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October 20, 2001

Defense Logistics Agency Defense National Stockpile Center 8725 John J. Kingman Rd Suite 3339 Ft. Belvoir, VA 22060-6223

Attn: Kevin Reilly

Subject: TRIP REPORT AND RECOMMENDATIONS

Mr. Reilly

From October 8 through 11, 2001, ERS Solutions, Inc. performed a historical review, collected background measurements and samples, and performed a scoping survey of the affected areas from the transfer of the baddeleyite ore piles at the New Haven Depot. The purpose of the historical review and site visit was to identify the affected areas and to locate areas of similar construction to be used for background measurements. Additionally, scoping surveys were performed at all affected areas to determine the likelihood of finding residual radioactivity.

The historical review and scoping survey revealed that several areas on the depot used during the shipment of the baddeleyite ore contain residual radioactivity in excess of the release criteria promulgated by the Nuclear Regulatory Commission (NRC). Furthermore, the historical review identified two additional areas that were used during the processing of the rail cars for final shipment not previously known. These areas are:

- The rail spur south of open storage area 8 potentially used to hold rail cars full of ore awaiting shrink wrapping, and
- A segment of track near the depot entrance south of Building T-111 used to shrink wrap the rail car's open top.

As part of the historical review it was learned that during the transfer of baddeleyite ore the rail cars were purposely loaded to weights less than maximum. At the rail scale, a front end loader would add additional ore to bring the car up to the desired level. The loader obtained the additional ore from the storage pile 111 then drove down the paved road to the rail scale.

The scoping survey performed in October 2001, showed that the paved road from the turn off to Open Area 7 to the north and the turn off to the rail scale to the south contained residual radioactivity in excess of NRC release criteria. The cause of the residual radioactivity appears to be spillage from the bucket of the front end loader as it traversed from the baddeleyite ore storage pile to the rail scale. The amount of spillage appears to be concentrated along the railroad crossings and as the loader made the turn from the storage piles. Figure 1 shows pebbles of baddeleyite ore in the railroad track crossings on the paved road. This area is shown as survey unit (SU) 2 on the attached site map.



New Haven Scoping Survey Recommendations

Several areas at the rail scale were also found to contain spilled ore. The spillage was traced from the paved road to the area near the tracks at the eastern end of the scale where the additional ore was added to the rail cars. A larger spillage area was identified near the tracks. Figure 1 shows the spillage near the tracks. This area is shown as SU 3 on the attached site map.

Finally, spillage was noted in the outside shrink wrapping area along the railroad tracks south of Building T-111. The amount of spillage in this area was minimal however, it is sufficient to prevent the unrestricted release of this area of track. This area is shown as SU 4 on the attached site map.

Based upon the results of the scoping survey the previously proposed survey strategy of performing closure surveys must be revised in order to obtain the most efficient and effective use of resources and release for unrestricted use the largest portion of the site. I have provided an outline of the actions recommended by ERS Solutions, Inc. to be taken prior to the performance of a final closure survey.

Recommendations for New Haven Surveys

The areas identified above do not meet the NRC promulgated release criteria. However, the amount of residual radioactivity present in each area is in a form (pebbles) and possesses physical characteristics (high specific activity and red coloring) that make it easy to remove. This allows for a rather simple but effective removal using the following steps.

- Two health physics persons will perform walk over scanning surveys of the effected areas using 2-inch by 2-inch sodium iodide detectors to scan the areas. Since the ore possesses a high gamma specific activity, detection with sodium iodide detectors will be relatively simple.
- As residual material is identified during the surveys it will be collected in a drum (30 or 55 gallon).
- The collection drums will be sealed and stored in open area 7 where piles 111/111A were located or other suitable areas designated by DNSC.
- After collection at an area is complete, the entire area will be scanned again to ensure no residual material remains.

By performing this minor housekeeping and verification surveys, I anticipate being able to release all survey units except SU 1. SU 1 will require a full remediation effort which requires coordination with the regulators and other stakeholders.

After the housekeeping surveys have been completed, the areas verified clean, and the results of the background sampling have been received, the MARSSIM closure surveys will be performed to officially release the areas covered by SU 2-8.



New Haven Scoping Survey Recommendations

The recommendations presented will require a change in the scope of the current delivery order SP0833-01-F-0144, to permit an additional week of surveying and housekeeping to be performed. ERS Solutions, Inc. will make every attempt to perform the actions included in the additional scope without increasing the contract cost. At this time, I do not believe additional funds will be required.

Should you have any questions please contact me at (916) 689-2680.

Sincerely,

ERS Solutions, Inc.

Cc: Michael Pecullan, DNSC

William Till, DNSC New Haven





Baddeleyite Ore in Railroad Tracks on Paved Road

Baddeleyite Ore Spillage at Rail Scale



Figure 1

