From: [redacted]
To: [redacted]
LRB
Cc: [redacted]
Subject: FW: Missing rad results for the NFSS RI Addendum
Date: Thursday, June 03, 2010 10:08:27 AM

Please see [redacted] response below:

-----Original Message-----
From: [redacted]
Sent: Thursday, June 03, 2010 9:59 AM
To: [redacted]
Cc: [redacted]
Subject: Re: Missing rad results for the NFSS RI Addendum

[redacted]

Many thanks to [redacted] for answering some specific questions I had, regarding the rationale behind sampling at location TWP 939 - I do appreciate getting a response. I, along with other members of the RAB Radiological Committee, have been attempting to review the results of radiological analysis re. the November 2009 NFSS RI Addendum sampling plan. As you are aware the RAB and the public were not given an opportunity to have any input to the RI Addendum sampling plan, as only NYSDEC as lead agency, was given an opportunity to review and submit comments on the September draft plan, which was expedited through the system at the request of USACE.
In his answer below, Bill Frederick refers me to the uranium in groundwater for RI Addendum sampling point TWP 939, which he states is included in the data release posted on the internet. However, this information is not available on the USACE web site as stated: the RI addendum sampling data (radiological results) provided to the public is incomplete and missing significant amounts of data.

Results of radiological analysis of surface soil and subsurface soil for locations 922, 923, 932, 935, 938, 941 and 943 have been omitted

Results of radiological analysis of groundwater for locations 929, 930, 931, 936 and 939 have been omitted

Results of virtually all radiological analysis (surface soil, subsurface soil and full groundwater analysis) for location 943 have been omitted - TWP data for uranium in groundwater is available, but there is no data for the corresponding permanent well MW 943
Note: location 943 was the only location USACE sampled south of the IWCS, an area of particular concern owing to elevated uranium in UWBZ groundwater in the area (indicative of potential IWCS leakage) and evidence of migration toward the Central Drainage Ditch.

In order to provide meaningful input, the community requires all of the relevant data. As with the proposed demolition of Building 401, USACE releasing only part of the data to the public, prevents our having meaningful input into the remedial investigation. Would USACE please make all of the results of radiological analysis carried out for the NFSS RI addendum available to the public within the next week, so that RAB members and other interested parties have an opportunity to review the data in a timely fashion before the next USACE public meeting, which is to be held in three weeks time on June 23rd, 2010.

Many Thanks,
[redacted]

In a message dated 6/2/2010 [redacted] writes:

Hello [redacted]

[redacted] responses to your questions are below:

The sand lenses seen in the boring log for well OW-15A lie 6.26-9.26 feet below grade (3-ft thick) and then 9.96-11.46 ft below grade (~1.5 ft thick); these are separated by brown clay till. No distinctive descriptions of the two lenses were provided in the original log (i.e., color or texture descriptions). This well is about 44 ft deep and screened ~8 ft in the Basal Red Till atop the Queenston Shale (thus a LWBZ well).

The sand lens in A-19, which was a historical boring that did not accommodate a well (thus investigatory in nature and grouted), ranges between 7.5 and 12.5 ft below grade (5 ft thick) within the brown clay till (UWBZ). This sand lens was described as "Brown clay sand with gravel, grades to brown silty fine sand, trace of gravel," so a variably textured lens. The total boring depth for A-19 was ~44 ft and stopped at the top of the Queenston Shale.

Although these locations either have a deep well or were grouted when done, their logs indicate the presence of sand lenses in the UWBZ (within the brown clay till layer). The Corps' intent was twofold: 1) to place location TWP939 (UWBZ) proximal to these two locations (OW-15A and A-19) to see if their lenses were geographically larger than expected and 2) fill an UWBZ data gap between wells OW-15B, OW-14B, OW-02B, A42, and RI location 103.

Basically we wanted to "split the difference" between the two objectives (sand lens assessment and groundwater coverage), with a slight tilt towards getting better groundwater sampling coverage between the points we have west of the IWCS, where historical aerial photos showed run-off and subsequent run-off controls west of the pile (before IWCS construction). The boring log from TWP939 showed a 0.5-ft (6-inch) thick sand lens between 11 and 12 feet below grade, which does not provide us with much information, although it is generally coincident with the lower depths of the sand lenses in OW-15A and A-19 borings. Our previous geostatistical analysis of sand lens occurrences would define the small sand lens in TWP939 as an individual feature, unconnected to those in OW-15A and A-19 logs.

In addition, the recent sampling results from the RI Addendum mobilization shows the following uranium in groundwater at TWP939 (these are in the data release posted on the internet):

U-238, Total = 3.98 pCi/L
U-238, Dissolved = 3.74 pCi/L
U-235, Total = 0.235 pCi/L
U-235, Dissolved = 0.229 pCi/L
U-234, Total = 4.56 pCi/L
U-234, Dissolved = 4.91 pCi/L

The Dissolved phase ratio (U-234:U-238) is 1.31, which is indicative of background ranges with very minor anthropogenic impacts (i.e., it delineates the outer extent of the R-10 impacts just west of the IWCS).

A calculated Total (elemental) Uranium would be 11.94 pCi/L (11.22 pCi/L filtered), or about 13.13 ug/L (12.34 ug/L filtered), which is below our 16.7 ug/L screening limit for "plume" inclusion.

The cross-section analysis referenced in the FSP ties back to the geologic logging report generated during the construction of the IWCS cut-off wall. The associated figure is attached with annotations used during presentations.

We are also assessing the sand lens occurrences from the new borings; this information will accompany the release of the RI Addendum. Of the new borings (2009 set), 61% have sand lenses, which is coincident with previous analyses that show a 59% occurrence in variable thicknesses, colors, textures, and lithologic depths (consistent with past observations).

The two LWBZ wells (OW-14A and -15A) were omitted from RI sampling since other LWBZ wells were sampled that are closer to the IWCS (OW-01A and -02A). The data from these wells showed no site-related impacts, although naturally occurring sodium was high (the LWBZ is naturally highly saline).

I hope these data and narrative answers your questions. The upcoming public workshop will present more of the RI Addendum information, which shows how groundwater is more widely impacted at low levels (generally as expected) due to past site operations and material handling.

Thank you for your inquiry.
Sincerely,

[redacted]

-----Original Message-----
From: [redacted]
[redacted] riday, May 21, 2010 11:20 AM
To: [redacted]
Subject: Re: Another Question for [redacted] from [redacted] re NFSS RI Addendum

[redacted],

Apologies, I forgot to thank you for sending me identification of the locations of the RI addendum monitoring wells. I did pass it on to the other RAB radiological committee members.
I do have another couple of questions regarding one of the TWPs in the RI addendum sampling plan. TWP 939 is justified (page T-6) as, "Further define groundwater contamination along the western side of the IWCS" and "Evaluate connectivity of sand lenses between OW-15A and A-19 as suggested by the cross-section review performed by HGL" However, well OW-15A is in the LWBZ, so how is sampling TWP 939, which is in the UWBZ going to define the sand lens? Is well A19 in the UWBZ?
I could not find either of these wells in table 3-15 of the NFSS RIR- they do not appear to have been sampled- so could you please refer me to the HGL cross-section review quoted so I can find the location of well A19 and fully understand the rationale for this sample.
34 of the 36 OW IWCS monitoring wells were sampled for the RI apart from OW-15A and OW-14A; why were these two LWBZ wells omitted from the RI?

Many Thanks,
[redacted]

In a message dated 4/8/2010 [redacted],
[redacted]

Hello [redacted]
Attached is a figure provided by our contractor for the Remedial Investigation Addendum sampling. It reflects the final groundwater-monitoring well installations (the red and white circles) and the
temporary well points (TWPs) that were abandoned after use (the blue

circles).

Some of the new wells may become part of the annual environmental monitoring program; some abandoned TWPs did show contamination but were not kept in lieu of more optimal down-gradient monitoring points. The construction information for these wells will be available in the RI Addendum Report when it is released.

Sincerely,

[redacted]
Outreach Program Specialist
US Army Corps of Engineers, Buffalo District
1776 Niagara Street
Buffalo, NY 14207

Phone: [redacted]
Fax: [redacted]

-----Original Message-----
From: [redacted]
Sent: Wednesday, March 31, 2010 5:27 PM
To: [redacted]
Subject: Question for [redacted] from [redacted] re NFSS RI Addendum

Hi [redacted]

Unfortunately, I was unable to attend the most recent USACE public meeting, so missed the opportunity to ask questions. I do have a question for [redacted], who I believe was present at the meeting to answer questions about groundwater. I have been taking a look at the NFSS RI Addendum sampling plan, but am missing a piece of information. I would like to know which of the 23 TWPs are now permanent groundwater monitoring wells. The sampling plan calls for 10 of the 23 TWPs to become monitoring wells, but does not identify which wells.

Many thanks,

[redacted]