

## McCallie, Karen

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**From:** Hickey, James  
**Sent:** Wednesday, June 04, 2014 11:18 AM  
**To:** McCallie, Karen  
**Subject:** FW: Honeywell Follow up Questions

Please add this to ADAMS publically available with Mr. Ladds email redacted.

Thank you,  
Jim

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**From:** Hickey, James  
**Sent:** Wednesday, June 04, 2014 11:17 AM  
**To:** 'RICKY LADD'  
**Subject:** RE: Honeywell Follow up Questions

Mr. Ladd,

Alpha particles are much more difficult to detect because they are highly charged and only travel a few inches in air. The Beta particles are not as highly charged and travel a few feet in air and therefore are much easier to detect. Because the U-238 decay chain involves both Alpha and Beta particles, surveying for either one would provide acceptable indication of contamination.

Regards,  
Jim



James Hickey  
Chief, Projects Branch 1  
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Region II  
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[James.Hickey@nrc.gov](mailto:James.Hickey@nrc.gov)

**From:** RICKY LADD [REDACTED]  
**Sent:** Wednesday, June 04, 2014 8:06 AM  
**To:** Hickey, James  
**Subject:** Re: Honeywell Follow up Questions

Mr. Hickey,

Thank you for your response to my questions. I was wondering if I might get a follow up to a misstatement in a question I submitted.

The number 1 question sent by me was incorrect. Why were the Honeywell cylinders shipped to BWCS only surveyed for Beta contamination rather than both Alpha and Beta. Were any of the Honeywell cylinders shipped to BWCS ever checked for Alpha contamination? If not what was Honeywell's reasoning for not surveying for Alpha contamination.

Regards

Ricky Ladd

On Wed, Jun 4, 2014 at 6:40 AM, Hickey, James <[James.Hickey@nrc.gov](mailto:James.Hickey@nrc.gov)> wrote:

Dear Mr. Ladd,

Here is a response to your follow up questions.

1. Could you please explain as to why Alpha monitoring was the only type of monitoring conducted on the cylinders shipped to BWCS.

The outside of UF6 cylinders shipped to BWCS were surveyed for removable beta contamination prior to shipment. Both alpha and beta particles are a part of the U-238 decay chain.

2. Also BWCS workers were told that these cylinders were being used as security barricades is this correct?

Yes, a portion of the population of cylinders were used as security barriers at Honeywell.

3. Apparently these cylinders no longer complied with hydro testing/ inspection requirements to be used for product material is this correct?

Yes, there is no requirement to inspect/hydro cylinders that are not being used for product material unless they were to be refilled with UF6.

4. Apparently these cylinders were older based off their condition when shipped to BWCS are there records available that would follow the cylinders from their purchase to when they were rejected showing when they were filled, when they were washed, and analytical data of the contents put into the cylinders.

These cylinders were essentially out of commercial rotation in the 1990's. Fill and wash records and associated sample analysis data would span 20+ years and would be very difficult to gather for each cylinder. These cylinders were used to ship product with very strict quality and purity controls. Honeywell would have confirmed purity prior to shipment and the customer would have verified product quality prior to use.

Best Regards,

Jim



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**From:** RICKY LADD [REDACTED]  
**Sent:** Monday, May 05, 2014 6:35 PM  
**To:** Hickey, James  
**Subject:** Re: Honeywell Meeting question regarding the U-238 Decay Chain

Mr. Hickey,

Thank you for responding to my question

I have limited knowledge in this area as I was an operator technician at BWCS. I have some documents that appear

to indicate that Honeywell was only monitoring for Alpha particles.

Could you please address the following questions associated with the shipment of the cylinders to BWCS:

1. Could you please explain as to why Alpha monitoring was the only type of monitoring conducted on the cylinders shipped to BWCS.
  
2. Also BWCS workers were told that these cylinders were being used as security barricades is this correct?
  
3. Apparently these cylinders no longer complied with hydro testing/ inspection requirements to be used for product material is this correct?
  
4. Apparently these cylinders were older based off their condition when shipped to BWCS are there records available that would follow the cylinders from their purchase to when they were rejected showing when they were filled, when they were washed, and analytical data of the contents put into the cylinders.

I would appreciate any information you could supply to these questions.

Regards

Ricky Ladd

On Mon, May 5, 2014 at 9:47 AM, Hickey, James <[James.Hickey@nrc.gov](mailto:James.Hickey@nrc.gov)> wrote:

Good Morning Mr. Ladd,

In response to your question regarding the decay daughter products of U-238. Attached is a picture of the U-238 decay chain.

Regards,

Jim



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