Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AA	36.0	11/24/03 04/12/04 01/13/07 05/15/07 01/23/08 01/08/09 01/13/10 04/11/10 08/09/10 09/09/10 10/13/10 11/10/10 12/08/10 01/14/11 02/07/11 03/04/11 04/07/11 05/05/11 06/16/11 07/13/11 08/31/11 09/15/11 10/20/11 11/17/11 01/19/12 02/15/12 04/17/12	$597 \pm 161$ $2,757 \pm 244$ $1,826 \pm 181$ $1,649 \pm 203$ $1,376 \pm 157$ $1,268 \pm 180$ $1,411 \pm 202$ $1,455 \pm 190$ $1,610 \pm 378$ $1,590 \pm 188$ $1,680 \pm 221$ $1,450 \pm 334$ $1,660 \pm 210$ $1,470 \pm 181$ $1,440 \pm 347$ $1,540 \pm 214$ $1,550 \pm 290$ $1,290 \pm 269$ $1,260 \pm 252$ $1,360 \pm 266$ $4,720 \pm 260$ $1,450 \pm 169$ $1,430 \pm 289$ $1,940 \pm 332$ $1,540 \pm 226$ $1,540 \pm 226$ $1,520 \pm 283$ $1,390 \pm 190$	05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 10/11/12 11/30/12 12/18/12 01/17/13 02/14/13 03/18/13 04/08/13 05/15/13 06/27/13 07/15/13 08/12/13 09/18/13	$1,270 \pm 223$ $1,760 \pm 255$ $1,550 \pm 194$ $1,470 \pm 279$ $1,410 \pm 273$ $1,530 \pm 226$ $1,720 \pm 304$ $1,510 \pm 274$ $1,780 \pm 305$ $1,770 \pm 300$ $1,580 \pm 255$ $1,530 \pm 289$ $1,220 \pm 255$ $1,740 \pm 309$ $1,520 \pm 207$ $1,380 \pm 278$ $1,280 \pm 183$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(10)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
AA-V	85.0	06/19/13 06/27/13 07/15/13 08/12/13 08/20/13 09/16/13 09/23/13	$8,890 \pm 377$ $9,150 \pm 373$ $9,200 \pm 375$ $8,950 \pm 650$ $8,110 \pm 340$ $8,500 \pm 634$ $8,260 \pm 341$		

- Results in picoCuries per liter (pCi/L)
- Well AA-V was installed in May 2013
- The current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey – Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
113011 QB			20,000		20,000
AB	42.0	11/19/03	$326,695 \pm 2,093$	06/20/12	$2,000 \pm 331$
		03/03/04	$176,626 \pm 1,554$	11/29/12	$3,950 \pm 413$
		12/13/04	$118,133 \pm 1,256$	12/20/12	$7,580 \pm 595$
		01/11/05	$131,064 \pm 1,317$	01/18/13	$24,300 \pm 1,060$
		02/08/05	$124,946 \pm 989$	02/15/13	$6,140 \pm 300$
		03/07/05	$136,149 \pm 1,337$	03/21/13	$32,900 \pm 1,210$
		04/18/05	$121,388 \pm 1,267$	04/11/13	$25,500 \pm 1,060$
		05/18/05	$108,389 \pm 1,191$	05/20/13	$38,200 \pm 994$
		06/22/05	$91,023 \pm 1,472$	06/27/13	$36,100 \pm 734$
		08/15/05	$65,108 \pm 641$	07/16/13	$30,100 \pm 631$
		12/12/05	$48,728 \pm 836$		
		01/24/06	$45,219 \pm 550$		
		02/22/06	$44,240 \pm 550$		
		03/21/06	$46,799 \pm 796$		
		04/17/06	$47,419 \pm 583$		
		05/15/06	$42,690 \pm 543$		
		06/20/06	$37,048 \pm 507$		
		07/24/06	$38,164 \pm 512$		
		09/21/06	$39,372 \pm 528$		
		01/23/07	$4,275 \pm 222$		
		02/06/07	$34,635 \pm 360$		
		06/19/07	$31,247 \pm 459$		
		08/23/07	$21,480 \pm 361$		
		09/20/07	$20,697 \pm 350$		
		05/11/09	$21,153 \pm 462$		
		06/10/09	$27,335 \pm 518$		
		04/13/10	$19,543 \pm 407$		
		05/25/10	$18,554 \pm 338$		
		06/09/10	$17,751 \pm 686$		

- Results in picoCuries per liter (pCi/L)
- Between 06/09/10 and 06/20/12 the well had not been sampled as it was reported as dry.
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey - Bureau of Nuclear Engineering

### Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AC	24.0	02/09/05 06/16/06 11/27/07 12/29/07 01/23/08 02/15/08 03/30/08 04/29/08 05/30/08 07/21/08 08/21/08 12/15/08 01/23/09 02/11/09 03/20/09 04/27/09 06/22/09 08/27/09 01/12/10 03/17/10 04/28/10 05/25/10 07/16/10 07/23/10 08/11/10 08/25/10 09/13/10 10/11/10	$543,977 \pm 2,724$ $12,721 \pm 329$ $28,454 \pm 395$ $53,082 \pm 477$ $44,709 \pm 485$ $38,707 \pm 461$ $43,185 \pm 485$ $57,663 \pm 551$ $28,018 \pm 433$ $23,783 \pm 403$ $24,324 \pm 428$ $21,268 \pm 357$ $21,557 \pm 358$ $19,590 \pm 340$ $17,055 \pm 327$ $20,911 \pm 404$ $15,599 \pm 405$ $21,843 \pm 431$ $47,952 \pm 629$ $124,133 \pm 996$ $62,863 \pm 688$ $22,360 \pm 362$ $25,118 \pm 742$ $44,717 \pm 997$ $29,300 \pm 5,700$ $19,800 \pm 3,860$ $23,900 \pm 510$ $21,000 \pm 715$	11/10/10 12/02/10 01/14/11 02/07/11 03/25/11 04/27/11 05/10/11 06/10/11 07/20/11 08/17/11 08/31/11 09/15/11 12/08/11 01/06/12 02/08/12 03/15/12 04/17/12 05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 10/11/12 11/28/12 12/19/12 01/14/13**	$28,300 \pm 921$ $26,000 \pm 897$ $26,900 \pm 552$ $26,700 \pm 592$ $33,000 \pm 1,240$ $2,510 \pm 362$ $5,400 \pm 519$ $7,160 \pm 545$ $18,700 \pm 763$ $17,400 \pm 912$ $31,100 \pm 627$ $12,300 \pm 487$ $15,800 \pm 635$ $31,700 \pm 658$ $67,200 \pm 1,680$ $85,500 \pm 1,920$ $397,000 \pm 7,780$ $31,200 \pm 652$ $9,560 \pm 429$ $24,800 \pm 1,040$ $17,200 \pm 996$ $16,300 \pm 657$ $34,900 \pm 1,260$ $684,000 \pm 13,300$ $580,000 \pm 11,300$ $275,000 \pm 5,350$ $528,000 \pm 10,300$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly
- Sample was collected using a 'bailer grab' device.
- \*\* Sample was collected using a Low Flow pump.

the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(11)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
AC (continued)	24.0	01/23/13* 01/23/13** 02/11/13* 02/11/13** 02/20/13* 02/20/13** 03/11/13* 03/11/13** 03/19/13** 04/08/13 05/17/13 06/26/13 07/12/13 08/16/13 09/20/13	$33,400 \pm 951$ $520,000 \pm 10,000$ $63,000 \pm 953$ $570,000 \pm 5,630$ $331,000 \pm 6,400$ $524,000 \pm 10,100$ $74,300 \pm 1,560$ $596,000 \pm 11,500$ $253,000 \pm 4,920$ $396,000 \pm 7,710$ $264,000 \pm 5,110$ $278,000 \pm 5,380$ $113,000 \pm 2,230$ $127,000 \pm 2,480$ $154,000 \pm 3,010$ $520,000 \pm 10,100$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly
- Sample was collected using a 'bailer grab' device
- Sample was collected using a Low Flow pump.

NOTE: Since March 19, 2013, the Low Flow pump is the only sampling method utilized by PSEG.

<sup>&</sup>lt;sup>1</sup> The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$ $NJGWQS^2$	(11)		300 20,000		300 20,000
AD	43.0	11/02/03 05/04/04 05/18/05 06/22/05 07/19/05 08/15/05 12/12/05 01/24/06 02/22/06 03/21/06 04/17/06 05/15/06 06/20/06 07/24/06 08/22/06 09/21/06 10/06/06 11/16/06 12/15/06 01/23/07 02/06/07 03/14/07 04/24/07 05/22/07 06/19/07 07/19/07 08/23/07 09/20/07 10/17/07	$20,000$ $225,378 \pm 1,745$ $372,281 \pm 2,238$ $396,093 \pm 2,289$ $300,816 \pm 2,641$ $288,546 \pm 1,310$ $197,371 \pm 1,105$ $134,896 \pm 1,335$ $125,902 \pm 914$ $122,175 \pm 894$ $118,629 \pm 1,252$ $449,651 \pm 1,683$ $101,058 \pm 812$ $84,336 \pm 743$ $73,202 \pm 699$ $76,258 \pm 752$ $65,598 \pm 671$ $69,095 \pm 590$ $62,614 \pm 642$ $63,437 \pm 652$ $65,144 \pm 610$ $60,603 \pm 462$ $56,304 \pm 547$ $56,276 \pm 546$ $52,280 \pm 539$ $58,492 \pm 554$ $62,022 \pm 587$ $56,287 \pm 553$ $47,217 \pm 504$ $38,424 \pm 421$	01/24/08 02/25/08 03/12/08 04/23/08 05/09/08 07/16/08 09/22/08 02/18/09 05/11/09 06/10/09 04/13/10 05/25/10 06/09/10 07/22/10 08/09/10 10/12/10 11/15/10 12/16/10 02/18/11 03/22/11 04/07/11 05/05/11 09/10/11 06/21/12 12/03/12 12/20/12 01/18/13 02/15/13	$20,000$ $41,676 \pm 474$ $49,122 \pm 512$ $53,091 \pm 533$ $47,060 \pm 500$ $1,075 \pm 176$ $51,035 \pm 554$ $52,143 \pm 556$ $45,812 \pm 492$ $63,778 \pm 769$ $46,911 \pm 670$ $45,892 \pm 592$ $30,204 \pm 414$ $30,220 \pm 864$ $22,977 \pm 733$ $30,200 \pm 632$ $15,600 \pm 420$ $27,400 \pm 825$ $15,800 \pm 694$ $25,500 \pm 580$ $22,800 \pm 546$ $19,700 \pm 951$ $21,100 \pm 992$ $20,600 \pm 998$ $28,300 \pm 703$ $7,770 \pm 608$ $29,900 \pm 1,170$ $2,040 \pm 252$ $6,850 \pm 578$ $2,810 \pm 228$
		11/15/07 12/13/07	$30,424 \pm 421$ $41,254 \pm 474$ $41,329 \pm 426$	03/18/13 07/15/13	$1,020 \pm 216$ $1,730 \pm 219$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## **Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant**

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	. ,		300 20,000		300 20,000
AD (continued)	43.0	08/20/13 09/19/13	6,900 ± 312 8,440 ± 361		

• Results in picoCuries per liter (pCi/L)

• Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AE	37.5	11/17/03 01/14/04 03/03/04 07/13/04 11/22/04 12/13/04 01/18/05 02/08/05 03/08/05 04/11/05 05/10/05 06/07/05 07/06/05 09/07/05 10/04/05 12/09/05 01/16/06 02/07/06 03/07/06 04/04/06 05/02/06 06/19/06 07/17/06 08/21/06 09/18/06 10/05/06 11/02/06 12/07/06 01/13/07 02/24/07	$6,040 \pm 315$ $14,298 \pm 458$ $15,208 \pm 477$ $6,246 \pm 324$ $3,970 \pm 260$ $3,617 \pm 235$ $6,263 \pm 326$ $9,032 \pm 286$ $11,222 \pm 402$ $8,501 \pm 315$ $8,167 \pm 315$ $7,166 \pm 496$ $5,673 \pm 496$ $4,210 \pm 215$ $2,889 \pm 199$ $2,751 \pm 205$ $3,977 \pm 318$ $8,932 \pm 282$ $9,255 \pm 284$ $10,248 \pm 423$ $8,271 \pm 282$ $5,873 \pm 232$ $3,357 \pm 215$ $3,650 \pm 224$ $3,381 \pm 233$ $10,343 \pm 323$ $3,691 \pm 202$ $4,605 \pm 233$ $3,708 \pm 229$ $4,085 \pm 220$ $4,508 \pm 174$	04/20/07 05/16/07 07/19/07 08/15/07 09/19/07 10/04/07 11/19/07 12/12/07 01/16/08 02/07/08 03/12/08 04/01/08 05/08/08 06/19/08 07/16/08 08/18/08 09/02/08 10/17/08 11/18/08 12/16/08 01/09/09 02/24/09 03/16/09 04/01/09 05/13/09 06/03/09 08/18/09 09/23/09 11/04/09 12/22/09	$4,506 \pm 202$ $6,596 \pm 245$ $4,882 \pm 221$ $4,243 \pm 205$ $10,668 \pm 270$ $3,579 \pm 193$ $3,861 \pm 193$ $4,462 \pm 202$ $6,337 \pm 223$ $8,305 \pm 249$ $9,039 \pm 259$ $9,016 \pm 249$ $10,391 \pm 294$ $7,378 \pm 245$ $6,706 \pm 249$ $6,414 \pm 264$ $5,434 \pm 233$ $5,572 \pm 220$ $7,834 \pm 263$ $8,568 \pm 253$ $9,354 \pm 261$ $15,709 \pm 315$ $19,224 \pm 347$ $19,861 \pm 388$ $10,032 \pm 342$ $8,355 \pm 344$ $7,297 \pm 281$ $5,647 \pm 259$ $6,088 \pm 265$ $6,310 \pm 269$ $5,429 \pm 257$
		03/04/07	$4,356 \pm 213$	01/13/10	$8,026 \pm 301$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AE (continued)	37.5	03/17/10 04/22/10 05/21/10 06/17/10 07/22/10 08/04/10 09/17/10 10/18/10 11/24/10 12/09/10 01/20/11 02/04/11 03/04/11 04/19/11 05/05/11 06/16/11 07/13/11 09/10/11 11/17/11 01/24/12 02/23/12 03/13/12 04/19/12 05/30/12 06/19/12 07/23/12 08/30/12 09/12/12 10/18/12 11/30/12 12/18/12	$8,920 \pm 315$ $10,415 \pm 324$ $9,413 \pm 257$ $9,411 \pm 529$ $9,282 \pm 512$ $11,200 \pm 2,210$ $10,600 \pm 357$ $9,800 \pm 495$ $8,500 \pm 505$ $10,600 \pm 577$ $13,500 \pm 403$ $15,300 \pm 458$ $19,500 \pm 965$ $18,100 \pm 921$ $15,700 \pm 875$ $13,100 \pm 732$ $14,000 \pm 769$ $11,800 \pm 615$ $11,400 \pm 485$ $11,900 \pm 741$ $14,300 \pm 789$ $15,100 \pm 623$ $15,200 \pm 814$ $15,300 \pm 480$ $13,400 \pm 491$ $11,200 \pm 718$ $9,330 \pm 660$ $7,900 \pm 445$ $7,410 \pm 501$ $9,300 \pm 663$ $9,630 \pm 666$	01/21/13 02/15/13 03/15/13 04/08/13 05/15/13 06/27/13 07/10/13 08/14/13 09/17/13	$13,100 \pm 783$ $12,200 \pm 736$ $17,300 \pm 891$ $18,900 \pm 717$ $13,200 \pm 762$ $13,000 \pm 433$ $11,400 \pm 725$ $9,320 \pm 662$ $8,930 \pm 361$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
${ m MDA}^1 { m NJGWQS}^2$	(ft)		300 20,000		300 20,000
			,		,
AF	45.0	11/24/03	< 229	06/13/11	< 222
		12/10/03	$474 \pm 146$	09/10/11	$297 \pm 129$
		12/21/04	< 233	12/20/11	< 241
		01/11/05	< 259	03/15/12	< 199
		02/08/05	< 211	06/19/12	< 225
		03/17/05	$309 \pm 134$	07/23/12	$266 \pm 149$
		04/11/05	$274 \pm 134$	10/18/12	< 236
		05/09/05	$368 \pm 142$	01/17/13	< 270
		07/11/05	< 265	03/22/13	< 258
		10/17/05	$198 \pm 163$	04/09/13	< 230
		01/16/06	< 281	07/11/13	< 194
		02/08/06	< 211		
		03/17/06	$309 \pm 134$		
		04/10/06	$218 \pm 179$		
		07/17/06	< 279		
		10/09/06	$201 \pm 180$		
		01/22/07	$612 \pm 163$		
		04/19/07	$463 \pm 144$		
		07/13/07	< 271		
		10/09/07	$194 \pm 149$		
		01/23/08	< 230		
		04/22/08	< 239		
		07/16/08	$202 \pm 155$		
		10/20/08	$190 \pm 146$		
		01/19/09	< 247		
		04/08/09	$204 \pm 149$		
		10/20/09	$168 \pm 161$		
		01/13/10	< 290		
		04/11/10	< 266		
		07/22/10	$319 \pm 280$		
		10/26/10	< 228		
		01/20/11	< 216		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is quarter-annual

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(11)		300 20,000		300 20,000
AG-D	40.0	02/23/04 07/14/04 11/09/04 12/14/04 01/11/05 03/07/05 04/18/05 05/16/05 06/06/05 10/11/05 01/09/06 02/06/06 03/06/06 04/03/06 05/01/06 06/05/06 07/11/06 08/07/06 09/18/06 11/15/06 12/08/06 01/14/07 02/20/07 03/14/07 04/19/07 05/03/07	$20,000$ $5,409 \pm 335$ $4,651 \pm 281$ $3,100 \pm 245$ $6,066 \pm 326$ $8,275 \pm 369$ $828 \pm 158$ $735 \pm 156$ $955 \pm 169$ $700 \pm 307$ $749 \pm 171$ $1,372 \pm 182$ $576 \pm 172$ $382 \pm 160$ $380 \pm 225$ $389 \pm 163$ $183 \pm 150$ $765 \pm 168$ $621 \pm 178$ $621 \pm 185$ $634 \pm 189$ $607 \pm 181$ $575 \pm 171$ $1,197 \pm 196$ $620 \pm 165$ $222 \pm 127$ $393 \pm 147$ $614 \pm 145$ $442 \pm 173$	10/17/07 11/20/07 12/20/07 01/23/08 02/20/08 03/13/08 04/01/08 05/15/08 06/24/08 07/17/08 08/18/08 09/03/08 10/17/08 11/21/08 11/21/08 12/23/08 01/20/09 02/18/09 03/16/09 04/22/09 05/13/09 06/03/09 08/19/09 09/24/09 11/04/09 12/29/09 01/19/10 03/18/10 04/14/10	$1,852 \pm 173$ $1,504 \pm 165$ $952 \pm 139$ $309 \pm 141$ $946 \pm 157$ $1,156 \pm 163$ $1,082 \pm 149$ $1,644 \pm 188$ $1,585 \pm 174$ $1,383 \pm 170$ $1,560 \pm 191$ $1,250 \pm 178$ $1,727 \pm 171$ $1,056 \pm 172$ $779 \pm 159$ $733 \pm 174$ $379 \pm 148$ $1,612 \pm 171$ $1,002 \pm 186$ $861 \pm 189$ $706 \pm 179$ $1,140 \pm 185$ $533 \pm 171$ $1,043 \pm 179$ $1,140 \pm 184$ $1,138 \pm 186$ $858 \pm 189$ $1,252 \pm 202$ $1,037 \pm 189$
		07/13/07 08/16/07 09/20/07	$< 270$ $476 \pm 153$ $462 \pm 149$	05/21/10 06/21/10 07/22/10	$1,450 \pm 300$ $1,091 \pm 290$ $1,267 \pm 310$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey – Bureau of Nuclear Engineering

## $Groundwater\ Monitoring\ of\ Tritium\ (H-3)\ -\ Salem\ Unit\ 1\ Nuclear\ Plant$

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AG-D (continued)	40.0	08/11/10 09/09/10 10/11/10 10/26/10 11/29/10 12/21/10 01/20/11 02/18/11 03/29/11 04/19/11 05/26/11 06/13/11 07/29/11 10/07/11 11/03/11 01/19/12 02/23/12 03/15/12 04/19/12 05/03/12 06/19/12 08/30/12 10/04/12 12/04/12 12/04/12 12/15/12 01/18/13 03/24/13 06/24/13	$1,490 \pm 360$ $571 \pm 192$ $1,480 \pm 355$ $1,040 \pm 181$ $1,360 \pm 220$ $1,160 \pm 196$ $1,170 \pm 172$ $757 \pm 278$ $998 \pm 192$ $811 \pm 221$ $1,050 \pm 157$ $950 \pm 235$ $1,120 \pm 215$ $1,930 \pm 294$ $1,080 \pm 202$ $1,173 \pm 191$ $1,030 \pm 184$ $902 \pm 247$ $1,210 \pm 205$ $949 \pm 238$ $1,260 \pm 178$ $1,150 \pm 259$ $1,290 \pm 278$ $2,030 \pm 318$ $1,290 \pm 209$ $1,180 \pm 262$ $1,100 \pm 192$ $859 \pm 259$ $833 \pm 211$ $721 \pm 226$ $930 \pm 219$ $730 \pm 164$	07/10/13 08/14/13 09/17/13	$889 \pm 171$ $776 \pm 179$ $1,140 \pm 175$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(11)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
AG-S	24.2	02/23/04	$2,409 \pm 267$	09/20/07	$311 \pm 147$
		07/14/04	$15,536 \pm 478$	11/20/07	$377 \pm 148$
		11/09/04	$19,500 \pm 525$	12/20/07	$309 \pm 126$
		12/14/04	$20,509 \pm 544$	01/23/08	$922 \pm 151$
		01/11/05	$29,243 \pm 646$	02/20/08	$380 \pm 149$
		02/09/05	$27,528 \pm 473$	03/13/08	$381 \pm 149$
		03/07/05	$6,036 \pm 306$	04/01/08	$462 \pm 138$
		04/18/05	$3,132 \pm 235$	05/15/08	$368 \pm 168$
		05/16/05	$2,494 \pm 220$	06/24/08	$600 \pm 160$
		06/06/05	$1,028 \pm 313$	07/17/08	$606 \pm 162$
		08/01/05	$3,267 \pm 200$	08/18/08	$584 \pm 174$
		09/06/05	$3,692 \pm 214$	09/03/08	$348 \pm 159$
		01/09/06	$776 \pm 177$	10/17/08	$1,151 \pm 163$
		02/06/06	$1,562 \pm 185$	11/21/08	$1,072 \pm 175$
		03/06/06	$2,106 \pm 270$	12/23/08	$1,732 \pm 172$
		04/03/06	$1,557 \pm 184$	01/20/09	$2,351 \pm 183$
		05/01/06	$938 \pm 168$	02/18/09	$1,519 \pm 166$
		06/05/06	$805 \pm 176$	03/16/09	$1,789 \pm 171$
		07/11/06	$398 \pm 167$	04/22/09	$996 \pm 185$
		08/07/06	$203 \pm 174$	05/13/09	$870 \pm 190$
		09/18/06	$218 \pm 185$	06/03/09	$747 \pm 178$
		10/06/06	$2,202 \pm 206$	08/19/09	$1,185 \pm 186$
		11/15/06	$567 \pm 169$	09/24/09	$952 \pm 180$
		12/08/06	$394 \pm 180$	10/21/09	$1,159 \pm 182$
		01/14/07	$632 \pm 169$	11/04/09	$1,520 \pm 191$
		02/20/07	$442 \pm 129$	12/29/09	$1,327 \pm 189$
		03/14/07	$389 \pm 146$	01/19/10	$616 \pm 185$
		04/19/07	< 233	03/17/10	$574 \pm 189$
		05/03/07	$257 \pm 198$	05/21/10	$1,131 \pm 289$
		06/18/07	$992 \pm 157$	06/21/10	$654 \pm 286$
		07/12/07	< 271	07/22/10	$484 \pm 288$
		08/16/07	$785 \pm 156$	09/09/10	$1,270 \pm 180$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey – Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AG-S (continued)	24.2	10/26/10 11/29/10 12/21/10 01/20/11 02/18/11 03/29/11 04/19/11 05/26/11 06/13/11 07/29/11 08/31/11 09/27/11 10/07/11 11/03/11 12/13/11 01/19/12 02/23/12 03/15/12 04/19/12 05/03/12 06/19/12 08/30/12 10/04/12 12/04/12 12/04/12 12/15/12 01/18/12 02/15/13 03/20/13 04/09/13 05/16/13 06/24/13 07/10/13	$675 \pm 156$ $567 \pm 187$ $834 \pm 184$ $881 \pm 208$ $731 \pm 281$ $675 \pm 180$ $483 \pm 183$ $727 \pm 145$ $729 \pm 216$ $817 \pm 190$ $2,030 \pm 300$ $919 \pm 186$ $990 \pm 186$ $1,050 \pm 184$ $931 \pm 166$ $579 \pm 215$ $651 \pm 186$ $790 \pm 220$ $863 \pm 161$ $934 \pm 236$ $1,010 \pm 251$ $1,630 \pm 290$ $1,480 \pm 218$ $1,200 \pm 259$ $435 \pm 141$ $989 \pm 215$ $1,100 \pm 254$ $2,110 \pm 345$ $1,270 \pm 276$ $1,020 \pm 230$ $1,190 \pm 187$ $1,010 \pm 185$	08/14/13 09/17/13	$984 \pm 185$ $775 \pm 163$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
$NJGWQS^2$			20,000		20,000
AH-D	40.0	02/23/04	$955 \pm 230$	07/13/07	< 266
		07/19/04	$353 \pm 151$	08/15/07	$951 \pm 160$
		11/15/04	$488 \pm 150$	09/19/07	< 242
		12/20/04	$470 \pm 158$	10/03/07	$1,136 \pm 160$
		01/11/05	$357 \pm 264$	11/19/07	$1,077 \pm 153$
		02/15/05	$470 \pm 146$	12/12/07	$940 \pm 156$
		03/08/05	$469 \pm 143$	01/23/08	$1,077 \pm 153$
		04/18/05	$410 \pm 141$	02/07/08	$1,170 \pm 165$
		05/16/05	$577 \pm 152$	03/12/08	$1,521 \pm 167$
		06/07/05	$702 \pm 308$	04/01/08	$1,544 \pm 166$
		07/11/05	$511 \pm 164$	05/29/08	$1,485 \pm 188$
		08/02/05	< 266	06/20/08	$1,004 \pm 167$
		10/17/05	< 267	07/07/08	$930 \pm 179$
		12/09/05	< 375	08/18/08	$982 \pm 183$
		01/10/06	< 279	09/22/08	$699 \pm 165$
		02/06/06	$382 \pm 160$	10/17/08	$760 \pm 155$
		03/06/06	$203 \pm 236$	11/18/08	< 266
		04/10/06	$196 \pm 161$	12/16/08	$389 \pm 152$
		05/01/06	$384 \pm 161$	01/09/09	$390 \pm 153$
		06/05/06	$577 \pm 165$	02/18/09	$193 \pm 148$
		07/17/06	$201 \pm 165$	03/16/09	$603 \pm 154$
		08/08/06	$204 \pm 175$	04/22/09	$198 \pm 170$
		09/06/06	$402 \pm 176$	05/11/09	$535 \pm 180$
		10/06/06	$399 \pm 175$	06/03/09	$310 \pm 173$
		11/02/06	$385 \pm 169$	08/04/09	$211 \pm 165$
		12/19/06	$158 \pm 147$	09/02/09	$1,427 \pm 190$
		01/22/07	$211 \pm 163$	10/08/09	$194 \pm 162$
		02/20/07	$217 \pm 124$	11/04/09	$318 \pm 166$
		03/14/07	$436 \pm 164$	12/29/09	$335 \pm 169$
		04/19/07	$307 \pm 140$	01/13/10	$201 \pm 178$
		05/03/07	< 284	03/17/10	$401 \pm 184$
		06/18/07	$438 \pm 154$	04/12/10	$481 \pm 176$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AH-D (continued)	40.0	05/21/10 06/21/10 07/16/10 08/09/10 09/13/10 10/11/10 11/23/10 12/02/10 01/20/11 02/18/11 03/04/11 04/07/11 05/05/11 06/16/11 07/13/11 08/31/11 10/07/11 11/17/11 12/13/11 01/19/12 02/15/12 03/15/12 04/19/12 05/30/12 06/19/12 08/22/12 09/25/12 10/18/12 12/04/12 12/15/12 01/21/13	$651 \pm 273$ $481 \pm 275$ $324 \pm 284$ $568 \pm 209$ $394 \pm 170$ $344 \pm 161$ $679 \pm 203$ $977 \pm 186$ $735 \pm 193$ $430 \pm 157$ $606 \pm 178$ $464 \pm 186$ $688 \pm 144$ $2,520 \pm 338$ $1,930 \pm 307$ $3,020 \pm 362$ $1,540 \pm 236$ $1,140 \pm 194$ $1,270 \pm 188$ $1,190 \pm 191$ $949 \pm 253$ $830 \pm 181$ $1,040 \pm 244$ $1,120 \pm 171$ $1,090 \pm 156$ $734 \pm 225$ $911 \pm 236$ $922 \pm 274$ $352 \pm 188$ $1,180 \pm 257$ $852 \pm 172$ $755 \pm 220$	02/15/13 03/19/13 04/09/13 05/17/13 06/24/13 07/16/13 08/20/13 09/19/13	$1,030 \pm 246$ $508 \pm 215$ $334 \pm 190$ $614 \pm 181$ $690 \pm 165$ $569 \pm 185$ $628 \pm 175$ $523 \pm 149$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(11)		300 20,000		300 20,000
AH-S	24.5	02/23/04 07/19/04 11/15/04 12/20/04 01/11/05 02/15/05 03/08/05 04/18/05 05/16/05 06/07/05 08/02/05 09/07/05 10/17/05 01/10/06 02/06/06 03/06/06 04/10/06 05/01/06 06/05/06 07/17/06 08/08/06 09/06/06 10/06/06 11/02/06 12/19/06 01/22/07 02/20/07 03/14/07 04/19/07	$20,000$ $1,248 \pm 240$ $577 \pm 158$ $622 \pm 164$ $563 \pm 162$ $648 \pm 180$ $655 \pm 154$ $581 \pm 147$ $544 \pm 147$ $709 \pm 157$ $346 \pm 291$ $< 268$ $< 262$ $< 267$ $192 \pm 165$ $382 \pm 160$ $< 383$ $< 275$ $192 \pm 157$ $208 \pm 170$ $202 \pm 166$ $197 \pm 169$ $401 \pm 176$ $201 \pm 172$ $196 \pm 168$ $157 \pm 146$ $411 \pm 161$ $448 \pm 131$ $406 \pm 152$ $< 231$	08/15/07 09/19/07 10/03/07 11/19/07 12/12/07 01/23/08 02/07/08 03/12/08 04/01/08 05/29/08 06/20/08 07/07/08 08/18/08 09/22/08 10/17/08 11/18/08 12/16/08 01/09/09 02/18/09 03/16/09 04/22/09 05/11/09 06/03/09 08/04/09 09/02/09 10/08/09 11/04/09 12/29/09 01/13/10	$\begin{array}{c} 20,000 \\ < 249 \\ < 239 \\ 375 \pm 147 \\ 2,624 \pm 177 \\ 4,996 \pm 207 \\ 1,238 \pm 157 \\ 1,343 \pm 165 \\ 1,359 \pm 167 \\ 1544 \pm 166 \\ 187 \pm 167 \\ 397 \pm 156 \\ 547 \pm 170 \\ 583 \pm 174 \\ 352 \pm 160 \\ 1,344 \pm 165 \\ 1,179 \pm 168 \\ 584 \pm 156 \\ 582 \pm 155 \\ 193 \pm 148 \\ 400 \pm 150 \\ 380 \pm 167 \\ 303 \pm 175 \\ < 277 \\ < 269 \\ 155 \pm 163 \\ < 263 \\ < 267 \\ < 271 \\ 140 \pm 177 \\ \end{array}$
		05/15/07 06/18/07 07/13/07	$< 328$ $468 \pm 176$ $314 \pm 128$	03/17/10 04/12/10 05/21/10	$132 \pm 178$ $141 \pm 172$ $976 \pm 285$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AH-S (continued)	24.5	06/21/10 07/16/10 08/09/10 09/13/10 10/11/10 11/23/10 12/02/10 01/20/11 02/18/11 03/04/11 04/07/11 05/05/11 06/16/11 07/13/11 08/31/11 10/07/11 11/17/11 12/13/11 01/19/12 02/15/12 04/19/12 05/30/12 06/19/12 08/22/12 09/25/12 10/18/12 12/04/12 12/15/13 01/21/13 02/15/13	$629 \pm 276$ $320 \pm 281$ $253 \pm 172$ $351 \pm 168$ $484 \pm 179$ $< 214$ $310 \pm 167$ $555 \pm 151$ $729 \pm 276$ $636 \pm 178$ $429 \pm 178$ $369 \pm 133$ $272 \pm 173$ $423 \pm 156$ $1,510 \pm 261$ $1,390 \pm 224$ $1,490 \pm 205$ $1,520 \pm 297$ $964 \pm 183$ $1,010 \pm 258$ $974 \pm 197$ $871 \pm 229$ $833 \pm 158$ $873 \pm 149$ $638 \pm 215$ $503 \pm 194$ $327 \pm 207$ $327 \pm 183$ $701 \pm 211$ $1,040 \pm 180$ $926 \pm 244$ $1,670 \pm 290$	03/19/13 04/09/13 05/17/13 06/24/13 07/16/13 08/20/13 09/19/13	$1,250 \pm 257$ $262 \pm 176$ $760 \pm 200$ $574 \pm 159$ $283 \pm 175$ $393 \pm 165$ $316 \pm 139$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AI	22.0	02/26/04 07/19/04 07/12/05 08/15/05 09/06/05 12/20/05 01/17/06 02/21/06 03/20/06 04/11/06 05/16/06 06/19/06 07/18/06 08/08/06 09/18/06 10/10/06 11/01/06 11/01/06 11/01/06 01/13/07 02/06/07 03/08/07 05/15/07 06/18/07 07/18/07 07/18/07 07/18/07 07/18/07 01/17/08 01/12/07 01/17/08 01/23/08	$3,925 \pm 300$ $26,022 \pm 604$ $12,847 \pm 312$ $7,383 \pm 264$ $5,988 \pm 241$ $3,515 \pm 305$ $2,698 \pm 201$ $2,293 \pm 193$ $2,563 \pm 287$ $5,403 \pm 252$ $2,393 \pm 189$ $2,101 \pm 190$ $1,375 \pm 189$ $1,445 \pm 199$ $1,771 \pm 196$ $1,160 \pm 183$ $1,741 \pm 172$ $2,699 \pm 197$ $2,401 \pm 150$ $2,137 \pm 173$ $2,288 \pm 207$ $2,467 \pm 158$ $2,682 \pm 195$ $2,538 \pm 184$ $2,334 \pm 178$ $3,006 \pm 185$ $2,671 \pm 180$ $2,570 \pm 176$ $2,840 \pm 184$ $463 \pm 143$	03/18/08 04/02/08 05/08/08 06/19/08 07/07/08 08/06/08 09/02/08 11/19/08 12/15/08 01/08/09 02/11/09 03/10/09 04/08/09 05/11/09 06/08/09 08/18/09 01/12/10 03/10/10 04/12/10 05/14/10 06/18/10 07/09/10 08/11/10 01/12/10	$2,690 \pm 190$ $2,805 \pm 176$ $3,347 \pm 216$ $2,392 \pm 186$ $2,434 \pm 189$ $2,146 \pm 201$ $2,220 \pm 186$ $3,050 \pm 196$ $4,281 \pm 207$ $3,364 \pm 198$ $3,719 \pm 201$ $3,409 \pm 195$ $21,005 \pm 395$ $5,675 \pm 276$ $8,679 \pm 324$ $8,515 \pm 297$ $4,480 \pm 242$ $6,226 \pm 267$ $7,350 \pm 282$ $3160 \pm 223$ $11,988 \pm 348$ $16,812 \pm 403$ $9,954 \pm 313$ $11,577 \pm 281$ $10,456 \pm 551$ $8,406 \pm 492$ $8,530 \pm 1,690$ $7,470 \pm 308$ $5,960 \pm 392$ $7,010 \pm 466$ $2,110 \pm 218$
		02/06/08	$2,737 \pm 188$	01/13/11	$6,780 \pm 301$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AI (continued)	22.0	02/08/11 03/25/11 04/19/11 05/10/11 06/10/11 07/20/11 09/01/11 10/20/11 11/17/11 12/08/11 01/06/12 02/08/12 03/13/12 04/17/12 05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 10/11/12 11/29/12 12/15/12 01/15/13 02/14/13 03/15/13 07/11/13	$4,320 \pm 273$ $4,040 \pm 447$ $3,690 \pm 429$ $5,910 \pm 538$ $6,220 \pm 516$ $6,470 \pm 527$ $4,550 \pm 256$ $4,820 \pm 340$ $14,700 \pm 815$ $2,040 \pm 245$ $15,600 \pm 473$ $6,610 \pm 545$ $2,760 \pm 365$ $3,380 \pm 252$ $1,330 \pm 224$ $1,010 \pm 234$ $1,920 \pm 203$ $1,360 \pm 274$ $1,900 \pm 307$ $1,610 \pm 228$ $2,260 \pm 341$ $1,850 \pm 309$ $2,450 \pm 355$ $1,470 \pm 269$ $1,280 \pm 234$ $1,550 \pm 304$ $1,120 \pm 194$ $2,350 \pm 219$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AJ	35.3	02/25/04 03/09/04 05/18/05 08/15/05 12/12/05 01/24/06 02/22/06 03/21/06 04/17/06 05/15/06 07/24/06 08/22/06 06/19/07 05/11/09 06/10/09 04/13/10 05/25/10 06/09/10 09/16/10 10/12/10 12/16/10 01/31/11 02/18/11 03/22/11 05/05/11 07/13/11 09/10/11 06/20/12 11/29/12 12/20/12 01/18/13	$1,305 \pm 236$ $3,485 \pm 255$ $109,547 \pm 1,199$ $189,109 \pm 1,064$ $89,687 \pm 1,083$ $45,215 \pm 554$ $45,136 \pm 557$ $51,897 \pm 838$ $46,829 \pm 567$ $41,760 \pm 538$ $39,051 \pm 518$ $76,931 \pm 733$ $30,052 \pm 424$ $18,468 \pm 433$ $27,023 \pm 515$ $12,854 \pm 347$ $23,906 \pm 378$ $23,954 \pm 782$ $6,090 \pm 284$ $11,500 \pm 536$ $18,400 \pm 483$ $20,000 \pm 482$ $19,800 \pm 515$ $18,200 \pm 920$ $18,100 \pm 933$ $14,300 \pm 783$ $22,500 \pm 646$ $10,900 \pm 714$ $14,000 \pm 799$ $19,200 \pm 928$ $22,100 \pm 1,020$ $23,000 \pm 549$	03/21/13 04/11/13 06/27/13 07/16/13 08/21/13 09/23/13	$24,200 \pm 1,050$ $26,200 \pm 1,080$ $16,300 \pm 480$ $19,600 \pm 510$ $21,900 \pm 543$ $20,900 \pm 511$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AL	25.3	02/25/04 09/08/04 11/16/04 12/21/04 02/08/05 04/11/05 01/11/06 03/14/06 04/11/06 05/19/06 10/09/07 04/22/08 10/20/09 01/13/10 04/11/10 04/11/10 06/17/10 06/28/10 07/09/10 08/09/10 09/17/10 10/18/10 01/20/11 03/04/11 06/13/11 08/05/11 08/05/11 08/05/11	$301 \pm 210$ $< 230$ $< 225$ $< 234$ $< 213$ $< 207$ $< 262$ $< 204$ $< 207$ $< 284$ $< 300$ $196 \pm 150$ $< 240$ $196 \pm 157$ $674 \pm 172$ $1,040 \pm 197$ $1,035 \pm 181$ $984 \pm 184$ $642 \pm 282$ $643 \pm 282$ $643 \pm 282$ $640 \pm 292$ $586 \pm 211$ $373 \pm 176$ $477 \pm 180$ $460 \pm 172$ $361 \pm 161$ $594 \pm 204$ $1,630 \pm 243$ $1,250 \pm 238$ $639 \pm 164$ $663 \pm 172$	11/17/11 12/20/11 03/15/12 06/13/12 09/25/12 10/11/12 11/29/12 12/11/12 01/18/13 02/15/13 03/21/13 04/08/13 05/15/13 06/25/13 07/15/13 08/20/13 09/23/13	$473 \pm 163$ $543 \pm 183$ $546 \pm 176$ $664 \pm 224$ $757 \pm 260$ $848 \pm 177$ $667 \pm 212$ $695 \pm 189$ $804 \pm 208$ $786 \pm 212$ $424 \pm 206$ $629 \pm 214$ $647 \pm 186$ $537 \pm 158$ $315 \pm 176$ $496 \pm 172$ $435 \pm 157$

- Results in picoCuries per liter (pCi/L)
- Well AL is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

MDA <sup>1</sup> NJGWQS <sup>2</sup> 20,000  20,000  AM  20,9 02/26/04 240,196 ± 1,799 10/20/09 30,570 ± 502 06/20/06 520,112 ± 1,823 11/17/09 27,310 ± 477 12/07/06 30,120 ± 467 12/16/09 33,977 ± 527 12/15/06 32,414 ± 480 01/12/10 59,523 ± 696 01/13/07 19,206 ± 366 03/17/10 29,250 ± 509 04/20/07 17,952 ± 328 04/28/10 30,834 ± 498 10/03/07 202,194 ± 1,000 05/25/10 22,510 ± 369 10/17/07 110,292 ± 693 06/21/10 18,701 ± 699 11/14/07 85,961 ± 667 07/16/10 13,025 ± 580 11/28/07 118,332 ± 770 08/11/10 13,200 ± 390 12/27/07 17,242 ± 287 10/11/10 11,800 ± 547 01/28/08 16,295 ± 314 11/10/10 11,700 ± 606 02/06/08 17,091 ± 326 01/14/11 9,600 ± 347 02/20/08 17,843 ± 331 02/07/11 8,030 ± 349 03/13/08 15,442 ± 313 03/25/11 5,620 ± 528 04/02/08 20,199 ± 343 04/27/11 6,010 ± 536 06/24/08 19,567 ± 352 05/10/11 5,990 ± 546 06/30/08 20,704 ± 358 06/10/11 7,000 ± 543 07/24/08 18,189 ± 354 07/20/11 6,830 ± 610 09/22/08 30,551 ± 442 09/15/11 6,690 ± 379 11/14/08 24,915 ± 398 12/08/11 7,460 ± 450 02/25/09 32,257 ± 419 03/13/12 9,270 ± 640 03/26/09 26,094 ± 399 04/17/12 9,280 ± 377 04/16/09 19,373 ± 395 05/10/12 7,870 ± 349 05/20/09 32,850 ± 663 06/13/12 4,320 ± 325 08/18/09 23,724 ± 447 08/22/12 5,990 ± 594 09/23/09 28,347 ± 485	Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
NJGWQS <sup>2</sup> 20,000  20,000  AM  20.9  02/26/04  240,196 ± 1,799  10/20/09  30,570 ± 502  06/20/06  520,112 ± 1,823  11/17/09  27,310 ± 477  12/07/06  30,120 ± 467  12/16/09  33,977 ± 527  12/15/06  32,414 ± 480  01/12/10  59,523 ± 696  01/13/07  19,206 ± 366  03/17/10  29,250 ± 509  04/20/07  17,952 ± 328  04/28/10  30,834 ± 498  10/03/07  202,194 ± 1,000  05/25/10  22,510 ± 369  10/17/07  110,292 ± 693  06/21/10  18,701 ± 699  11/14/07  85,961 ± 667  07/16/10  13,025 ± 580  11/28/07  118,332 ± 770  08/11/10  13,200 ± 390  12/12/07  20,267 ± 337  09/13/10  13,200 ± 390  12/12/07  17,242 ± 287  10/11/10  11,700 ± 606  02/06/08  17,091 ± 326  01/14/11  9,600 ± 347  02/20/08  17,843 ± 331  02/07/11  8,030 ± 349  03/13/08  15,442 ± 313  03/25/11  5,620 ± 528  04/02/08  20,199 ± 343  04/27/11  6,010 ± 536  06/24/08  19,567 ± 352  05/10/11  5,990 ± 546  06/30/08  20,704 ± 358  06/10/11  7,000 ± 543  07/24/08  18,189 ± 354  07/20/11  6,480 ± 532  08/07/08  20,454 ± 395  08/17/11  6,480 ± 532  08/07/08  20,454 ± 395  08/17/11  6,480 ± 532  08/07/08  22,579 ± 419  03/13/12  9,270 ± 640  03/26/09  28,611 ± 410  02/08/12  13,600 ± 767  02/25/09  32,257 ± 419  03/13/12  9,270 ± 640  03/26/09  26,094 ± 399  04/17/12  9,280 ± 377  04/16/09  19,373 ± 395  05/10/12  7,870 ± 349  05/20/09  32,850 ± 563  06/13/12  4,320 ± 595  08/18/09  23,724 ± 447  08/22/12  5,990 ± 594	$MDA^1$	(11)		300		300
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$NJGWQS^2$			20,000		20,000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	AM	20.9				-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						·
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				•		-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				· · · · · · · · · · · · · · · · · · ·		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				•		·
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			04/20/07		04/28/10	-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			10/03/07	$202,194 \pm 1,000$	05/25/10	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			10/17/07	$110,292 \pm 693$		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			11/14/07	$85,961 \pm 667$	07/16/10	$13,025 \pm 580$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			11/28/07	$118,332 \pm 770$	08/11/10	$13,200 \pm 390$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			12/12/07	$20,267 \pm 337$	09/13/10	$13,200 \pm 390$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			12/27/07	$17,242 \pm 287$	10/11/10	$11,800 \pm 547$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			01/28/08	$16,295 \pm 314$	11/10/10	$11,700 \pm 606$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			02/06/08	$17,091 \pm 326$	01/14/11	$9,600 \pm 347$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			02/20/08	$17,843 \pm 331$	02/07/11	$8,030 \pm 349$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			03/13/08	$15,442 \pm 313$	03/25/11	$5,620 \pm 528$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			04/02/08	$20,199 \pm 343$	04/27/11	$6,010 \pm 536$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			06/24/08	$19,567 \pm 352$	05/10/11	$5,990 \pm 546$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			06/30/08	$20,704 \pm 358$	06/10/11	$7,000 \pm 543$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			07/24/08	$18,189 \pm 354$	07/20/11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			08/07/08	· · · · · · · · · · · · · · · · · · ·	08/17/11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			09/22/08		09/15/11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$				· ·		·
$\begin{array}{ccccc} 04/16/09 & 19,373 \pm 395 & 05/10/12 & 7,870 \pm 349 \\ 05/20/09 & 32,850 \pm 563 & 06/13/12 & 4,320 \pm 325 \\ 06/10/09 & 23,769 \pm 488 & 07/23/12 & 6,520 \pm 555 \\ 08/18/09 & 23,724 \pm 447 & 08/22/12 & 5,990 \pm 594 \end{array}$				· ·		
$05/20/09$ $32,850 \pm 563$ $06/13/12$ $4,320 \pm 325$ $06/10/09$ $23,769 \pm 488$ $07/23/12$ $6,520 \pm 555$ $08/18/09$ $23,724 \pm 447$ $08/22/12$ $5,990 \pm 594$				· · · · · · · · · · · · · · · · · · ·		
$06/10/09$ $23,769 \pm 488$ $07/23/12$ $6,520 \pm 555$ $08/18/09$ $23,724 \pm 447$ $08/22/12$ $5,990 \pm 594$				· ·		
$08/18/09$ $23,724 \pm 447$ $08/22/12$ $5,990 \pm 594$						

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

### Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(==)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
43.6	20.0	10/11/10	5.510 400		
AM	20.9	10/11/12	$5,710 \pm 493$		
(continued)		11/28/12	$5,190 \pm 498$		
		12/19/12	$5,880 \pm 527$		
		01/14/13	$7,170 \pm 580$		
		02/14/13	$7,070 \pm 569$		
		03/19/13	$6,150 \pm 554$		
		04/08/13	$6,100 \pm 406$		
		05/17/13	$8,490 \pm 490$		
		06/26/13	$7,430 \pm 351$		
		07/12/13	$6,990 \pm 581$		
		08/16/13	$5,570 \pm 508$		
		09/20/13	$5,690 \pm 521$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AN	25.0	08/10/04 05/16/05 07/19/05 12/09/05 01/24/06 02/22/06 03/21/06 04/17/06 05/15/06 06/20/06 07/24/06 08/22/06 09/21/06 10/06/06 11/16/06 12/15/06 01/23/07 02/06/07 08/23/07 02/06/07 10/17/07 11/15/07 12/13/07 01/24/08 02/25/08 03/12/08 04/23/08 05/09/08 06/12/08 07/16/08 08/21/08 09/22/08	$20,060 \pm 533$ $83,291 \pm 718$ $3,995 \pm 211$ $58,305 \pm 872$ $67,066 \pm 657$ $56,664 \pm 618$ $76,367 \pm 1,001$ $48,318 \pm 572$ $85,327 \pm 746$ $45,995 \pm 562$ $45,191 \pm 559$ $81,383 \pm 752$ $45,578 \pm 564$ $3,606 \pm 243$ $45,796 \pm 548$ $7,184 \pm 277$ $4,158 \pm 234$ $34,737 \pm 349$ $24,922 \pm 384$ $34,711 \pm 434$ $27,066 \pm 396$ $19,440 \pm 343$ $61,569 \pm 512$ $59,243 \pm 556$ $60,625 \pm 566$ $44,521 \pm 490$ $52,911 \pm 529$ $3,953 \pm 218$ $35,272 \pm 450$ $45,323 \pm 532$ $46,054 \pm 566$ $20,258 \pm 368$	03/16/09 05/11/09 06/10/09 04/13/10 05/25/10 06/09/10 07/22/10 08/09/10 09/16/10 11/15/10 01/31/11 05/05/11 09/10/11 06/20/12 01/17/13 02/15/13 03/21/13 04/11/13 08/21/13 09/23/13	$3,989 \pm 202$ $21,370 \pm 465$ $26,652 \pm 513$ $2,234 \pm 211$ $1,135 \pm 290$ $5,294 \pm 437$ $1,877 \pm 326$ $2,130 \pm 471$ $< 246$ $11,800 \pm 544$ $9,460 \pm 539$ $24,500 \pm 529$ $17,100 \pm 892$ $2,110 \pm 334$ $12,100 \pm 489$ $< 228$ $4,020 \pm 441$ $15,800 \pm 461$ $16,900 \pm 893$ $18,300 \pm 915$ $14,100 \pm 444$ $14,100 \pm 430$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey – Bureau of Nuclear Engineering

#### **Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant**

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(10)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
AO	21.0	08/10/04 10/06/06 12/15/06 12/04/12 12/19/12 01/17/13 02/14/13 03/19/13	$1,782 \pm 200$ $3,629 \pm 288$ $13,566 \pm 299$ $3,290 \pm 401$ $3,090 \pm 392$ $2,690 \pm 368$ $3,560 \pm 405$ $3,000 \pm 389$		

- Results in picoCuries per liter (pCi/L)
- Well has been inaccessible due to site constraints. The well had been removed from service since 2006. Sampling was restarted in December 2012.
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
113011 QD			20,000		20,000
AP	40.0	08/09/04	$1,229 \pm 180$	12/12/07	$3,377 \pm 190$
		12/14/04	$1,116 \pm 182$	01/17/08	$1,136 \pm 160$
		01/27/05	$1,266 \pm 182$	02/21/08	$1,153 \pm 163$
		02/01/05	$2,255 \pm 168$	03/12/08	$1,141 \pm 161$
		03/07/05	$64,377 \pm 922$	04/01/08	$1,089 \pm 150$
		04/05/05	$86,727 \pm 1,071$	05/08/08	$1,086 \pm 177$
		08/01/05	$59,996 \pm 612$	06/19/08	$797 \pm 163$
		09/06/05	$1,097 \pm 173$	07/07/08	$612 \pm 163$
		12/08/05	$22,069 \pm 564$	08/07/08	$988 \pm 184$
		01/10/06	$12,894 \pm 324$	09/02/08	$870 \pm 168$
		02/07/06	$9,451 \pm 286$	10/17/08	$584 \pm 162$
		03/06/06	$9,498 \pm 413$	11/18/08	$174 \pm 156$
		04/03/06	$8,558 \pm 256$	12/15/08	$984 \pm 164$
		05/01/06	$7,746 \pm 273$	01/27/09	$788 \pm 161$
		06/05/06	$4,984 \pm 239$	02/25/09	$979 \pm 163$
		07/10/06	$601 \pm 172$	03/16/09	$1,376 \pm 163$
		08/07/06	$1,563 \pm 191$	04/08/09	$1,208 \pm 164$
		09/06/06	$2,600 \pm 212$	05/11/09	$1,134 \pm 195$
		10/10/06	$5,092 \pm 255$	06/03/09	$1,065 \pm 191$
		11/01/06	$610 \pm 182$	08/04/09	$1,024 \pm 182$
		12/08/06	$4,448 \pm 221$	09/23/09	< 267
		01/13/07	$1,011 \pm 168$	10/08/09	$1,215 \pm 183$
		02/05/07	$4,274 \pm 179$	11/04/09	$1,330 \pm 188$
		03/07/07	$1,358 \pm 161$	12/16/09	$1,301 \pm 189$
		04/19/07	$930 \pm 152$	01/13/10	$1,095 \pm 196$
		05/15/07	$837 \pm 161$	03/10/10	$1,436 \pm 203$
		06/18/07	$1,417 \pm 162$	04/11/10	$1,471 \pm 192$
		07/18/07	$316 \pm 145$	05/14/10	$1,298 \pm 159$
		08/15/07	$2,071 \pm 178$	06/18/10	$1,684 \pm 330$
		09/19/07	$2,945 \pm 186$	07/09/10	$3,015 \pm 364$
		10/03/07	$3,153 \pm 185$	08/09/10	$1,160 \pm 300$
		11/14/07	$3,418 \pm 189$	09/09/10	$2,400 \pm 210$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is mnthly

the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey – Bureau of Nuclear Engineering

## $Groundwater\ Monitoring\ of\ Tritium\ (H-3)\ -\ Salem\ Unit\ 1\ Nuclear\ Plant$

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AP (continued)	40.0	10/13/10 11/10/10 12/08/10 01/14/11 02/08/11 03/04/11 04/07/11 05/05/11 06/16/11 07/13/11 08/31/11 09/15/11 10/20/11 11/17/11 01/19/12 02/15/12 03/15/12 04/17/12 05/10/12 06/13/12 08/30/12 10/11/12 11/30/12 12/17/12 01/16/13 02/14/13 03/18/13 04/09/13 06/27/13 07/09/13 08/19/13	$894 \pm 242$ $924 \pm 243$ $1,000 \pm 190$ $1,400 \pm 179$ $952 \pm 307$ $974 \pm 192$ $1,130 \pm 258$ $1,020 \pm 249$ $1,070 \pm 236$ $967 \pm 202$ $2,260 \pm 198$ $1,220 \pm 214$ $1,100 \pm 160$ $960 \pm 245$ $782 \pm 237$ $807 \pm 181$ $931 \pm 234$ $823 \pm 163$ $817 \pm 197$ $878 \pm 230$ $972 \pm 230$ $660 \pm 162$ $707 \pm 226$ $925 \pm 234$ $747 \pm 247$ $749 \pm 212$ $745 \pm 196$ $780 \pm 237$ $954 \pm 223$ $789 \pm 221$ $853 \pm 168$ $714 \pm 178$	09/18/13	$835 \pm 160$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
			•		,
AR	43.0	08/09/04	$431,806 \pm 2,398$	01/23/08	$32,926 \pm 424$
		01/27/05	$312,134 \pm 1,576$	02/21/08	$28,743 \pm 404$
		02/22/05	$275,252 \pm 1,898$	03/12/08	$29,816 \pm 413$
		03/14/05	$174,632 \pm 1,513$	04/01/08	$22,819 \pm 360$
		04/12/05	$203,500 \pm 1,628$	05/08/08	$22,685 \pm 395$
		05/10/05	$208,442 \pm 1,660$	06/19/08	$14,026 \pm 308$
		06/21/05	$207,436 \pm 2,196$	07/07/08	$11,696 \pm 282$
		07/19/05	$185,219 \pm 1,055$	08/18/08	$22,550 \pm 417$
		08/16/05	$193,551 \pm 1,097$	09/22/08	$10,371 \pm 287$
		09/19/05	$177,920 \pm 1,042$	10/13/08	$9,722 \pm 261$
		12/08/05	$150,684 \pm 1,392$	11/25/08	$7,266 \pm 247$
		01/10/06	$156,764 \pm 1,000$	12/23/08	$7,508 \pm 245$
		02/06/06	$94,420 \pm 788$	01/08/09	$12,672 \pm 291$
		03/20/06	$37,160 \pm 715$	02/24/09	$24,302 \pm 377$
		04/10/06	$15,331 \pm 348$	03/16/09	$29,135 \pm 426$
		05/15/06	$11,414 \pm 311$	04/08/09	$37,805 \pm 514$
		06/06/06	$11,612 \pm 313$	05/11/09	$33,888 \pm 571$
		07/17/06	$79,227 \pm 692$	06/03/09	$32,968 \pm 567$
		08/08/06	$63,391 \pm 651$	08/20/09	$27,508 \pm 477$
		09/06/06	$18,675 \pm 380$	09/02/09	$27,560 \pm 480$
		10/10/06	$10,997 \pm 276$	10/21/09	$38,934 \pm 560$
		11/02/06	$60,851 \pm 636$	11/06/09	$31,150 \pm 506$
		12/18/06	$47,426 \pm 572$	12/22/09	$22,346 \pm 437$
		01/13/07	$79,815 \pm 691$	01/13/10	$23,623 \pm 458$
		02/05/07	$65,592 \pm 477$	03/10/10	$19,419 \pm 429$
		03/07/07	$51,176 \pm 554$	04/12/10	$17,225 \pm 387$
		04/19/07	$61,858 \pm 574$	05/14/10	$15,882 \pm 320$
		05/15/07	$71,705 \pm 659$	06/18/10	$15,790 \pm 652$
		06/18/07	$75,361 \pm 684$	07/09/10	$13,868 \pm 587$
		07/19/07	$80,779 \pm 668$	08/09/10	$16,600 \pm 3,250$
		08/15/07	$65,221 \pm 590$	09/10/10	$17,500 \pm 442$
		12/12/07	$41,279 \pm 464$	10/13/10	$19,100 \pm 686$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## **Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant**

#### **Split Sample Analytical Results**

Well ID Tot We Dep	ell Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
(ft	t)			
$MDA^1$		300		300
NJGWQS <sup>2</sup>		20,000		20,000
AR 43.		$15,100 \pm 678$		
(continued)	12/08/10	$14,200 \pm 446$		
	01/14/11	$13,300 \pm 400$		
	02/07/11	$14,400 \pm 448$		
	03/04/11	$14,000 \pm 814$		
	04/07/11	$13,500 \pm 803$		
	05/05/11	$12,700 \pm 784$		
	06/16/11	$13,500 \pm 748$		
	07/13/11	$12,300 \pm 719$		
	08/31/11	$8.960 \pm 339$		
	09/15/11	$7,910 \pm 407$		
	10/20/11	$7,870 \pm 413$		
	11/17/11	$11,800 \pm 749$		
	01/19/12	$12,600 \pm 753$		
	02/15/12	$12,100 \pm 562$		
	03/15/12	$11,500 \pm 715$		
	04/17/12	$11,400 \pm 413$		
	05/10/12	$11,000 \pm 401$		
	06/13/12	$9,960 \pm 436$		
	08/22/12	$7,970 \pm 685$		
	10/11/12	$8,480 \pm 633$		
	11/30/12	$8,980 \pm 646$		
	12/18/12	$8,060 \pm 598$		
	01/17/13	$9,550 \pm 662$		
	02/14/13	$11,900 \pm 749$		
	03/18/13	$13,400 \pm 797$		
	04/09/13	$11,500 \pm 725$		
	05/17/13	$8,100 \pm 473$		
	06/27/13	$7,640 \pm 340$		
	07/15/13	$7,930 \pm 352$		
		, <del>-</del>		
	08/20/13	$6,620 \pm 351$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey – Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
AS	41.5	08/09/04 11/16/04 01/27/05 03/23/05 04/18/05 05/18/05 05/18/05 07/19/05 08/15/05 12/12/05 01/24/06 02/22/06 03/21/06 04/17/06 05/15/06 06/20/06 07/24/06 08/22/06 09/21/06 10/06/06 11/16/06 12/15/06 01/23/07 02/06/07 03/14/07 04/24/07 05/22/07 06/19/07 07/19/07 08/23/07	$11,095 \pm 408$ $14,929 \pm 476$ $12,546 \pm 330$ $65,225 \pm 929$ $67,318 \pm 942$ $56,399 \pm 872$ $54,980 \pm 1,155$ $61,422 \pm 615$ $43,439 \pm 539$ $59,702 \pm 914$ $62,576 \pm 642$ $62,480 \pm 638$ $43,938 \pm 777$ $46,122 \pm 566$ $45,282 \pm 554$ $46,963 \pm 562$ $41,987 \pm 541$ $57,501 \pm 623$ $70,088 \pm 714$ $59,583 \pm 523$ $70,985 \pm 666$ $41,087 \pm 535$ $44,164 \pm 540$ $26,664 \pm 311$ $36,409 \pm 472$ $52,669 \pm 531$ $39,797 \pm 472$ $24,591 \pm 395$ $7,514 \pm 250$ $13,550 \pm 301$	09/20/07 10/17/07 11/15/07 12/13/07 01/24/08 02/25/08 03/12/08 04/23/08 05/09/08 07/16/08 12/04/12 12/19/12 01/18/13 02/15/13 03/18/13 04/09/13 05/17/13 06/27/13 07/15/13 08/16/13	$3,413 \pm 192$ $8,750 \pm 264$ $15,734 \pm 312$ $24,737 \pm 336$ $30,591 \pm 410$ $23,835 \pm 373$ $22,712 \pm 365$ $11,615 \pm 273$ $2,317 \pm 194$ $42,333 \pm 514$ $17,400 \pm 904$ $28,000 \pm 1,130$ $15,500 \pm 853$ $23,900 \pm 560$ $13,000 \pm 786$ $18,100 \pm 904$ $14,200 \pm 627$ $8,800 \pm 367$ $4,920 \pm 295$ $9,280 \pm 678$ $14,400 \pm 454$

- Results in picoCuries per liter (pCi/L)
- Sampling compromised because of pump degradation. The well was removed from service after July 2008. Sampling was restarted in December 2012
- Current sampling frequency is monthly

<sup>&</sup>lt;sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
MICWOS <sup>2</sup>					
NJGWQS <sup>2</sup>			20,000		20,000
AT	44.0	05/18/05	$2,860 \pm 237$	04/23/08	$36,188 \pm 443$
AI	44.0	05/16/05	$2,800 \pm 237$ $1,514 \pm 324$	05/09/08	$30,188 \pm 443$ $3,810 \pm 218$
		00/22/03	$1,314 \pm 324$ $1,476 \pm 181$	12/18/08	$2,771 \pm 190$
		07/19/03	$1,470 \pm 181$ $1,100 \pm 175$	01/19/09	$2,771 \pm 190$ $2,548 \pm 186$
		10/17/05	$1,750 \pm 173$ $1,753 \pm 188$	03/16/09	$2,348 \pm 180$ $2,841 \pm 189$
		10/17/05	$602 \pm 172$	04/22/09	$3,977 \pm 231$
		01/24/06	$1,758 \pm 195$	04/22/09	•
		01/24/06 02/23/06		05/11/09	$2,866 \pm 229$ $2,428 \pm 219$
		02/23/06 03/21/06	$2,395 \pm 194$	05/25/10	
		03/21/06	$1,017 \pm 257$	05/25/10	$5,062 \pm 213$
			$1,213 \pm 184$		$4,637 \pm 423$
		05/15/06	$1,310 \pm 174$	07/22/10	$3,487 \pm 376$
		06/20/06	$1,672 \pm 198$	08/09/10	$5,690 \pm 309$
		07/24/06	$1,590 \pm 219$	09/16/10	$4,100 \pm 247$
		08/22/06	$3,102 \pm 214$	10/12/10	$4,550 \pm 348$
		09/21/06	$3,242 \pm 235$	11/15/10	$3,630 \pm 341$
		10/06/06	$4,444 \pm 248$	12/16/10	$4,410 \pm 280$
		11/16/06	$4,827 \pm 230$	01/31/11	$4,080 \pm 247$
		12/15/06	$1,888 \pm 174$	02/18/11	$4,520 \pm 280$
		01/23/07	$1,917 \pm 190$	03/22/11	$4,200 \pm 462$
		02/06/07	$1,306 \pm 137$	04/07/11	$3,880 \pm 444$
		03/14/07	$1,856 \pm 178$	06/20/12	< 224
		04/24/07	$3,367 \pm 186$	11/29/12	$3,930 \pm 432$
		05/22/07	$2,902 \pm 196$	12/20/12	$3,860 \pm 432$
		06/19/07	$2,142 \pm 174$	01/18/13	$3,830 \pm 324$
		07/19/07	$1,264 \pm 134$	02/15/13	$3,720 \pm 258$
		08/23/07	$1,902 \pm 175$	03/13/13	$2,840 \pm 329$
		09/20/07	$1,726 \pm 171$	04/11/13	$2,960 \pm 370$
		10/17/07	$1,702 \pm 164$	05/20/13	$3,270 \pm 320$
		11/15/07	$2,349 \pm 175$	06/27/13	$3,120 \pm 253$
		12/13/07	$3,667 \pm 175$	07/16/13	$2,600 \pm 244$
		02/25/08	$54,351 \pm 539$	08/21/13	$2,850 \pm 238$
		03/12/08	$47,668 \pm 508$	09/23/13	$2,290 \pm 215$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
CA	38.0	02/21/07 04/11/07 05/22/07 07/12/07 11/19/07 01/16/08 02/20/08 07/08/08 08/18/08 01/19/09 02/24/09 11/19/09 01/25/10 03/24/10 04/07/10 07/22/10 08/26/10 09/24/10 11/24/10 11/24/10 12/09/10 01/21/11 03/24/11 03/24/11 04/25/11 05/09/11 07/28/11 08/11/11 09/12/11 10/26/11 11/26/11 11/25/11	$616 \pm 134$ $< 233$ $686 \pm 183$ $156 \pm 146$ $620 \pm 147$ $760 \pm 155$ $757 \pm 154$ $789 \pm 161$ $766 \pm 175$ $702 \pm 166$ $759 \pm 155$ $987 \pm 183$ $663 \pm 174$ $608 \pm 188$ $997 \pm 197$ $1,009 \pm 188$ $818 \pm 304$ $1,040 \pm 278$ $948 \pm 267$ $979 \pm 180$ $1,050 \pm 264$ $917 \pm 241$ $614 \pm 187$ $876 \pm 296$ $1,070 \pm 196$ $1,110 \pm 251$ $1,110 \pm 160$ $1,050 \pm 209$ $1,350 \pm 233$ $1,320 \pm 215$ $769 \pm 147$ $926 \pm 246$	12/15/11 01/24/12 02/10/12 03/28/12 04/24/12 05/17/12 06/19/12 07/17/12 08/29/12 09/21/12 10/24/12 11/30/12 12/19/12 01/16/13 02/13/13 03/14/13 04/10/13 05/14/13 06/26/13 07/10/13 08/14/13	$1,020 \pm 187$ $973 \pm 253$ $937 \pm 191$ $1,240 \pm 268$ $1,290 \pm 177$ $1,120 \pm 250$ $1,440 \pm 283$ $1,120 \pm 227$ $881 \pm 225$ $882 \pm 268$ $841 \pm 237$ $868 \pm 232$ $1,040 \pm 245$ $1,250 \pm 202$ $1,040 \pm 184$ $1,270 \pm 265$ $1,100 \pm 189$ $902 \pm 222$ $1,070 \pm 248$ $907 \pm 178$ $731 \pm 177$ $762 \pm 164$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(11)		300 20,000		300 20,000
CB	80.0	02/21/07 04/11/07 05/22/07 07/12/07 11/19/07 01/16/08 02/20/08 07/08/08 08/18/08 01/19/09 02/24/09 01/25/10 07/22/10 08/26/10 02/04/11 03/24/11 04/27/11 05/09/11 07/28/11 07/28/11 09/12/11 10/26/11 11/25/11 11/25/11 11/25/11 01/24/12 02/10/12 03/28/12	$412 \pm 120$ $< 232$ $< 294$ $< 270$ $< 232$ $< 249$ $191 \pm 147$ $2,197 \pm 184$ $1,757 \pm 194$ $< 271$ $767 \pm 156$ $199 \pm 170$ $449 \pm 169$ $165 \pm 177$ $796 \pm 296$ $1,370 \pm 336$ $1,090 \pm 321$ $505 \pm 160$ $< 188$ $1,290 \pm 276$ $876 \pm 199$ $3,080 \pm 312$ $1,160 \pm 208$ $1,090 \pm 159$ $762 \pm 174$ $333 \pm 182$ $358 \pm 193$ $282 \pm 174$ $468 \pm 193$ $609 \pm 150$	05/17/12 06/19/12 07/17/12 08/29/12 09/21/12 10/24/12 11/30/12 12/19/12 01/17/13 02/13/13 03/15/13 04/11/13 05/14/13	$359 \pm 172$ $332 \pm 180$ $348 \pm 159$ < 175 $359 \pm 206$ $415 \pm 197$ $389 \pm 179$ $461 \pm 142$ $411 \pm 181$ $1,190 \pm 270$ $4,550 \pm 474$ $1,450 \pm 222$ $773 \pm 217$

- Results in picoCuries per liter (pCi/L)
- The well casing for this monitoring well was found damaged beyond repair and was targeted for abandonment in May 2013

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
K	40.0 60.0 80.0	01/29/03 02/03/03 02/05/03 02/27/03 03/14/03 03/18/03 03/26/03 03/31/03 04/09/03 04/17/03 04/21/03 05/05/03 05/28/03 05/28/03 06/04/03 06/10/03 06/24/03 06/30/03 07/16/03 11/09/03 08/02/04 05/09/05 07/05/05 01/09/06 07/10/06 01/23/07 07/12/07 01/16/08 01/19/09	$ < 274 $ $ < 275 $ $1,288 \pm 187 $ $1,115 \pm 194 $ $941 \pm 170 $ $708 \pm 212 $ $742 \pm 198 $ $943 \pm 178 $ $1,010 \pm 178 $ $1,045 \pm 180 $ $857 \pm 182 $ $890 \pm 179 $ $765 \pm 192 $ $749 \pm 185 $ $851 \pm 186 $ $758 \pm 181 $ $632 \pm 180 $ $1,663 \pm 206 $ $1,803 \pm 203 $ $1,565 \pm 195 $ $918 \pm 188 $ $732 \pm 171 $ $562 \pm 153 $ $595 \pm 149 $ $683 \pm 299 $ $586 \pm 175 $ $401 \pm 168 $ $618 \pm 165 $ $< 272 $ $382 \pm 150 $ $402 \pm 157 $ $188 \pm 168 $	01/25/10 04/11/10 07/09/10 01/13/11 07/29/11 01/24/12 07/17/12 01/16/13 07/10/13	258 ± 180 < 270 < 464 < 226 < 264 < 248 < 188 < 250 < 153

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is semi-annual

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
L	20.0	01/22/03	< 240	07/24/12	< 224
	40.0	01/23/03	< 146	01/21/13	< 201
	60.0	01/24/03	< 241	07/11/13	< 147
	80.0	01/28/03	< 200		
		03/14/03	< 219		
		03/18/03	< 289		
		03/26/03	< 274		
		04/02/03	< 239		
		04/08/03	< 239		
		04/16/03	< 235		
		04/24/03	< 253		
		04/29/03	$269 \pm 154$		
		05/05/03	< 277		
		05/15/03	< 265		
		05/20/03	< 263		
		05/28/03	$213 \pm 162$		
		06/04/03	< 260		
		06/10/03	< 266		
		06/17/03	$863 \pm 178$		
		06/24/03	$1,435 \pm 190$		
		06/30/03	$949 \pm 174$		
		12/16/03	< 207		
		08/02/04	< 221		
		01/22/07	$205 \pm 157$		
		01/17/08	< 238		
		01/19/10	$263 \pm 180$		
		04/07/10	< 284		
		06/28/10	$355 \pm 284$		
		07/14/10	< 463		
		01/21/11	< 212		
		07/29/11	< 264		
		01/24/12	< 246		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is semi-annual

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
			,		,
M	20.0	02/13/03	$12,638 \pm 443$	02/23/07	$4,031 \pm 169$
		02/28/03	$12,856 \pm 440$	03/08/07	$4,644 \pm 205$
		03/03/03	$13,380 \pm 617$	04/20/07	$9,255 \pm 253$
		03/10/03	$11,853 \pm 498$	05/15/07	$8,127 \pm 247$
		03/17/03	$7,896 \pm 343$	06/18/07	$7,082 \pm 254$
		03/24/03	$9,443 \pm 444$	07/18/07	$6,893 \pm 243$
		03/31/03	$8,911 \pm 371$	08/15/07	$4,936 \pm 215$
		04/07/03	$7,903 \pm 352$	09/20/07	$4,188 \pm 202$
		04/14/03	$8,381 \pm 361$	10/03/07	$4,190 \pm 202$
		04/21/03	$7,078 \pm 338$	11/14/07	$3,774 \pm 195$
		04/30/03	$7,487 \pm 343$	12/12/07	$4,049 \pm 195$
		07/09/03	$101,201 \pm 1,156$	02/06/08	$4,255 \pm 205$
		07/23/03	$98,090 \pm 1,168$	03/18/08	$4,222 \pm 208$
		08/06/03	$64,992 \pm 976$	06/19/08	$4,181 \pm 209$
		09/04/03	$36,039 \pm 731$	07/07/08	$4,433 \pm 214$
		09/16/03	$29,382 \pm 648$	08/06/08	$4,942 \pm 242$
		07/12/05	$73,456 \pm 672$	09/02/08	$4,591 \pm 223$
		08/15/05	$74,613 \pm 683$	11/19/08	$3,477 \pm 206$
		09/06/05	$63,521 \pm 640$	12/15/08	$3,337 \pm 196$
		01/17/06	$6,601 \pm 225$	01/08/09	$31,279 \pm 416$
		02/21/06	$6,727 \pm 255$	02/25/09	$25,966 \pm 384$
		03/20/06	$3,948 \pm 316$	03/05/09	$25,249 \pm 387$
		04/11/06	$3,726 \pm 219$	04/08/09	$31,600 \pm 472$
		05/16/06	$4,056 \pm 214$	05/26/09	$38,553 \pm 604$
		06/19/06	$4,307 \pm 227$	06/08/09	$75,714 \pm 838$
		07/18/06	$4,639 \pm 235$	09/02/09	$59,649 \pm 684$
		08/08/06	$4,336 \pm 242$	10/08/09	$31,285 \pm 508$
		09/18/06	$3,656 \pm 230$	11/17/09	$35,450 \pm 536$
		10/10/06	$3,554 \pm 189$	12/16/09	$29,314 \pm 493$
		11/01/06	$3,321 \pm 218$	01/12/10	$21,218 \pm 434$
		12/18/06	$2,968 \pm 205$	03/10/10	$21,764 \pm 447$
		01/13/07	$4,593 \pm 222$	04/12/10	$18,472 \pm 401$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
M (continued)	20.0	05/25/10 06/21/10 07/09/10 08/25/10 09/17/10 10/11/10 11/10/10 12/02/10 01/13/11 02/08/11 03/25/11 04/19/11 05/10/11 06/10/11 07/20/11 10/20/11 11/17/11 12/08/11 01/06/12 02/08/12 03/13/12 04/17/12 05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 11/30/12 11/30/12 12/15/13	$14,423 \pm 308$ $11,295 \pm 577$ $9,985 \pm 523$ $10,200 \pm 2,010$ $8,870 \pm 328$ $10,100 \pm 509$ $8,240 \pm 510$ $8,540 \pm 359$ $6,310 \pm 451$ $9,540 \pm 374$ $25,400 \pm 640$ $41,200 \pm 828$ $47,700 \pm 882$ $35,000 \pm 1,190$ $25,800 \pm 1,050$ $22,900 \pm 517$ $15,000 \pm 543$ $12,400 \pm 758$ $9,020 \pm 486$ $9,450 \pm 380$ $9,170 \pm 634$ $13,900 \pm 788$ $29,700 \pm 651$ $22,900 \pm 561$ $40,300 \pm 827$ $27,800 \pm 1,130$ $19,300 \pm 1,040$ $16,900 \pm 674$ $16,800 \pm 864$ $12,400 \pm 753$ $12,100 \pm 750$ $9,630 \pm 669$	02/12/13 03/14/13 04/09/13 05/16/13 06/26/13 07/11/13 08/19/13 09/18/13	$8,240 \pm 625$ $7,880 \pm 610$ $6,030 \pm 507$ $6,180 \pm 423$ $7,100 \pm 333$ $6,000 \pm 545$ $6,130 \pm 311$ $6,080 \pm 309$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(11)		300 20,000		300 20,000
N N	20.0	01/30/03 03/04/03 03/14/03 03/17/03 03/25/03 04/04/03 04/11/03 04/25/03 04/30/03 05/06/03 05/21/03 05/27/03 06/04/03 06/11/03 06/19/03 07/25/03 07/10/03 07/25/03 08/07/03 08/20/03 09/17/03 12/12/03 05/15/07 10/17/07 11/14/07 12/12/07 01/17/08 02/20/08 03/13/08	$51,435 \pm 917$ $3,086 \pm 336$ $3,003 \pm 234$ $4,048 \pm 262$ $4,047 \pm 316$ $3,174 \pm 248$ $3,350 \pm 251$ $3,684 \pm 260$ $5,612 \pm 308$ $8,012 \pm 354$ $8,140 \pm 365$ $5,668 \pm 314$ $5,737 \pm 313$ $4,856 \pm 293$ $4,224 \pm 281$ $5,393 \pm 302$ $4,734 \pm 280$ $4,104 \pm 288$ $4,579 \pm 290$ $4,593 \pm 290$ $5,288 \pm 303$ $5,588 \pm 308$ $4,964 \pm 285$ $6,537 \pm 242$ $21,674 \pm 353$ $25,866 \pm 364$ $14,937 \pm 303$ $12,292 \pm 280$ $6,525 \pm 225$ $6,111 \pm 225$ $5,574 \pm 224$	02/25/09 03/26/09 04/16/09 01/12/10 03/17/10 04/28/10 07/16/10 08/11/10 09/13/10 10/11/10 01/14/11 02/07/11 03/25/11 04/27/11 05/10/11 06/10/11 07/20/11 12/08/11 01/06/12 02/08/12 03/13/12 04/17/12 05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 10/11/12	$6,984 \pm 232$ $7,782 \pm 254$ $6,379 \pm 262$ $11,359 \pm 340$ $11,387 \pm 346$ $11,601 \pm 332$ $9,364 \pm 506$ $9,740 \pm 1,920$ $11,300 \pm 367$ $9,710 \pm 501$ $8,220 \pm 501$ $7,950 \pm 508$ $5,850 \pm 309$ $7,370 \pm 366$ $8,620 \pm 371$ $9,300 \pm 419$ $10,700 \pm 664$ $13,300 \pm 757$ $14,200 \pm 836$ $21,600 \pm 639$ $12,900 \pm 579$ $15,300 \pm 467$ $15,500 \pm 817$ $14,200 \pm 778$ $12,600 \pm 435$ $14,300 \pm 451$ $17,200 \pm 548$ $18,800 \pm 925$ $19,400 \pm 1,050$ $20,000 \pm 732$ $22,500 \pm 1,010$
		04/23/08	$6,033 \pm 216$	11/28/12	$18,700 \pm 701$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey – Bureau of Nuclear Engineering

## $Groundwater\ Monitoring\ of\ Tritium\ (H-3)\ -\ Salem\ Unit\ 1\ Nuclear\ Plant$

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$\mathbf{MDA}^1$	(10)		300		300
$NJGWQS^2$			20,000		20,000
N (continued)	20.0	12/19/12 01/14/13 02/14/13 03/11/13 04/08/13 05/17/13 06/26/13 07/12/13 08/16/13 09/20/13	$21,000 \pm 980$ $20,000 \pm 950$ $18,800 \pm 935$ $17,200 \pm 764$ $15,200 \pm 641$ $16,300 \pm 661$ $21,500 \pm 544$ $19,300 \pm 923$ $18,000 \pm 898$ $18,900 \pm 513$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(ft)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
100000			20,000		20,000
O	20.0	01/29/03	$1,324 \pm 217$	10/04/05	$3,719 \pm 219$
-		02/21/03	$6,453 \pm 327$	12/09/05	$13,299 \pm 464$
		02/28/03	$14,140 \pm 455$	01/16/06	$23,462 \pm 406$
		03/04/03	$7,715 \pm 483$	02/07/06	$17,437 \pm 365$
		03/13/03	$10,926 \pm 497$	03/07/06	$11,210 \pm 437$
		03/17/03	$8,072 \pm 348$	04/04/06	$6,447 \pm 254$
		03/25/03	$8,617 \pm 445$	05/02/06	$8,751 \pm 273$
		03/31/03	$6,718 \pm 328$	06/19/06	$8,054 \pm 275$
		04/07/03	$6,299 \pm 319$	07/17/06	$9,178 \pm 290$
		04/15/03	$10,012 \pm 389$	08/21/06	$4,103 \pm 238$
		04/21/03	$8,933 \pm 372$	09/18/06	$3,635 \pm 228$
		04/29/03	$8,908 \pm 369$	10/05/06	$11,494 \pm 264$
		05/06/03	$8,747 \pm 375$	11/02/06	$16,826 \pm 359$
		05/21/03	$9,059 \pm 377$	12/07/06	$8,546 \pm 253$
		05/28/03	$10,873 \pm 406$	01/13/07	$27,740 \pm 437$
		06/03/03	$10,061 \pm 392$	02/24/07	$21,786 \pm 280$
		06/10/03	$10,098 \pm 393$	03/07/07	$41,342 \pm 485$
		06/17/03	$9,440 \pm 380$	04/20/07	$35,591 \pm 441$
		06/24/03	$11,465 \pm 407$	05/05/07	$12,376 \pm 296$
		07/09/03	$7,249 \pm 352$	06/18/07	$13,910 \pm 303$
		10/20/03	$5,680 \pm 308$	07/19/07	$7,352 \pm 249$
		01/14/04	$3,325 \pm 256$	08/15/07	$7,852 \pm 245$
		07/13/04	$8,328 \pm 363$	09/19/07	$1,235 \pm 161$
		12/13/04	$13,633 \pm 454$	10/04/07	$2,461 \pm 179$
		01/18/05	$16,888 \pm 496$	11/19/07	$5,285 \pm 212$
		02/08/05	$23,395 \pm 441$	12/12/07	$34,874 \pm 430$
		03/08/05	$9,654 \pm 375$	01/16/08	$22,652 \pm 358$
		04/11/05	$6,101 \pm 303$	03/12/08	$32,710 \pm 424$
		06/07/05	$5,424 \pm 447$	04/01/08	$20,988 \pm 349$
		07/19/05	$4,198 \pm 214$	05/27/08	$9,068 \pm 264$
		08/02/05	$4,199 \pm 214$	06/23/08	$7,910 \pm 253$
		09/07/05	$4,472 \pm 217$	07/28/08	$10,844 \pm 293$

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
	(ft)				
$MDA^1$	(10)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
110011 QB			20,000		20,000
O	20.0	09/02/08	$9,153 \pm 275$	09/10/11	$7,240 \pm 394$
(continued)		10/17/08	$8,309 \pm 246$	10/20/11	$2,740 \pm 211$
,		11/18/08	$23,843 \pm 390$	11/17/11	$6,220 \pm 543$
		12/16/08	$28,362 \pm 408$	01/24/12	$6,910 \pm 554$
		01/09/09	$55,353 \pm 546$	02/23/12	$12,000 \pm 565$
		02/24/09	$35,365 \pm 443$	03/13/12	$14,700 \pm 791$
		04/01/09	$86,051 \pm 757$	04/19/12	$13,100 \pm 448$
		05/26/09	$14,431 \pm 395$	05/30/12	$13,300 \pm 493$
		06/03/09	$14,036 \pm 390$	06/19/12	$8,180 \pm 622$
		08/25/09	$11,317 \pm 329$	07/23/12	$4,360 \pm 460$
		09/23/09	$13,994 \pm 359$	08/30/12	$4,440 \pm 348$
		10/20/09	$15,625 \pm 376$	09/12/12	$5,190 \pm 378$
		11/04/09	$15,850 \pm 378$	10/18/12	$5,300 \pm 429$
		12/22/09	$13,562 \pm 355$	11/30/12	$22,700 \pm 1,010$
		01/13/10	$30,676 \pm 511$	12/18/12	$33,600 \pm 1,240$
		03/17/10	$34,305 \pm 544$	01/21/13	$31,100 \pm 1,200$
		04/22/10	$20,607 \pm 431$	02/15/13	$43,900 \pm 1,410$
		05/21/10	$19,319 \pm 345$	03/15/13	$33,300 \pm 1,240$
		06/17/10	$10,066 \pm 547$	04/08/13	$23,400 \pm 785$
		07/22/10	$21,977 \pm 718$	05/17/13	$17,600 \pm 696$
		08/25/10	$8,720 \pm 1,730$	06/27/13	$12,900 \pm 431$
		09/17/10	$2,580 \pm 215$	07/10/13	$9,030 \pm 653$
		10/18/10	$8,320 \pm 457$	08/14/13	$6,600 \pm 562$
		11/24/10	$10,100 \pm 561$	09/17/13	$5,740 \pm 299$
		12/09/10	$7,000 \pm 330$		
		01/20/11	$59,800 \pm 964$		
		02/04/11	$46,300 \pm 932$		
		03/04/11	$30,300 \pm 695$		
		04/19/11	$15,100 \pm 473$		
		05/05/11	$9,090 \pm 413$		
		06/16/11	$3,590 \pm 398$		
		07/13/11	$8,610 \pm 612$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
${ m MDA}^1 { m NJGWQS}^2$	(11)		300 20,000		300 20,000
P	40.0	02/05/03	371 ± 151		
Γ	60.0	02/05/03	< 145		
	80.0	02/06/03	$411 \pm 152$		
	00.0	02/00/03	$627 \pm 174$		
		03/13/03	$416 \pm 227$		
		03/18/03	< 298		
		03/26/03	$488 \pm 210$		
		04/03/03	< 242		
		04/24/03	< 253		
		04/29/03	< 241		
		05/05/03	< 279		
		05/20/03	< 266		
		05/30/03	< 262		
		06/04/03	< 260		
		06/10/03	< 270		
		06/17/03	$801 \pm 176$		
		06/24/03	$1,271 \pm 184$		
		08/03/04	< 220		
		05//10/05	< 210		
		01/14/07	< 264		
		01/24/08	< 229		
		01/27/09	< 250		
		01/19/10	$126 \pm 177$		
		07/22/10	< 466		
		01/20/11	< 210		
		07/29/11	< 264		
		01/19/12	< 252		
		07/24/12	< 224		
		01/18/13	< 200		
		07/11/13	< 142		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is semi-annual

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	, ,		300		300
NJGWQS <sup>2</sup>			20,000		20,000
	20.0	02/06/02	205 151		
Q	20.0	02/06/03	$385 \pm 151$		
	40.0	03/11/03	< 210		
	60.0	03/12/03	$233 \pm 216$		
	80.0	03/14/03	< 219		
		03/19/03	< 292		
		03/24/03	< 274		
		04/23/03	< 253		
		04/30/03	< 251		
		05/06/03	< 278		
		05/12/03	< 267		
		05/19/03	< 265		
		05/30/03	< 259		
		06/05/03	< 259		
		06/11/03	< 267		
		06/16/03	$1,360 \pm 198$		
		06/24/03	$1,549 \pm 194$		
		07/17/03	< 262		
		11/09/03	< 237		
		01/08/04	< 232		
		08/02/04	< 218		
		01/08/07	< 258		
		01/28/08	< 229		
		01/27/09	< 251		
		01/26/10	$194 \pm 179$		
		07/23/10	< 460		
		01/31/11	< 211		
		07/28/11	< 263		
		01/30/12	< 249		
		07/24/12	< 228		
		01/18/13	< 196		
		07/15/13	< 274		
		07/13/13	< 214		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is semi-annual

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
R	19.0	02/26/03 03/03/03 03/10/03 03/17/03 03/25/03 04/01/03 04/08/03 04/14/03 04/22/03 04/30/03 07/09/03 10/21/03 03/05/04 01/13/07 01/17/08 01/08/09 01/12/10 04/12/10 07/09/10 08/25/10 09/13/10 10/11/10 11/10/10 12/02/10 01/20/11 02/08/11 03/25/11 04/19/11 05/10/11 06/10/11	$8,645 \pm 151$ $7,242 \pm 468$ $6,297 \pm 404$ $6,608 \pm 320$ $6,477 \pm 400$ $5,719 \pm 309$ $5,507 \pm 303$ $4,872 \pm 290$ $4,919 \pm 294$ $4,465 \pm 283$ $2,709 \pm 255$ $2,273 \pm 223$ $2,045 \pm 224$ $3,024 \pm 196$ $2,636 \pm 181$ $2,876 \pm 214$ $4,066 \pm 245$ $4,333 \pm 237$ $3,971 \pm 390$ $5,710 \pm 308$ $5,700 \pm 278$ $6,510 \pm 405$ $6,130 \pm 432$ $5,840 \pm 310$ $5,980 \pm 443$ $6,140 \pm 313$ $6,190 \pm 342$ $5,890 \pm 315$ $6,030 \pm 349$ $5,790 \pm 499$ $5,490 \pm 495$	10/20/11 11/17/11 12/08/11 01/06/12 02/08/12 03/13/12 04/17/12 05/10/12 06/13/12 07/23/12 08/22/12 09/12/12 10/11/12 12/04/12 12/15/12 01/15/13 02/12/13 03/14/13 04/09/13 05/16/13 06/26/13 07/16/13 08/19/13	$5,400 \pm 357$ $5,790 \pm 531$ $5,080 \pm 368$ $5,470 \pm 308$ $5,410 \pm 493$ $5,260 \pm 487$ $5,410 \pm 304$ $5,640 \pm 309$ $5,500 \pm 349$ $4,450 \pm 463$ $4,760 \pm 539$ $4,470 \pm 352$ $4,170 \pm 451$ $4,340 \pm 458$ $4,410 \pm 461$ $4,090 \pm 451$ $3,700 \pm 424$ $3,740 \pm 429$ $3,350 \pm 399$ $2,810 \pm 292$ $3,210 \pm 255$ $3,200 \pm 253$ $2,980 \pm 246$ $3,230 \pm 239$
		09/01/11	$6,210 \pm 290$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## $Groundwater\ Monitoring\ of\ Tritium\ (H-3)\ -\ Salem\ Unit\ 1\ Nuclear\ Plant$

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
S	34.7	07/09/03 10/17/05 11/15/05 04/13/10 05/25/10 10/12/10 11/15/10 12/16/10 02/18/11 03/22/11 05/05/11 07/13/11 09/10/11 06/20/12 11/30/12 12/20/12 01/18/13 02/15/13 03/21/13 06/27/13 07/16/13 08/21/13	$2,993,972 \pm 14,973$ $56,841 \pm 621$ $51,045 \pm 620$ $48,498 \pm 607$ $51,832 \pm 536$ $50,500 \pm 1,110$ $18,900 \pm 766$ $51,000 \pm 809$ $40,000 \pm 810$ $36,900 \pm 763$ $28,800 \pm 687$ $37,200 \pm 1,250$ $38,700 \pm 833$ $< 225$ $23,700 \pm 1,050$ $16,500 \pm 879$ $17,400 \pm 680$ $17,600 \pm 913$ $16,300 \pm 864$ $14,600 \pm 433$ $12,000 \pm 418$ $13,800 \pm 425$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey - Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
T	31.2	07/10/03 07/15/03 10/06/03 12/12/03 04/12/04 05/09/05 07/05/05 10/03/05 01/09/06 04/03/06 05/19/06 07/10/06 10/05/06 01/23/07 04/11/07 07/12/07 10/09/07 01/16/08 04/22/08 07/16/08 10/21/08 01/19/09 04/01/09 10/20/09 01/25/10 04/11/10 07/09/10 10/20/10 01/13/11 06/07/11	<293 <259 <239 <210 <259 <211 523 ± 299 <267 <297 <265 <281 <274 <287 208 ± 160 <232 <271 <246 <239 <240 <256 <252 <278 991 ± 184 <263 <293 <274 <474 <221 <213 <264	09/10/11 10/11/11 11/08/11 03/23/12 06/07/12 07/17/12 10/18/12 11/27/12 12/13/12 01/16/13 02/12/13 03/13/13 04/11/13 05/14/13 06/25/13 07/09/13 08/15/13 09/18/13	< 179 < 210 < 249 < 193 < 230 < 191 < 236 < 167 < 187 < 198 < 169 < 211 < 221 < 220 < 145 < 253 < 205

- Results in picoCuries per liter (pCi/L)
- Well T is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey – Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(11)		300 20,000		300 20,000
U	32.2	07/10/03 10/06/03 04/12/04 01/09/05 05/09/05 07/05/05 10/03/05 01/09/06 04/03/06 05/19/06 07/10/06 10/05/06 01/23/07 04/11/07 07/12/07 10/09/07 01/16/08 05/28/08 07/16/08 10/20/08 01/19/09 04/01/09 10/20/09 01/25/10 04/07/10 04/08/10 04/09/10 04/22/10 04/28/10	$374 \pm 187$ $< 237$ $< 257$ $< 281$ $< 212$ $< 487$ $< 265$ $< 281$ $< 267$ $< 279$ $< 274$ $197 \pm 169$ $208 \pm 160$ $< 232$ $< 270$ $< 244$ $190 \pm 146$ $178 \pm 159$ $202 \pm 155$ $190 \pm 146$ $183 \pm 164$ $1,553 \pm 190$ $412 \pm 166$ $230 \pm 180$ $366 \pm 173$ $298 \pm 168$ $242 \pm 166$ $241 \pm 170$ $339 \pm 176$	08/26/10 09/24/10 10/20/10 01/13/11 06/07/11 09/10/11 10/11/11 11/08/11 12/28/11 03/23/12 06/07/12 07/17/12 10/18/12 11/27/12 12/13/12 01/15/13 02/12/13 03/13/13 04/11/13 05/14/13 06/25/13 07/08/13 08/15/13	$355 \pm 184$ $< 234$ $< 217$ $299 \pm 149$ $< 264$ $291 \pm 148$ $331 \pm 192$ $< 246$ $407 \pm 169$ $337 \pm 136$ $259 \pm 145$ $294 \pm 149$ $< 240$ $438 \pm 157$ $397 \pm 161$ $330 \pm 179$ $337 \pm 168$ $284 \pm 156$ $281 \pm 129$ $348 \pm 181$ $306 \pm 148$ $227 \pm 116$ $333 \pm 162$ $252 \pm 139$
		06/28/10	$328 \pm 275$		

- Results in picoCuries per liter (pCi/L)
- Well U is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

#### State of New Jersey - Bureau of Nuclear Engineering

## Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant **Split Sample Analytical Results**

Well ID  MDA <sup>1</sup>	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
NJGWQS <sup>2</sup>			20,000		20,000
14JOW QS			20,000		20,000
V	79.5	07/16/03	< 261	10/18/12	< 240
	, , , ,	10/06/03	< 232	01/15/13	$757 \pm 228$
		04/12/04	$292 \pm 165$	02/13/13	$457 \pm 175$
		05/09/05	$375 \pm 142$	03/13/13	$344 \pm 177$
		07/05/05	< 474	04/11/13	$245 \pm 147$
		10/03/05	$391 \pm 164$	05/14/13	$333 \pm 178$
		01/09/06	< 281	07/08/13	$168 \pm 112$
		04/03/06	< 286	08/15/13	$365 \pm 152$
		07/10/06	$604 \pm 173$	09/19/13	< 213
		10/05/06	$404 \pm 177$		
		01/22/07	$203 \pm 156$		
		04/11/07	< 233		
		07/12/07	< 269		
		10/09/07	$190 \pm 146$		
		01/16/08	$372 \pm 146$		
		05/28/08	$184 \pm 165$		
		07/16/08	$199 \pm 153$		
		10/20/08	$191 \pm 146$		
		01/19/09	< 279		
		04/01/09	$1,418 \pm 168$		
		10/20/09	$457 \pm 167$		
		01/25/10	< 295		
		04/11/10	< 277		
		07/09/10	< 473		
		10/20/10	< 153		
		01/13/11	< 224		
		06/07/11	< 267		
		09/10/11	$216 \pm 133$		
		12/28/11	< 255		
		03/23/12	< 207		
		0 - 10 - 11 -			

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is quarter-annual

06/07/12

07/17/12

<sup>1</sup> The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and

 $377\pm126$ 

 $249 \pm 144$ 

the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey - Bureau of Nuclear Engineering Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
W	35.0	07/07/03 11/17/03 03/03/04 01/13/07 01/12/10 04/08/10 04/09/10 07/09/10 08/25/10 09/13/10 10/18/10 11/10/10 12/02/10 01/14/11 02/08/11 03/25/11 04/19/11 05/10/11 06/10/11 07/20/11 10/20/11 11/17/11 12/08/11 01/06/12 02/08/12 03/13/12 04/17/12 05/10/12 06/13/12 08/22/12	$8,882 \pm 381$ $10,013 \pm 392$ $4,578 \pm 291$ $17,342 \pm 348$ $4,592 \pm 244$ $5,097 \pm 251$ $5,341 \pm 255$ $4,905 \pm 412$ $4,680 \pm 950$ $5,000 \pm 265$ $4,670 \pm 354$ $3,320 \pm 682$ $3,420 \pm 257$ $4,000 \pm 373$ $4,090 \pm 272$ $3,970 \pm 288$ $3,740 \pm 269$ $3,670 \pm 290$ $4,070 \pm 424$ $4,320 \pm 322$ $5,230 \pm 269$ $2,370 \pm 268$ $3,050 \pm 402$ $2,950 \pm 289$ $3,040 \pm 254$ $2,620 \pm 360$ $2,820 \pm 366$ $1,420 \pm 189$ $1,070 \pm 212$ $1,080 \pm 236$ $1,380 \pm 279$	11/29/12 12/15/12 01/15/13 02/14/13 03/13/13 04/09/13 05/17/13 06/27/13 07/09/13 08/19/13 09/17/13	$1,400 \pm 275$ $1,670 \pm 232$ $1,270 \pm 271$ $1,780 \pm 310$ $3,610 \pm 365$ $1,020 \pm 206$ $1,550 \pm 279$ $1,420 \pm 269$ $1,420 \pm 213$ $1,560 \pm 205$ $1,550 \pm 181$
		10/11/12	$1,350 \pm 212$		

- Results in picoCuries per liter (pCi/L)
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(11)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
Y	37.0	11/24/03	< 229	05/16/07	227 + 174
1	37.0	01/06/04	< 229 < 232	05/16/07	$227 \pm 174$ < 285
		09/08/04	< 232 < 225	06/19/07 07/12/07	< 269
			< 223 < 233	08/16/07	
		12/13/04	< 233 < 264		< 248 < 240
		01/10/05	< 204 < 213	09/20/07	
		02/01/05		10/04/07	< 240
		03/07/05	< 205	11/20/07	< 229
		04/06/05	< 206	12/20/07	< 209
		05/25/05	< 229	03/13/08	$193 \pm 148$
		06/07/05	< 480	04/22/08	< 240
		07/20/05	< 265	05/15/08	< 272
		08/01/05	< 266	06/24/08	< 257
		09/07/05	< 251	07/17/08	$180 \pm 161$
		10/04/05	< 286	08/19/08	$198 \pm 170$
		01/17/06	< 279	09/03/08	< 264
		02/07/06	< 259	10/18/08	$191 \pm 147$
		03/07/06	< 373	11/21/08	< 267
		04/04/06	< 269	12/23/08	< 247
		05/02/06	< 257	01/20/09	< 247
		05/16/06	< 280	02/25/09	< 242
		06/06/06	< 265	03/30/09	$1,414 \pm 168$
		07/11/06	< 284	04/27/09	< 242
		08/07/06	< 312	05/20/09	< 281
		09/07/06	< 289	06/10/09	< 275
		10/09/06	< 297	08/18/09	< 269
		11/01/06	< 277	09/24/09	$1,273 \pm 186$
		12/07/06	< 295	10/27/09	$217 \pm 162$
		01/14/07	< 262	11/19/09	< 266
		02/20/07	< 222	12/30/09	< 270
		03/14/07	$196 \pm 144$	01/19/10	< 294
		04/19/07	< 232	03/18/10	< 294

- Results in picoCuries per liter (pCi/L)
- Well Y is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

radioactivity, when in fact it is present.

<sup>2</sup> New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

## State of New Jersey - Bureau of Nuclear Engineering

## Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
Y (continued)	37.0	04/09/10 05/21/10 06/17/10 07/22/10 08/26/10 09/09/10 10/26/10 11/29/10 12/21/10 01/20/11 02/18/11 03/29/11 04/27/11 05/26/11 06/13/11 07/29/11 10/07/11 11/03/11 12/13/11 02/23/12 03/23/12 04/19/12 05/30/12 11/30/12 11/30/12 12/14/12	<pre></pre>	02/12/13 03/15/13 04/09/13 05/16/13 06/21/13 07/10/13 08/14/13 09/17/13	< 197 < 197 < 196 < 140 < 222 < 272 < 244 < 220
		01/21/13	< 200		

- Results in picoCuries per liter (pCi/L)
- Well Y is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

Well ID	Total Well Depth (ft)	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
$MDA^1$	(11)		300		300
NJGWQS <sup>2</sup>			20,000		20,000
Z	37.5	11/24/03	$497 \pm 156$	05/16/07	$214 \pm 165$
		12/12/03	$428 \pm 143$	06/19/07	$467 \pm 162$
		03/23/04	$483 \pm 142$	07/12/07	< 272
		09/08/04	$483 \pm 155$	08/16/07	$159 \pm 148$
		12/13/04	$248 \pm 147$	09/20/07	< 239
		01/10/05	$212 \pm 162$	10/04/07	$192 \pm 147$
		02/01/05	$197 \pm 135$	11/20/07	< 230
		03/07/05	$445 \pm 142$	12/20/07	< 208
		04/06/05	$343 \pm 136$	03/13/08	$191 \pm 147$
		05/25/05	< 231	04/22/08	< 238
		06/07/05	< 480	05/15/08	< 269
		07/20/05	< 265	06/24/08	$199 \pm 153$
		08/01/05	$187 \pm 160$	07/17/08	$174 \pm 156$
		09/07/05	< 260	08/19/08	$407 \pm 178$
		10/04/05	$197 \pm 162$	09/03/08	$181 \pm 162$
		01/17/06	$194 \pm 167$	10/18/08	< 267
		03/07/06	< 369	11/21/08	< 267
		04/04/06	$389 \pm 163$	12/23/08	$197 \pm 151$
		05/02/06	< 251	01/20/09	$195 \pm 150$
		05/16/06	< 279	02/25/09	$379 \pm 149$
		06/06/06	$384 \pm 161$	03/30/09	$408 \pm 153$
		07/11/06	$201 \pm 165$	04/27/09	$201 \pm 147$
		08/07/06	< 299	05/20/09	$243 \pm 174$
		09/07/06	$198 \pm 170$	06/10/09	$304 \pm 173$
		10/09/06	< 310	08/18/09	$339 \pm 168$
		11/01/06	< 275	09/24/09	< 267
		12/07/06	$156\pm145$	10/27/09	$506 \pm 168$
		01/14/07	< 270	11/09/09	$332 \pm 167$
		02/20/07	< 207	12/30/09	$284 \pm 168$
		03/14/07	$441 \pm 165$	01/19/10	< 288
		04/19/07	< 232	03/18/10	$367 \pm 184$

- Results in picoCuries per liter (pCi/L)
- Well Z is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides

### State of New Jersey - Bureau of Nuclear Engineering **Groundwater Monitoring of Tritium (H-3) - Salem Unit 1 Nuclear Plant**

#### **Split Sample Analytical Results**

Well ID	Total Well Depth	Sample Date	Tritium (H-3) (pCi/L)	Sample Date	Tritium (H-3) (pCi/L)
MDA <sup>1</sup> NJGWQS <sup>2</sup>	(ft)		300 20,000		300 20,000
Z (continued)	37.5	04/08/10 04/09/10 05/21/10 06/17/10 07/22/10 08/26/10 09/09/10 10/26/10 11/29/10 12/21/10 01/20/11 02/18/11 03/29/11 04/27/11 05/26/11 06/13/11 07/29/11 08/31/11 09/27/11 10/07/11 11/03/11 12/13/11 02/23/12 03/23/12 04/19/12 05/30/12 06/19/12 08/30/12 11/29/12 12/14/12	$472 \pm 172$ $541 \pm 174$ $814 \pm 279$ $321 \pm 269$ $316 \pm 277$ $503 \pm 199$ $184 \pm 163$ $269 \pm 155$ $363 \pm 130$ $507 \pm 173$ $458 \pm 155$ $361 \pm 148$ $515 \pm 160$ $332 \pm 160$ $462 \pm 136$ $285 \pm 170$ $326 \pm 182$ $2,450 \pm 344$ $581 \pm 172$ $630 \pm 175$ $546 \pm 138$ $441 \pm 186$ $472 \pm 180$ $586 \pm 148$ $565 \pm 144$ $494 \pm 131$ $476 \pm 143$ $601 \pm 191$ $702 \pm 213$ $553 \pm 212$	02/12/13 03/15/13 04/09/13 05/16/13 06/21/13 07/10/13 08/14/13	$674 \pm 207$ $796 \pm 220$ $443 \pm 166$ $516 \pm 172$ $627 \pm 165$ $901 \pm 181$ $849 \pm 177$
		01/21/13	$590 \pm 209$		

- Results in picoCuries per liter (pCi/L)
- Well Z is part of the Industry Groundwater Protection Initiative for the Salem nuclear plant
- Current sampling frequency is monthly

the US Environmental Protection Agency drinking water standards for radionuclides