

## Slama, Chuck

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**From:** Slama, Chuck  
**Sent:** Wednesday, December 18, 2013 8:23 AM  
**To:** Raddatz, Michael  
**Cc:** Knowles, Timothy  
**Subject:** RE: Followup on a Recent RAI response

### UUSA Response:

The U qualifier in the analysis is an industry standard to qualify a sample was categorically non-detect.

In this instance, the C column in the report noted in the analysis is the concentration qualifier. The actual result for this sample was -0.0066 mg/l. The laboratory reports the Practical Quantization Limit (PQL) as a non-detect. The PQL is defined as approximately 5 times the method detection limit (MDL). For this set of results, the PQL for Uranium is 0.05 mg/l and the MDL was 0.01 mg/l. For all non-detect results, the laboratory reports the PQL as the result and qualifies with the U qualifier.

Again, the U qualifier indicates that the result is Uranium non-detect below the MDL. For this sample, the U is qualifying non-detects of Uranium at the PQL.

To answer the first part of the question, below are the total numbers of cylinders stored on the UBC Pad in the month of July, with a total uranium mass of 7,345,593 kg and a U235 mass of 38,036 kg. No enriched uranium is stored on the UBC Pad at this time.

82 Empty Feed Cylinders (48Y), some with heels of 0.711 w/o U235

560 Full Feed Cylinders (48Y), 0.711 w/o U235

347 Full Tails Cylinders (48Y), 0.220 w/o U235

Based on the fact that the results were non-detect, as expected due to process history and programmatic controls, there is no practical way to extrapolate an expected sample result for additional materials on the UBC Pad. An extrapolated PQL and MDL would not change, thus 0.05 mg/l and 0.01 mg/l.

Regards,

**Charles (Chuck) James Slama**  
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**From:** Knowles, Timothy  
**Sent:** Monday, December 16, 2013 8:04 AM  
**To:** Slama, Chuck  
**Subject:** Fw: Followup on a Recent RAI response

FYI

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**From:** Raddatz, Michael [<mailto:Michael.Raddatz@nrc.gov>]  
**Sent:** Monday, December 16, 2013 07:17 AM  
**To:** Knowles, Timothy  
**Subject:** Followup on a Recent RAI response

Second Round RAI to RAI D3 on LAR-12-10 Supplement

Specify the amount of stored material (numbers of and uranium masses in feed cylinders, tails cylinders, product cylinders, and empty cylinders) that contributed to the measured uranium concentration of 0.05 mg/L in runoff water. Update the estimate of uranium activity concentrations in runoff water at the maximum, requested storage capacity. Given that the specific activity of enriched uranium is significantly greater than the specific activities for depleted and natural uranium, estimate contributions from enriched uranium to the total uranium activity concentration in runoff waters.