HITACHI

GE Hitachi Nuclear Energy

Vallecitos Nuclear Center
Sunol, California

VALLECITOS BOILING WATER REACTOR
(DEACTIVATED)

ANNUAL REPORT NO. 50
FOR THE YEAR 2014

LICENSE DPR-1
DOCKET 50-18

MARCH 2015

HITACHI

GE Hitachi Nuclear Energy

Vallecitos Nuclear Center
Sunol, California

Vallecitos Boiling Water Reactor
(Deactivated)

Annual Report No. 50

GE Hitachi Nuclear Energy has maintained the Vallecitos Boiling Water Reactor (VBWR) in a deactivated status under the authority of Amendment No. 21 to License DPR-1, Docket 50-18, issued Oct 22, 2007. In this annual report, a summary of the status of the facility for the period of January 1, 2014 to December 31, 2014 is presented, as required by paragraph 5.d.2 of the license.

1.0 SUMMARY

All reactor systems have been removed from the containment except for the reactor vessel. The water level within the reactor vessel was monitored and has remained essentially constant throughout the report period.

Radiation and contamination levels remain at acceptable levels. Environmental data is maintained on site and available for review.

2.0 STATUS OF FACILITY

In accordance with written procedures, the Facility Manager controls access to the containment building and general systems. The facility continues to be in deactivated status in safe storage condition.

3.0 RADIATION AND CONTAMINATION

Complete radiation and contamination surveys of the facility indicate that levels remain low. Results of the surveys are presented in attachment 1. Air sampling results are presented in attachment 2. The radiation/contamination levels listed are representative but not necessarily maximum values.

4.0 ACTIVITIES

Routine inspections were conducted during this report period. No other significant activities

occurred at VBWR.

5.0 ORGANIZATION

The organizational structure remained unchanged during 2014. The Site Manager remains T. A. Caine. The VBWR Facility Manager remains M. R. Schrag. The Manager, Regulatory Compliance and EHS remains E. F. Saito.

In early 2015, prior to issuance of this report, the Manager, Regulatory Compliance and EHS changed to T. M. Leik.

6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated VBWR is being maintained in a safe shutdown condition. The inspections, access control, and administratively controlled activities ensure maximum protection for the public health and safety. The procedures will be continued to maintain this high level of protection.

GE Hitachi Nuclear Energy
Vallecitos Operations

T A Caine

T. A. Caine
Manager Vallecitos Nuclear Center

ATTACHMENT 1

HITACHI

VALLECITOS NUCLEAR CENTER

NUCLEAR SAFETY SURVEY RECORD

SURVEYOR (print and sign)	REVIEWER	NO.
Name and signatures on Original at GEH Vallecitos		D-092
LOCATION		DATE: 12/12/14
VBWR Containment		TIME: 1000

☒ Routine ☐ Special

REASON: Annual Survey

	ITEMS OR LOCATION	DOSE RATE					DIRECT READING				SMEAR READINGS				
Item No.		β mRad/h	γ mR/h	n mRem/h	TOTAL mRem/h	Distance	βγ CPM	βγ dPM	α CPM	α dPM	βγ CPM	βγ dPM	α CPM	α dPM	AREA
1	Main Floor - General Area		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
2	- Area Over Reactor Vessel		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
3															
4	Basement - General Area		<0.5 - 1		<0.5 - 1	F					<100	<500	<20	<200	100 cm²
5	- Sump	5	4		9	C					200	1000	<20	<200	100 cm²
6															
7	Reactor Vessel Head Area		<1		<1	F					<100	<500	<20	<200	100 cm²
8															
9	Top of Fuel Pool		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
10															
11	Personnel Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
12															
13	Equipment Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
14															
15															
16															

INSTRUMENT USED		PRM - 7	CP - 5	RO - 20	PNR - 4	TBM -	E - 120	RM -	RM -	PAC - 1SA	LUDLUM-12	
SERIAL NUMBER				286			1339			897		

Area Posted: (circle applicable) RA HRA CA RMA AIRBORNE

COMMENTS

PROBE EFF. (4 P GEO.)				PROBE EFF. (4 P GEO.)		
	α AC - 3A (U)	10%	X		βγ PANCAKE	20%	X
	α 43 - 4 (U)	10%					

NEO 289 (REV. 07/10)

ATTACHMENT 2: Air Sample Radon Calculations for Vallecitos Reactor Annual Inspection 2014

			Initial				At Sampling Time			
		Sample	Alpha		Beta		Alpha		Beta	
Reactor	Location	Volume (ml)	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml
VBWR	First Floor	2.83E+06	427.91	1.97E-10	1074.67	4.98E-10	892.2432	4.11E-10	2240.815	1.04E-09
	Basement	2.83E+06	1324.41	6.10E-10	3298.66	1.53E-09	2460.261	1.13E-09	6127.683	2.84E-09
	Fuel Pool	2.83E+06	1048.93	4.83E-10	2660.80	1.23E-09	1948.522	8.97E-10	4942.776	2.29E-09
EVESR	First Floor	2.83E+06	1292.39	5.95E-10	3428.86	1.59E-09	2400.78	1.11E-09	6369.546	2.95E-09
	Basement	2.83E+06	1066.39	4.91E-10	2858.58	1.33E-09	2223.55	1.02E-09	5960.479	2.76E-09
	519' Level	2.83E+06	1037.91	4.78E-10	2771.47	1.29E-09	2164.166	9.96E-10	5778.844	2.68E-09
GETR	First Floor	2.83E+06	86.66	3.99E-11	219.20	1.02E-10	160.982	7.41E-11	407.192	1.89E-10
	Basement	2.83E+06	93.06	4.28E-11	237.77	1.10E-10	172.8708	7.96E-11	441.6882	2.05E-10
	Third Floor	2.83E+06	175.52	8.08E-11	445.04	2.06E-10	326.0508	1.50E-10	826.7187	3.83E-10

Tennelec System "A" Efficiency & Conversion Factors

Alpha Efficiency	34.58%
Beta Efficiency	34.32%
dpm/uCi	2.22E+06
Alpha cpm/uCi	7.68E+05
Beta cpm/uCi	7.62E+05

Radon Decay Factors

Reactor	Location	Date Sampled	Time On	Time Off	Minutes sampled	Sampling Time Factor	Time Counted	Decay Time	Decay Factor	Minutes Counted	Count Time Factor	Radon Decay Factor
VBWR	First Floor	12/12/2014	10:55	11:20	25	1.316463	11:35	15	1.414216	10	1.11997	**2.08511875**
VBWR	Basement	12/12/2014	10:25	10:50	25	1.316463	11:00	10	1.259922	10	1.11997	**1.85762782**
VBWR	Fuel Pool	12/12/2014	9:55	10:20	25	1.316463	10:30	10	1.259922	10	1.11997	**1.85762782**
EVESR	First Floor	12/12/2014	11:45	12:10	25	1.316463	12:20	10	1.259922	10	1.11997	**1.85762782**
EVESR	Basement	12/12/2014	12:40	13:05	25	1.316463	13:20	15	1.414216	10	1.11997	**2.08511875**
EVESR	519' Level	12/12/2014	12:10	12:35	25	1.316463	12:50	15	1.414216	10	1.11997	**2.08511875**
GETR	First Floor	12/12/2014	15:30	15:55	25	1.316463	16:05	10	1.259922	10	1.11997	**1.85762782**
GETR	Basement	12/12/2014	16:00	16:25	25	1.316463	16:35	10	1.259922	10	1.11997	**1.85762782**
GETR	Third Floor	12/12/2014	17:00	17:25	25	1.316463	17:35	10	1.259922	10	1.11997	**1.85762782**

HITACHI

GE Hitachi Nuclear Energy

Vallecitos Nuclear Center
Sunol, California

ESADA-VALLECITOS EXPERIMENTAL SUPERHEAT REACTOR (DEACTIVATED)

ANNUAL REPORT NO. 47 FOR THE YEAR 2014

LICENSE DR-10
DOCKET 50-183

MARCH 2015

ESADA-Vallecitos Experimental Superheat Reactor (Deactivated)

ANNUAL REPORT NO. 47

GE Hitachi Nuclear Energy (GEH) has maintained the ESADA Vallecitos Experimental Superheat Reactor (EVESR) in a deactivated status under the authority of Amendment No. 7 to License DR-10, Docket 50-183, issued December 1, 2008. In this annual report, a summary of the status of the facility for the period of January 1, 2014 to December 31, 2014 is presented, as required by Amendment 7, Appendix A, Technical Specifications, section C. 1.

1.0 SUMMARY

Component removal activities began in 2008 above the 549 foot level. Tech Spec changes issued in Amendment 7 December 1, 2008 authorize the removal of systems beside the reactor vessel and bio-shield below the 549 level. Component removal concluded (current scope) in 2010. Entry into the containment building was made for routine radiation surveys and a general examination of conditions throughout the building. In accordance with written procedures, the Facility Manager controls access to the containment building.

Radiation and contamination levels remain at acceptable levels. Environmental data is maintained on site and available for review.

2.0 STATUS OF FACILITY

The facility continues to be in deactivated status. The plugs to the reactor vessel and head storage shield, the wooden cover over the fuel storage pool remain in place.

3.0 RADIATION AND CONTAMINATION

Complete radiation and contamination surveys of the facility indicate that levels remain low. Results of the surveys are presented in attachment 1. Air sampling results are presented in attachment 2. The radiation/contamination levels listed are representative but not necessarily maximum values.

4.0 ACTIVITIES

Routine inspections were conducted during this report period.

The equipment disposal concluded during 2010.

5.0 ORGANIZATION

The organizational structure remained unchanged during 2014. The Site Manager remains T. A. Caine. The VBWR Facility Manager remains M. R. Schrag. The Manager, Regulatory Compliance and EHS remains E. F. Saito.

In early 2015, prior to issuance of this report, the Manager, Regulatory Compliance and EHS changed to T. M. Leik.

6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated ESADA-Vallecitos Experimental Superheat Reactor is being maintained in a safe shutdown condition. The inspections, access control, and administratively controlled activities ensure maximum protection for the public health and safety. The procedures will be continued to maintain this high level of protection.

GE Hitachi Nuclear Energy
Vallecitos Operations

T. A. Caine
Manager Vallecitos Nuclear Center

ATTACHMENT 1

HITACHI

VALLECITOS NUCLEAR CENTER

NUCLEAR SAFETY SURVEY RECORD

SURVEYOR (print and sign)	REVIEWER	NO.
Name and signatures on Original at GEH Vallecitos		D-093
LOCATION		DATE: 12/12/14
EVESR Containment		TIME: 1200

☒ Routine ☐ Special

REASON: Annual Survey

	ITEMS OR LOCATION	DOSE RATE					DIRECT READING				SMEAR READINGS				
Item No.		β mRad/h	γ mR/h	n mRem/h	TOTAL mRem/h	Distance	βγ CPM	βγ dPM	α CPM	α dPM	βγ CPM	βγ dPM	α CPM	α dPM	AREA
1	Top of Spent Fuel Pool (Main Floor)		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
2															
3	487' Level (Basement)		<1		<1	F					100	500	<20	<200	100 cm²
4	503' Level		<0.5		<0.5	F									
5	519' Level		<0.5		<0.5	C					150	750	<20	<200	100 cm²
6	534' Level - General Area		<1		<1	C					150	750	<20	<200	100 cm²
7	- Floor Drain		<0.5		<0.5	F									
8	- Emergency Cooling Valves		4		4	C									
9	549' Level		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
10															
11	Equipment Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
12	Personnel Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm²
13															
14															
15															
16															

INSTRUMENT USED		PRM - 7	CP - 5	RO - 20	PNR - 4	TBM -	E - 120	RM -	RM -	PAC - 1SA	LUDLUM-12	
SERIAL NUMBER				285			1339			897		

Area Posted: (circle applicable) RA HRA CA RMA AIRBORNE

COMMENTS

PROBE EFF. (4 P GEO.)				PROBE EFF. (4 P GEO.)		
	α AC - 3A (U)	10%	X		βγ PANCAKE	20%	X
	α 43 - 4 (U)	10%					

NEO 289 (REV. 07/10)

ATTACHMENT 2: Air Sample Radon Calculations for Vallecitos Reactor Annual Inspection 2014

			Initial				At Sampling Time			
		Sample	Alpha		Beta		Alpha		Beta	
Reactor	Location	Volume (ml)	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml
VBWR	First Floor	2.83E+06	427.91	1.97E-10	1074.67	4.98E-10	892.2432	4.11E-10	2240.815	1.04E-09
	Basement	2.83E+06	1324.41	6.10E-10	3298.66	1.53E-09	2460.261	1.13E-09	6127.683	2.84E-09
	Fuel Pool	2.83E+06	1048.93	4.83E-10	2660.80	1.23E-09	1948.522	8.97E-10	4942.776	2.29E-09
EVESR	First Floor	2.83E+06	1292.39	5.95E-10	3428.86	1.59E-09	2400.78	1.11E-09	6369.546	2.95E-09
	Basement	2.83E+06	1066.39	4.91E-10	2858.58	1.33E-09	2223.55	1.02E-09	5960.479	2.76E-09
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GETR	First Floor	2.83E+06	86.66	3.99E-11	219.20	1.02E-10	160.982	7.41E-11	407.192	1.89E-10
	Basement	2.83E+06	93.06	4.28E-11	237.77	1.10E-10	172.8708	7.96E-11	441.6882	2.05E-10
	Third Floor	2.83E+06	175.52	8.08E-11	445.04	2.06E-10	326.0508	1.50E-10	826.7187	3.83E-10

Tennelec System "A" Efficiency & Conversion Factors

Alpha Efficiency	34.58%
Beta Efficiency	34.32%
dpm/uCi	2.22E+06
Alpha cpm/uCi	7.68E+05
Beta cpm/uCi	7.62E+05

Radon Decay Factors

Reactor	Location	Date Sampled	Time On	Time Off	Minutes sampled	Sampling Time Factor	Time Counted	Decay Time	Decay Factor	Minutes Counted	Count Time Factor	Radon Decay Factor
VBWR	First Floor	12/12/2014	10:55	11:20	25	1.316463	11:35	15	1.414216	10	1.11997	**2.08511875**
VBWR	Basement	12/12/2014	10:25	10:50	25	1.316463	11:00	10	1.259922	10	1.11997	**1.85762782**
VBWR	Fuel Pool	12/12/2014	9:55	10:20	25	1.316463	10:30	10	1.259922	10	1.11997	**1.85762782**
EVESR	First Floor	12/12/2014	11:45	12:10	25	1.316463	12:20	10	1.259922	10	1.11997	**1.85762782**
EVESR	Basement	12/12/2014	12:40	13:05	25	1.316463	13:20	15	1.414216	10	1.11997	**2.08511875**
EVESR	519' Level	12/12/2014	12:10	12:35	25	1.316463	12:50	15	1.414216	10	1.11997	**2.08511875**
GETR	First Floor	12/12/2014	15:30	15:55	25	1.316463	16:05	10	1.259922	10	1.11997	**1.85762782**
GETR	Basement	12/12/2014	16:00	16:25	25	1.316463	16:35	10	1.259922	10	1.11997	**1.85762782**
GETR	Third Floor	12/12/2014	17:00	17:25	25	1.316463	17:35	10	1.259922	10	1.11997	**1.85762782**

HITACHI

GE Hitachi Nuclear Energy

Vallecitos Nuclear Center
Sunol, California

GENERAL ELECTRIC TEST REACTOR
(DEACTIVATED)

ANNUAL REPORT NO. 56
FOR THE YEAR 2014

LICENSE TR-1
DOCKET 50-70

MARCH 2015

General Electric Test Reactor
(Deactivated)

ANNUAL REPORT NO. 56

GE Hitachi (GEH) has maintained the General Electric Test Reactor (GETR) in a deactivated status under the authority of Amendment No. 17 to License TR-1, Docket 50-70, issued October 22, 2007. In this annual report, a summary of the status of the facility for the period of January 1, 2014 to December 31, 2014 is presented.

1.0 SUMMARY

The facility remains in essentially the same condition described in Annual Report No. 55. Entry into the reactor building was made for routine radiation surveys and a general examination of conditions throughout the building. The crane, elevator, and ventilation were serviced and tested in 2011 in anticipation of beginning remediation activities. Such activities have not begun.

Radiation and contamination levels remain at acceptable levels. Environmental data is maintained on site and available for review.

2.0 STATUS OF FACILITY

In accordance with written procedures, the Facility Manager controls access to the containment building and general systems. The facility continues to be in deactivated status. There were no changes authorized by the Facility Manager pursuant to 10CFR50.59(a) in 2014.

3.0 RADIATION AND CONTAMINATION

Complete radiation and contamination surveys of the facility indicate that levels remain low. Results of the surveys are presented in attachment 1. Air sampling results are presented in attachment 2. The radiation/contamination levels listed are representative but not necessarily maximum values.

3.1 GETR Stack

Although maintenance was performed on the stack in 2011, and the stack was tested, there has been no remediation effort performed for the GETR reactor. The

stack air flow has been documented. Stack records are available on site for review.

4.0 ACTIVITIES

Routine inspections were conducted during this report period. There were no preventive or corrective maintenance activities performed having safety significance during the reporting period.

5.0 ORGANIZATION

The organizational structure remained unchanged during 2014. The Site Manager remains T. A. Caine. The VBWR Facility Manager remains M. R. Schrag. The Manager, Regulatory Compliance and EHS remains E. F. Saito.

In early 2015, prior to issuance of this report, the Manager, Regulatory Compliance and EHS changed to T. M. Leik.

6.0 CONCLUSION

GE Hitachi Nuclear Energy concludes that the deactivated GETR is being maintained in a safe shutdown condition. The inspections, access control, and administratively controlled activities ensure maximum protection for the public health and safety. The procedures will be continued to maintain this high level of protection.

GE Hitachi Nuclear Energy
Vallecitos Operations

T. A. Caine
Manager Vallecitos Nuclear Center

ATTACHMENT 1

HITACHI

VALLECITOS NUCLEAR CENTER

NUCLEAR SAFETY SURVEY RECORD

SURVEYOR (print and sign)	REVIEWER	NO.
Name and signatures on Original at GEH Vallecitos		C-027
LOCATION		DATE: 12/12/14
200 Area GETR Containment (page 1 of 2)		TIME: 1400

☒ Routine ☐ Special

REASON: Annual Survey

ITEMS OR LOCATION		DOSE RATE					DIRECT READING				SMEAR READINGS				
Item No.		β mRad/h	γ mR/h	n mRem/h	TOTAL mRem/h	Distance	βγ CPM	βγ dPM	α CPM	α dPM	βγ CPM	βγ dPM	α CPM	α dPM	AREA
1	Personnel Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
2	Equipment Air Lock		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
3	Personnel Air Lock SOP										<100	<500	<20	<200	100 cm^2
4	1st Floor - Clean Area *		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
5	- Zone Area *		<1-3		<1-3	F					1600	8000	<20	<200	100 cm^2
6	2nd Floor - General Dose Rate		<1-2		<1-2	F									
7	- EEHS Cubicle Door		7		7	C									
8	- Field Reading Around EEHS Cubicle		1.5-5		1.5-5	F									
9	- Floor Smear / Clean Area *										<100	<500	<20	<200	100 cm^2
10	- Filter Bank		<1		<1	C									
11	3rd Floor - Zone Area North / Floor *		<1-4		<1-4	F					800	4000	<20	<200	100 cm^2
12	- Zone Area South		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
13	- Bridge / Canal		1.5		1.5	F					300	1500	<20	<200	100 cm^2
14	- Missile Shield Point A *		<1		<1	F					<100	<500	<20	<200	100 cm^2
15	- Platform		<0.5		<0.5	F					100	500	<20	<200	100 cm^2
16	- Clean Area *		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2

INSTRUMENT USED		PRM - 7	CP - 5	RO - 20	PNR - 4	TBM -	E - 120	RM -	RM -	PAC - 1SA	LUDLUM-12	
SERIAL NUMBER				285			1339			897		

Area Posted: (circle applicable) RA HRA CA RMA AIRBORNE

PROBE EFF. (4 P GEO.)				PROBE EFF. (4 P GEO.)		
	α AC - 3A (U)	10%	X		βγ PANCAKE	20%	X
	α 43 - 4 (U)	10%					

COMMENTS: * Whatman Smears

NEO 289 (REV. 07/10)

ATTACHMENT 1

HITACHI

VALLECITOS NUCLEAR CENTER

NUCLEAR SAFETY SURVEY RECORD

SURVEYOR (print and sign)	REVIEWER	NO.
Name and signatures on Original at GEH Vallecitos		C-027
LOCATION		DATE: 12/12/14
200 Area GETR Containment (page 2 of 2)		TIME: 1400

☒ Routine ☐ Special

REASON: Annual Survey

	ITEMS OR LOCATION	DOSE RATE					DIRECT READING				SMEAR READINGS				
Item No.		β mRad/h	γ mR/h	n mRem/h	TOTAL mRem/h	Distance	βγ CPM	βγ dPM	α CPM	α dPM	βγ CPM	βγ dPM	α CPM	α dPM	AREA
1	3rd Floor - Zone Area Floor Drain	60	4		64	C									
2	Elevator		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
3	Basement - Clean Area *		<1-3		<1-3	F					<100	<500	<20	<200	100 cm^2
4	- Filter Bank		1		1	F									
5	- Zone Area *		<1-5		<1-5	F					200	1000	<20	<200	100 cm^2
6	- Control Rod Storage		1.0-50		1.0-50	C									
7	- Control Rod Repair Hood		<1-3		<1-3	F-C									
8	- Autoclave / Rad Work Area		<1		<1	C									
9	Mezzanine between 2nd & 3rd Floors		<0.5		<0.5	F					<100	<500	<20	<200	100 cm^2
10															
11															
12															
13															
14															
15															
16															

INSTRUMENT USED		PRM - 7	CP - 5	RO - 20	PNR - 4	TBM -	E - 120	RM -	RM -	PAC - 1SA	LUDLUM-12	
SERIAL NUMBER				285			1339			897		

Area Posted: (circle applicable) RA HRA CA RMA AIRBORNE

COMMENTS: * Whatman Smears

PROBE EFF. (4 P GEO.)				PROBE EFF. (4 P GEO.)		
	α AC - 3A (U)	10%	X		βγ PANCAKE	20%	X
	α 43 - 4 (U)	10%					

NEO 289 (REV. 07/10)

ATTACHMENT 2: Air Sample Radon Calculations for Vallecitos Reactor Annual Inspection 2014

			Initial				At Sampling Time			
		Sample	Alpha		Beta		Alpha		Beta	
Reactor	Location	Volume (ml)	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml	ncpm	uCi/ml
VBWR	First Floor	2.83E+06	427.91	1.97E-10	1074.67	4.98E-10	892.2432	4.11E-10	2240.815	1.04E-09
	Basement	2.83E+06	1324.41	6.10E-10	3298.66	1.53E-09	2460.261	1.13E-09	6127.683	2.84E-09
	Fuel Pool	2.83E+06	1048.93	4.83E-10	2660.80	1.23E-09	1948.522	8.97E-10	4942.776	2.29E-09
EVESR	First Floor	2.83E+06	1292.39	5.95E-10	3428.86	1.59E-09	2400.78	1.11E-09	6369.546	2.95E-09
	Basement	2.83E+06	1066.39	4.91E-10	2858.58	1.33E-09	2223.55	1.02E-09	5960.479	2.76E-09
	519' Level	2.83E+06	1037.91	4.78E-10	2771.47	1.29E-09	2164.166	9.96E-10	5778.844	2.68E-09
GETR	First Floor	2.83E+06	86.66	3.99E-11	219.20	1.02E-10	160.982	7.41E-11	407.192	1.89E-10
	Basement	2.83E+06	93.06	4.28E-11	237.77	1.10E-10	172.8708	7.96E-11	441.6882	2.05E-10
	Third Floor	2.83E+06	175.52	8.08E-11	445.04	2.06E-10	326.0508	1.50E-10	826.7187	3.83E-10

Tennelec System "A" Efficiency & Conversion Factors

Alpha Efficiency	34.58%
Beta Efficiency	34.32%
dpm/uCi	2.22E+06
Alpha cpm/uCi	7.68E+05
Beta cpm/uCi	7.62E+05

Radon Decay Factors

Reactor	Location	Date Sampled	Time On	Time Off	Minutes sampled	Sampling Time Factor	Time Counted	Decay Time	Decay Factor	Minutes Counted	Count Time Factor	Radon Decay Factor
VBWR	First Floor	12/12/2014	10:55	11:20	25	1.316463	11:35	15	1.414216	10	1.11997	**2.08511875**
VBWR	Basement	12/12/2014	10:25	10:50	25	1.316463	11:00	10	1.259922	10	1.11997	**1.85762782**
VBWR	Fuel Pool	12/12/2014	9:55	10:20	25	1.316463	10:30	10	1.259922	10	1.11997	**1.85762782**
EVESR	First Floor	12/12/2014	11:45	12:10	25	1.316463	12:20	10	1.259922	10	1.11997	**1.85762782**
EVESR	Basement	12/12/2014	12:40	13:05	25	1.316463	13:20	15	1.414216	10	1.11997	**2.08511875**
EVESR	519' Level	12/12/2014	12:10	12:35	25	1.316463	12:50	15	1.414216	10	1.11997	**2.08511875**
GETR	First Floor	12/12/2014	15:30	15:55	25	1.316463	16:05	10	1.259922	10	1.11997	**1.85762782**
GETR	Basement	12/12/2014	16:00	16:25	25	1.316463	16:35	10	1.259922	10	1.11997	**1.85762782**
GETR	Third Floor	12/12/2014	17:00	17:25	25	1.316463	17:35	10	1.259922	10	1.11997	**1.85762782**