State of Washington

Radioactive Materials License

License Number: WN- I019-2

Pursuant to the Nuclear Energy and Radiation Control Act, RCW 70.98, and the Radiation Protection Regulations, chapters 246-220 through 246-255 WAC, and in reliance on statements and representations heretofore made by the licensee designated below, a license is hereby issued authorizing such licensee to transfer, receive, possess and use the radioactive material(s) designated below; and to use such radioactive materials for the purpose(s) and at the place(s) designated below. **This license is subject to all applicable rules and regulations** promulgated by the State of Washington Department of Health.

1. Licensee Name:	3. License Number:
US ECOLOGY WASHINGTON, INC.	WN-I019-2 **Renewal** Amendment 40
2. Address: 1777 TERMINAL DRIVE RICHLAND, WASHINGTON 99354 Attn: Mike Ault, Facility Manager	**4. Expiration Date:** December 31 , 2018 **5. Reference Number(s):**

6. Radioactive Material (element and mass number).	7. Chemical and/or Physical Form.	8. Maximum quantity licensee may possess at any one time.
6.A. Any radioactive material, excluding source material and special nuclear material.	7.A. Dry packaged radioactive waste except as authorized by this license.	8.A. 60,000 Curies (2.22×10^{15} Bequerels).
6.B. Source material.	7.B. Dry packaged radioactive waste except as authorized by this license.	8.B. 36,000 kilograms.
6.C. Special nuclear material.	7.C. Dry packaged radioactive waste except as authorized by this license.	8.C. 350 grams of U^{235} or 200 grams of U^{233} or 200 grams of plutonium or any combination of these, provided the sum of the ratios of the quantities does not exceed unity.
6.D. Any radioactive material.	7.D. Check and calibration sources in any form.	8.D. 0.1 Curie (3.7×10^{9} Bequerels).

License Number: WN-I019-2

Amendment 40

CONDITIONS

9. Authorized use.

A-C. Radioactive waste may be received, transferred, stored, repackaged, and disposed at a low-level radioactive waste disposal facility. The maximum radioactivity and/or quantity of radioactive material indicated in Items 8.A, 8.B, and 8.C apply only to above-ground activity. The licensee is not authorized to remove any waste that has been disposed without specific departmental approval.

D. For use as check and calibration sources.

10. A. The licensee shall not receive for disposal any waste containing Ra-226, I-129, Tc-99, U-238, C-14, U-234, and Pu-239 once the following source term limits have been reached:

Radionuclide	Total Site Limit (Curies)
Ra-226	464.60
I-129	5.98
Tc-99	55.10
U-238	1,547.7
C-14	5,090.00
U-234	335.4
Pu-239	4,510.00

B. The licensee shall not receive for disposal any waste containing H-3 in an unstable waste form once the following yearly source term limit has been reached:

Radionuclide	Yearly Limit (Curies)
H-3 (unstable waste form)	100.0 Curies

11. The authorized place of use is a low-level waste burial facility located in the southeast corner of Section 9, Township 12 North, Range 26E W.M., Benton County, Washington, Route 4 - U.S. DOE Hanford Reservation, Richland, Washington 99352, within the boundary of the land area described in Sublease Agreement with the state of Washington, dated July 29, 1965, as amended. For the purposes of this license, the authorized place of use shall be referred to as the "facility."

License Number: WN-I019-2

Amendment 40

12. Reference to the "department" in this license shall mean the Department of Health, Waste Management Section, or successor agency. Reference to the "NRC" in this license shall mean the U.S. Nuclear Regulatory Commission. Reference to the "U.S. DOT" in this license shall mean the U.S. Department of Transportation. Reference to "U.S. DOE" in this license shall mean the U.S. Department of Energy.

13. A. The licensee shall notify the department immediately by telephone and/or email followed by written notification upon learning of the departure of any Facility Manager, Assistant Facility Manager, Corporate Radiation Protection Manager, Radiation Protection Manager, or Assistant Radiation Protection Manager.

    B. The licensee shall notify the department in writing within 30 days of the appointment of any new Facility Manager, Assistant Facility Manager, Corporate Radiation Protection Manager, Radiation Protection Manager, or Assistant Radiation Protection Manager. This notification shall clearly demonstrate that the proposed appointee meets or exceeds the requirements specified in the Facility Standards Manual for the relevant position.

    C. The licensee shall notify the department in writing at least 30 days prior to any changes in the licensee's corporate structure.

14. The licensee shall conduct and document in a written report the annual review of the ALARA (As Low As Reasonably Achievable) Program. The written ALARA report shall be maintained by the licensee. A copy of the report shall be submitted to the department no later than June 30 of each year for the previous calendar year's operations.

15. The licensee shall conduct a quality assurance/quality control program in accordance with US Ecology Quality Assurance Manual QA-MA-01, and Quality Assurance Procedure Manual QA-MA-02. Changes to these documents shall be submitted to the department within 30 days of the change.

GENERAL PACKAGING CONDITIONS

16. Waste or packaging shall not contain any liquid except as authorized by this license.

17. In order to keep doses as low as reasonably achievable (ALARA), the licensee shall not receive shipments of radioactive material in shipping casks unless appropriate lifting devices of sufficient length to allow at least 2 feet of the cable or sling outside of the cask, have been provided and securely attached to containers and palletized shipments within a cask.

18. All radioactive waste shall be packaged, loaded, received, and transported in accordance with all applicable U.S. DOT regulations, NRC regulations, state regulations, and the requirements of this license. Nothing in this license shall in any way relieve the licensee from full compliance with all applicable state and federal laws and regulations, including but not limited to the Resource Conservation and Recovery Act of 1976, as amended, and the State Hazardous Waste Management Statutes of 1976, as amended, and subsequently enacted regulations.

19. All metal containers shall be secured by an intact heavy-duty closure device when presented for disposal. Closure devices of open-head metal drums having 55-gallons or greater capacity shall be secured by bolts having 5/8 inch or larger diameters. The shipper of any DOT 7A Type A container must maintain on file, complete documentation of tests and an engineering evaluation or comparative data showing that the construction methods, packaging design, and materials of construction comply with that specification.

20. The classification and package identification marking required by License Condition 43 is in addition to any marking or labeling required by the NRC or U.S. DOT, and shall consist of lettering 1/2 inch high or greater in a durable contrasting color to the background surrounding the lettering. The classification marking shall be visible on the same side as the radioactive marking or label and in close proximity (within six inches). Waste packages marked "Radioactive" or "Radioactive LSA" need only one classification marking, whereas waste packages labeled White I, Yellow II, or Yellow III shall have classification markings in close proximity (within six inches) to each label. Waste materials shipped in casks shall have the classification markings visible on the outside of the cask.

21. Radioactive waste shall be packaged in such a manner that waste containers received at the facility do not show:

    A. Significant deformation.

    B. Loss or dispersal of contents.

    C. An increase in the external radiation levels as recorded on the manifest, within instrument tolerances.

    D. Degradation due to rust or other chemical action which results in a loss of container integrity.

22. All radioactive waste shall be received and buried in closed metal containers or Polyethylene High Integrity Containers (poly HICs). All other packaging requires specific authorization by the department. Cardboard, corrugated paper, wood, and fiberboard are prohibited burial containers.

23. Void spaces within the radioactive waste and between the waste and its package shall be reduced to the maximum extent practicable. Unless specifically approved by the department, void spaces within all waste packages shall be less than 15 percent of the total volume of the disposal package, provided the disposal package is not a high integrity container nor contains activated metals that are too large to put into high integrity containers. For Class B and Class C waste packages containing activated metals, voids shall be reduced to the extent practicable and shall be demonstrated to be structurally stable by any of the methods discussed in WAC 246-249-050(2)(a). This documentation shall be submitted to the department prior to disposal, and shall be kept on file by the licensee.

24. The licensee may possess SNM that has not been disposed of at the facility, subject to the following restrictions and all other conditions of this license:

A. No single package shall contain more than 100 grams of U-235, or 60 grams of U-233, or 60 grams of Pu, or any combination thereof, such that the sum of the ratios of the quantity of each SNM radionuclide to the quantities specified herein exceeds unity. Compliance with this requirement shall be determined by the following formula:

$$\frac{\text{grams containing U-235}}{100} + \frac{\text{grams containing U-233}}{60} + \frac{\text{grams containing Pu}}{60} = <1$$

B. No single package shall contain more than 15 grams of any combination of U-235, U-233, and Pu, per cubic foot of the total volume. To the extent practicable, the SNM will essentially be uniformly distributed throughout the waste package.

SPECIFIC WASTE FORM REQUIREMENTS

25. Unless otherwise authorized, the licensee shall not receive for disposal any mixed low-level radioactive waste. Mixed waste is defined as any radioactive material which is no longer of use or value, and contains waste that either (A) is listed as dangerous waste in the state's Dangerous Waste Regulations, (B) causes the waste to exhibit any of the dangerous waste characteristics identified in the state's Dangerous Waste Regulations, (C) fulfills any of the "dangerous waste criteria" identified in the state's Dangerous Waste Regulations, (D) listed as hazardous waste in Subpart D, 40 CFR Part 261, or (E) causes the waste to exhibit any of the hazardous waste characteristics identified in Subpart C, 40 CFR Part 261.

26. Waste shall not contain, or be capable of generating, toxic gases, vapors, or fumes during transportation, handling, or disposal.

27. No pyrophoric, hazardous, dangerous, or chemically explosive materials or materials which could react violently with water or moisture or when subject to agitation shall be accepted for disposal.

28. Except as specifically provided in this license, the licensee shall not accept for disposal, any liquid radioactive waste packaged in sorbent material.

29. Incidental and unintentional liquids entrained in solid material may be received, provided that:

    A. (1) The dry material contains less than 0.1 volume percent of liquid within the package, or

    (2) If a process control program (PCP) is used to verify the amount of liquids, the dry material must contain less than 0.5 volume percent of liquids within the package and;

    B. Sufficient approved sorbent material (see Appendix F) is used and layered to absorb the incidental and unintentional liquids.

30. Except as allowed under this license, untreated liquids and wet sludges are not allowed for disposal. Liquids shall be rendered non-corrosive ($4 \leq$ pH ≤ 11) prior to treatment. Acceptable treatments are stabilization or solidification, depending on waste class. Wet sludges and slurries, such as evaporator bottoms, shall be non-corrosive and shall be treated by stabilization or solidification. Ion exchange media shall not be treated by sorption.

31. Liquids, ion exchange resins, or filter media treated by stabilization shall be processed in accordance with a process control program using an approved stabilization medium (see Appendix C). The resulting waste form shall contain no detectable free-standing liquid and shall meet the stability requirements of License Condition 43. "No detectable free-standing liquid" is defined to be as little free-standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1.0% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of waste processed to a stable form.

32. Class A ion exchange and filter media containing radionuclides with half-lives greater than five years, the total package concentration of which is one microcurie (3.7×10^4 Bqs) per cubic centimeter or greater, except Cobalt 60 having a concentration of 50 microcuries per cubic centimeter or greater, shall:

    A. Meet the stability requirements of License Condition 43 and shall contain no detectable free-standing liquid. "No detectable free-standing liquid" is defined to mean as little liquid as reasonably achievable, but in no case shall the liquid exceed 1.0% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of waste processed to a stable form. Other Class A ion exchange and filter media which are classified as unstable shall contain no more liquid than 0.5% by volume of the waste.

    B. The calculations of concentrations of nuclide activity will adhere to the "sum of fractions being equal to or less than unity rule" for ion exchange resins and filter media containing nuclides with half-lives greater than five years, with the exception of Cobalt 60.

33. Liquids treated by solidification shall be processed in accordance with a process control program using an approved solidification medium (see Appendix B). The resulting waste form shall contain no detectable free-standing liquid. "No detectable free-standing liquid" is defined to be as little liquid as is reasonably achievable, but in no case shall it exceed more than 0.5 percent (by volume) of liquid per container.

34. Waste containing biological (excluding animal carcasses, which are considered in License Condition 35), pathogenic, or infectious material or equipment (e.g., syringes, test tubes, capillary tubes) used to handle such material, shall be treated to reduce, to the maximum extent practicable, the potential hazard from the non-radiological materials. The inner waste container shall be a metal container meeting DOT 7A performance specifications (see License Condition 19) and shall be lined with a minimum 4 mil plastic liner which shall be sealed. The inner waste container shall be placed in an outer metal container meeting DOT 7A performance specifications with a heavy duty closure device (see License Condition 19) and shall have a capacity at least 40 percent greater than the inner container. The void between inner container and outer container shall be completely filled by approved sorbent material and the outer container must be sealed. Only sorbents approved by the department shall be allowed (see Appendix F).

35. Animal carcasses containing, or contained in, radioactive materials shall be packaged in accordance with the following requirements: the biological material shall be layered with absorbent and lime and placed in a metal container meeting DOT 7A performance specification, having a heavy duty closure device (see License Condition 19). The inner container shall be closed and placed in a metal container meeting DOT 7A performance specification with a heavy duty closure device, having a capacity at least 40 percent greater than the inner container. The void between the inner container and the outer container shall be completely filled by approved sorbent material and the outer container must be sealed. Only sorbents approved by the department (except Perlites) shall be used (see Appendix F).

36. Waste in gaseous form must be packaged at a pressure that does not exceed 1.5 atmospheres at 20^0C. Total activity shall not exceed 100 curies (3.7×10^{12} Bqs) per container. Class A gaseous waste shall be contained within U.S. DOT specification cylinders. Class A gaseous waste contained in hermetically sealed glass ampules, tubes, or sealed sources are exempt from the requirement for the specification cylinder provided that they are packaged in containers meeting DOT 7A specifications, having a heavy duty closure device (see License Condition 19) and with sufficient sorbent material to prevent breakage and rupture of its contents. Specific approval of the department is required if the gaseous waste is Class B or C. Only sorbents approved by the department shall be used (see Appendix F).

37. Incinerator ash and incinerator ash-like material which is classified as Class A waste according to License Condition 43 shall be solidified, granular, or treated in such a manner as to be rendered nondispersible in air, exclusive of packaging.

38. Radioactive waste containing radium and/or transuranic radionuclides, as described in Appendix A, is acceptable, provided that the radium and transuranic radionuclides are essentially evenly distributed within a homogenous waste form. The receipt and disposal of waste in which the radium or transuranic radionuclides are not evenly distributed (components, or equipment primarily contaminated with radium or transuranic radionuclides), or radium or transuranic radionuclides in excess of Class A limits, requires the specific approval of the department. Radioactive waste packaged in accordance with License Condition 39 is exempt from this condition.

39. Radioactive consumer products, the use and disposal of which is exempt from licensing control (see WAC 246-232), may be received for disposal without regard to concentration limits of Appendix A, provided the entire unit is received and is packaged with sufficient sorbent material so as to preclude breakage and rupture of its contents. Only sorbents approved by the department shall be used (see Appendix F).

This condition allows the disposal of such consumer products as intact household or industrial smoke detector units containing Americium-241 foils, and radium or other radioactive materials incorporated into self-luminous devices and electron tubes. Documentation that the consumer product was manufactured under a U.S. Nuclear Regulatory Commission exempt license shall accompany each shipment made under this condition. Waste packaged in accordance with this license condition shall be Class A unstable, and the words "Condition 39" shall be noted on the manifest or other documentation accompanying the waste package.

40. Wastes containing a concentration of oil in excess of ten percent by weight are not authorized for burial. Dilution by solidification or stabilization media shall not be allowed in determining the waste composition. "Oil" means an organic liquid which is immiscible in water, the disposal of which is not regulated under RCRA or the state hazardous waste regulations.

41. Waste which has a pretreatment concentration of chelating agents in excess of 0.1 percent by weight shall be treated by either solidification or stabilization, and placed into an Engineered Concrete Barrier (ECB). Prior to receipt of any chelate waste in excess of 1.0 percent by weight, the generator must notify the licensee of the intent to ship such material for disposal. The notification shall consist of telephone and written notification to the Facility Manager prior to shipment. Dilution by solidification or stabilization media shall not be allowed in determining waste composition. "Chelating agent" means amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxy-carboxylic acids and polycarboxylic acids (e.g., citric acid, carbolic acid, and gluconic acid), the disposal of which is not regulated under RCRA or the state hazardous waste laws. Additionally, the licensee shall record the three-dimensional location of the ECBs containing these wastes

42. The licensee shall not accept for disposal any neutron source (e.g., polonium 210, americium 241, radium 226 in combination with beryllium or other target) unless the generator has notified the licensee of the intent to ship such source to the licensees disposal facility. The notification shall consist of telephone and written notification to the Facility Manager prior to shipment. The notification shall indicate the nuclide, activity, form of the source, a description of the packaging utilized, radiological data, and anticipated date of arrival. Additionally, a copy of the written notification must accompany the shipment made under this license condition.

RECEIPT, ACCEPTANCE, AND INSPECTION CONDITIONS

43. The licensee shall not accept radioactive waste unless each waste package has been:

A. Classified in accordance with Appendix A of this license and the most recent version of the "Low-Level Waste Licensing a Technical Position on Radioactive Waste Classification," issued May 1983 by the U.S. Nuclear Regulatory Commission.

B. Marked as either Class A stable, Class A unstable, Class B, or Class C, as defined in Appendix A of this license and the most recent version of the "Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification," issued May 1983 by the U.S. Nuclear Regulatory Commission.

C. Marked with a unique package identification number, clearly visible on the package, that can be correlated with the manifest for that particular shipment.

D. Stabilized, when required by this license, in accordance with criteria contained in the most recent version of the "Technical Position on Waste Forms," issued May 1983 by the U.S. Nuclear Regulatory Commission, and procedures that are described in approved vendor topical reports. Only those stabilization media approved by the department and listed in Appendix C to this license, or High Integrity Containers approved by the department and listed in Appendix D to this license may be used. Stability may also be achieved using engineered barriers in the disposal unit. Specific approval by the department is required prior to construction of any newly designed or redesigned engineered barrier. Only those engineered barriers listed in Appendix E of this license are approved for use at the facility.

44. Any shipment in which there is evidence that any radioactive material is missing, or that the waste packages have been tampered with or damaged in transit, shall be received by the licensee and safely stored pending notification to the department. The licensee shall not dispose of such packages unless authorized by the department.

45. Waste shipments shall not be accepted at the facility unless accompanied by the following (a single shipment shall consist of not more than one vehicle or one tractor with legal trailer(s) attached):

A. Shipment manifest approved by the department.

B. Washington State Patrol or Washington State Utilities and Transportation Commission vehicle inspection certificate, or a current visible Washington State 90-day vehicle inspection seal.

C. Current certification Form RHF-31, properly executed by a representative of the shipper/generator of the waste, in accordance with requirements of Washington State Rules and Regulations for Radiation Protection, WAC 246-249-030.

D. Copies of any specific approval or variance granted by the department for disposal.

E. Upon departmental request, other permits or documentation required under this license, or state or federal law or regulation.

46. Waste shipments shall not be accepted by the facility unless the accompanying Form RHF-31 is stamped as received, and initialed by an authorized representative of the department. (This individual may be the licensee, when designated in writing by the department.)

47. The manifest for each package of waste received for disposal shall list all radionuclides greater than 3,700 kBq (100 microcuries).

48. Upon acceptance for disposal of each waste shipment, the licensee shall:

A. Acknowledge receipt of the waste as soon as practicable, but no later than seven days following its acceptance for disposal, by returning a signed copy or equivalent documentation of the shipment manifest to the shipper. The shipper to be notified by the licensee is the one last possessing the waste and transferring it to the licensee.

B. Indicate on the returned copy of the shipment manifest, shipping papers, or equivalent documentation any discrepancy between noted waste descriptions listed on the manifest or papers and the waste materials received in the shipment.

C. Notify the shipper and the department when any shipment or part of a shipment has not arrived 60 days after the separate copy of the shipment manifest or shipping papers was received by the licensee.

D. Maintain copies of completed shipment manifests, including annotations of discrepancies found in accordance with License Condition 48.B.

E. Maintain records in accordance with in WAC 246-250-600.

49. Upon receipt of a shipment, the licensee shall furnish to the department copies of all shipment manifests received. The licensee shall furnish to the department, within 30 days of a specific written request, special reports consisting of selected information contained on shipment manifests.

50. Unless otherwise specifically authorized by the department, the licensee is not authorized to open any package containing radioactive waste at the facility, except for the following:

A. For purposes of repairing, repackaging, or overpacking leaking containers or containers damaged in transport in the event the material is to be disposed, or returned to the generator if required for the protection of the health and safety of the employees or the environment.

B. At the direction of the department, for purposes of inspection and waste confirmation, for compliance with Title 246 WAC, other applicable federal and state regulations, and conditions of this license.

C. For purposes of returning outer shipping containers.

The licensee shall use and maintain a facility, in accordance with the Facility Standards Manual, where the above operations can be safely conducted.

51. The licensee is exempt from the timely inspection requirements of WAC 246-221-160(2)(a) and (3)(a), provided the requirements of the Facility Standards Manual and License Conditions 44 through 48 of this license are met.

BURIAL OPERATIONS CONDITIONS

52. Packages containing radioactive material shall not be stored above ground for a period greater than ninety days from the date of the department's release of the packages. Packages shall be stored in such a manner as to maintain radiation exposures as low as reasonably achievable. Retention of packaged waste above ground for not more than three working days does not constitute storage.

53. The licensee shall dispose of all Class B, and C waste in a secondary containment system which has been reviewed and approved by the department. In addition, waste packages containing any of the following radionuclides, H-3, I-129, C-14, Tc-99, U-238, U-234, and Pu-239, shall be disposed in accordance with procedures approved by the department. Secondary containment shall be used for all packages that exceed the predetermined levels contained in these procedures, and the Facility Standards Manual. Levels shall be established such that at least 90% of the allowable future source term activity for each nuclide listed in License Conditions 10.A and B is placed in secondary containment. The effectiveness of these procedures shall be evaluated annually and reported in the Facility Utilization Report required by License Condition 62.

54. Class B and C waste packages stabilized with bitumen shall be backfilled immediately after waste placement. Sufficient backfill material shall be placed around each container to cover all sides around the packages.

55. Accumulations of waste packages, with an SNM Mass ratio (SNM Mass/ Package Mass) that exceeds 0.0002 (1/5000), in quantities specified in this license, shall be disposed so that there is a minimum of eight inches of soil or a minimum of four feet of non-SNM-bearing waste in all directions from any other accumulation of packages containing SNM in quantities specified in this license, with an SNM Mass ratio that exceeds 0.0002.

56. Class B, and C waste packages must be disposed at a minimum depth of five meters (16.5 feet) below the natural grade of the trench, as defined in the Comprehensive Facility Utilization Plan.

57. All discrete radium 226 must be disposed in an engineered concrete barrier (ECB) at a minimum depth of 23 feet below the natural grade of the trench, as defined in the Comprehensive Facility Utilization Plan and in accordance with approved procedures.

58. In addition to the record keeping requirements contained in WAC 246-250-600, the licensee shall maintain a record for each shipment of waste disposed at the facility. As a minimum, the record shall include:

    A. The date of disposal of the waste.

    B. The location of the waste in the disposal site.

    C. The condition of the waste packages as received.

    D. Any discrepancies between materials listed on the manifest and those received.

    E. Any evidence of leaking or damaged packages, or radiation or contamination levels in excess of limits specified in U.S. DOT and state of Washington regulations.

    F. A description of any repackaging operations of any of the waste packages in the shipment.

    G. Type of secondary containment used (if any).

License Number: WN-I019-2

Amendment 40

DISPOSAL REPORTS DUE TO THE DEPARMENT

59. By the 10th day of each month the licensee shall submit, to the department, a report totaling the volume and activity of the waste received during the previous month.

60. By the 15th day of each month the licensee shall submit, to the department, a monthly facility receipt and burial activities report for the previous month. The report shall include the following information for each shipment:

A. Name and address of the generator(s), broker (if any), and shipper.

B. Radionuclides and activity of each radionuclide in millicuries (total and by generator).

C. Grams of special nuclear material (total and by generator).

D. Mass (in kilograms) of source material received (total and by generator).

E. Class totals of volume and activity of Class A, B, and C waste entrenched (total and by generator).

F. Volume of packages disposed with radiation readings at the surface of the disposal container of:

≤50 mR/hr	>1 R/hr to ≤10 R/hr
>50 mR/hr to ≤200 mR/hr	>10 R/hr to ≤100 R/hr
>200 mR/hr to ≤1 R/hr	>100 R/hr

And to the extent practicable:

G. Type and physical form of the waste.

H. Chemical form of the waste and solidification/stabilization/sorption agent used.

I. If an Engineered Concrete Barrier (ECB), or High Integrity Container (HIC) was used (total and by generator).

J. Quantity and type of chelates in concentrations greater than 0.1 percent by weight (total and by generator).

K. Type of secondary containment used (if any).

L. Volume of diffuse Naturally Occurring or Accelerator Produced Radioactive Material received (total and by generator).

61. By the 15th of each month the licensee shall submit, to the department, the ECF567N report for the previous month. This report shall include:

A. The waste generator.

B. Permit Number.

C. Generator's state.

D. Manifest Number.

E. Date of shipment.

F. Volume of shipment by generator and total volume.

G. Activity of shipment by generator and total activity.

62. By June 30th of each year the licensee shall submit, to the department, a Facility Utilization Report. At a minimum the report shall include:

A. Identification of each disposal unit and description of all waste emplaced during the previous calendar year. A three-dimensional identification to describe the disposal location of each Class B, and C package of waste including the location of engineered barriers used to provide structural stability, and the disposal location of those wastes containing oils or chelates shall also be provided. The location of Class A waste shall be tracked three-dimensionally within 50 feet horizontally and within 10 feet in the vertical plane.

B. Percent of utilization for each operating stable and unstable trench or disposal unit filled during the previous calendar year.

C. Annual aerial or satellite photograph of the leasehold.

D. Summary, by waste class, of activities and quantities of radionuclides disposed.

E. A summary of disposal unit maintenance activities.

F. Any instances in which observed site characteristics were significantly different from those described in the application for the license.

G. The remaining capacity of the disposal facility and each open disposal unit.

H. A summary of each disposed radionuclide and its activity.

I. An updated source term for the facility that covers all waste disposed during the previous year.

J. A summary of waste packages that have been placed in secondary containment.

K. The volume of diffuse Naturally Occurring or Accelerator Produced Radioactive Material (NARM) disposed.

L. An evaluation of waste disposed in secondary containment during the previous year.

M. Any other information the department may require.

N. Electronic copies of manifests from the previous year.

SITE DESIGN AND CONSTRUCTION CONDITIONS

63. All burial trenches or disposal units shall be in a controlled area surrounded by a chain link fence, eight feet high, and topped with barbed wire.

64. Until an agreement is secured with agencies controlling adjacent lands, which meets the requirements of License Condition 88.K of this license, disposal units shall be placed at least 100 feet away from the North, South, and West subleasehold boundaries. The set-back distance for the East boundary shall be no less than 50 feet.

65. The dimensions of burial trenches shall not exceed a width of 150 feet (46 meters), a depth of 50 feet (15.24 meters), or a length of 1000 feet (305 meters) without specific documented approval from the department. Measurements shall be referenced to natural grade as established in the departmentally approved Comprehensive Facility Utilization Plan.

66. The licensee shall construct new disposal units in accordance with the most recent departmentally approved Comprehensive Facility Utilization Plan.

67. Thirty days prior to commencement of construction of any new disposal unit, the licensee shall submit to the department a detailed engineering plan for the trench in accordance with the provisions of the Facility Standards Manual, or a statement that the proposed trench will be designed and constructed in accordance with the most recent departmentally approved Comprehensive Facility Utilization Plan.

68. Upon completion of the construction of any new disposal units the licensee shall:

A. Submit to the department two copies of the disposal unit construction report. The report shall include, at a minimum, as-built drawings, daily and final inspection reports, laboratory and field soil test results, and a description of any problems encountered during construction, in order to demonstrate that the construction of the disposal unit is in compliance with applicable plans and specifications contained in the approved Comprehensive Facility Utilization Plan.

B. 30 days prior to use of any new disposal unit, notify the department in writing of the intent to physically place waste in the disposal unit.

ENVIRONMENTAL MONITORING AND SURVEY CONDITIONS

69. The licensee shall conduct an environmental monitoring program capable of detecting the potential contribution of radioactive material from the site to the environment. The program shall include collection of samples and analyses at frequencies specified in the Facility Standards Manual. The licensee shall coordinate sampling schedules with the department to provide, when possible, duplicate samples on a prearranged frequency.

70. The licensee shall report immediately any environmental monitoring results that meet or exceed the reporting levels specified in the Facility Standards Manual. This information shall be reported to the department verbally within 24 hours of confirmation of the measurement and in writing within 30 days of the investigation conclusion.

71. A comprehensive annual report of all sample analyses, with statistical trend analyses and discussions of all anomalous results and actions taken, specification of the quantity of each of the principal contaminants released to unrestricted areas in liquid and in airborne effluents during the preceding year, wind rose for the facility, depth to water, and depth to bottom, pH, as well as non-radiological contaminants specified in the Facility Standards Manual for all groundwater wells, ventilation exhaust samples taken from the inspection

facility, and comparisons of onsite groundwater wells and U.S. DOE groundwater wells in the vicinity of the facility shall be forwarded to the department by June 1 of each year. The licensee shall forward two hard copies and one electronic copy of this report. The report shall be submitted in general accordance with the department's document entitled "Recommended Content and Format for Annual Environmental Reports." Deviations in the reporting format must be approved by the department.

72. Continue the study of subsidence of trenches in accordance with the department approved plan. Results of the study shall be reported to the department annually in the Facility Utilization Report required by License Condition 62.

73. By August 1, 2014 the licensee shall submit to the department an evaluation of the licensee's current environmental monitoring program. This evaluation shall demonstrate that the environmental monitoring program sampling media, frequency, analysis, and detection limits provide reasonable assurance that the exposure to humans from the release of radioactivity will not exceed the limits set forth in WAC 246-250-170.

74. The licensee shall perform an exposure pathway analysis of the site closure plan within 180 days of revising the Site Stabilization and Closure Plan as required by License Condition 88. The licensee shall verify that the proposed closure actions remain within the acceptable parameters developed and established by the Environmental Impact Statement's (EIS) "Comprehensive Exposure Pathway Analysis". The verification shall include air, soil, ground water, vegetation, fauna, burrowing animals, and human impacts. Additionally, the analyses shall be reviewed and updated as necessary every four years subsequent to the approval of the pathway analyses. Upon completion of the review, the licensee shall submit a copy of the review to the department. This requirement is in addition to the requirements found in WAC 246-250-060(1). Within 120 days of completion of the pathway analysis report, the licensee shall submit to the department the licensee's evaluation and analysis of the report with respect to the environmental monitoring programs. The analyses shall clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes.

TRENCH AND SITE CLOSURE CONDITIONS

75. As radioactive material buried may not be transferred by abandonment or otherwise, unless specifically authorized by the department, the expiration date of this license applies only to the above-ground activities and to the authority to bury radioactive material wastes at the location specified in License Condition 11. The license continues in effect, and the

responsibility and authority for possession of buried radioactive material wastes continues until the department finds that the plan established for preparation of the facility for transfer to another person or custodial agency has been satisfactorily implemented in a manner to reasonably assure protection of the public health and safety and the environment, and the department takes action to terminate the licensee's responsibility and authority under this license. All requirements for environmental monitoring, site inspection, maintenance, and site security continue whether wastes are being buried or not.

76. The licensee shall design and construct interim disposal unit caps in accordance with the specifications contained in the Facility Standards Manual and Comprehensive Facility Utilization Plan. Interim disposal unit caps shall be established within 3 months of completion of a disposal unit, or as described in the Comprehensive Facility Utilization Plan.

77. Within 90 days of filling each disposal unit, the licensee shall erect interim disposal unit monuments upon in which the following information shall be displayed in a legible manner:

A. Total activity of radioactive material, in curies, excluding source and special nuclear materials, total amount of source materials in kilograms, and total amount of special nuclear material in grams.
B. Trench number or disposal unit designation.

C. Date of opening and closing of the disposal unit.

D. Volume of waste contained in the disposal unit.

E. Coordinates of the disposal unit.

This same information shall be reported to the Department of Health and the Department of Ecology within 30 days of closure of each trench or disposal unit. The erection of interim monuments may be omitted if permanent monuments, required by License Condition 80, are scheduled to be erected within six months after completion of the disposal unit.

78. Within 90 days of closure of each disposal unit, the licensee shall submit to the department a summary of:

A. All radionuclides and associated activities disposed in that trench.

B. Waste class totals by volume and activities.

C. Disposal locations and volume of chelates disposed.

D. A summary, to the extent practical, of the physical and chemical forms disposed.

79. The licensee shall conduct closure and stabilization operations on closed trenches, and as each active trench is filled and covered, in accordance with the following documents:

A. The schedule and performance criteria defined in the Final Environmental Impact Statement for the Commercial Low-Level Radioactive Waste Disposal Site, Richland Washington, dated May 28, 2004.

B. The most recent department-approved Comprehensive Facility Utilization Plan.

C. The most recent department-approved Site Stabilization and Closure Plan.

80. After final closure (Phase I/II or Phase II Cover construction) all trenches and disposal units shall be conspicuously marked with inscribed, permanent, stable monuments at each end, consistent with the departmentally approved Site Stabilization and Closure Plan. This same inscription information shall be reported to the Department of Health and the Department of Ecology within 30 days of closure of each trench or disposal unit.

81. By July 1, 2014, the licensee shall develop specific plans, schedule and procedures to implement a program in accordance with criteria established by the department. The program, which shall be approved by the department shall be designed to study(A) erosion of soils onto and off of the facility, and (B) methods of revegetation and sustained vegetation on closed trenches. Once approved, the licensee shall submit annual reports to the department by October 31 which discusses the results of the program.

82. Notwithstanding other requirements of this license or the sublease, one year prior to the anticipated transfer of the licensee's facility and buried radioactive waste to another person (including an agency of the state or federal government), the licensee shall submit a final version of the Site Stabilization and Closure Plan, including a schedule for implementation of all remaining plan elements prior to transfer, and a description of the mechanics of orderly transfer in coordination with the transferee.

FINANCIAL ASSURANCES

83. By June 30 of each year, the licensee shall submit the following financial documentation to the department:

A. A copy of its financial report or a certified financial statement and Security and Exchange Commission (SEC) Form 10K.

B. A copy of its financial or surety arrangements for closure and stabilization of the disposal facility.

C. A copy of personnel and nuclear liability insurance held for the facility.

INCREASED CONTROLS

84. The licensee shall comply with the requirements set forth in Order dated November 29, 2005, signed by Gary Robertson, Director, Office of Radiation Protection, and made a part hereof by this reference. The licensee shall comply with any new requirements issued subsequent to date of original Order.

The licensee shall comply with the requirements set forth in the Administrative Amendment(s) to all licensees subject to the Increased Controls dated March 5, 2008, regarding Fingerprinting and Criminal History Records Check Requirements for Unescorted Access to Certain Radioactive Materials, signed by Mikel Elsen, Supervisor, Waste Management Section, Office of Radiation Protection, and made a part hereof by this reference. The licensee shall complete implementation of requirements in NRC Order EA-07-305 by the first day that radionuclides in quantities of concern are possessed at or above the limits specified in Table 1 of EA-07-305. The licensee shall also comply with any new requirement(s) issued subsequent to the date of the Administrative Amendment(s).

85. The licensee must comply with the initial inventory reporting requirement in WAC 246-221-235(8) (10 CFR 20.2207(h)) for nationally tracked sources by the dates imposed in that paragraph. The licensee must also comply with the reporting requirements for transactions involving nationally tracked sources in WAC 246-221-235 (10 CFR 20.2207). This section includes the requirement to report any manufacture, transfer, receipt, disassembly, or disposal of a nationally tracked source, otherwise allowed by this license, by the close of the next business day after the transaction. A nationally tracked source, as defined in WAC 246-220-010(82) (10 CFR 20.1003), refers to a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in WAC 246-221-236 (Appendix E to 10 CFR Part 20 - "Nationally Tracked Source Thresholds.").

License Number: WN-I019-2

Amendment 40

DOCUMENT REVISIONS

86. By July 1, 2014 the licensee shall submit, for departmental approval, updated operating procedures revised to be in compliance with the provisions of this license.

87. By March 1, 2015 the licensee shall submit, for departmental approval, an updated Comprehensive Facility Utilization Plan which encompasses the proposed site conditions for the expected lifetime of the facility. The Plan shall discuss, at a minimum, the reasoning for the choice of design, and shall include detailed drawings and calculations sufficient to support the conclusions reached. Changes to the Plan must be submitted to the department for review and approval. The plan shall be reviewed, updated and submitted for approval by the department every five years.

88. Within one year from the approval of the Phase II Cover Design, the licensee shall review and update the July 1996 Site Stabilization and Closure Plan. The licensee shall review and update the plan as necessary every four years thereafter. A copy of this review shall be submitted to the department upon completion of the review.

The Site Stabilization and Closure Plan shall address how the licensee meets or plans to meet the following requirements:

A. Bury all waste in accordance with the requirements of the license.

B. Dismantle, decontaminate (as required), and dispose of all structures, equipment, and materials that are not to be transferred to the site custodian.

C. Document the arrangements and the status of the arrangements for orderly transfer of site control and for long-term care by the government custodian. Also document the agreement, if any, of state or federal governments to participate in, or accomplish, performance objectives. Specific arrangements to assure availability of funds to complete the site closure and stabilization plan shall be documented.

D. Direct gamma radiation levels from buried wastes shall be essentially background at any accessible above-ground location, as determined by evaluation of environmental data from the licensee, the U.S. Department of Energy, and its contractors.

E. Demonstrate by measurement and model during operations and after site closure that concentrations of radioactive material which may be released to the general environment in ground water, surface water, air, soil, plants, or animals will not result in any member of the public receiving an annual dose exceeding an equivalent to 25 millirems (0.25 mSv) to the whole body, 75 millirems (0.75 mSv) to the thyroid, and 25 millirems (0.25 mSv) to any other organ.

F. Render the site suitable for surface activities without resort to custodial care exceeding vegetation control, minor maintenance, and environmental monitoring. No active ongoing maintenance shall be necessary. Final conditions at the site must be acceptable to the government custodian and compatible with its plan for the site.

G. Demonstrate that all trench elevations are above water table levels, taking into account the complete history of seasonable fluctuations.

H. Eliminate the potential for erosion or loss of site or trench integrity due to factors such as ground water, surface water, wind, subsidence, and frost action. All slopes shall be sufficiently gentle to prevent slumping or gullying. The surface shall be stabilized to minimize erosion, settling, or slumping of caps.

I. Permanent monuments shall be designed and shall stand erect, well above the grade of the final trench cover, and in a manner which will not allow them to be covered or obscured by drifting sand during the institutional control period. Inscriptions shall be made so as to endure and remain legible well beyond the institutional control period. The permanent monuments shall be inscribed with the following information:

(1) Total activity of radioactive material, in curies, excluding source and special nuclear materials, total amount of source material in kilograms, and total amount of special nuclear material, in grams, in the trench.

(2) Trench number or other means of identifying the disposal unit.

(3) Date of opening and closing the disposal unit.

(4) Volume of waste in the disposal unit.

(5) Coordinates of the stable and unstable disposal units, including disposal unit depth and depth of cover at closure.

J. Demonstrate that permanent trench markers are in place, stable, and keyed to benchmarks.

K. Compile and transfer to the department complete records of site maintenance and stabilization activities, trench elevation and locations, trench inventories, and monitoring data for use during custodial care for unexpected corrective measures and data interpretation.

L. Maintain a buffer zone to provide space to stabilize slopes, incorporate offsite surface water management features, assure that any future excavation on adjoining areas shall be evaluated for the potential to compromise trench or site integrity, and provide working space for unexpected mitigating measures, if needed, in the future. The buffer zone may be within the subleasehold or on adjacent land, provided written agreements are secured with persons owning or controlling adjacent lands, which shall allow the licensee or custodial agency the required access and actions.

M. Provide a secure passive site security system (e.g., a fence) that requires minimum maintenance.

N. Stabilize the site in a manner to minimize environmental monitoring requirements for the long-term custodial phase, and develop a monitoring program based on the stabilization plan.

O. Investigate the causes of any statistically significant levels of radioactive or hazardous materials in environmental samples taken during operation and stabilization. In particular, any evidence of unusual or unexpected rates or levels of radionuclide migration in or with the ground water shall be analyzed, and corrective measures implemented.

P. Eliminate the need for active water management measures, such as a sump or trench pumping and treatment of water to assure that wastes are not leached by standing water in the trenches.

Q. Evaluate present and proposed activities on adjoining areas to determine their impact on the long-term performances of the site, and take reasonable action to identify and minimize the effects.

State of Washington

Radioactive Materials License

License Number: WN-I019-2

Amendment 40

Tie-Down Condition

89. Except as specifically provided by this license, the licensee shall possess and use radioactive material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in the documents listed below. The department's "Rules and Regulations for Radiation Protection," Title 246 WAC, shall govern the licensee's statements in applications or letters, unless statements are more restrictive than the regulations. Any change to the documents listed below shall require departmental approval in the form of an amendment to this license.

A. License application and attachments dated December 13, 2010.

B. Letter from M. Kornish (US Ecology) to K. Schwab (WA DOH) dated January 12, 2011, RE: additional license application information.

C. Letters from K. Schwab (WA DOH) to M. Ault (US Ecology) dated October 5, 2011 and January 3, 2012, RE: Licensing Meeting Notes

D. Comprehensive Facility Utilization Plan, US Ecology Low-Level Radioactive Waste Facility, Richland, Washington, Document 200-DOC-001, Rev. 3, March 1, 1991.

E. Site Stabilization and Closure Plan, July 1996.

F. US Ecology Washington, Inc. Facility Standards Manual dated September 2013.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: February 12, 2014

By _____

Mikel J. Elsen, Supervisor
Waste Management Section

APPENDIX A

WASTE CLASSIFICATION TABLE

License Number: WN-I019-2

Amendment 40

RADIONUCLIDES	CONCENTRATION LIMITS IN CURIES/CUBIC METER**	
Table 1 (long-lived)	Class A	Class C
C-14	≤ 0.8	≤ 8
C-14 in activated metal	≤ 8	≤ 80
Ni-59 in activated metal	≤ 22	≤ 220
Nb-94 in activated metal	≤ 0.02	≤ 0.2
Tc-99	≤ 0.3	≤ 3
I-129	≤ 0.008	≤ 0.08
CONCENTRATION LIMITS IN NANOCURIES/GRAM		
Alpha emitting Transuranic radionuclides with half-lives greater than five years	≤ 10	≤ 100 with specific departmental approval
Radium 226	≤ 10	≤ 100 with specific departmental approval
Curium 242	≤ 2,000	≤ 20,000 with specific departmental approval
Plutonium 241	≤ 350	≤ 3,500 with specific departmental approval

APPENDIX A

WASTE CLASSIFICATION TABLE

License Number: WN-I019-2

Amendment 40

RADIONUCLIDES	CONCENTRATION LIMITS IN CURIES/CUBIC METER**		
Table 2 (short-lived)	Class A	Class B	Class C
Total of all with half-life less than 5 years	≤ 700	♦	
H-3	≤ 40	♦ with specific departmental approval	
Co-60	≤ 700	♦	
Ni-63	≤ 3.5	≤ 70	≤ 700
Ni-63 in activated metal	≤ 35	≤ 700	≤ 7000
Sr-90	≤ 0.04	≤ 150	≤ 7000
Cs-137	≤ 1	≤ 44	≤ 4600

** Curies/cubic meter is equivalent to microcuries/cubic centimeter

♦ There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other nuclides in Table 2 determine the Waste to be Class C independent of these nuclides.

Note 1. Unless specifically restricted elsewhere in the license, the concentration of a radionuclide or radionuclide mixture may be averaged over the volume (or mass) of the waste and, if used, the solidification agent or matrix. The concentration of radionuclides in filters encapsulated with a solidification agent or matrix shall be averaged over the volume of the filter, not the solidification agent. The volume (mass) of packaging containers, liners or overpacks shall not be included in this calculation, nor shall the volume (mass) of the waste mixture be artificially increased by the addition of heavy, nondispersible solids or objects even if considered as waste. Further guidance is provided in "Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification," May 1983, or successor documents issued by the U.S. Nuclear Regulatory Commission.

Note 2. The waste is Class A if none of the listed radionuclides is present. Waste packaged in accordance with License Condition 39 of this license shall be Class A unstable and the words "Condition 39" shall be noted on the manifest or other documentation accompanying the waste package.

Note 3. There are no Class B values for Table 1 radionuclides; their presence classifies the waste as either Class A or Class C according to their concentrations.

Note 4. The waste class for mixtures of the listed radionuclides is determined by deriving for each radionuclide the ratio between its concentration in the mixture and its concentration limit in the table of this license and adding the resulting ratio values for each radionuclide group. All limits used in the calculations must be for the same waste class. The sum of the ratios for each radionuclide group must be equal to or less than 1.0, or the waste is the next higher classification than that used for the calculation.

If Class C limits are used in the calculation and the sum of ratios for either group exceeds 1.0, the waste is not acceptable for near-surface disposal without prior written approval from the department.

Note 5. If radioactive waste contains a mixture of radionuclides, some of which are listed on Table 1, and some of which are listed on Table 2, classification shall be determined as follows:

A. If the concentration of a nuclide listed in Table 1 does not exceed the Class A limit, the class shall be that determined by the concentration of nuclides listed in Table 2.

B. If the concentration of a nuclide listed in Table 1 exceeds the Class A limit, but does not exceed the Class C limit, the waste shall be Class C, provided the concentration of nuclides listed in Table 2 does not exceed the Class C value.

Note 6. If concentrations for any single radionuclide exceed the Class C values in the table, the waste is not acceptable for near-surface disposal under this license.

APPENDIX B

APPROVED SOLIDIFICATION MEDIA

License Number: WN-I019-2

Amendment 40

Only approved solidification media can be used. Approved solidification media are:

1. Atcor Cement
2. Aquaset I and II
3. Aztech (General Electric)
4. Bitumen* (Waste Chem and ATI)
5. Chem-Nuclear Cement
6. Concrete (Structural)
7. Delaware Custom Media
8. Dow Media
9. Envirostone
10. LN Technologies Portland Cement Formula for Oils
11. Pacific Nuclear Portland Cement
12. Petroset I and II
13. Safe T Set
14. SEG (Westinghouse - Hittman) Cement
15. Petroset -H
16. Aquaset -H
17. EMC Cement
18. Other solidification media and processes which have been approved by the NRC and/or the department.

*Note: For waste types that require solidification, both oxidized bitumen and straight distilled are acceptable.

"Solidification" means a resultant waste form which is a free-standing solid and primarily relies upon a chemical reaction or encapsulation to contain the liquid. Approved stabilization media may also be used as solidification agents without conducting tests necessary to verify stability, provided the resulting waste form is a free-standing solid.

It is the responsibility of the person processing the waste into a solid form to adhere to a quality control program to verify the waste form is appropriate. If a material can also be used as a sorbent, the restrictions noted for its use in Appendix F shall apply to its use as a solidification agent.

APPENDIX C

APPROVED STABILIZATION MEDIA

License Number: WN-I019-2

Amendment 40

Only approved stabilization media may be used. Approved stabilization media are:

1. Aztech (General Electric)
2. Bitumen* (Waste Chem)
3. Concrete**
4. Dow Media (Vinyl Ester Styrene)
5. Veri Solidification Process
6. Other stabilization media and processes which have been reviewed and approved by the NRC and the department as meeting waste form stability criteria.

*Note: Oxidized Bitumen only.

**Concrete, when used as an encapsulation medium around a small volume of radioactive material; e.g., a sealed source centered in a 55-gallon drum containing concrete, shall have a formulated compressive strength greater than or equal to 2500 psi.

APPENDIX D

CERTIFICATES OF COMPLIANCE FOR HIGH INTEGRITY CONTAINERS

License Number: WN-I019-2

Amendment 40

Only those High Integrity Containers which have been approved by the department and used in accordance with the Certificate of Compliance (C of C) may be used. Approved High Integrity Containers are:

C of C Number	Manufacturer	Package Identification Number
WN-HIC-01	Pacific Nuclear	DSHS-HIC-TMI-01
WN-HIC-02	Nuclear Packaging	DSHS-HIC-EA-50
WN-HIC-03	Chichibu Cement	DSHS-HIC-SFPIC 200L
WN-HIC-04	Chichibu Cement	DSHS-HIC-SFPIC 400L
WN-HIC-05	Nuclear Packaging	DSHS-HIC-EA 142-A
WN-HIC-06	Nuclear Packaging	DSHS-HIC-EA 50-A
WN-HIC-07	Nuclear Packaging	DSHS-HIC-EA 140-A
WN-HIC-08	Nuclear Packaging	DSHS-HIC-EA 190-A
WN-HIC-09	Nuclear Packaging	DSHS-HIC-EA 210-A
WN-HIC-10	Nuclear Packaging	DSHS-HIC-EA 50-C
WN-HIC-11	Nuclear Packaging	DSHS-HIC-EA 140-C
WN-HIC-12	Nuclear Packaging	DSHS-HIC-EA 142-C
WN-HIC-13	Nuclear Packaging	DSS-HIC-EA 190-C

APPENDIX D

CERTIFICATES OF COMPLIANCE FOR HIGH INTEGRITY CONTAINERS

License Number: WN-I019-2

Amendment 40

C of C Number	Manufacturer	Package Identification Number
WN-HIC-14	Nuclear Packaging	DSHS-HIC-EA 210-C
WN-HIC-15	(SEG) LN Technologies	DSHS-HIC-LN 179-H
WN-HIC-16	(SEG) LN Technologies	DSHS-HIC-LN 131-H
WN-HIC-17	(SEG) LN Technologies	DSHS-HIC-LN 118-H
WN-HIC-18	(SEG) LN Technologies	DSHS-HIC-LN 96-H

Other High-Integrity Containers which have been specifically approved by the department.

APPENDIX E

CERTIFICATES OF COMPLIANCE FOR ENGINEERED BARRIERS

License Number: WN-I019-2

Amendment 40

Only those Engineered Barriers approved by the department and/or NRC and used in accordance with the Certificate of Compliance (C of C) may be used. Approved Engineered Barriers are:

C of C Number	Issued To
WN-EB-01	US Ecology Washington, Inc.
WN-EB-02	US Ecology Washington, Inc.

Other Engineered Barriers which have been specifically approved by the department.

APPENDIX F

APPROVED SORBENTS

License Number: WN-I019-2

Amendment 40

Only those absorbents listed below have been approved by the state of Washington, Department of Health, Office of Radiation Protection, (department) for use in packaging and/or processing of incidental or unintentional radioactive liquids in accordance with License Condition 29.

Absorbency efficiencies and quantity of absorbent required vary. In all cases, it is the responsibility of the waste generator and/or packager to determine the efficiency and proper proportions of absorbent for incidental or unintentional liquids being absorbed. Note: Enough absorbent materials must be provided to absorb at least twice the volume of radioactive liquid contents.

Media

A. Clay Materials

1. Speedi Dri
2. Hi Dri
3. Florco
4. Florco X
5. Instant Dri
6. Safe T Sorb
7. Opalex
8. Moltan Plus

B. Diatomaceous Earths

1. Superfine
2. Floor Dry
3. Celetom
4. Safe N Dri
5. Solid-A-Sorb
6. SelectSorb

C. Perlite *

1. Chemsil 30
2. Chemsil 50
3. Chemsil 3030
4. Dicaperl HP2OO
5. Dicaperl HP5OO

D. Others

1. Dicalite Dicasorb
2. Petroset
3. Petroset II
4. Aquaset
5. Aquaset II
6. Safe T Set
7. SP-100
8. SP-400
9. Water Works Large Grain Superabsorbent crystals

* Note: Perlite products shall not be used for packaging animal carcasses.