



CONNECTICUT YANKEE ATOMIC POWER COMPANY

HADDAM NECK PLANT
362 INJUN HOLLOW ROAD • EAST HAMPTON, CT 06424-3099

MAR - 1 2005

CY-05-057

Docket No. 50-213

RE: 10 CFR 20.2002

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D C 20555

Haddam Neck Plant
Supplemental Information
Request for Approval of Proposed Procedures
in Accordance with 10 CFR 20.2002

In a letter dated September 16, 2004¹, Connecticut Yankee Atomic Power Company (CYAPCO) proposed to transfer certain of its solid waste from decommissioning of the Haddam Neck Plant (HNP) facilities (e.g., structures and buildings) to a disposal facility. Specifically, CYAPCO proposed to dispose of demolition debris from decommissioning of the HNP facilities to the US Ecology Idaho Facility, located in Grand View, Idaho.

CYAPCO has performed a conservative radiological assessment of the demolition debris material and determined that the potential dose to workers involved in the transportation and placement of the waste at the site and to members of the public after closure of the facility will be no more than a few millirem per year Total Effective Dose Equivalent (TEDE) and a small fraction of NRC limits for exposure to members of the public of 25 millirem/yr TEDE. This assessment was provided to the NRC by letter dated September 16, 2004.¹

By letter dated December 17, 2004², provided an on-site survey limit for the disposition of waste in Intermodal-type containers that can be shipped to US Ecology Idaho disposal site.

¹ G. H. Bouchard (CYAPCO) letter to the US NRC Document Control Desk, dated September 16, 2004, "Request for Approval of Proposed Procedures in accordance with 10 CFR 20.2002", CY-04-168.

² G. van Noordennen (CYAPCO) letter to the US NRC Document Control Desk, dated December 17, 2004 "Supplemental Information Request for Approval of Proposed Procedures in Accordance with 10 CFR 20.2002", CY-04-252.

HMSSD/

The purpose of this letter is to provide supplemental information requested by the NRC Staff in a teleconference with CYAPCO on February 22, 2005.

The above mentioned information requested by the NRC staff is in two subject areas:

1. Additional characterization information was not available for inclusion in the original submittal of this request.
2. On-site survey limits for various shipping containers other than the Intermodal-type which CYAPCO intends to utilize to ship waste to the US Ecology Idaho site.

These information needs are addressed as follows:

Characterization Information:

The original submittal of this request provided a significant amount of characterization information for most of the areas that will generate building debris to be shipped to US Ecology Idaho. The two areas for which characterization information was limited were the Containment Building walls and floors inside the containment liner and the Spent Fuel Building.

Containment Building Internal Walls and Floors:

The characterization data in the original submittal was considered limited only for the radionuclides H-3 and C-14. The contamination mechanism for these radionuclides was suspected of being gaseous diffusion into the concrete rather than due to leakage of contaminated liquids which is the mechanism for the other radionuclides of interest. For the radionuclides other than H-3 and C-14, using the floor concentrations for both the walls and floors (which was done in the original submittal) was felt to be very conservative as the wall contamination levels are normally much lower than the floor concentrations.

To increase the understanding of the H-3 and C-14 concentrations in concrete inside containment, eight (8) additional concrete cores have been taken at six (6) new locations in various areas of the containment interior. As can be seen in the enclosed Figures, these cores when combined with the original 4 cores (ones that were analyzed for C-14 including 2 analyzed for H-3) cover all three floor levels of containment and the two interior wall levels. The additional characterization data for these 8 samples is displayed in the revised Table 3 (for the significant radionuclides: H-3, C-14, Co-60 and Cs-137) along with the samples results from the original submittal for which H-3 and/or C-14 was analyzed. This data was reviewed against the conclusions made in the original submittal. The following was determined:

1. Except for H-3, when significant contamination is present, the core wafer closest to the surface contains contamination that is at least an order of magnitude higher than that in the next sample. This confirmed the original conclusion in this respect. To characterize the waste, the surface wafer concentration is diluted by the total thickness of the floor or for the internal walls (as they are contaminated on both sides), by half of the thickness of the walls.
2. As can be seen in the revised Table 3, the ratio of C-14 to Co-60 shows significant variability across the samples taken inside the Containment Building. This would be expected, as discussed earlier, due to the different contamination mechanisms for C-14 and Co-60. The use of a scaling factor to Co-60 as discussed in the original submittal is not appropriate for C-14.
3. The concentrations of C-14 in the waste, diluted over the appropriate depth of concrete, are generally consistent. This data is consistent with that contained in the original submittal.
4. The concentrations of H-3, Co-60 and Cs-137 in the waste (surface concentrations diluted over the appropriate depth) are lower than those presented in the original submittal.

Considering the above, the following modifications are made to the original submittal of this request:

1. For the Containment Building internal walls and floors, the C-14 concentration to be used to determine the post closure dose will be that contained in the revised Table 3 using actual characterization data in lieu of using a scaling factor to the waste Co-60 concentration. This change results in a change to the weighted average C-14 concentration for all the waste proposed for disposal at US Ecology (revised Table 8 enclosed) and a change in the projected total post closure dose calculation (revised Table 9 enclosed). These changes do not alter the conclusion of the original submittal that "the potential dose to workers involved in the transportation and placement of the waste at the site and to members of the public after closure of the facility will be no more than a few millirem per year Total Effective Dose Equivalent (TEDE) and a small fraction of NRC limits for exposure to members of the public of 25 millirem/yr TEDE".
2. Although the average waste concentrations for H-3, Co-60 and Cs-137 determined for the Containment Building interior concrete walls and floors are lower than those contained in the original submittal, the original higher values will be retained for conservatism.

Spent Fuel Building:

Due to the operable status of the Spent Fuel Building, characterization has not been undertaken. After movement of all the spent fuel out of the building, characterization will be done. The results of these samples will be compared to

the waste concentrations assumed in the original submittal. If the results show higher waste concentrations, the NRC will be informed as to the effect of these differences on the conclusions of this submittal. If the waste concentrations are below the values that have been presented, the samples results will be retained and be available for NRC inspection.

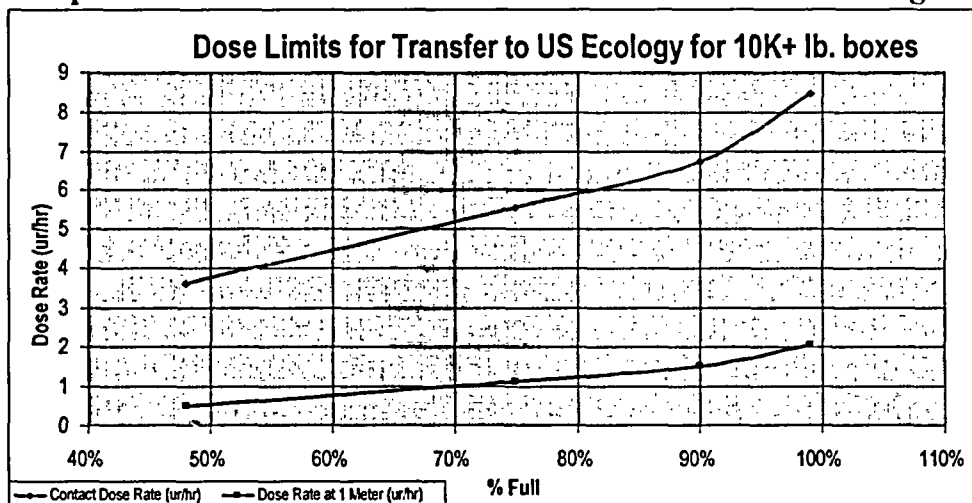
On-site Survey Limits for Additional Types of Waste Containers:

In addition to the Intermodal-type containers discussed in our December 17th letter, CYAPCO may be using B-25 type boxes to ship waste to US Ecology Idaho. An action level has been developed to identify when it is appropriate to transport waste in a B-25 box to US Ecology or to an alternate disposal site if the container dose rates exceed the alternate waste disposal procedure criteria of 10 CFR 20.2002. This action level is a bounding value developed using the same assumptions and methodology as were used to determine the actions levels for Intermodal-type boxes in the December 17th letter².

Using totally filled B-25 boxes containing the highest density material allowed by the package weight, a 1 meter dose rate of 2 $\mu\text{r/hr}$ is selected as a reliable and conservative action level for determining compliance with the alternate disposal procedure survey criteria. It is considered that containers exhibiting dose rates below the action level may be shipped to US Ecology Idaho and those exhibiting higher dose rates need to be investigated further to determine radionuclide concentrations or shipped to alternate facilities.

As this limit is 50 % of the limit for Intermodal containers, the corresponding dose to transportation workers will be less than that shown acceptable in the December 17th letter². Should some very dense material be shipped in B-25 boxes such that the boxes are not completely filled to the maximum allowable weight, the 1 meter dose rate limits shown on Graph 1 below will be followed.

Graph 1: Action Levels for B-25 Containers at Maximum Loading



Although not expected, should other sized containers be used, appropriate dose rate limits will be determined using the same basis as shown above.

CYAPCO hereby requests expedited review and approval of this request to support our decommissioning activities at the HNP.

If you should have any questions regarding this submittal, please contact me at (860) 267-3938.

Sincerely,


Gerard P. van Noordennen
Regulatory Affairs Manager

3-1-05
Date

Attachment

cc: S. J. Collins, NRC Region 1 Administrator
T. B. Smith, NRC Project Manager, Haddam Neck Plant
R. R. Bellamy, Chief, Decommissioning and Laboratory Branch, NRC
Region1
E. L. Wilds, Jr., Director, CT DEP Monitoring and Radiation Division

Attachment 1
(Total of 8 pages)

Figure 1 Containment Floor Samples

Figure 2 Containment Internal Wall and Charging Floor Samples

Three (3) Attachments of Diagrams from the
Survey/Sampling Work Plan – SSWP

Reactor Containment Building Elevation 1'-6"

Reactor Containment Building Elevation 22'

Reactor Containment Building Elevation 48'-6"

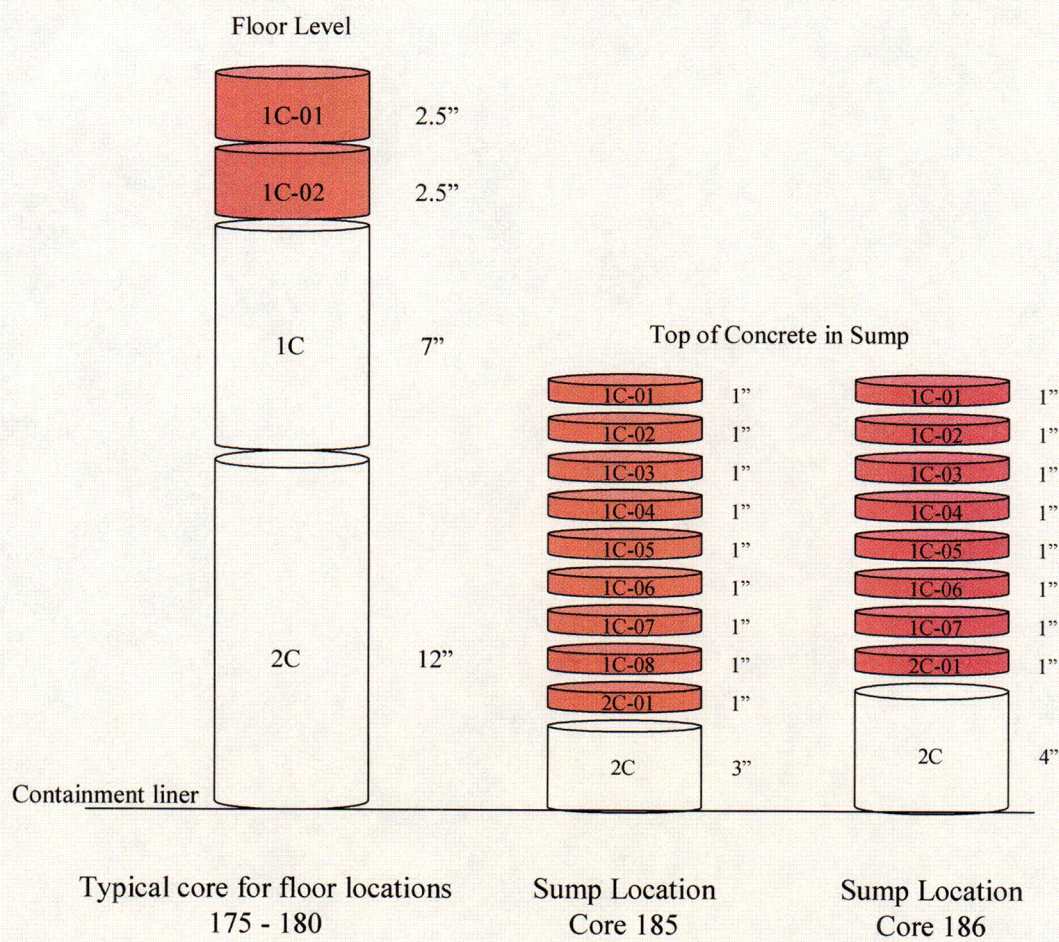
Three (3) Revised Tables

Table 3, Containment Floor and Wall Samples, Revision 1

Table 8, Average Waste Concentration Calculation, Revision 1

Table 9, Post Closure Dose Calculation, Revision 1

Figure 1
Containment Floor Samples




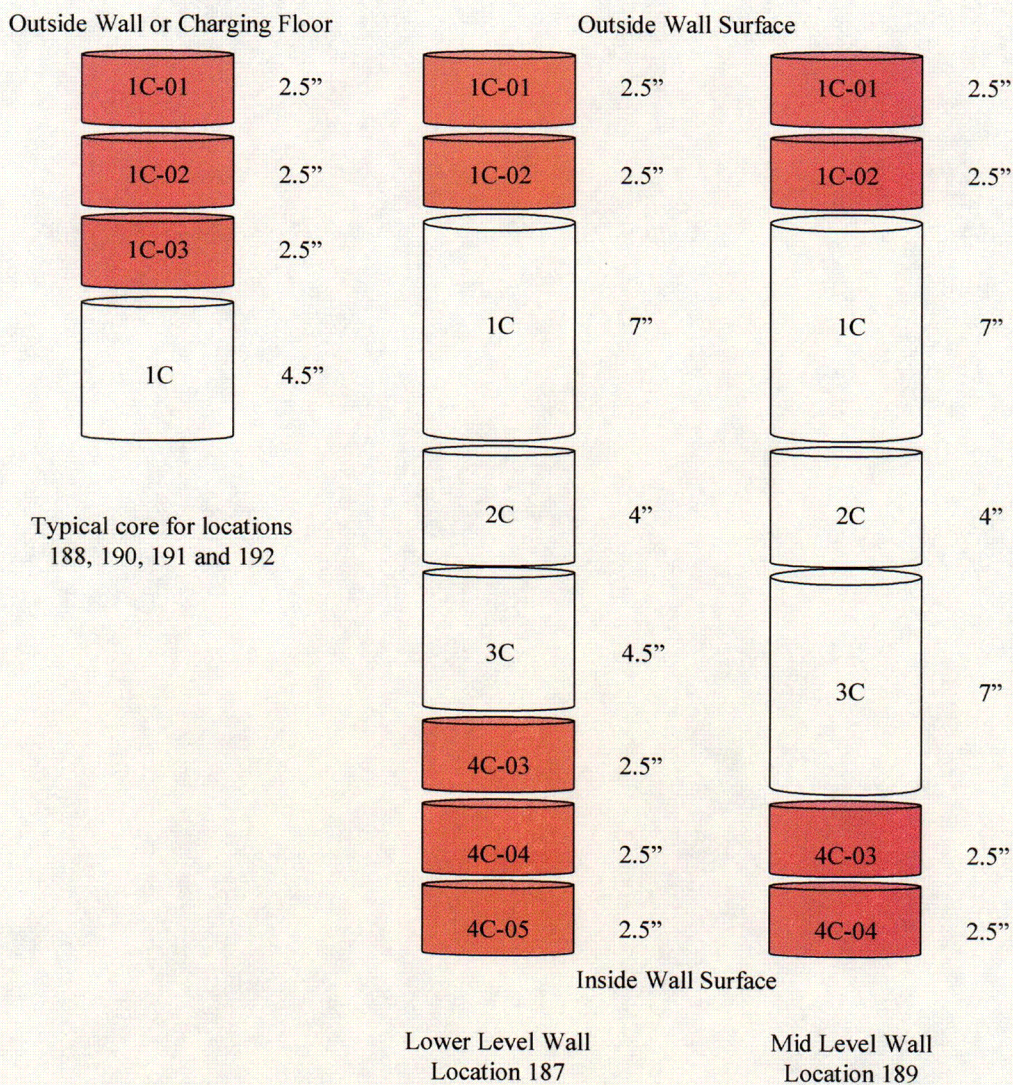
Note:  wafers analyzed for radionuclides
All dimensions are approximate

Figure 2
Containment Internal Wall and Charging Floor Samples

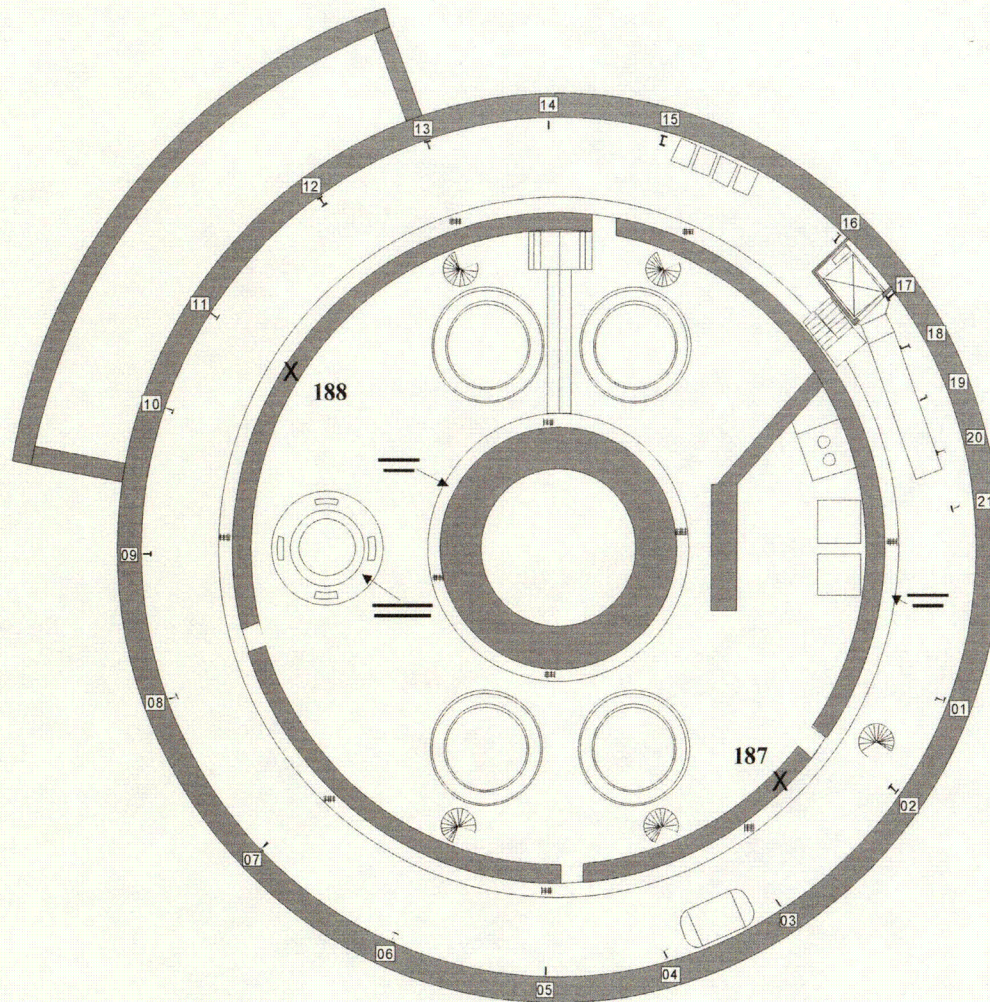


Attachment 1

● = Hole Location

✕ = Wall Hole Location

NOTE:



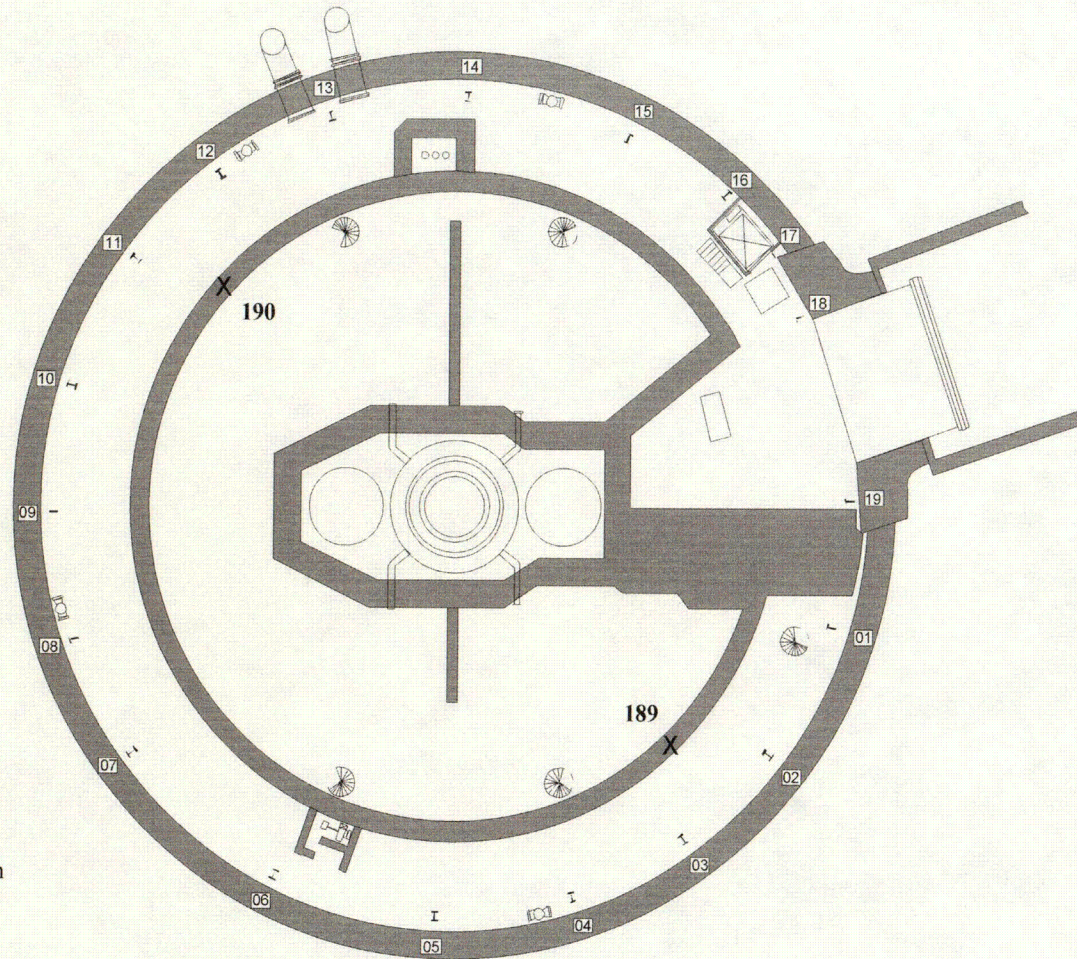
CONNECTICUT YANKEE ATOMIC POWER COMPANY
GENERAL ARRANGEMENT DRAWING
REACTOR CONTAINMENT BUILDING
ELEVATION: 1'-6"

INITIAL CREATION DATE:	06/18/97
REVISION DATE:	06/06/01
REVISION #:	7
MAP #:	GAD3100

LEGEND:

FLOOR WALL INTERSECTION	---
SURVEY AREA BOUNDARY	---
SURVEY AREA	#
SURVEY UNIT BOUNDARY	---

Attachment 2



● = Hole Location

× = Wall Hole Location

NOTE:

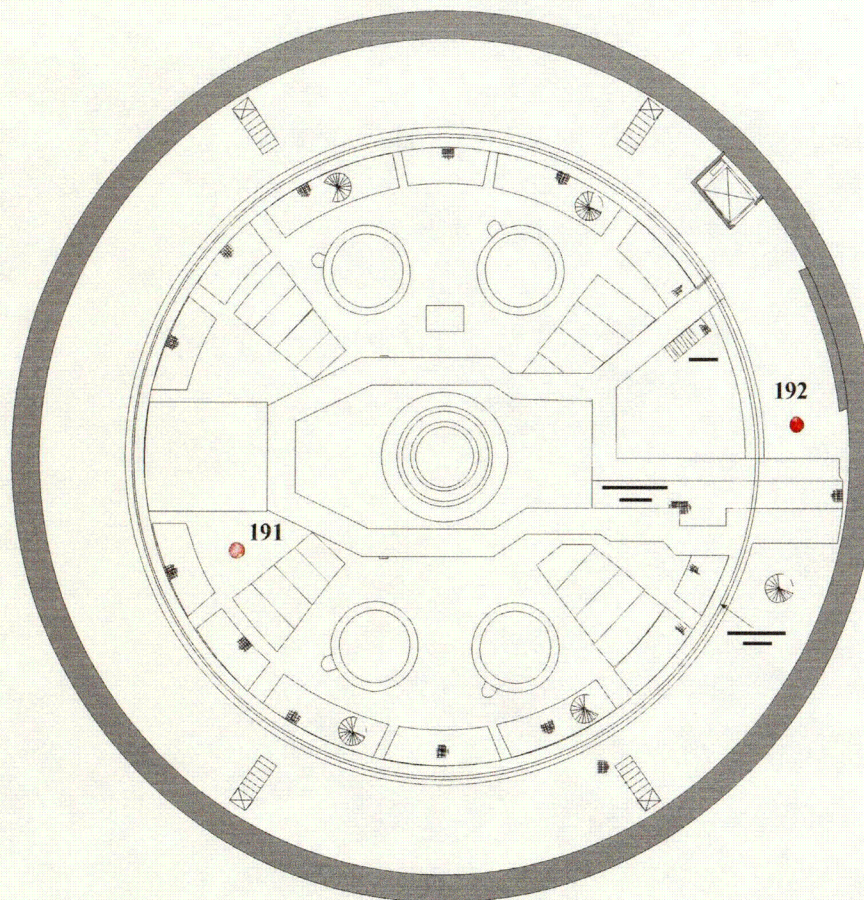


CONNECTICUT YANKEE ATOMIC POWER COMPANY
GENERAL ARRANGEMENT DRAWING
REACTOR CONTAINMENT BUILDING
ELEVATION: 22'

INITIAL CREATION DATE:	06/18/97	LEGEND:	
REVISION DATE:	06/06/01	FLOOR WALL INTERSECTION	---
REVISION #:	7	SURVEY AREA BOUNDARY	---
MAP #:	GAD3200	SURVEY AREA	#
		SURVEY UNIT BOUNDARY	---

Coy

Attachment 3



● = Hole Location

× = Wall Hole Location

NOTE:



CONNECTICUT YANKEE ATOMIC POWER COMPANY
GENERAL ARRANGEMENT DRAWING
REACTOR CONTAINMENT BUILDING
ELEVATION: 48'-6"

INITIAL CREATION DATE:	06/18/97
REVISION DATE:	06/06/01
REVISION #:	7
MAP #:	GAD3300

LEGEND:	
FLOOR WALL INTERSECTION	---
SURVEY AREA BOUNDARY	---
SURVEY AREA	#
SURVEY UNIT BOUNDARY	---

TABLE 3 (Revision 1)

Containment Floor & Wall Samples

Original Sample Results Provided with September Submittal												Additional Sample Results as of 2/15/05																								
Radionuclide	Floor # 175		Floor # 176		Contain. Sump # 185			Contain. Sump # 186			Average Scaling Factor (to Co-60) for Containment Floor/ Sump Surface Samples	Internal Wall Sample # 187					Internal Wall # 188			Internal Wall # 189		Internal Wall #190		Charg. Floor # 191			Charg. Floor # 192			Avg of 1st Samples Diluted over Total depth (All Sample Results)						
	Outside		Inside		Outside			Outside		Inside		Outside		Outside		Outside		Outside			Outside															
	175-1C-01	175-1C-02	176-1C-01	176-1C-02	185-1C-01	185-1C-02	185-1C-03	186-1C-01	186-1C-02	186-1C-03		3100-187-1C-01	3100-187-1C-02	3100-187-4C-03	3100-187-4C-04	3100-187-4C-05	3100-188-1C-01	3100-188-1C-02	3100-188-1C-03	3200-189-1C-01	3200-189-1C-02	3200-189-4C-03	3200-189-4C-04	3100-190-1C-01	3100-190-1C-02	3100-188-1C-03	3300-191-1C-01	3300-191-1C-02	3300-191-1C-03		3300-192-1C-01	3300-192-1C-02	3300-192-1C-03			
	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g		pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g			
H-3					1400			1170			Use Avg																									
C-14	720	0.52	350	0.50	70.00	0.50	0.51	25.40	0.57	0.54	27.087																									
Co-60	7.78	0.07	23.10	0.02	240.0	0.38	0.09	70.90	0.02	0.07	Use Avg																									
Cs-137	34.90	0.05	17.00	0.06	1270	6.02	0.15	584	1.59	0.04	Use Avg																									
Ratio of C-14/Co-60	92.54	15.15			0.29			0.36				1065		4961	78		39.8		1962	1928		48.2		3.72												
Avg C-14 Conc. Diluted Over Concrete Depth	75.00	36.46			Decon	0.50		Decon	0.57			18.2		62.5	4.9		1.4		71.7	26.0		30.1		0.9									27.36			
Avg Co-60 Conc. Diluted Over Concrete Depth	0.81	2.41			Decon	0.04		Decon	0.07			0.02		0.01	0.06		0.04		0.04	0.01		0.63		0.25									0.33			
Avg Cs-137 Conc. Diluted Over Concrete Depth	3.64	1.77			Decon	0.70		Decon	0.18			0.24		0.04	0.37		0.14		0.91	0.06		0.80		2.38									1.16			
Sept. Submittal	Containment Floor					Containment Internal Walls										Radionuclide																				
	Duratek Sample 1/27/99 SML #1 First 0.5"	Duratek Sample 1/27/99 SML #1 0.5 to 1 inch	Duratek Sample 1/27/99 SML #1 1 to 1.5 inch	Avg Over All Samp at SML #1	Avg #1 Diluted over Entire Floor Depth	Duratek Sample 1/27/99 SML #2 First 0.5"	Duratek Sample 1/27/99 SML #2 0.5 to 1 inch	Avg Over All Samp at SML #2	Avg #2 Diluted over Entire Floor Depth	Duratek Sample 1/27/99 SML #3 First 0.5"	Duratek Sample 1/27/99 SML #3 0.5 to 1 inch	Avg Over All Samp at SML #3	Avg #3 Diluted over Entire Floor Depth																							
	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g																							
Co-60	23.40	1.00	0.58	8.33	0.52	0.39	0.50	0.45	0.02	1.68	0.23	0.52	0.81	0.05																						
Cs-137	279	0.49	0.76	93.42	5.84	2.12	1.10	1.61	0.07	13.66	0.60	0.58	4.95	0.31																						

Note: Sample Results in Bold Type are <Minimum Detectable Activity (MDA) (MDA Value Shown)

Table 8 (Revision 1)

Average Waste Concentration Calculation

Source of Concrete Waste	Estimated Waste Weight (Million lbs)	Contam-ination Levels Based On	Average Co-60 Concentration by Source (pCi/g)	Average Cs-137 Concentration by Source (pCi/g)	Average H-3 Concentration by Source (pCi/g)	C-14 Scaling Factor to Co-60	C-14 Concentration (pCi/g)	Mn-54 Scaling Factor to Co-60	Mn-54 Concentration (pCi/g)	Fe-55 Scaling Factor to Co-60	Fe-55 Concentration (pCi/g)	Ni-63 Scaling Factor to Co-60	Ni-63 Concentration (pCi/g)	Sr-90 Scaling Factor to Co-60	Sr-90 Concentration (pCi/g)	Nb-94 Scaling Factor to Co-60	Nb-94 Concentration (pCi/g)	Tc-99 Scaling Factor to Co-60	Tc-99 Concentration (pCi/g)	Ag-108m Scaling Factor to Co-60	Ag-108m Concentration
Containment Walls	40	Actual	0.06	0.05	5.48	2.522	0.143	0.003	0.000	0.737	0.042	0.322	0.018	Use Actual	0.011	0.0020	0.0001	0.0127	0.0007	0.0036	0.0002
Cont. Floor & Internal	20	Actual Floor	0.67	2.69	1285.00	N/A	27.356	0.010	0.006	0.226	0.151	12.289	8.214	0.0486	0.032	0.0072	0.0048	0.0343	0.0229	0.0112	0.0075
RHR Floors	1	Actual	1.73	5.78	8.45	0.011	0.020	0.003	0.005	0.737	1.272	0.322	0.556	0.0678	0.117	0.0020	0.0034	0.0127	0.0219	0.0036	0.0062
RHR Walls	2	Actual	0.18	0.63	7.66	0.011	0.002	0.003	0.000	0.737	0.130	0.322	0.057	Use Actual	0.073	0.0020	0.0003	0.0127	0.0022	0.0036	0.0006
Waste Disposal Walls	2.5	RHR Walls	0.18	0.63	7.66	0.011	0.002	0.003	0.000	0.737	0.130	0.322	0.057	RHR Walls	0.073	0.0020	0.0003	0.0127	0.0022	0.0036	0.0006
Waste Disposal Floors	0.5	Actual	2.79	4.59	8.45	0.011	0.032	0.003	0.007	0.737	2.058	0.322	0.899	0.0678	0.189	0.0020	0.0055	0.0127	0.0354	0.0036	0.0100
PAB Above El. 17.5'	7	Cont. Floor	0.67	2.69	7.66	0.011	0.008	0.003	0.002	0.737	0.493	0.322	0.215	0.0486	0.032	0.0020	0.0013	0.0127	0.0085	0.0036	0.0024
Fuel Pool Walls & Floor	1	RHR Floors	1.73	5.78	8.45	0.011	0.020	0.003	0.005	0.737	1.272	0.322	0.556	0.0678	0.117	0.0020	0.0034	0.0127	0.0219	0.0036	0.0062
Remainder of Fuel Bldg	8	RHR Walls	0.18	0.63	7.66	0.011	0.002	0.003	0.000	0.737	0.130	0.322	0.057	RHR Walls	0.073	0.0020	0.0003	0.0127	0.0022	0.0036	0.0006
Service Building	8	Cont. Walls	0.06	0.05	5.48	0.011	0.001	0.003	0.000	0.737	0.042	0.322	0.018	Cont. Walls	0.011	0.0020	0.0001	0.0127	0.0007	0.0036	0.0002
Misc Struct/Soil/Asphalt	10	Cont. Walls	0.06	0.05	5.48	0.011	0.001	0.003	0.000	0.737	0.042	0.322	0.018	Cont. Walls	0.011	0.0020	0.0001	0.0127	0.0007	0.0036	0.0002
Total	100	Weighted Avg. Conc.																			
			0.284	0.974	261.88		5.53		1.67E-03		0.14		1.69		2.77E-02		1.25E-03		6.49E-03		2.04E-03

Source of Concrete Waste	Estimated Waste Weight (Million lbs)	Contam-ination Levels	Average Co-60 Concentration by Source (pCi/g)	Cs-134 Scaling Factor to Co-60	Cs-134 Concentration (pCi/g)	Eu-152 Scaling Factor to Co-60	Eu-152 Concentration (pCi/g)	Eu-154 Scaling Factor to Co-60	Eu-154 Concentration (pCi/g)	Eu-155 Scaling Factor to Co-60	Eu-155 Concentration (pCi/g)	Pu-238 Scaling Factor to Co-60	Pu-238 Concentration (pCi/g)	Pu-239 Scaling Factor to Co-60	Pu-239 Concentration (pCi/g)	Pu-241 Scaling Factor to Co-60	Pu-241 Concentration (pCi/g)	Am-241 Scaling Factor to Co-60	Am-241 Concentration (pCi/g)	Cm-243 Scaling Factor to Co-60	Cm-243 Concentration (pCi/g)
Containment Walls	40	Actual	0.06	0.0048	0.0003	0.0087	0.0005	0.0043	0.0002	0.0066	0.0004	0.0112	0.0006	0.0031	0.0002	0.1758	0.0099	0.0143	0.0008	0.0036	0.0002
Cont. Floor & Internal	20	Actual Floor	0.67	0.0312	0.0209	0.0277	0.0185	0.0236	0.0158	0.0214	0.0143	0.0150	0.0101	0.0057	0.0038	0.1837	0.1228	0.0332	0.0222	0.0043	0.0029
RHR Floors	1	Actual	1.73	0.0048	0.0082	0.0087	0.0150	0.0043	0.0075	0.0066	0.0114	0.0112	0.0193	0.0031	0.0053	0.1758	0.3034	0.0143	0.0246	0.0036	0.0062
RHR Walls	2	Actual	0.18	0.0048	0.0008	0.0087	0.0015	0.0043	0.0008	0.0066	0.0012	0.0112	0.0020	0.0031	0.0005	0.1758	0.0310	0.0143	0.0025	0.0036	0.0006
Waste Disposal Walls	2.5	RHR Walls	0.18	0.0048	0.0008	0.0087	0.0015	0.0043	0.0008	0.0066	0.0012	0.0112	0.0020	0.0031	0.0005	0.1758	0.0310	0.0143	0.0025	0.0036	0.0006
Waste Disposal Floors	0.5	Actual	2.79	0.0048	0.0133	0.0087	0.0243	0.0043	0.0121	0.0066	0.0185	0.0112	0.0313	0.0031	0.0086	0.1758	0.4908	0.0143	0.0398	0.0036	0.0100
PAB Above El. 17.5'	7	Cont. Floor	0.67	0.0048	0.0032	0.0087	0.0058	0.0043	0.0029	0.0066	0.0044	0.0112	0.0075	0.0031	0.0021	0.1758	0.1175	0.0143	0.0095	0.0036	0.0024
Fuel Pool Walls & Floor	1	RHR Floors	1.73	0.0048	0.0082	0.0087	0.0150	0.0043	0.0075	0.0066	0.0114	0.0112	0.0193	0.0031	0.0053	0.1758	0.3034	0.0143	0.0246	0.0036	0.0062
Remainder of Fuel Bldg	8	RHR Walls	0.18	0.0048	0.0008	0.0087	0.0015	0.0043	0.0008	0.0066	0.0012	0.0112	0.0020	0.0031	0.0005	0.1758	0.0310	0.0143	0.0025	0.0036	0.0006
Service Building	8	Cont. Walls	0.06	0.0048	0.0003	0.0087	0.0005	0.0043	0.0002	0.0066	0.0004	0.0112	0.0006	0.0031	0.0002	0.1758	0.0099	0.0143	0.0008	0.0036	0.0002
Misc Struct/Soil/Asphalt	10	Cont. Walls	0.06	0.0048	0.0003	0.0087	0.0005	0.0043	0.0002	0.0066	0.0004	0.0112	0.0006	0.0031	0.0002	0.1758	0.0099	0.0143	0.0008	0.0036	0.0002
Total	100	Weighted Avg. Conc.																			
			0.28		4.89E-03		5.01E-03		3.81E-03		3.85E-03		3.69E-03		1.23E-03		5.09E-02		6.58E-03		1.11E-03

Note: 1. Information changed from the original submittal shown in italics

Table 9 (Revision 1)

Post Closure Dose Calculation

Radio-nuclide	Dose Equivalent per Concentration of Radionuclide - Resident Farmer (mrem/yr per pCi/g)	Weighted Average of All Waste (pCi/g)	Post Closure Dose for Avg of All Waste (mrem/yr)
H-3	1.045E-05	261.88	2.737E-03
C-14	3.060E-01	5.53	1.692E+00
Mn-54	6.286E-25	1.67E-03	1.052E-27
Fe-55	0.000E+00	0.14	0.000E+00
Co-60	1.653E-21	0.28	4.692E-22
Ni-63	0.000E+00	1.69	0.000E+00
Sr-90	0.000E+00	0.0277	0.000E+00
Nb-94	9.961E-01	1.25E-03	1.246E-03
Tc-99	2.221E-01	6.49E-03	1.441E-03
Ag-108m	5.764E-01	2.04E-03	1.176E-03
Cs-134	5.881E-26	4.89E-03	2.875E-28
Cs-137	6.850E-27	0.97	6.674E-27
Eu-152	1.567E-23	5.01E-03	7.854E-26
Eu-154	5.997E-23	3.81E-03	2.286E-25
Eu-155	0.000E+00	3.85E-03	0.000E+00
Pu-238	2.004E-06	3.69E-03	7.398E-09
Pu-239	0.000E+00	1.23E-03	0.000E+00
Pu-241	0.000E+00	5.09E-02	0.000E+00
Am-241	0.000E+00	6.58E-03	0.000E+00
Cm-243	0.000E+00	1.11E-03	0.000E+00
Total Post Closure Dose (mrem/yr)			1.699E+00

- Notes:** 1. Values in Bold Type are based on Minimum Detectable Activity (MDA)
(i.e. Radionuclide was not detected at the MDA concentration)
2. Information changed from the original submittal shown in shaded cells