

REFER TO NMSS/DWMEP FOR RELEASABILITY

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
SAFETY EVALUATION REPORT  
RELATED TO A REQUEST TO REVISE AUTHORITY TO DISPOSE OF  
CONTAMINATED DEMOLITION DEBRIS PURSUANT TO 10 CFR 20.2002  
CONNECTICUT YANKEE ATOMIC POWER COMPANY  
HADDAM NECK PLANT  
DOCKET NO. 50-213

## 1.0 BACKGROUND

CYAPCO has proposed to dispose of 45.5 million kg (100 million lbs) of demolition debris, which includes concrete, concrete reinforcing bar (hereafter "rebar"), some soil, and miscellaneous debris at the US Ecology Idaho Facility. This demolition debris has relatively low levels of residual radioactive material. Soil above the site derived concentration guideline levels (DCGLs) and other debris above the levels justified in this proposal will continue to be disposed as per 10 CFR 20.2001 at a 10 CFR Part 61 licensed waste facility.

The US Ecology Idaho facility is a Subtitle C RCRA hazardous waste disposal facility permitted by the State of Idaho. It is located near Grand View, Idaho in the Owyhee Desert. The current cell, that may receive the CYAPCO material, has a capacity of 1.5 million m<sup>3</sup> (2 million yd<sup>3</sup>). The most important natural site features that limit the transport of radioactive material are the low precipitation rate [i.e., 18.4 cm/y (7.4 in.)] and the long vertical distance to groundwater (i.e., 61-meter (203-ft) thick unsaturated zone below the disposal zone). As is usual with a Subtitle C RCRA site, a number of engineered features are present to enhance confinement of contaminants over the long-term. These include an engineered cover, liners and leachate monitoring systems. Operations at the site include a number of systems that minimize the potential for exposure of workers to any waste handled by the facility. These include a closed facility with filtered ventilation exhaust for transfer of incoming waste material from the shipping conveyance, mechanized equipment for disposition of waste material in the cell, and an application of an asphaltic spray at the end of each day's operations. The site is permitted to receive non-Atomic Energy Act material or exempted radioactive material that meets the permit requirements.

## 2.0 TECHNICAL EVALUATION

### 2.1 SOURCE TERM

As stated in the proposal, "[t]he waste material (the demolition debris) intended for disposal includes flooring materials, concrete, rebar, roofing materials, structural steel, soils associated with digging up foundations, and concrete and/or pavement or other similar solid materials." The material will be disposed after remediation to remove any areas of high contamination. As

the material is demolition debris, it will be in various physical sizes, ranging from the size of sand grains to volumes of several cubic feet. This material will come from portions of the following buildings: (1) containment; (2) auxiliary building; (3) waste disposal building; (4) fuel building; (5) service building; and (6) other miscellaneous structures, soil and asphalt. A total of approximately 45.5 million kg (100 million lbs) is expected to be disposed at the US Ecology Idaho facility. This corresponds to approximately 30,500 m<sup>3</sup> (40,000 yds<sup>3</sup>). For dose calculational purposes, CYAPCO assumed that all the waste would be shipped in one year.

CYAPCO has performed some characterization on a majority of the structures. The proposal contains a description of the potential source term; focusing on the weighted average characteristics of the total disposal. The weighted average concentration of the waste material is shown in Table 1.

Table 1. Average of Radionuclides in 20.2002 Waste

Radionuclide	Weighted Average Concentration (pCi/g)*
H-3	262
C-14	5.53
Mn-54	1.67e-3
Fe-55	0.14
Co-60	0.28
Ni-63	1.69
Sr-90	2.77e-2
Nb-94	1.25e-3
Tc-99	6.49e-3
Ag-108m	2.04e-3
Cs-134	4.89e-3
Cs-137	0.974
Eu-152	5.01e-3
Eu-154	3.81e-3
Eu-155	3.85e-3
Pu-238	3.69e-3
Pu-239	1.23e-3
Pu-241	5.09e-2
Am-241	6.58e-3
Cm-243	1.11e-3

\* To convert to Bq/kg, multiply by 37.

As seen in Table 1, most of the radionuclides are trace concentrations. The staff finds the surrogate approach used by the licensee to be appropriate for the situation and data. The use of the weighted average for estimating dose is reasonable and more realistic than assuming all the waste is at the maximum concentrations.

The maximum allowed concentration in a single shipment will be approximately equivalent to 1.1 Bq/g (30 pCi/g) of Cs-137. The licensee is proposing action levels to limit the radionuclide

concentrations in any single shipment. An action level for intermodal containers was proposed to be a maximum dose rate of 4  $\mu$ R/hr. Based on modeling using Microshield that would be approximately equivalent to 1.1 Bq/g (30 pCi/g) of Cs-137. A more realistic maximum concentration, as it would also include stronger gamma-emitters like Co-60, would be far lower.

## 2.2 SCENARIOS AND PATHWAYS

The licensee evaluated three scenarios for this proposal: (1) transportation worker/driver, (2) disposal facility worker, and (3) resident farmer intrusion scenario. These three scenarios cover the potential release modes for normal operations and the unlikely event of an intrusion after site closure. The intrusion scenario ignores the chemical hazards from intruding on a RCRA disposal facility.

For both the transportation worker/driver and disposal facility worker, the primary exposure pathway is external. The transportation driver is not involved in loading or unloading activities and, therefore, would have minimal potential exposure to inhalation or ingestion hazards. The RCRA site is designed to accept many wastes that are inhalation and ingestion hazards with minimal risk to workers. In the radiation area, the site can receive other naturally occurring radioactive materials (NORM) like uranium and thorium that is not licensed by the Atomic Energy Act. These materials have a much higher potential dose exposure through inhalation and ingestion than the radionuclides in the CYAPCO waste. The handling procedures would be the same for either the NORM or the CYAPCO waste, thereby minimizing the ingestion and inhalation hazard.

The resident farmer intrusion scenario envelopes the range of potential exposures. It includes the external exposure pathways, ingestion of food stuff including meat and milk contaminated by irrigation water, drinking water, and inhalation of soil contaminated by irrigation water. The scenario does not include potential intrusion directly into the waste material. However, due to the depth of final cover and very unlikely situation that the CYAPCO waste would be in the upper waste layer, an intrusion scenario including exposed waste is not considered credible.

The staff finds these scenarios to be adequate and reasonable for the assessments required for compliance with 10 CFR 20.2002.

## 2.3 COMPUTER MODELS

The licensee used a combination of Microshield version 5.01 and RESRAD version 6.21 to analyze the three scenarios. The staff finds the use of the codes to be acceptable and reasonable for the conceptual models assessed for this proposal. The staff notes that the use of RESRAD for the intruder scenario is likely to lead to greatly overestimate dose from the groundwater pathway due to the rather simple conceptual model used in RESRAD as compared to the actual site's likely performance with an engineered cover and a relatively thick unsaturated zone.

## 2.4 PARAMETER SELECTION

The licensee performed deterministic analyses for the compliance calculations. As such, the parameters used were point estimates. For the Microshield calculations, the assumptions were either appropriate (i.e., dimensions of the vehicle) or bounding (i.e., 1000 hours of occupation for the truck driver/site operator). For the RESRAD calculation, the licensee used a combination of site-specific information and default data sets. The use of site-specific information is the preferred approach. However, the use of the RESRAD default deterministic data sets, without adequate justification, is inappropriate, as noted in NUREG-1757, Volume 2.

## 2.5 SENSITIVITY/UNCERTAINTY CALCULATIONS

Since the licensee performed deterministic analyses, the licensee did not supply any sensitivity or uncertainty calculations for review. These are not needed if the deterministic analyses are reasonably bounding.

## 2.6 LICENSEE RESULTS

The licensee calculated the total dose for each scenario from all radionuclides assuming the average concentration was consistent with the survey data average. For the transportation worker/driver scenario, the licensee calculated a dose of less than 0.01 mSv/yr (1 mrem/yr). For the disposal worker, the dose was calculated to be approximately 0.0145 mSv/yr (1.45 mrem/yr). For the residential scenario, the dose was calculated to be approximately 0.017 mSv/yr (1.7 mrem/yr).

For a single truck maximum, the licensee has set the maximum dose rate at 4  $\mu$ R/hr at 1 meter. Assuming an unrealistic bounding scenario where a worker spends half of his or her work year around trucks at the limit (1000 hours) of exposure, this would result in a worker or driver getting 0.04 mSv (4 mrem).

These analyses show that the dose from the proposed action is likely to be negligible and within the NRC policy of approving doses of "a few mrem" for 10 CFR 20.2002 requests.

## 2.7 INDEPENDENT ANALYSES

The staff in its review performed a couple independent analyses of the potential impact from the waste. The first analyses is a probabilistic analyses of the long-term scenario. The second is a comparison using the generic analyses for concrete in NUREG-1640. The results from these analyses allowed (1) the staff to determine that a request of additional information on the data sets used by CYAPCO was not necessary, and (2) provided additional confidence for the staff making the regulatory decision to approve the request.

The first independent analyses used RESRAD version 6.22 in probabilistic mode. Site specific information on the disposal site was used to supplement the probabilistic data set. Correspondingly, the parameter ranges for parameters that had site-specific data were removed from the analysis. The results of the analysis is a dose of 0.019 mSv/yr (1.9 mrem/yr) with a standard deviation of 0.01 mSv/yr (1 mrem/yr). The majority of the dose is caused by the C-14 in the waste. Based on past experience with more complex models of disposal cell performance, it is very likely that the RESRAD code is grossly overestimating the release from waste cells to the groundwater. As the difference between the licensee's analysis and the

staff's analysis is small, no additional information or justification of parameters was considered warranted.

NUREG-1640, "Radiological Assessments for Clearance of Materials from Nuclear Facilities," is a good reference material of generic assessments of potential doses from disposing of low levels of radioactive materials. For this proposal, the staff used the dose coefficients in Appendix I. The resulting total doses for each scenario resulted a dose that was a small fraction of 0.01 mSv/y (1 mrem/y).

### 3.0 CONCLUSIONS

The staff's review finds the dose assessment for the licensee's proposal to be adequate and reasonable to demonstrate that the dose will be below the NRC policy limit of "a few mrem." The licensee used appropriate scenarios and computer models. The licensee used appropriate site-specific information. While the licensee failed to justify the generic parameters used in the models, independent staff analysis found the impact of these parameters to be small. As the licensee has used a dose assessment approach using characterization data to estimate the doses, the licensee should keep adequate records, including any additional survey data collected on areas before demolition, to verify the average concentrations. In addition, the licensee has committed to an upper limit on the gamma dose rate from individual trucks.

Further, in accordance with the provisions of 10 CFR 30.11, and 70.17, "the Commission may, upon application by an interested person or upon its own initiative, grant such exemptions from the requirements of the regulations. . . as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest." Based on the above analyses, this material authorized for disposal poses no danger to public health and safety, does not involve information or activities that could potentially impact the common defense and security of the United States, and it is in the public interest to dispose of wastes in a controlled environment such as that provided by the licensed, state-regulated landfills. Therefore, to the extent that this material authorized for disposal in this 20.2002 authorization is otherwise licensable, the staff concludes that the material is exempt from further Atomic Energy Act (AEA) and NRC licensing requirements.

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\*See previous concurrence

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**NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-213]**

**Environmental Assessment and Finding of No Significant Impact  
Related to Exemption of Material in Accordance with 10 CFR 20.2002 for Proposed  
Disposal Procedures for the Connecticut Yankee Atomic Power Company  
License DPR-061, East Hampton, Connecticut**

**AGENCY:** Nuclear Regulatory Commission

**ACTION:** Environmental Assessment and Finding of No Significant Impact

**FOR FURTHER INFORMATION CONTACT:** Theodore Smith, Division of Waste Management and Environmental Protection, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Mail Stop T7E18, Washington, DC 20555-00001. Telephone: (301) 415-6721; email [tbs1@nrc.gov](mailto:tbs1@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The U.S. Nuclear Regulatory Commission (NRC) staff is considering a September 16, 2004, request by the Connecticut Yankee Atomic Power Company (CYAPCO or Licensee), License DPR-61, to dispose of demolition debris from decommissioning of the Haddam Neck Plant (HNP) in East Hampton, Connecticut. The request for approval is submitted pursuant to Section 20.2002 of Title 10 of the Code of Federal Regulations (10 CFR 20.2002), "Method of Obtaining Approval of Proposed Disposal Procedures." The licensee proposes to demonstrate that the material is acceptable for burial at a Subtitle C Resources Conservation and Recovery Act (RCRA) hazardous waste disposal facility in accordance with 10 CFR 20.2002. The RCRA facility is regulated by the State of Idaho Department of Environmental Quality, and any disposal must comply with State requirements. This proposed action would also exempt the

low-contaminated material if authorized for disposal from further Atomic Energy Act (AEA) and NRC licensing requirements. The NRC has prepared an Environmental Assessment (EA) in support of this proposed action in accordance with the requirements of 10 CFR Part 51. Based upon the EA, the NRC has determined that a Finding of No Significant Impact (FONSI) is appropriate.

## **II. Environmental Assessment**

### **Background:**

The waste material (the demolition debris) intended for disposal includes flooring materials, concrete, rebar, roofing materials, structural steel, soils associated with digging up foundations, and concrete and/or pavement or other similar solid materials. Soils remediated for the purpose of meeting the final status survey requirements of the HNP License Termination Plan (LTP) (i.e., exceed the Derived Concentration Guideline Levels (DCGL) in the LTP) are not included in this action. CYAPCO intends to scabble off surface concrete where contamination or activation levels are high and to dispose of this material at other radioactive waste disposal facilities. The demolition debris will originate from the destruction and removal of structures and paved surfaces at the HNP plant site, after the structure/surface has been decontaminated to remove areas that are highly contaminated. The underlying soil will be surveyed in accordance with CYAPCOs LTP.

The physical form of this demolition debris will be that of bulk material of various sizes ranging from the size of sand grains up to occasional monoliths with a volume of several cubic feet. The material will be dry solid waste containing no absorbents or chelating agents. It is estimated that the mass of demolition debris originating from the decommissioning of the HNP will total approximately 45,000 metric tons (50,000 tons). After compaction, the estimated



volume of material to be disposed of is approximately 30,500 cubic meters (40,000 cubic yards).

The licensee has demonstrated by calculation that the potential dose consequence is less than 17 microsieverts per year ( $\mu\text{Sv/y}$ ) (1.7 millirem per year [mrem/y]), as a result of the proposed burial demolition debris in a RCRA facility.

Proposed Action:

The proposed action would approve the removal of approximately 45,000 metric tons (50,000 tons) of demolition debris from the HNP, in East Hampton, Connecticut, transportation of the debris and disposition at the US Ecology facility in Grand View, Idaho. The proposed action also would exempt the low-contamination material from further Atomic Energy Act and NRC licensing requirements. The licensee has conservatively assumed a radionuclide inventory for the demolition debris and calculated the potential dose as less than 17 microsieverts per year ( $\mu\text{Sv/y}$ ) (1.7 millirem per year [mrem/y]), if all the material were disposed of in such a facility. The proposed action is in accordance with the licensee's application dated September 16, 2004, and supplements dated December 17, 2004 and March 1, 2005, requesting approval.

Need for Proposed Action:

The licensee needs to dispose of 45,000 metric tons (50,000 tons) of demolition debris since the HNP site is currently undergoing licensed decontamination and decommissioning in accordance with their License Termination Plan. Characterization and conservative modeling of the material to be included as demolition debris have been used to develop overall averages for radionuclide concentrations. These averages are listed below in table 1. The licensee proposes to dispose 45,000 metric tons (50,000 tons) of demolition debris at US Ecology,

Idaho, which is a Subtitle C RCRA hazardous waste disposal facility. This proposed action, would also require NRC to exempt the low-contaminated material authorized for disposal from further Atomic Energy Act (AEA) and NRC licensing requirements.

**Table 1. Overall Radionuclide Concentrations**

<b>Radionuclide</b>	<b>Average Concentration In Becquerel per gram (Bq/g)</b>	<b>Average Concentration In picoCuries per gram (pCi/g)</b>
H-3	9.69e+00	2.62e+02
C-14	2.05e+00	5.53e+00
Mn-54	6.29e-05	1.70e-03
Fe-55	5.18e-03	1.40e-01
Co-60	1.04e-02	2.80e-01
Ni-63	6.25e-02	1.69e+00
Sr-90	1.11e-03	3.00e-02
Nb-94	4.81e-05	1.30e-03
Tc-99	2.41e-04	6.50e-03
Ag-108m	7.40e-05	2.00e-03
Cs-134	1.81e-04	4.90e-03
Cs-137	3.59e-02	9.70e-01
Eu-152	1.85e-04	5.01e-03
Eu-154	1.41e-04	3.81e-03
Eu-155	1.42e-04	3.85e-03
Pu-238	1.37e-04	3.70e-03
Pu-239	4.44e-05	1.20e-03
Pu-241	1.89e-03	5.10e-02
Am-241	2.44e-04	6.60e-03
Cm-243	4.07e-05	1.10e-03

Alternatives to the Proposed Action:

Alternatives to the proposed action include: (1) no action alternative, (2) decontamination of the buildings and structures before demolition, or of the debris, (3) decontaminating and conducting final status surveys of the buildings (4) handling demolition debris as low-level radioactive waste and shipping them to a low-level waste facility. CYAPCO has determined that disposal for these demolition wastes in a Subtitle C RCRA hazardous waste disposal facility is less costly than alternatives 2, 3 and 4. Disposal of the demolition debris in the manner proposed is protective of the health and safety, and is the most cost-effective alternative.

Environmental Impacts of the Proposed Action:

The 45,000 metric tons (50,000 tons) of demolition debris will come from the HNP containment building, residual heat exchanger facility, the waste disposal building, the auxiliary building, the spent fuel pool and building, the service building and facility soils asphalt and other small structures. The HNP is located in the Town of Haddam, Middlesex County, Connecticut, on the east bank of the Connecticut River at a point 21 miles south-southeast of Hartford, Connecticut and 25 miles northeast of New Haven, Connecticut. The reactor was permanently shutdown on December 5, 1996, and the site is currently undergoing active decommissioning. The current site is approximately 430 acres. The distance between the HNP and US Ecology, Idaho, is approximately 2,500 miles. The driving time would be approximately 50 hours (assuming average speed of 50 miles per hour).

The NRC has completed its evaluation of the proposed action and concludes there are no significant radiological environmental impacts associated with the disposal of 45,000 metric tons (50,000 tons) of demolition debris to US Ecology, Idaho, which is a Subtitle C RCRA hazardous waste disposal facility. The licensee's analysis used conservative estimates of the average radionuclide concentrations based on ongoing site characterization. The licensee

analyzed the dose to a transport driver, loader, disposal facility worker, and long-term impacts to a resident. Each of the analyses conservatively estimated the exposure to less than 1.5 mrem total dose per year. The proposed action will not significantly increase the probability or consequences of accidents and there is no significant increase in occupational or public radiation exposures.

With regard to potential non-radiological impacts, the HNP is considered to be a potentially historically significant site. Potential impacts from site decommissioning and dismantlement were previously considered as part of the HNP license termination plan review. Site decommissioning is being conducted in accordance with mitigation measures established by the State Historical Preservation Office, which included documentation of HNP facility in accordance with the professional standards of the National Park Service's Historic American Engineering Record. There is no additional impacts to historic archaeological resources imposed by alternate disposal location for demolition debris.

The disposal of demolition debris does not affect non-radiological plant effluents. There may be a slight decrease in air quality and slight increase in noise impacts during the loading and transportation the demolition debris. However, there are no expected adverse impacts to air quality as a result of the loading and transportation of the demolition debris.

CYAPCO estimates that transportation of the demolition debris will require between 2,500 - 3,000 truck shipments. CYACPO is engaging the local community and government officials for awareness and coordination of the shipping activities in the area immediately surrounding the HNP. There is no anticipated overall impact from the alternate disposal as the shipping effort represents a small fraction of the national commercial freight activity. The total tonnage to be shipped represents 0.0005 % of the total U.S. annual commercial freight trucking activity (based on 2002 data). Similarly, the total ton-miles for the alternate disposal represents 0.0087% of the total U.S. annual commercial freight trucking activity in the same time period. Additionally, these activities will be short in duration and minimal as compared to other activities

at the HNP. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

The proposed action and attendant exemption of the material from further AEA and NRC licensing requirements will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no-action" alternative). The implications from the no-action alternative is that the demolition debris would remain on site until disposition sometime in the future. The impacts would therefore be limited to the site, and there would be no transportation impacts and no disposal considerations or impacts until sometime in the future.

Two of the alternatives to the proposed action would be to decontaminate the buildings and structures prior to demolition or final status survey. The environmental impacts as a result of this alternative would decrease air quality, and increase the noise and water usage, as necessary, during the decontamination process. Additionally, there would be an increase in occupational exposure as a result of the decontamination process.

Disposing of the demolition debris in a low-level waste disposal facility is another alternative to the proposed action. This alternative has similar environmental impacts as the proposed action.

Agencies and Persons Consulted:

This EA was prepared by Theodore B. Smith, M.S., Environmental Engineer, Decommissioning Directorate, Division of Waste Management and Environmental Protection (DWMEP). NRC staff determined that the proposed action is not a major decommissioning activity and will not affect listed or proposed endangered species, nor critical habitat. Therefore, no further

consultation is required under Section 7 of the Endangered Species Act. Likewise, NRC staff determined that the proposed action is not the type of activity that has the potential to cause previously unconsidered effects on historic properties, as consultation for site decommissioning has been conducted previously. There are no additional impacts to historic properties associated with the disposal method and location for demolition debris. Therefore, no consultation is required under Section 106 of the National Historic Preservation Act. The NRC provided a draft of its Environmental Assessment (EA) to the following individuals:

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The State of Connecticut wanted to know the basis for the conclusion that impacts to air quality and noise were minimal, and expressed concern about operation of diesel fuel truck in the state, since the state is in non-attainment for ozone pollution.

NRC staff considered the states comment, and provides the following clarifying information:

Transportation impacts for decommissioning nuclear facilities were considered in NUREG-0586, Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities, Supplement 1, dated November 2002, and determined to be not significant.

The 2500-3000 shipments scheduled to occur is a very small fraction of the total number of operating diesel vehicles in the state of Connecticut. Ninety-nine percent of Connecticut school buses run on diesel. Discounting the approximately 360 buses which have had some form of emission reducing equipment retrofit, this still represents 5,680 buses a day for nine months a year. This figure does not include city mass transit systems or other commercial shipping. The operation of unmodified diesel engine school buses in the State of Connecticut represents over one million vehicle days of operation annually. The proposed CY action represents 0.27 % of the unmodified diesel school bus traffic in a year in the State of Connecticut, and is therefore not considered significant.

Further, for the "moderate" non-attainment classification of the Haddam Neck and surrounding area, EPA has established an attainment date of June 2010. Due to the relatively quick breakdown of the ozone affecting chemicals compounds in diesel exhaust, the proposed shipping campaign will have no impact on ozone attainment in Connecticut in 2010.

On February 14, 2005 several comments were received from the State of Idaho Department of Environmental Quality. In response to Idaho's comments and requests, statements have been added to the Introduction to clarify that waste disposal at the US Ecology RCRA C facility must comply with their state issued RCRA C permit, and to identify the proposed exemptions in the Need for Proposed Action section.

Idaho also requested NRC to identify the exemption criteria, and to identify when and where the exemption takes effect. This information is included in the Safety Evaluation Report.

Idaho requested NRC to clarify how the proposed action relates to regulation of transuranic elements in waste from NRC-licensed facilities. There are five transuranic radionuclides identified in CYAPCO's proposal; three isotopes of plutonium, americium-241,

and curium-243. The plutonium isotopes are considered special nuclear material, subject to 10 CFR 70, while the americium and curium isotopes are byproduct materials subject to 10 CFR 30. As such, all the transuranic materials in the proposed action would be subject to specific exemption under either 10 CFR 30.11 or 10 CFR 70.17.

Idaho requested NRC staff to identify to what extent NRC's evaluation relied upon US Ecology's current performance assessment, waste acceptance criteria and verification, health and safety plan, post-closure requirements, radiation monitoring, and waste handling procedures. NRC staff's dose assessment relied only upon general RCRA facility operating practices and did not require detailed information about US Ecology's facility as part of our analysis.

Finally, the US Ecology site currently accepts other non-NRC licensed radiological material, in accordance with their acceptance criteria. Idaho identified that if NRC determines that the CYAPCO decommissioning waste is exempt from its regulation, Idaho would have to assess the cumulative effects of this additional waste stream, and evaluate regulatory and permitting changes that may apply to US Ecology's RCRA license.

State licensing requirements notwithstanding, NRC staff have concluded that since the conservatively modeled dose contribution from demolition debris post-burial is small (less than 20  $\mu\text{Sv/y}$  (2.0 mrem/y)), it would not constitute a significant increase in the cumulative dose at a RCRA C or other facility.

### **III. Finding of No Significant Impact**

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

Sources Used:



-US NRC Power Reactor License: Connecticut Yankee Atomic Power Company

Docket Number 050-00213, License Number DPR-61.

-Connecticut Yankee Atomic Power Company letter CY-04-168, dated September 16, 2004, Request for Approval of Proposed Procedures in Accordance with 10 CFR 20.2002 for alternate disposal at the US Ecology Hazardous Waste Treatment and Disposal Facility in Idaho. (ML042800489).

-Connecticut Yankee Atomic Power Company letter CY-04-252, dated December 17, 2004, Supplemental Information. (ML043570446).

- Connecticut Yankee Atomic Power Company letter CY-05-057, dated March 1, 2005, Supplemental Information. (ML050680216).

-NRC Safety Evaluation Report of Code of Federal Regulation (10 CFR) Part 20.2002 Request by Connecticut Yankee Atomic Power Company. (ML05xxxxxx).

-NRC 10 CFR 20.2002, "Method of Obtaining Approval of Proposed Disposal Procedures"

-NUREG-1640, "Radiological Assessment for Clearance of Materials from Nuclear Facilities."

-NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs."

-US DOT, Bureau of Transportation Statistics, "Transportation Statistics Annual Report", September 2004.

-US DOT, Bureau of Transportation Statistics, "Freight Shipments in America", April 2004.

-US EPA Health Assessment Document for Diesel Engine Exhaust.

-US EPA Designation for 8-Hour Nonattainment Areas in New England Questions and Answers.

-Connecticut Department of Environmental Protection Diesel Risk Reduction Strategies.

-Evaluation of Test Data Collected in 2001 and 2002 from Connecticut's Inspection/Maintenance Program, July 2004.

-NUREG -0586, Supplement 1, Generic Environmental Impact Statement of Decommissioning of Nuclear Facilities, November 2002.

-State of Idaho Department of Environmental Quality letter dated February 7, 2005

#### **IV. Further Information**

For further details with respect to the proposed action, see the licensee's letter dated September 16, 2004 (ADAMS Accession No. ML042800489). As of October 25, 2004, the NRC initiated an additional security review of publicly available documents to ensure that potentially sensitive information is removed from the ADAMS database accessible through the NRC's web site. Interested members of the public may obtain copies of the referenced documents for review and/or copying by contacting the Public Document Room pending resumption of public access to ADAMS. The NRC Public Documents Room is located at NRC Headquarters in Rockville, MD, and can be contacted at (800) 397-4209. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System's (ADAMS) Public Library component on the NRC Web site, <http://www.nrc.gov> (the Public Electronic Reading Room). Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR Reference staff by telephone at 1-800-397-4209, or 301-415-4737, or by e-mail at [pdr@nrc.gov](mailto:pdr@nrc.gov).

Dated at Rockville, Maryland, this      <sup>th</sup> day of March, 2005.

**FOR THE NUCLEAR REGULATORY COMMISSION**

**Daniel M. Gillen, Deputy Director  
Division of Waste Management and  
Environmental Protection  
Office of Nuclear Material Safety  
and Safeguards**