

John Hickman - Response to Questions in Email Dated 2/6

From: <acarson1967@comcast.net>
To: <jbh@nrc.gov>, <thy@nrc.gov>
Date: 02/12/2007 2:10 PM
Subject: Response to Questions in Email Dated 2/6
CC: <babineau@yankeerowe.com>, <bourassa@cyapco.com>, <van Noordennen@cyapco.com>, <erickson@yankeerowe.com>

John and Tom,

Attached are the responses to the questions that John sent on February 6. Please give me a call at the site (413-424-2283, through Thursday) or an email if you have any questions or wish to discuss.

Thanks,

Alice Carson

Mail Envelope Properties (45D0BBBA.C8B : 10 : 44171)**Subject:** Response to Questions in Email Dated 2/6**Creation Date** 02/12/2007 2:10:20 PM**From:** <acarson1967@comcast.net>**Created By:** acarson1967@comcast.net**Recipients**

nrc.gov

OWGWPO04.HQGWDO01

JBH (John Hickman)

nrc.gov

TWGWPO04.HQGWDO01

THY (Thomas Youngblood)

yankeerowe.com

erickson CC

babineau CC

cyapco.com

vannoordennen CC

bourassa CC

Post Office

OWGWPO04.HQGWDO01

TWGWPO04.HQGWDO01

Route

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Files**Size****Date & Time**

MESSAGE

238

02/12/2007 2:10:20 PM

TEXT.htm

373

NRC Comments dated 2-6-2007 final.pdf

47645

Mime.822

67832

Options**Expiration Date:**

None

Priority:

Standard

ReplyRequested:

No

Return Notification:

None

Concealed Subject:

No

Security: Standard

Junk Mail Handling Evaluation Results

Message is eligible for Junk Mail handling

This message was not classified as Junk Mail

Junk Mail settings when this message was delivered

Junk Mail handling disabled by User

Junk Mail handling disabled by Administrator

Junk List is not enabled

Junk Mail using personal address books is not enabled

Block List is not enabled

NRC Comments/Questions for Four FSSRs
Email from Hickman to Carson dated 2/6/2007

NRC Comment #1. NOL-02 Survey Units:

No comments.

Yankee Response: None necessary.

NRC Comment #2. OOL-4 Survey Units:

Section 5.4 - Survey Results - provides the results of the 20 systematic soil samples and the ISOCS scan surveys. The results of the 5 biased samples were not provided in the FSSR.

Yankee Response: As indicated in the Final Status Survey Plan for OOL-04 (Appendix A to the FSSR), five biased soil samples were taken (OOL-04-01-021-F-B through OOL-04-01-025-F-B). The gamma spec results for these samples, as well as the unbiased samples are provided in Attachment D to the FSSR. However, the SOFs for these samples were not included in the table in Section 5.4. The SOFs are provided below:

Sample ID	SOF
OOL-04-01-021-F-B	0.177
OOL-04-01-022-F-B	0.081
OOL-04-01-023-F-B	0.067
OOL-04-01-024-F-B	0.085
OOL-04-01-025-F-B	0.298

NRC Comment #3. OOL-17 Survey Units

Section 5.3 - Survey Results - provides the results of the 20 systematic soil samples and SPA-3 scan surveys. Section 1.3 and Appendix A of the FSSR also indicates that 19 biased, subsurface samples were taken to assess the radiological status of pre-fill soil. The results of these 19 biased samples were not provided in the FSSR.

Also, YR does not indicate the locations where SPA-3 scan surveys were made in Class 2 or 3 survey units. Does the YR applicable QA Plan or the LTP direction indicate the information that needs to be recorded in survey records?

Yankee Response: As indicated in the Final Status Survey Plan for OOL-17 (Appendix A to the FSSR), nineteen biased soil samples were taken (OOL-17-01-021-F-B through OOL-01-039-F-B). The gamma spec results for these samples, as well as the unbiased samples are provided in Attachment D to the FSSR. However, the SOFs for these samples were not included in the table in Section 5.4. The SOFs are provided as follows:

Sample ID	SOF
OOL-17-01-021-F-B	0.078
OOL-17-01-022-F-B	0.042
OOL-17-01-023-F-B	0.052
OOL-17-01-024-F-B	0.093
OOL-17-01-025-F-B	0.084
OOL-17-01-026-F-B	0.052
OOL-17-01-027-F-B	0.061
OOL-17-01-028-F-B	0.049
OOL-17-01-029-F-B	0.036
OOL-17-01-030-F-B	0.041
OOL-17-01-031-F-B	0.059
OOL-17-01-032-F-B	0.052
OOL-17-01-033-F-B	0.078
OOL-17-01-034-F-B	0.067
OOL-17-01-035-F-B	0.016
OOL-17-01-036-F-B	0.036
OOL-17-01-037-F-B	0.075
OOL-17-01-038-F-B	0.095
OOL-17-01-039-F-B	0.059

The FSSP for OOL-17 indicates that in addition to scanning a 1 m radius footprint surrounding each sample point before taking the sample, scan areas should be biased to high traffic areas and areas indicating drainage collection. Although LTP Section 5.8, does not specifically require that a map of scan areas be included in the FSSR, the locations of scans are maintained in detailed FSS backup data. A daily survey journal is prepared and maintained in accordance with site final status survey procedures. This includes information such as: the sample's name, the sample location with sufficient description of measurement locations to allow the location to be identified in the future (if applicable), measurements or samples collected at the sampling site (area scan, soil sample, etc.), and any deviations from the FSSP required by field conditions. An example of a map of scan areas included in the daily survey journals (in this case for OOL-17) has been included as an attachment.

NRC Comment #4. SSS-01 Survey Units:

Systematic and biased soil samples was done for this subsurface unit in the industrial area footprint. The FSSR indicates that 25 statistical soil samples and 10 additional biased soil samples were taken. Also, the Surface Soil Sampling Plan indicates that 5% of the samples will be analyzed for HTD radionuclides. The FSSR does not provide the results for the 10 biased samples and the results for HTD radionuclides.

Yankee Response: As indicated in the Final Status Survey Plan for SSS-01 (Appendix A to the FSSR), ten biased soil samples were taken (SSS-01-01-026-F-B and SSS-01-01-029-F-B through SSS-01-01-038-F-B). Originally SSS-01-01-027-F-B and SSS-01-01-028-F-B were identified as

biased samples in the FSSP. However, soil conditions at the associated locations were such that samples could not be taken. Two new locations were selected, and new sample identifiers were created associated with these locations. The gamma spec results for these samples, as well as the unbiased samples are provided in Attachment D to the FSSR. However, the SOFs for these samples were not included in the table in Section 5.4. The SOFs are provided below:

Sample ID	SOF
SSS-01-01-026-F-B	0.053
SSS-01-01-029-F-B	0.039
SSS-01-01-030-F-B	0.071
SSS-01-01-031-F-B	0.112
SSS-01-01-032-F-B	0.087
SSS-01-01-033-F-B	0.047
SSS-01-01-034-F-B	0.042
SSS-01-01-035-F-B	0.059
SSS-01-01-036-F-B	0.068
SSS-01-01-037-F-B	0.037
SSS-01-01-038-F-B	0.203

The FSSP for SSS-01 indicates that 5% of the samples will be analyzed for HTD radionuclides. Samples SSS-01-01-015-F-S and SSS-01-01-020-F-S were selected to undergo the HTD analyses. As a total of 35 samples were taken for SSS-01, analyzing two samples satisfied the 5% criterion. The results of the HTD analyses for these two samples were not included in Section 5.4 but are given below:

HTD Radionuclide	SSS-01-01-015-F-S (pCi/g)	SSS-01-01-020-F-S (pCi/g)
H-3	ND	ND
C-14	1.58E-01	ND
Fe-55	ND	ND
Ni-63	ND	ND
Sr-90	2.32E-02*	ND
Tc-99	ND	ND
Pu-241	ND	ND
Pu-239	ND	ND
Pu-239/-240	ND	ND
Am-241	ND	5.03E-02*
Cm-242	ND	ND
Cm-243/-244	ND	ND

**Activity is above critical level but below the MDC.*

YANKEE ATOMIC ELECTRIC COMPANY

RADIATION PROTECTION SURVEY FORM

DATE 9-13-06 TIME 1500

SURVEYOR (Print) T. Mayers

SURVEYOR (Sign) T. Mayers

INSTRUMENT/#	CAL DUE
E600 5072	1-25-07
SPM3 725329	12-9-06
E600 5155	1-25-07
SPM3 726554	12-14-06

KEY

- ☐ RADIATION GENERAL AREA
- ☐ RADIATION CONTACT
- SMEAR LOCATION
- XX BARRIER | MASSLINN

() DIRECT RADIATION READINGS IN MR/HR EXCEPT AS NOTED.

- () CONTAMINATION
- () LESS THAN 1000 dpm/100cm² BETA-GAMMA UNLESS NOTED
 - () LESS THAN 50 dpm/100cm² ALPHA UNLESS NOTED.

() HOT PARTICLE SURVEY
NO HOT PARTICLES FOUND UNLESS NOTED.

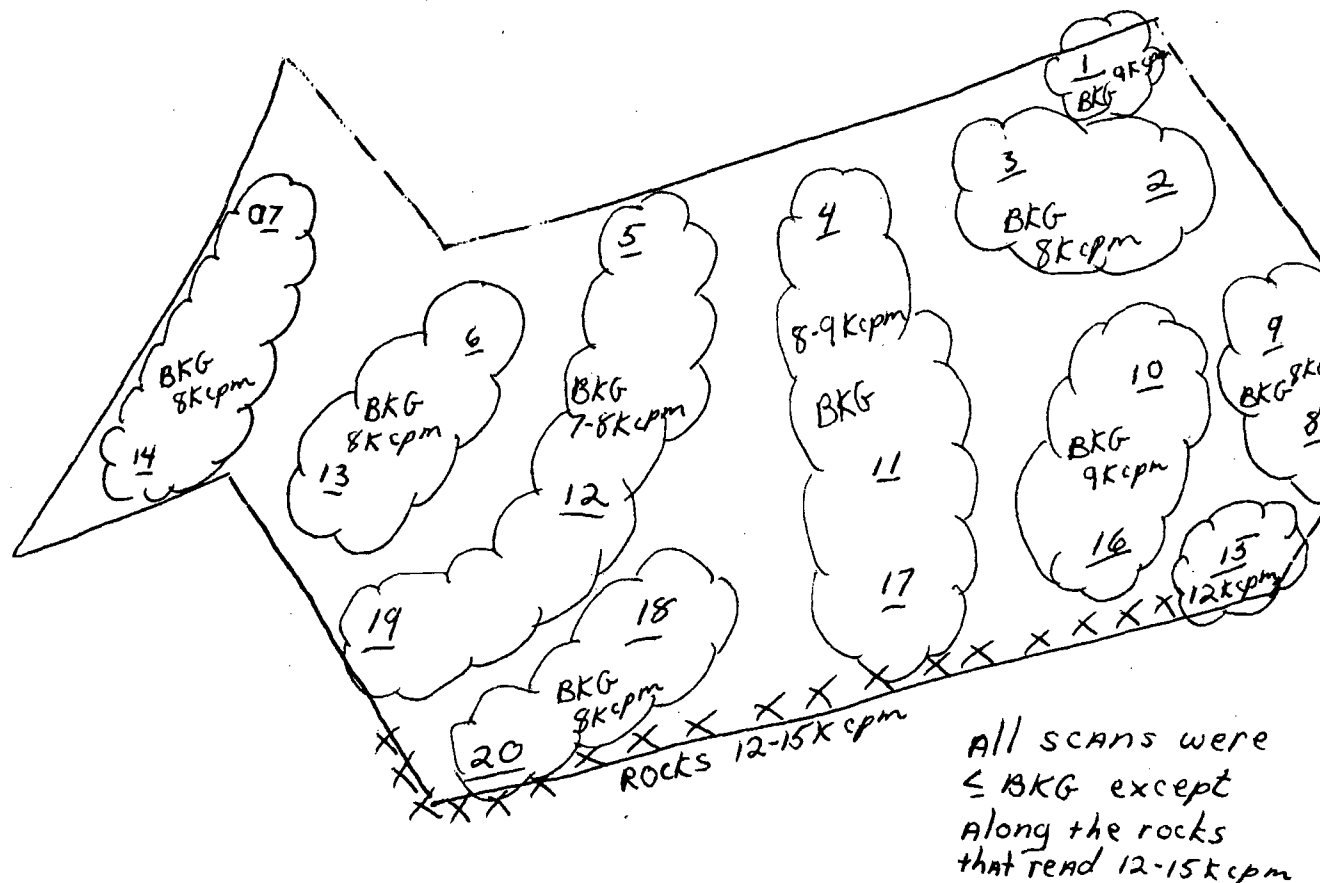
SMEAR LOCATION & NET dpm/100 cm²

1	N/A	8	15
2		9	16
3		10	17
4		11	18
5		12	19
6		13	20
7		14	21

COMMENTS:

1st SPA3 eff 243 cpm/pci/gram
2nd SPA3 eff 253 cpm/pci/gram

Reviewed by: [Signature]
DATE: 9/13/06 R.F. Supervision



Was this survey performed for releasing equipment or materials in accordance with AP-0052? Y (N) (Circle One)

If the answer to the above is YES, sign here when all log entries are complete N/A

Associated Tracking Numbers N/A Destination N/A

LOCATION or EQUIPMENT

00L-17-01

APF-8101.6 REV. 31

SPECIAL SURVEY FORM