

**From:** Malliakos, Asimios  
**Sent:** Friday, January 10, 2014 11:00 AM  
**To:** Knowles, Timothy  
**Cc:** 'Slama, Chuck'; Raddatz, Michael; Hsueh, Kevin; Lemont, Stephen  
**Subject:** RE: Request for Clarification on the URENCO USA Responses to NRC Request for Additional Information

Tim,

Please see below the NRC responses in **blue**.

**Your response will posted in ADAMS as publicly available.**

Thank you

Asimios

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**From:** Slama, Chuck [<mailto:Chuck.Slama@urenc.com>]  
**Sent:** Friday, December 06, 2013 9:50 PM  
**To:** Malliakos, Asimios; Knowles, Timothy  
**Subject:** Re: Request for Clarification on the URENCO USA Responses to NRC Request for Additional Information

Asimios,

Yes, the UUSA response and the attached file be posted in ADAMS as publicly available.

Regards,

Chuck

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**From:** Malliakos, Asimios [<mailto:Asimios.Malliakos@nrc.gov>]  
**Sent:** Friday, December 06, 2013 02:36 PM  
**To:** Slama, Chuck  
**Subject:** FW: Request for Clarification on the URENCO USA Responses to NRC Request for Additional Information

Chuck,

Can your response and the attached file be posted in ADAMS as publicly available?

Thank you

Asimios

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**From:** Slama, Chuck [<mailto:Chuck.Slama@urenc.com>]  
**Sent:** Friday, December 06, 2013 1:04 PM  
**To:** Malliakos, Asimios

**Cc:** Raddatz, Michael; Knowles, Timothy

**Subject:** RE: Request for Clarification on the URENCO USA Responses to NRC Request for Additional Information

Asimios,

This email is the response to the 4 RAIs emailed previously, see original email below. As discussed in our phone calls and in an attempt to minimize confusion in many emails, I waited for the completion of all 4 responses prior to sending this email.

Regards,

Charles (Chuck) James Slama  
Licensing Project Manager

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1. Figure 1 in the July 31<sup>st</sup> RAI response shows expansion of the UBC storage pad to the east, extending well beyond the east side of SBM 1005. This is in contrast to other previous figures such as Fig. 6.1-1 in the Supplement ER which shows expansion of the UBC pad to the west, while the east edge of the pad is roughly even with the east edge of SBM 1005. While Figure 1 in the RAI response says it is not drawn to scale, it is not clear if the plans have changed. This can have an effect on construction worker dose as well as doses at the fence line if previously reported distance values to the fence line have been changed. Which of the two figures (i.e., Figure 1 in the July 31<sup>st</sup> RAI response or Fig. 6.1-1 in the Supplement ER) is correct?

#### UUSA Response:

Figure 1 is the accurate representation of the future plans of extending the UBC Storage Pad further in the east direction. The distance to the east site boundary has been reduced to approximately 737 ft; however, this is still enough distance to meet the regulatory requirements/limits at the site boundary (CALC-S-00141 demonstrates that less than 600 ft distance is needed to meet 25 mrem/yr based on 2000 hrs occupancy in the east/west directions).

The worker dose assessment (CALC-S-00143) was based on these distances and arrangement. The comment from the NRC that this change of the UBC Storage Pad location (from the previously provided Fig. 6.1-1) can impact the worker dose assessment is not a concern, since this change has already been accounted for in the most recent assessment.

#### NRC Staff Response:

The response is not complete. It does not include the change in fence line direct radiation dose. According to the UUSA response, the design of the storage pad has changed from the design discussed in the Supplemental ER. This change in design will impact the closest distances to the fence line and hence the fence line direct radiation

dose values. The fence line distance now in the East direction (737 ft) is much less than the fence line distance in the West direction (898 ft). Update the UBC Storage Pad Annual Dose Equivalent Isopleths shown in Figure 4.12-4.

Table 4.12-1 in the Supplemental ER provides the direct radiation dose at the site fence in the North and West directions from the Storage Pad and CRDB. Confirm that the dose is still correct for those two directions and provide the dose at the fence in the East and South directions.

2. When is the response expected for RAI 7? UUSA expects a 52.478 MVA load due to the 10 MSWU facility. The “Xcel Interconnection Study” shows Xcel can handle up to 30 MVA by 2019 as forecasted by UUSA. UUSA made a formal request to Xcel to obtain the maximum capacity of the transmission lines. When does UUSA expect to receive an answer from Xcel because information is needed for our assessment, especially if a new transmission line is needed.

**UUSA Response:**

There is a great amount uncertainty related to a study to support this request. Due to the ongoing growth, not only at UUSA, the utilities cannot do a study based on a stable base load. At best, they can try to estimate the local growth of oil and natural gas industry needs and correlated this to dates that UUSA will bring units online. For each unit brought online, Xcel needs specific UUSA load data that is conceptual at best. In aggregate, the study will be extremely unreliable and will not provide any guarantee of future Xcel plans or load requirements. UUSA has assembled and submitted the Xcel the requested data to initiate a study. Xcel has not yet provided an expected completion date.

In 2005 a load study was completed for the UUSA facility (then NEF). This study concluded that the existing 115 kV lines and circuits supplying the facility were capable of handling up to a 64 MW load with a 0.95 power factor. This equates to an apparent power of 60.8 MVA. Thus, the conclusion was that existing infrastructure supplying the facility was sufficient to support the expansion loading. The attached document is the study summary that was email to UUSA on January 14, 2005.

**NRC Staff Response:**

The staff appreciates the UUSA response, however the 2005 load study does not address current loads. It is not clear if the current infrastructure (transmission lines and generating capacity) can handle the current existing load due to other XCEL customers and the increased load that would be imposed by the 10 MSWU facility. Given the 2005 load study calculations to be valid at the time (and correct for the actual implementation), additional loads from new customers added over the past 8 years could result in a need to add additional transmission lines and/or generating capacity to support the expanded UUSA facility.

3. The Supplement ER on transportation (Section 4.2.3) states “The maximum potential increase to traffic due to construction deliveries and waste removal is 10,318 roundtrips over the ongoing construction period. This value is based on the estimated number of material deliveries and construction waste shipments during the period of ongoing construction.” Please clarify what the ongoing construction is. Is the number of future roundtrips for the construction of the expanded facility (i.e. SBMs 1005, 1007, and 1009) estimated to be 10,318 based on the construction of SBMs 1001 and 1003? Over what

period will the 10,318 additional roundtrips occur? Also what is the annual number of shipments (construction deliveries and waste removal) for the facility expansion?

**UUSA Response:**

The statement in Supplemental ER Section 4.2.3:

The maximum potential increase to traffic due to construction deliveries and waste removal is 10,318 roundtrips over the ongoing construction period. This value is based on the estimated number of material deliveries and construction waste shipments during the period of ongoing construction.

This is meant to convey the potential for impact due to truck traffic associated with deliveries and waste disposal specifically associated with active construction versus the flow of delivery trucks and waste that would occur in support of normal operations. This number was not meant to represent the impact from construction laborers traveling to and from the site.

The ER version (18b, 5/11) that was in place at the time we started to evaluate the potential impacts for the expansion was the basis we used for the continued statement in the ER version 21 and the Supplemental ER. The statement is identical in all three places for the number 10,318.

The NRC's EIS (NUREG-1827) includes a statement in Section 4.2.11 that during construction there was the expectation of approximately 3400 trucks per year for the three years of construction (SBM 1001 and 1003), or 10,200 trucks for the first three years. I assume that the EIS number originated from an earlier version of the ER. It appears the NRC has already evaluated and accepted this level of construction truck traffic as posing minimal impact in the initial site EIS.

During the evaluation of the impact due to the expansion, we considered increasing the number of trucks associated with construction deliveries/waste shipments by a small amount, but we continued to use the previous number of 10,318 trucks for the "ongoing construction" period. Use of this number is supported by the assumption that the "ongoing construction" under the expansion would be very similar in nature to that conducted during the initial construction. This assumption is consistent with the number of construction workers through the period to full expansion construction – 2020. A clarification in the wording will be to indicate that on an annual basis during the ongoing construction we would anticipate that no more than 3,400 trucks per year would be making construction related deliveries/waste shipments and that this level of impact was previously evaluated and determined to be insignificant. Based on recent data from the NMDOT which was included in the Supplemental ER, greater than 50 % capacity is still available on HW 176.

**NRC Staff Response:**

An upper bound of approximately 3,400 trucks per year due to construction deliveries and waste removal will be used in the NRC staff review.

4. Section 4.2.3 of the Supplement ER estimates that 2,800 non-radiological operational deliveries and waste shipments would occur once the expansion is complete. This is consistent with the ER Rev. 20f. However, the NEF EIS and ER Rev. 5 state 2,800 supply deliveries and 149 waste shipments. Please clarify what the estimate of 2,800 shipments includes? Does it include both deliveries and waste?

#### UUSA Response:

This section of the supplemental ER discusses 4300 shipments; consisting of 2800 non-radiological and 1500 radiological. In the current ER, Rev 21b, there is a breakdown of the 1500 radiological shipments (including to and from) in Table 4.2.3, but no similar breakdown for non-radiological shipments.

From the EIS (NUREG-1857) –

The transportation impacts of non-radiological materials would include the delivery of routine supplies necessary for operation and the removal of non-radiological wastes. Supplies delivered to and waste removed from the site would require 2,800 and 149 truck trips, respectively, on an annual basis (LES, 2005a).

It would appear that at some point UUSA dropped the 149 non-radiological waste removal shipments.

Further research found that in pre-application approval revisions of the ER, UUSA added a statement of 2800 radiological and 1500 non-radiological for a total of 4300. Prior to that there are no specific numbers. I have looked through the first few versions of the ER, up to rev 6, and can find no reference to 149 non-radiological waste shipments. What I can find is that the total number of radiological shipments, from table 4.2.3, adds up to 1498 and thus we round of to 1500 the text of 4.2.3.

Thus, it appears that there was a typographical error in completing the EIS and rather than 149, the author intended to type 1498 in the EIS.

#### NRC Staff Response:

So, what is the total annual number of non-radiological shipments associated with operation of the 10 MSWU facility? Is it 2,800,  $2,800 + 149 = 2,949$ , or something else?

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**From:** Malliakos, Asimios [<mailto:Asimios.Malliakos@nrc.gov>]

**Sent:** Friday, September 06, 2013 2:03 PM

**To:** Timothy Knowles

**Cc:** Raddatz, Michael; Chuck Slama

**Subject:** Request for Clarification on the URENCO USA Responses to NRC Request for Additional Information

Tim,

Please provide responses to the following questions:

1. Figure 1 in the July 31<sup>st</sup> RAI response shows expansion of the UBC storage pad to the east, extending well beyond the east side of SBM 1005. This is in contrast to other previous figures such as Fig. 6.1-1 in the Supplement ER which shows expansion of the UBC pad to the west, while the east edge of the pad is roughly even with the east edge of SBM 1005. While Figure 1 in the RAI response says it is not drawn to scale, it is not clear if the plans have changed. This can have an effect on construction worker dose as well as doses at the fence line if previously reported distance values to the fence line

have been changed. Which of the two figures (i.e., Figure 1 in the July 31<sup>st</sup> RAI response or Fig. 6.1-1 in the Supplement ER) is correct?

2. When is the response expected for RAI 7? UUSA expects a 52.478 MVA load due to the 10 MSWU facility. The “Xcel Interconnection Study” shows Xcel can handle up to 30 MVA by 2019 as forecasted by UUSA. UUSA made a formal request to Xcel to obtain the maximum capacity of the transmission lines. When does UUSA expect to receive an answer from Xcel because information is needed for our assessment especially if a new transmission line is needed.
3. The Supplement ER on transportation (Section 4.2.3) states “The maximum potential increase to traffic due to construction deliveries and waste removal is 10,318 roundtrips over the ongoing construction period. This value is based on the estimated number of material deliveries and construction waste shipments during the period of ongoing construction.” Please clarify what the ongoing construction is. Is the number of future roundtrips for the construction of the expanded facility (i.e. SBMs 1005, 1007, and 1009) estimated to be 10,318 based on the construction of SBMs 1001 and 1003? Over what period will the 10,318 additional roundtrips occur? Also what is the annual number of shipments (construction deliveries and waste removal) for the facility expansion?
4. Section 4.2.3 of the Supplement ER estimates that 2,800 non-radiological operational deliveries and waste shipments would occur once the expansion is complete. This is consistent with the ER Rev. 20f. However, the NEF EIS and ER Rev. 5 state 2,800 supply deliveries and 149 waste shipments. Please clarify what the estimate of 2,800 shipments includes? Does it include both deliveries and waste?

Thank you

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