

**Beissel, Dennis**

**From:** Noggle, James *JR*  
**Sent:** Tuesday, March 02, 2010 1:52 PM  
**To:** Beissel, Dennis *DRR*  
**Subject:** A couple of VY maps  
**Attachments:** VYWell locations.pdf; VYGWcontours\_Jan%2010\_REV-1.pdf

I have attached an early site groundwater contour map and a recent map of monitoring well locations. The corresponding tritium concentrations are in the following table.

	GZ-1	GZ-2	GZ-3	GZ-4	GZ-5	GZ-6	GZ-7
pCi/L	<700±220	<1800±570	705- 40,000±1300	1400- 3200±220	<700±220	<660±200	737,000- 891,000±5350
Date	11/07-2/10	2/3-4/10	11/09-2/10	1/30-2/7/10	11/07-2/10	1-2/10	2/10
	GZ-8	GZ-9	GZ-10	GZ-11	GZ-12	GZ-13	GZ-14
pCi/L	dry	<660±200	2.2- 2.45E6±9000	<660±200	6900- 15,700±900	<660±200	63,400- 85,800±1800
Date		2/10	2/10	2/10	2/10	2/10	1-2/10

\* GZ-8 is upgradient from the plant and this groundwater monitoring well will be used for evaluating groundwater flow characteristics

Regards,

Jim

*Admin 307*

*cc-2*

~~For Internal Use Only – Not for Public Disclosure~~

Summary from the Afternoon Phone Call with VY on Tritium (4/7/10)

Sample results provided on the call:

- GZ-3 – 52,000 pCi/L
- GZ-4 – 2,400 pCi/L
- GZ-7 – 757,000 pCi/L
- GZ-10 – Less than minimum detectable
- GZ-11 – 750 pCi/L
- GZ-12 – 267,000 pCi/L
- GZ-13D – 1,200 pCi/L
- GZ-14 – 258,000 pCi/L
- GZ-15 – 710,000 pCi/L
- GZ-20 – 130,000 pCi/L
- GZ-21 – 2,028,000 pCi/L

Relative to well GZ-11, they stated that the 750 pCi/L result is from a 3/22 sample, which was taken prior to when they began pumping water as a part of their groundwater remediation activities. They stated that they do not view this as an unexpected result, and they stated that there is no reason to believe it is a new leak.

They stated that they shifted from extraction well GZ-EW-1 to extraction well GZ-EW-1A and are getting a better flow rate of approximately three gallons per minute. Additionally, they are continuing with preparations to run extraction water to the rad waste system. They estimated that the "clean" frac tank currently contains approximately 6,000 gallons of water, and the "dirty" frac tank currently contains approximately 15,000 gallons of water.

They are continuing with soil remediation preparations.

Technical stakeholders from the state of New Hampshire were on site today (4/7).

They stated that they will have their public forum on Monday (4/12).

## Reference and Groundwater Elevation Information for Bedrock Wells

Vermont Yankee  
Vernon, Vermont

Well Name	Location/Function	Total Depth (ft)	Bottom Elevation (ft)	Reference Elevation (ft)	Groundwater Elevation 15-Mar-10	Groundwater Elevation 31-Mar-10	Groundwater Elevation 06-April-10
COB Well	VYNPS, currently out of service, formerly served COB Building	350	-97.42	253.28	225.3	225.5	225.3
PSB Well	VYNPS, currently serves PSB Building	503	-239.61	263.69	256.1	254.5	256.0
South Well	VYNPS, limited service to site	496	-242.24	253.86	235.6	237.7	237.9
Edson Well	Along Gov. Hunt Road, currently out of service	171	101.23	272.93	253.6	254.4	255.0
Tuttle Well	Along Gov. Hunt Road, currently out of service	244	29.43	273.33	258.9	258.9	259.4
Thomas Well	Along Gov. Hunt Road, currently out of service	215	58.37	273.27	No transducer deployed	No transducer deployed	No transducer deployed

**CONNECTICUT RIVER**  
FLOW →



**LEGEND**

- COB WELL
- VERMONT YANKEE BEDROCK DRINKING WATER WELL OFF-LINE
- GZ-10
- ▲ MONITORING WELL INSTALLED JANUARY-MARCH 2010
- ▽ GROUNDWATER ELEVATION IN FEET (FEBRUARY 26, 2010)
- TRITIUM ACTIVITY (pCi/L) (FEBRUARY 8, 2010)
- GZ-1
- GPI MONITORING WELL INSTALLED NOVEMBER 2007
- 3201
- OTHER VERMONT YANKEE MONITORING WELL
- 225
- INFERRED GROUNDWATER CONTOUR IN FEET (FEBRUARY 26, 2010)
- INFERRED GROUNDWATER FLOW DIRECTION

**NOTES:**

1. GROUNDWATER CONTOURS AND FLOW DIRECTIONS INFERRED FROM GROUNDWATER ELEVATION MEASUREMENTS COLLECTED FROM WIDELY SPACED MONITORING WELLS ON FEBRUARY 26, 2010. ACTUAL CONDITIONS MAY VARY.
2. TRITIUM ACTIVITY LEVELS BASED ON GROUNDWATER SAMPLES COLLECTED BY OTHERS AND ANALYZED BY VERMONT YANKEE BETWEEN FEBRUARY 8, 2010.
3. FLUCTUATIONS IN LOCAL GROUNDWATER ELEVATIONS MAY OCCUR OVER TIME DUE TO RAINFALL, SEASONAL CHANGES IN THE RATE OF EVAPOTRANSPIRATION, RELEASE RATES FROM THE LOCAL DAM, AND OTHER VARIOUS FACTORS.
4. THE LOCATIONS AND REFERENCE ELEVATIONS OF MONITORING WELLS AND DRINKING WATER WELLS WERE SURVEYED BY SOUTHERN VERMONT ENGINEERING OF BRATTLEBORO VERMONT (EXCEPT GZ-20 AND GZ-21, WHICH WERE ESTIMATED PENDING FORMAL SURVEY).
5. BASE PLAN, INCLUDING SITE TOPOGRAPHY, PROVIDED TO GZA IN ELECTRONIC FORMAT BY VERMONT YANKEE.



**ENTERGY VERMONT YANKEE**  
VERNON, VERMONT

**TRITIUM CONCENTRATION PLAN**

PROJECT: JRP DRAWN BY: MMS DATE: 04-15-2010		REVISION: JRP DRAWING NO.: CAS/ENR/2410 PROJECT NO.: 20072478.11		SHEETS BY: JRP SCALE: 1" = 100' REVISION:	FIGURE <b>3</b>
---	--	--	--	---	--------------------

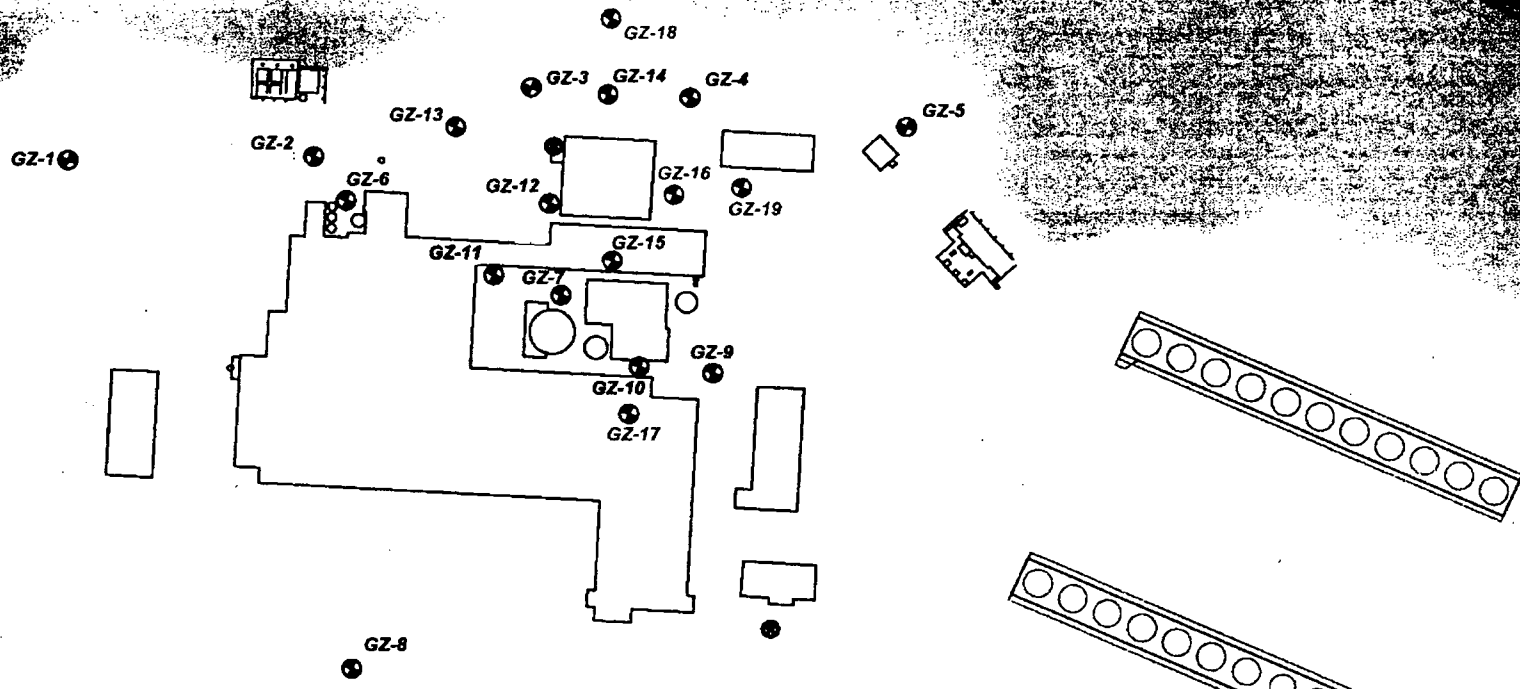
**PRELIMINARY**  
**PROGRESS PRINT**  
4/15/10

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA. THE INFORMATION SHOWN ON THIS DRAWING IS SOLELY FOR USE OF OUR CLIENT ON THE BASIS OF THE DATA AND INFORMATION PROVIDED TO US BY THE CLIENT. GZA SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE DATA OR INFORMATION PROVIDED TO US BY THE CLIENT. THE USER'S OR SOLELY OURS' LIABILITY SHALL BE LIMITED TO THE USER'S OR SOLELY OURS' LIABILITY TO GZA.

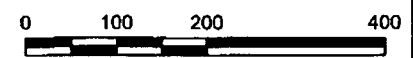
© 2010 - GZA, Confidential, Inc. GZA-P-008 008888.11 - VY Tridium, Released/CAD/COR-008888-11, Reviewed: 4/15/10 [17:11] April 15, 2010 - 24/00m, Michael.Donohue

**CONNECTICUT RIVER**

FDW



- LEGEND:**
- EXISTING GROUNDWATER SUPPLY WELLS
  - ⊕ GZ-3 GROUNDWATER MONITORING WELL
  - ⊕ GZ-17 PROPOSED GROUNDWATER MONITORING WELL LOCATION



SCALE IN FEET
ENTERGY VERMONT YANKEE
VERNON, VERMONT
EXISTING AND PLANNED GROUNDWATER MONITORING WELLS
ENTERGY VERMONT YANKEE VERNON, VERMONT

