20333

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
Before the
ATOMIC SAFETY AND LICENSING BOARD

Administrative Judges:
Charles Bechhoefer, Chariman
Dr. Thomas S. Ellman
Thomas D. Murphy

In the Matter of YANKEE ATOMIC ELECTRIC COMPANY (Yankee Nuclear Power Station) License Termination Plan	Docket No. 50-029-LA ASLBP No. 99-754-01-LA-R

CITIZENS AWARENESS NETWORK'S [CAN's] FIRST SET OF .NTERROGATORIES AND REQUESTS TO PRODUCE SERVED UPON YANKEE ATOMIC ELECTRIC COMPANY

I. GENERAL INSTRUCTIONS.

CAN, with two substitutions, hereby incorporates and republishes to Yankee Atomic Electric Company the General Instructions New England Coalition published to Yankee Atomic Electric Company in New England Coalition's First Set of Interrogatories and Requests to Produce Served Upon Yankee Atomic Electric Company. CAN's substitutions for the incorporated and republished matter are: (1) "Citizens Awareness Network" or "CAN" replaces "New England Coalition on Nuclear Pollution" or "NECNP" wherever mentioned in the instructions, and (2) that, for each round of discovery, a set of answers and documents, be provided to the following person (Dr. Resnikoff, assisting CAN on an as-needed basis, will get a set under NECNP's filing):

D503

Deborah B. Katz
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II. CAN'S FIRST SET OF INTERROGATORIES.[1]

CANY1-I-1 Before site release to the general public Yankee may take or may have taken one or more of a number of actions that will disturb the subsurface soil, e.g., tearing up paved areas, demolishing buildings, excavating, building additional roads, altering drainage, and/or creating additional structures. Please identify any and all persons YAEC has employed, employs, has contracted with, or contracts with, who have knowledge of these matters and the possible ramifications in relation to subsurface radioactivity and the potential for disturbance or release of same. In particular, please be sure to identify any and all persons who analyzed how the disturbance of radioactivity in subsurface soil could precipitate the migration of subsurface contamination if material is disturbed, moved to another location, uncovered to rain, wind, and other forces of weather, and/or displaced in the course of undertaking any of the activities YAEC has pursued or will pursue to the end of achieving license termination and an approved final site survey.

[1] Not having asked a full complement of interrogatories and requests to produce in this filing, CAN reserves the right to ask four additional interrogatories and eighteen additional requests to produce in addition to the customary twenty/twenty set in its next set of discovery requests.

Please identify and summarize any and all documents and/or communications that were consulted, created in relation to or otherwise used in regard to any such analysis. Identify any and all companies and persons contracted to carry out earth moving projects. Also, please separately identify any and all persons YAEC has employed, employs, has contracted with, or contracts with who have decided or will decide if actions be taken that will disturb subsurface soil. Particularly, identify any and all persons who are responsible for providing information to and/or advising the decisionmaker(s) in this regard, and identify and summarize any and all documents and/or communications related to or containing this information and/or advice.

CANY1-I-2 Please identify all documented and undocumented shipments of materials contaminated with radioactivity, or whose radioactive isotope content is or was unknown, from Yankee Rowe to any location, or moved to a location on-site. This list should include, but not be limited to, the radioisotope content of each shipment, if known, date of shipment, destination of the shipment, and date of arrival of the shipment. If any such material was shipped or removed to local landfills (on-site or off-site) or to any location other than to a facility specifically and primarily licensed to receive radioactive materials, please separately provide the same information. Please identify any and all persons involved in any and all parts of the process of identifying, packaging, moving and

disposing of such radioactive waste or materials whose radioactive isotope is or was unknown, both on or off-site. Identify separately any and all persons who may have had responsibility for overseeing the handling and or disposal of materials contaminated with radioactivity, or whose radioisotope content is or was unknown, between the years 1962 and 1982. Identify separately any and all persons who may have had occasion to be directly responsible for handling and/or disposing of materials contaminated with radioactivity, or whose radioisotope content is or was unknown, between the years 1962 and 1982.

CANY1-I-3 Please identify any and all persons, including those employed by the Nuclear Regulatory Commission (NRC), consulted or otherwise involved in creating the methodologies that have been or will be used in calculating the 15 mrem/year total effective dose equivalent (TEDE) in the License Termination Plan (LTP) and Final Status Survey Plan (FSSP), including relating "As Low As Reasonably Achievable" (ALARA) calculations, and any and all documents and/or communications consulted or created in connection with this matter. Please identify any and all persons, including those who may be employed by NRC, involved in making the decision to include the 15 mrem/yr. TEDE in the LTP and FSSP, and any and all documents and/or communications consulted or created in this regard. Please identify any and all persons consulted with or otherwise involved in establishing the

scenario that Yankee included in the LTP and FSSP to be used in calculating TEDE doses, including any and all relating ALARA calculations, and any and all documents and/or communications consulted or created in this matter. Please identify and summarize any and all documents and/or communications relating to the decision to include in the LTP and FSSP the 15 mrem/yr. TEDE and scenario, including any documents and/or communications relating to doses and scenarios, and any combination thereof that were ultimately not included in the LTP and FSSP.

CANY1-I-4 Please identify and summarize any and all documents and/or communications regarding forms of regulatory relief or exemptions that YAEC may have requested and/or received regarding the on-site release or disposal of actually or potentially radioactive materials, any and all regulatory relief and/or exemptions regarding TEDE criteria release values, and/or regarding the critical population to which the TEDE will be applied, and any requested and/or received exemption and/or relief regarding acceptable levels of residual radiation following license termination.

CANY1-I-5 For over a decade, Yankee Rowe used fuel with stainless-steel cladding. This fuel cladding has a history of problems, including hydriding and cladding defects, which led to contamination of the fuel pool and reactor coolant. At other reactors with degraded fuel cladding, such as San Onofre and Connecticut Yankee,

microscopic fuel fragments or "fuel fleas" were released to the reactor coolant and fuel pool, and led to serious occupational exposure problems. Please identify and summarize any and all documents and/or communications that would have been used or consulted by persons YAEC employs (or employed) and contracts with (or contracted with) to alert them to the possibility that problems relating to "fuel fleas", failed fuel and/or the deterioration of stainless steel fuel cladding may have occurred. Please identify any and all persons YAEC employs (or employed) and contracts with (or contracted with) who may have knowledge of "fuel fleas", failed fuel and/or the deterioration of stainless steel fuel cladding, and/or any other possible sources of contamination of the site by hot particles that may have occurred.. Also please identify any and all persons with knowledge of any resulting attempt to take remedial action. In particular concerning such persons, please be sure to indicate how each person was or is consulted or otherwise involved in the course of preparing the LTP and FSSP, indicating the nature of each such persons involvement and a summary of his or her opinions concerning the effects that failed fuel, "fuel fleas" and/or the deterioration of stainless steel fuel cladding may have had on the contamination of the site by alpha emitters and hot particles. Please identify and summarize any and all documents and/or communications which discuss the problem and detection of "fuel fleas", failed fuel, and/or the deterioration of stainless steel cladding at Yankee Rowe, and the

remediation thereof, including any assays taken of the extent of the contamination, any and all documents and/or communications which discuss the existence and/or concentrations of "fuel fleas" or other hot particles in reactor coolant and spent fuel pool water, and the remediation thereof, and any and all documents and/or communications which detail the measurement of gross alpha, gross beta/gamma and individual radionuclides in air filters, air monitors and wipes for removable contamination.

CANY1-I-6 Please identify and summarize any and all documents and/or communications relating to the methodology Yankee uses or will use to decide in what circumstances and locations subsurface soil has been or will be tested for radioactive contamination below 300 mm from the surface, including areas that were or are covered by asphalt. Please identify and summarize any and all documents and/or communications relating to the methodology used to determine at which locations soil borings are made. Please identify and summarize any and all documents which show subsurface radiation levels on site, including but not limited to those that show subsurface radiation levels changing with depth. Please identify any and all EPA or other (please specify) approved laboratory procedures YAEC uses to determine gross alpha, gross beta/gamma, alpha spec, gamma spec and individual radionuclide measurements. Additionally, please identify and summarize any and all documents and/or communications consulted, created, or

otherwise relating to the rejection of other methodologies that YAEC chose not to use to determine in which situations subsurface soil would be tested and/or analyzed.

CANY1-I-7 Please identify and summarize any and all documents and/or communications consulted, created or otherwise relating to the methodology used to determine the levels and identity of alpha emitting isotopes and other hot particles in groundwater. Please also identify and summarize any and all documents and/or communications and/or other materials consulted, created, or otherwise used to inform the rejection of other methodologies that could have been used to determine the quantity and identity of alpha emitting isotopes and other hot particles in groundwater.

CANY1-I-8 Please identify and summarize any and all documents and/or communications used or consulted to establish the methodology used to determine whether sufficient information existed to make an accurate assessment of radionuclide distributions, including the distribution of possible alpha emitting isotopes, in relation to assigning areas of land into specific survey areas. Please identify and summarize any and all documents and/or communications consulted, created in relation to or otherwise relating to the methodology that will be used to determine if new radionuclide distribution data is more appropriate for use in determining area guideline values. Please also identify and summarize any and all

documents and/or communications consulted, created in regard to or otherwise relating to the rejection of other possible methodologies that could have been used to determine if new radionuclide distribution data is more appropriate for use in determining area guideline values. Please also identify and summarize any and all documents and/or communications, including but not limited to maps, which identify areas for which the radionuclide distributions, including the possible distribution of alpha emitting isotopes, have not been determined.

CANY1-I-9 Please identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to the methodology that has been or will be used to select which storm drain catchements, and underground structures will be surveyed for radionuclide distribution, including the distribution of alpha emitting isotopes.

CANY1-I-10 Please identify any and all persons involved in formulating the LTP and FSSP methodology to differentiate surface and subsurface naturally occurring background radiation from surface and subsurface radioactive contamination produced in the course of operating the Yankee Nuclear Power Station (YNPS) and contamination resulting from bomb testing, and any documents and/or communications consulted or created by such persons in this regard. Be sure to plainly indicate which parts of the LTP and

FSSP each person was consulted or involved in producing. In addition, as the methodology used in the LTP and FSSP fails to adequately map, chart, or differentiate any on-site land burial of radioactive contamination from other forms of contamination that occurred during the operational life of YNPS (e.g. leaks, spills. etc.), to the extent that YAEC's employees and/or contractors made any efforts to chart, map, or differentiate the various forms of surface and subsurface contamination, please identify all persons involved in such considerations, and any and all documents and/or communications consulted or created by such persons in this regard. If any such persons were involved in preparing the LTP and FSSP please indicate which portions each listed person was involved in producing.

CANY1-I-11 During the mid 1960's, the ion exchange pit leaked contaminates. This leakage contributed to high levels of tritium in Sherman Pond and Sherman Spring, among other areas, and in three on-site monitoring wells. Please identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to the: (a) gross alpha and gross beta/gamma concentrations, and individual radionuclide concentrations, in monitoring wells, (b) the gross alpha and gross beta/gamma concentrations, and individual radionuclide concentrations in the

ion exchange leachate, (c) the migratory path, and/or plume, of each radionuclide, and (d) the total inventory of radionuclides which have (or are suspected to have) leaked, including, but not limited to, tritium and alpha emitters, from all sources, including the ion exchange pit, spent fuel pool and/or sanitary sewer. Please also identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to any remediation efforts that may have been or will be attempted. If remediation has not been or will not be attempted, please identify and summarize any and all documents and/or communications consulted, created in regard to, or otherwise relating to that decision. Please identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to how YAEC took this information into account in establishing LTP and FSSP methodologies to assure that the health and safety of the public will be protected from alpha emitters and other subsurface and surface radiation contamination.

CANY1-I-12 Please identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to the methodologies used to establish ALARA doses for each of the following: (a) exposure due to alpha emitting isotopes, (b) exposure due to background radioactivity, (c) exposure due to surface contamination, and, (d) exposure due to subsoil contamination. Please also identify and summarize any and all

documents and/or communications consulted, created in regard to or otherwise relating to the methodology used to incorporate ALARA considerations into the 15 mrem/year TEDE and the release scenario YAEC uses in the LTP and FSSP. Please identify and summarize any and all documents and/or communications used in the consideration and rejection of alternatives to each of the methodologies YAEC has chosen to include in this regard.

NY1-I-13 Please identify and summarize any and all documents and/or communications, including but not limited to, historical records, previous surveys, interviews with plant personnel, Radiological Monitoring Program data, and aerial photos, used in YAEC's scoping survey(s) to date. Include documentation of the methodology used to establish the location and positioning of equipment used in the determination of naturally occurring background levels of radiation, (including, but not limited to, equipment used as part of the Radiological Environmental Monitoring Program). Please identify and summarize any and all additional documents and/or communications, including but not limited to, historical records, previous surveys, interviews with plant personnel, Radiological Monitoring Program data, and aerial photos, that YAEC and/or its contractors intend to use in any future scoping survey(s).

CANY1-I-14 Please identify and summarize any and all documents and/or communications which were consulted, created in regards to or are otherwise related to the existence or creation of any methodology established for the discovery and analysis of alpha-emitting isotopes that may have been released as a result of any and all decommissioning activities, including activities involved in the Early Component Removal Program. Please also identify and summarize any and all documents relating to any remediation of such contamination.

CANY1-I-15 Please identify any and all persons, including those employed by NRC, consulted with or otherwise involved in creating the methodology for determining the "average member of the critical population" used in the LTP and FSSP. Please identify and summarize any and all documents and/or communications consulted or created by such persons in this regard. Please identify any and all persons, including those employed by NRC, consulted with or otherwise involved in creating the methodology for defining the scenario in which the "average member of the critical population" is situated in the LTP and FSSP. Please identify and summarize any and all documents and/or communications which were consulted or created by such persons in this regard or otherwise relate to this matter. Please also identify and summarize any and all documents and/or communications consulted and/or

created by such persons in the establishment of methodology to consider exposure pathways that an "average member of the critical population" might be effected by when placed in the scenario YAEC chose to include in the LTP and FSSP. Please identify and summarize any and all documents and/or communications relating to exposure pathways that were considered, but ultimately not included in the methodologies of the LTP and FSSP.

CANY1-I-16 Please identify and summarize any and all documents and/or communications consulted, created in regard to or otherwise relating to any methodology YAEC has used or intends to use to ensure that measurements used to establish off-site background radiation levels in locations that it characterizes as not affected by the operation or decommissioning of the Yankee Rowe reactor will not include as background any contamination resulting from the operation of the Yankee Vernon reactor, located across the Massachusetts border.

III. CAN'S FIRST SET OF REQUESTS TO PRODUCE DOCUMENTS.

CANY1-kP-1 Please produce all documents and/or communications identified in answer to CAN's first set of interrogatories.

CANY1-RP-2 Provide a map of the site, showing any and all on-site areas YAEC characterizes as unaffected by licensed operations, and providing background radiation, for both surface and subsurface, levels at showing any and all on-site areas YAEC characterizes are affected each of those areas, if known. For comparison, provide a map, by licensed operations, and provide radiation levels, for both surface and subsurface, at these areas, if known. Also for comparison, provide a map showing several off-site areas several miles from the site that YAEC characterizes as unaffected by licensed operations, and provide background radiation levels, for both surface and subsurface, at these off-site areas as well.

Respectfully submitted.

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DATED: April 30, 1999

cc: Service List

Certificate of Service

I, Deborah B. Katz, *pro-se* representative for Citizens Awareness Network [CAN], do hereby certify that on April 30, 1999, I served the within discovery requests by First Class mail as follows:

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