

# YANKEE ATOMIC ELECTRIC COMPANY

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June 2, 2004  
BYR 2004-062

Massachusetts Department of Environmental Protection  
DEP Western Region  
436 Dwight Street  
Suite 402  
Springfield, MA 01103

Attention: Mr. David Howland

**Subject: Responses to MADEP Draft Review Comments on Hydrogeologic Report of 2003 Supplemental Investigation, dated May 5, 2004**

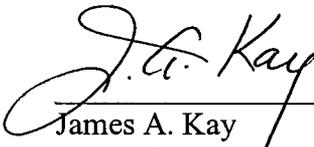
Dear Mr. Howland:

Attached are the Yankee Atomic responses to the draft review comments on the YNPS Hydrogeologic Report of 2003 Supplemental Investigation<sup>1</sup>. These comments were provided to us in early May and discussed at the May 11, 2004 meeting in Springfield.

Should you have questions or require additional information, please contact us.

Sincerely,

YANKEE ATOMIC ELECTRIC COMPANY

  
\_\_\_\_\_  
James A. Kay  
Principal Licensing Engineer

Attachment: YAEC Responses to MADEP Draft Review Comments on Hydrogeologic Report of 2003 Supplemental Investigation, dated May 5, 2004

<sup>1</sup> YAEC Letter to USNRC, Hydrogeologic Report of 2003 Supplemental Investigation, dated March 16, 2004, BYR 2004-023.

cc: R. Walker, MA Department of Public Health  
R. Gallagher, MA Department of Public Health  
L. Dunlavy, Franklin Regional Council of Government  
P. Sloan, Greenfield Director of Planning & Development  
W. Perlman, Franklin Regional Planning Board  
T. Hutcheson, Franklin Regional Planning Board  
M. Rosenstein, US EPA, Chemicals Management Branch Chief  
K. Tisa, US EPA, Region I, TSCA Coordinator  
J. Hickman, Senior Project Manager, NRC NMSS  
J. Wray, Regional Inspector, NRC Region I  
M. Fischer, USGen New England, Inc.  
D. Katz, Citizen's Awareness Network  
Public Repository at Greenfield Community College

YAEC Responses to MADEP Draft Review Comments on Hydrogeologic  
Report of 2003 Supplemental Investigation, dated May 5, 2004

Well Installation, Sampling & Analysis

**Comment No. 1**

The methods for the drilling, installation and development of the monitoring wells in 2003 (incl. 7 bedrock wells) appear generally acceptable, especially given the depth and difficulty of drilling. In particular, Yankee took precautions to avoid cross-contamination of aquifers at depth, i.e. telescoping of well casing and fully grouting the annular space of the wells from the screen depth to the ground surface. Installation methods for wells prior to 2003 are probably generally ok, but are somewhat unknown.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 2**

Soil samples were continuously obtained during drilling, and monitored in the field for radioactivity using a "Frisker". Only one soil sample reportedly had radioactivity above background from field monitoring, at a depth of 94 feet in deep well MW-102B, attributed to a boulder with naturally-occurring radionuclides. It should be noted that this location and depth is located near the center of the groundwater tritium plume, and a groundwater sample obtained during drilling from 95 to 100 feet in 102B had about 15,000 picocuries/liter (pCi/L) of tritium, i.e. may not be a coincidence, possibly not natural.

**YAEC Response:**

The detection of radioactivity with a frisker in a boulder in MW-102B and the occurrence of tritium in ground water at about the same depth (95 feet) are coincidental. The low-level beta energy emitted by tritium is not detected by a frisker. Tritium concentrations were measured in the on-site laboratory in each ground water sample collected during drilling.

The radioactivity was detected within a boulder consisting of crystalline rock (albeit gneiss) and not within the surrounding soil. A fragment of the boulder was analyzed for gamma emitting radionuclides and only naturally-occurring radionuclides from the uranium and thorium decay series were identified. These isotopes included: Th-224, Pb-212, Ra-226, Ac-228, Bi-212 and Tl-208. The primary radionuclide detected was Ac-228.

**Comment No. 3**

Soil samples were also screened for VOCs with an FID, if elevated levels, some of the soil samples were analyzed in the lab for VOCs by EPA Method 8260, a few soil samples were analyzed for additional parameters, incl. TPH, PCBs, SVOCs, RCRA 8 metals. Results of all non-rad analyses were not included in this report, they say a separate report will be prepared. One potential problem is that many of the FID hits were attributed to a "melted poly sleeve", apparently the plastic bag liner for the soil cores melted at times,

maybe due to friction heat from Rotosonic drilling method, this causes some uncertainties.

**YAEC Response:**

Results of the non-rad analyses will be included in a separate report to be submitted on or about June 1. As the rotosonic drill bit penetrated the very dense and dry sections of the glaciolacustrine sediments substantial friction heat was produced and the soil core was, in some cases, too hot to hold with bare hands. This heat warmed the plastic sleeve into which the cores were extruded and caused volatilization of components of the plastic. Components of the plastic could be smelled in some cases and the FID detected the presence of volatile compounds when the probe was first inserted through the sleeve to screen the soil within. These FID hits were not repeatable and were attributed to off gassing of the heated plastic.

YAEC is investigating the use of sleeves comprised of alternative materials that will not produce off gassing when heated.

**Comment No. 4**

About 40 groundwater samples were obtained during different depths during the drilling and monitored for tritium and analyzed in lab for VOCs. This is generally good info, since it provides more of a “picture” of the subsurface water quality than just sampling of the completed wells, but there may be some question on whether the groundwater sample was really just from that depth, or maybe could be from higher up also.

**YAEC Response:**

Steel casing was advanced as each borehole was drilled. The bottom of the core barrel was never advanced more than 10 or 15 feet below the bottom of the drilling casing. Some minor leakage around the outside of the drill casing was possible, but because each aquifer was sampled within about an hour of drilling into it, mixing with water leakage from above the bottom of the casing would not be significant.

It also should be noted that in several wells (MW-102, MW-103, MW-104 and MW-105) aquifers with higher concentrations of tritium were found below aquifers with lower tritium concentrations. This condition could not be the result of mixing with ground water from higher in the section.

**Comment No. 5**

The “low-flow” groundwater sampling method used in 2003 is accepted by DEP for waste Site Cleanup and Solid Waste investigations, and should be an improvement over previous filtering of turbid samples and questions raised by that practice.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 6**

The two, 2003 groundwater contour/flow maps were based on groundwater elevations measured over a one-month or two-month time period, rather than one to three days, as is standard protocol. Future groundwater-level monitoring needs to be done in rounds of one to three days.

**YAEC Response:**

A synoptic round of water level measurements was made in all accessible monitoring wells on February 26, 2004. A second round of synoptic water level measurements was made on May 14, 2004. Additional synoptic rounds of measurements are scheduled for the remainder of the year at about 2-month intervals. These data will be evaluated, contoured on a map of the site and provided to the MADEP in YAEC's next data summary / progress report of hydrogeologic investigations.

*Geology, Hydrogeology Results*

**Comment No. 7**

The geology at the site is very complex. The presence of up to 280 feet of unconsolidated material above bedrock at well MW- 103 is quite unusual- Yankee's interpretation of this material as "glaciolacustrine" probably makes more sense than the previous interpretation as glacial till, but this interpretation still is open to question, i.e. where is the evidence of a glacial lake at this elevation in the surrounding Deerfield River valley?

**YAEC Response:**

The USGS Geologic Map of the Rowe Quadrangle in Massachusetts and Vermont (Map #GQ-642, dated 1967) shows the surficial sediments beneath the YAEC site and those farther north along the east and west shores of Sherman Reservoir to be "waterlaid ice-contact deposits". These deposits are described as "gravel, sand, silt, and minor amounts of clay, deposited by glacial melt water; locally includes thin layers of till. Forms kettled, collapsed, or eroded glaciofluvial and glaciolacustrine deposits. Deposits include kames, kame terraces, and deltas, and associated lake sediments and varved clay."

YAEC believes that its interpretation of the site stratigraphy is consistent with the USGS mapping: a glacial lake was formed in the steep-sided Deerfield River valley by an ice dam probably located in the vicinity of Monroe Bridge. The spillway of the ice dam was at an elevation of about 1090 feet relative to mean sea level. Near the end of the Quaternary Period, when the ice dam was breached and glacial meltwater was abundant, 10 to 20 feet of stratified drift that now covers the surface of the site, was laid down, burying the glaciolacustrine sediments deposited into the former glacial lake. The timing of these events is not clear. Both the glaciolacustrine sediments and stratified drift may have been deposited during the last (Wisconsin) glacial stage. Conversely, deposition of the glaciolacustrine sediments (at least the lower portion) may have begun during the Illinoian or even earlier glacial stages.

As noted by MADEP, the presence of an exposed, relatively easily erodable dolomitic marble in the core of a plunging anticline beneath Sherman Reservoir may explain the depth of the pre-glacial Deerfield River valley and the thickness of unconsolidated sediments (at least 280 feet) that now exists in the valley. Additional subsurface information to be developed during the next phase of drilling at the site (summer 2004) may provide further insight into the local glacial stratigraphy.

**Comment No. 8**

Yankee's interpretation of glacial lodgement till over the thick glaciolacustrine deposits may be incorrect. It is very unusual for this to have occurred.

**YAEC Response:**

YAEC agrees that a glacial lodgement till overlying a glaciolacustrine sequence would be unusual. As noted in our report, the current preferred interpretation of the stratigraphy is that the very dense, dry, till-like sediments directly beneath the stratified drift comprise a transitional zone of the glaciolacustrine sequence, laid down late in the life of the glacial lake, when the lake was much shallower than when the deeper sediments were deposited into it. We hope to gain more information and refine our interpretation of the local stratigraphy of the unconsolidated sediments during the summer 2004 drilling program.

**Comment No. 9**

The great depth of unconsolidated material above bedrock and the presence of multiple, permeable sand layers within the unconsolidated material make tracking of contaminant plumes more difficult, i.e. more chances to miss something, especially vertically.

**YAEC Response:**

Although this comment is generally true, use of the roto-sonic drilling method tends to minimize the chance of not identifying important contaminant pathways because virtually 100 percent of the soil core, throughout the entire thickness of sediments drilled, is recovered and examined.

**Comment No. 10**

Groundwater flow patterns (hydrogeology) at the site can be quite complex, due to both the complex geology, as well as the location near a dam, where the groundwater base level above the dam is quite higher than that in the river below.

**YAEC Response:**

This comment is true. We expect that analysis of several rounds of synoptic water level data will help to identify the ground water flow potential in greater detail. Evaluation of the first round of such synoptic water level data already has proved useful, compared to earlier rounds of data collected over a month or more. The synoptic data suggest that ground water flow in sand stringers at the 30-foot depth within the glaciolacustrine sequence is to the north, while flow in sand stringers at the 100-foot depth is to the northwest.

**Comment No. 11**

Shallow groundwater flow beneath the RCA area appears to be as previously mapped, primarily towards the river near Sherman Spring, with some apparent radial flow to the NE towards MW-105 and Sherman Pond.

**YAEC Response:**

YAEC agrees. It can be noted that the same shallow ground water flow directions are indicated by both the latest synoptic round of water level measurements and the earlier rounds that were measured over a month or more.

**Comment No. 12**

Deeper groundwater flow in the unconsolidated material appears to be strongly influenced by the bedrock surface, following the steeply-dipping bedrock surface to the southwest, parallel to the river and at almost right angles to the shallow flow direction. At some point (maybe 500 to 2,000 feet downstream?), this deeper flow must also discharge to the river.

**YAEC Response:**

YAEC now believes that the ground water flow directions in the deeper (glaciolacustrine) sediments which were shown in the Hydrogeologic Report of the 2003 Supplemental Investigation are incorrect. Those flow directions were based upon rounds of water level measurements made over a month or more. Evaluation of the first round of synoptic water level measurements made on February 26, 2004 indicates that the ground water flow in sand stringers at the 30-foot depth is to the north (toward Sherman Reservoir), while the flow in sand stringers at the 100-foot depth is to the northwest (toward Sherman Spring and the Deerfield River).

There is a contrast between the (relatively higher) hydraulic conductivities of the deeper unconsolidated sediments and the (relatively lower) hydraulic conductivity of the bedrock at the site. For this reason, it is possible that the bedrock surface may influence the ground water (and tritium) flow within the unconsolidated sediments in parts of the site.

The latest round of synoptic water level data indicate that the flow potential is upward from the bedrock to the overlying deep sediments at monitoring wells MW-101, MW-102, MW-104 and MW-107. These wells are located in the center and immediately downgradient of the RCA, in the heart of the identified tritium plume. And yet, with the possible exception of MW-101, while tritium has been detected in the glaciolacustrine sediments, it has not been detected in the bedrock in any of these wells. On this basis, it appears that the effect of the bedrock surface in the area of these wells is to prevent tritium in the deep glaciolacustrine sediments from moving deeper into the rock. The degree to which the bedrock surface may divert ground water flow laterally is not yet clear.

**Comment No. 13**

Bedrock groundwater flow appears to be somewhat radial from the site, with flow to the river and some to Sherman Pond.

**YAEC Response:**

YAEC agrees. It can be noted that the latest synoptic round of water level measurements supports this general conclusion, although the bedrock flow potentials are somewhat different from those shown in our report of the 2003 hydrogeologic investigation.

*Sampling Results – Source, Extent and Nature of Groundwater Contamination*

**Comment No. 14**

According to Yankee, groundwater analyses show only tritium, no other plant-related radionuclides. Based on groundwater data, the source of tritium appears to be Spent Fuel Pool/Ion Exchange Pit (SFP/IXP), IXP had documented leak as early as November, 1963, Sherman Spring had tritium up to 7,000,000 pCi/L in 1965, Sherman Spring is now ND for tritium at a detection limit of 200 pCi/L. Have surface water samples from the river been analyzed for tritium and other radionuclides, especially in this area?

**YAEC Response:**

Surface water has been sampled at several points in the Deerfield River and in Sherman Spring several times each year since the plant began operation. These samples were analyzed for tritium and other radionuclides as part of the Radiological Environmental Monitoring Program (REMP) for the site and the results summarized in annual reports submitted to the NRC. Copies of the annual reports for the last five years are enclosed and provide the relevant information.

**Comment No. 15**

The EPA Drinking Water Guideline (MCL) for tritium is 20,000 pCi/L. MA DEP has no MCL for tritium, just for radium, gross alpha, and beta/photon.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 16**

The IXP was drained in 1995/1996, the SFP was drained in June, 2003. Was there ever any evidence of other radionuclides in the SFP water or in the IXP? If so, why would only tritium be in the plume?

**YAEC Response:**

The nuclear reactor primary cooling water was in direct contact with both the SFP and the IX Pit. All plant-related activation and fission products could be found in the primary cooling water at some time during the plant operating history. The list of radionuclides of concern for which each ground water sample is analyzed each quarter was developed based upon the isotopes known to be present in the reactor cooling water.

With the exception of tritium, radionuclides were removed from the primary cooling water by filtering it through ion exchange resins in the IX Pit. (Tritium cannot be removed by ion exchange). Because of their atomic structure, soil is also an effective ion exchange medium for the plant-related radionuclides. Indeed, geoprobe borings around the perimeter of the SFP and IX Pit have identified areas where plant-related radionuclides other than tritium are present in the soil. Because of its ion-exchange capacity, the soil around the foundation of the SFP and IX Pit has removed radionuclides in the primary cooling water that leaked, and limited the transport of those radionuclides to within a few feet of the foundation. The impacted soil will be removed from the site during remediation of the SFP and IX Pit.

**Comment No. 17**

Based on all of the available data, the SFP/IXP appears to be the primary source of the tritium in groundwater, however there are also some lower levels of tritium in groundwater just upgradient of the SFP/IXP, probably from the PAB building documented release in 1997, and 540 pCi/L tritium in well CB-12, at the Waste Disposal Building Ash Dewatering Pit, about 100 feet upgradient (SE) of the IXP.

**YAEC Response:**

YAEC agrees that other minor sources of tritium in the ground water, other than the SFP and IX Pit may have existed. We hope to further delineate the source(s) of tritium with information to be developed during the summer 2004 monitoring well drilling. Ongoing demolition activities at the site may prevent access to some areas this year.

**Comment No. 18**

The highest tritium concentrations from groundwater sampling during drilling were at MW-107B&C at about 30' deep – 44,000 to 48,000 pCi/L, MW-102B at about 95' deep – 15,000 pCi/L, and MW-104B, from 38' to 175' deep (top of rock) – 6,000 to 9,000 pCi/L. The highest tritium concentration from the 2 rounds of standard sampling in 2003 was MW-107C, screen depth 27-32' – 48,000 pCi/L.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 19**

Shallow tritium plume appears to follow previous mapped plume, mostly towards Sherman Spring, some indication radial flow to Sherman Pond also.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 20**

Deeper tritium plume extends to top of rock, some indication of plume towards Sherman Spring, but plume mostly extends towards Sherman Pond, almost in opposite the

direction of deep groundwater flow direction from GW contour map, something odd is going on here, may be from lack of sampling points as noted by Yankee.

**YAEC Response:**

YAEC agrees with the noted direction and depth of the deeper tritium plume. However, as noted above in Comment 12, our interpretation of the ground water flow direction in the deeper (glaciolacustrine) sediments has been revised, based on the latest synoptic round of water level measurements (February, 26, 2004). Those measurements have shown that the deeper tritium plume is aligned in the same direction as ground water flow in the sand stringers within the glaciolacustrine sediments at the 30-foot depth (to the north). MW-107C, the well with the highest measured concentration of tritium (up to 48,000 pCi/L) is screened in a sand stringer from 27 to 32 feet below grade.

**Comment No. 21**

Tritium is ND in 5 of the 7 new bedrock wells, present in MW-105B (towards Sherman Pond) at about 5,000 pCi/L, and in MW-101B at 252 pCi/L.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 22**

Boron concentrations, from boric acid added to the reactor coolant and SFP, generally tracks with the tritium, but not always.

**YAEC Response:**

YAEC agrees. No response required.

**Comment No. 23**

Tritium was present at 252 pCi/L in monitoring well CFW-1, upgradient of the SCFA. What is the explanation for this?

**YAEC Response:**

Tritium was reported at 266 pCi/L (not 252) in monitoring well CFW-1 for the 4<sup>th</sup> quarter '03 sampling round. This level is very close to the minimum detectable concentration (MDC), which varies with each analysis, depending on the background radiation. The tritium concentration in this well was less than the MDC for the 3<sup>rd</sup> quarter 2003. It was again less than the MDC for the 1<sup>st</sup> quarter 2004.

YAEC believes that the 4<sup>th</sup> quarter 2003 tritium result is a false positive, most likely caused by incomplete removal of naturally-occurring beta emitters (tritium is a low-energy beta emitter) by the distillation process used to prepare the sample for analysis and remove the naturally-occurring isotopes prior to analysis for tritium.

**Comment No. 24**

For other radionuclides, Gross Beta levels in all of the monitoring wells at the plant site are about one order of magnitude higher than Gross Beta levels in all of the monitoring

wells at the upgradient SCFA. Could this indicate that there has been an impact to groundwater for plant-related radionuclides other than tritium, or is there another explanation, i.e. background differences, etc. Gross beta and other radionuclide levels should be mapped to see if there are any comparisons to the source(s), the tritium plume, even if the levels are very low.

**YAEC Response:**

YAEC believes that the measured gross beta activities in all monitoring wells are the result of the presence of several naturally-occurring beta emitters. We plan to analyze for specific naturally-occurring beta emitters in the samples collected for this purpose during 2004 and show the correlation between their total activity and the gross beta activity in each sample. As requested, we will also map the gross beta activity in all wells to determine if it is spatially correlated with the tritium plume or known or suspected sources of plant-related radionuclides.

*NEXT PHASE OF GROUNDWATER ASSESSMENT – RECOMMENDATIONS*

**Comment No. 25**

Defining the tritium plume: Initial data gaps identified - more wells, incl. deep wells, needed at:

- source area (SFP/IXP);
- towards Sherman Pond, N/NE of the SFP/IXP;
- in center of deeper plume, i.e. – mid-depth (80'?) at MW-102 and deep overburden (top of rock) at MW-104;
- near discharge of plume at river, i.e. near USGEN wells, Sherman Spring, and downriver some; and
- possibly SW of the VC, in direction of bedrock slope.

**YAEC Response:**

YAEC agrees that additional monitoring wells are needed to further define the nature and extent of the tritium plume in the ground water at the site. Because of ongoing decommissioning activities, access to those parts of the site referred to in the first and third bullets of the MADEP's comment (SFP/IXP, and at center of deeper plume at MW-102 and MW-104) will probably not be possible this year. As agreed during our meeting on May 11, 2004, we plan to drill this summer in an additional four locations where access is possible. These locations correspond to the remaining three bullets in MADEP's comment: toward Sherman Reservoir, N/NE of SFP/IXP (MW-108); near discharge of plume to Deerfield River and Sherman Spring (MW-106); Southwest of the VC, in direction of bedrock slope (MW-109 and MW-110).

**Comment No. 26**

Confirm that other plant-related radionuclides are present or not present in groundwater.

- Continue sampling for other radionuclides in existing and new wells.
- map gross beta and other radionuclide data to see if any trends.
- Are there true upgradient monitoring wells for both overburden and bedrock, i.e. should there be a couple upgradient wells on the hillside east of the facility?

**YAEC Response:**

YAEC intends to continue quarterly sampling of new and existing monitoring wells. The samples will continue to be analyzed for the list of 24 plant-related radionuclides of concern plus gross alpha and gross beta.

YAEC will map gross beta activity and other radionuclide data in all monitoring wells to see if any trends can be identified.

The plant potable water well is located on the hillside southwest and about 675 feet south southeast (upgradient) of the center of the VC. The well is 280 feet deep and completed in bedrock. Two hundred and fifty seven feet of steel casing extends through the unconsolidated sediments and into the top of rock. The plant water well is sampled semiannually and analyzed for the full list of plant-related radionuclides of concern. No tritium or other plant-related radionuclides have been detected. Gross beta activity has been detected, but gross alpha has not. We will conduct additional analyses during an upcoming sampling round to demonstrate that the detected gross beta activity is due to naturally-occurring beta emitting radionuclides. YAEC believes that the plant water well is an adequate background monitoring well for ground water in the bedrock.

Monitoring well OSR-1 is about 650 feet southeast and upgradient of the center of the VC. The well is screened from 3 to 13 feet below grade and has a depth to water around 7 feet below grade. To date, OSR-1 has only been monitored for tritium, gross alpha and gross beta (plus non-rad constituents). Tritium and gross alpha activity have not been detected in OSR-1. Gross beta has been detected, but we believe this activity is due to the presence of naturally-occurring beta emitting radionuclides in the soil.

OSR-1 is near the ground water divide that forms the upgradient end of the shallow flow path running under the RCA (see Figures 9 and 10 in the Hydrogeologic Report). On this basis, OSR-1 would appear to be a good candidate for a shallow background monitoring well. However, the planned storage of plant demolition material in the adjacent Southeast Construction Landfill and the eventual excavation and removal of the Landfill may create short-term impacts to the shallow ground water in the vicinity of OSR-1. These potential impacts may make OSR-1 unsuitable as a shallow background monitoring well. We suggest a discussion with MADEP and other interested parties to evaluate the best location to site a shallow background monitoring well.

Other than the plant water well, no deep wells have been drilled and no detailed geologic logs have been prepared for wells south or east of the industrial area. Therefore, we do not know to what extent the deeper glaciolacustrine sediments may be present in that part of the site. One of the wells planned to be drilled this summer, MW-110, will be located about 200 feet south southeast from the center of the VC. That well will probe the entire thickness of unconsolidated sediments in that location and tell us to what extent the glaciolacustrine sequence is present there. If no plant-related radionuclides are detected in monitoring wells to be constructed at MW-110, we may find that these wells may serve as suitable background monitoring wells.

**Comment No. 27**

Testing for non-rad contaminants in plant area: Yankee says results will be in another, summary report. This report needs to include all such data in an organized fashion.

**YAEC Response:**

YAEC will submit a detailed report of non-rad ground water quality on or about June 1, 2004.

**Comment No. 28**

The location of the nearest private, semi-public and public water supply wells need to be clearly identified, the on-site supply well is known, and apparently there are no supply wells between the facility and the river, the only real question is probably the visitor center well to the south. Has this been sampled, can it be included in future sampling rounds as a bedrock data point, even if it is no longer used?

**YAEC Response:**

The potable water well at the Furlon House (Visitor Center) has been sampled and analyzed for radiological constituents, though not routinely. This well will be sampled quarterly and analyzed for the full list of plant-related radionuclides of concern.

The locations of all private, semi-public and public water supply wells east of the Deerfield River within 0.5 miles of the center of the VC will be clearly identified on a map and provided to MADEP in YAEC's next update of hydrogeologic investigations.

**Comment No. 29**

The results of groundwater monitoring as outlined in #25-28 above will, along with other data (i.e. soil, sediment and surface water) be input into a DEP Waste Site Cleanup Risk Assessment, as part of a BWSC Phase 2 Equivalency Report, in order to complete the overall DEP BWSC (MCP) Risk Assessment for radiological and non-radiological parameters at the site, as required in the MOU between DEP and Yankee..

**YAEC Response:**

YAEC agrees. No response required.