

From: "Werner, Bryan" <brwerner@state.pa.us>
To: "Marjorie McLaughlin" <MMM3@nrc.gov>
Date: Fri, Feb 24, 2006 10:25 AM
Subject: RE: FYI - Whittaker Sand Description

Marjey,

Your email works fine for us. You don't need to bother sending a copy to us. It pretty much sounded like foundry sand to me by what Kevin Taylor told me on the phone the other day. They found what sounds like the same stuff on the property adjacent to Cabot Reading a few years ago. I wasn't involved then, but it was elevated activity sands. The property had been owned by Reading Gray Iron, and they had drums of this stuff lying around during a site cleanup. I talked to Bob Maiers, and he said that NRC was not involved with the investigation, but Sherri Minick was involved when she was with EPA. You might want to talk to her to see if it sounds like the same type of material. I believed it turned out that it was a zirconium sand that was high in natural levels of radiation. Sherri may have more knowledge about it, and EPA may even have some analyses that you can compare to what Whittaker comes up with. Thanks for the update. It is much appreciated. Have a great weekend.

Bryan

-----Original Message-----

From: Marjorie McLaughlin [mailto:MMM3@nrc.gov]
Sent: Wednesday, February 22, 2006 11:33 AM
To: brwerner@state.pa.us
Subject: FYI - Whittaker Sand Description

Bryan:

I was talking with Kevin Taylor last week and asked him about the Whittaker 1st Quarter site inspection they performed. You probably also saw in the 2/16/06 email he sent us that they took some soil samples during that inspection. I asked Kevin what the samples were of and for, and he told me they were to characterize a sandy material that had been uncovered in the Section 2 excavation. When I was at the site in October for our last inspection, we saw this sand and wondered with the Envirocare guys where it had come from. So, they took these samples to try to determine what it is made of.

I recently was looking through some of our historical records from the site (to find those characterization surveys describing the depth of the slag pile). I came across a 1970 AEC inspection that mentioned sand. In 1970, Whittaker was actively using the entire site for metals processing. The inspection report briefly describes this process, and states "The building in which the heat runs were made, was a large shed type structure with one long side open. Along the other side was a pit filled with sand. . . up to six bottomless crucibles were placed on the sand and each filled with the proper mixture of columbium ore, stainless steel, and aluminum for the alumino-thermic reaction. The mixture is then ignited with a torch and burns fiercely for about six minutes and produces a molten mass. The crucible is then lifted off and the mass allowed to cool. The cooled mass is removed to the outside and the ferro-columbium removed from the slag with chipping hammers. The product is broken up (crushed), weighed, placed in one gallon cans and boxed for shipment. The form of the product resembles fine crushed rock. It is silver-gray in color. The slag containing the thorium was dumped on a slag heap which was in front of the building."

I also found a good description of foundry sand on line (<http://www.tfhr.gov/hnr20/recycle/waste/fs1.htm>), which describes the same sort of process.

Anyway, I am sending Kevin a hard copy of the inspection report, and I wanted to keep you informed of the content and offer to send it to you as well. It is on carbon paper, so I can't fax it, but I will make a copy and mail to you, if you would like it. Clearly, they still need to determine if the sand is clean, but at least we

A124

can feel more comfortable that it is from the Whittaker operations, and not some other material from past Army operations or anything.

Let me know if you would also like the report, or if the above description is good enough. There is no other mention of the sand in the report than what I quoted above.

Marjey

Marjorie McLaughlin

Health Physicist
USNRC Region I Decommissioning
610-337-5240 (Phone)
610-337-5269 (Fax)

Mail Envelope Properties (43FF255E.A78 : 2 : 19064)

Subject: RE: FYI - Whittaker Sand Description
Creation Date Fri, Feb 24, 2006 10:15 AM
From: "Werner, Bryan" <brwerner@state.pa.us>

Created By: brwerner@state.pa.us

Recipients

nrc.gov

kp1_po.KP_DO

MMM3 (Marjorie McLaughlin)

Post Office

kp1_po.KP_DO

Route

nrc.gov

Files

MESSAGE

Mime.822

Size

3991

5488

Date & Time

Friday, February 24, 2006 10:15 AM

Options

Expiration Date: None

Priority: Standard

ReplyRequested: No

Return Notification: None

Concealed Subject: No

Security: Standard