APPENDIX C – HSA QUESTIONNAIRE FOR PERSONNEL INVOLVED WITH RADIOACTIVE MATERIALS

The purpose of this questionnaire is to assist CABRERA Services, Inc. in collecting information for a Historical Site Assessment (HSA). The HSA findings will be used to design and perform radiological surveys.

Date of Interview: August 23, 2006

Name of Interviewer: Mike Barsa / Greg Bright

Installation: New Haven Depot

Mode of Communication(s): Face-to-face Interview

1. What is your name and what is/was your job title/position?

Richard Whitman – General Supply Specialist

Lois Huddlestun – General Supply Specialist

Nikki Horther – General Supply Specialist

Dale Arnos – General Supply Specialist

Warren Flood – General Supply Specialist

2. During what span of years have you worked, or did you work, at this installation?

Mr. Whitman – 23 years

Ms. Huddlestun – 13 years

Ms. Horther – 12 years

Mr. Arnos – 25 years

Mr. Flood – 7 years

3. How many years have you worked with radioactive materials?

Mr. Whitman – 23 years

Ms. Huddlestun – 13 years

Ms. Horther – 12 years

Mr. Arnos – 25 years

Mr. Flood – 5 years

4. Can you name or identify the radioactive commodities or devices that you or anyone else might have worked on within the selected installation? What isotopes did they contain?

Natural uranium and thorium are contained within certain metals stored on site. Materials stored on site containing natural uranium and thorium include: bastnasite, rare earth sodium sulfate, vanadium pentoxide (originating in Columbus, OH and having since been shipped off), zirconium ore, tantalum, and tungsten.

[NOTE: There are three fluorspar piles on the site, as well as a fluorspar storage bin in a warehouse, which contains a large amount of residue. This fluorspar contains natural thorium and uranium; however, it has been reported as not a high enough quantity to be licenseable. Any high radioactivity readings observed from the fluorspar have been attributed to the sheer "quantity of material present, rather than actually from a high amount of activity."]

5. Was the site ever used to create radioactive materials(s) by activation?

Not applicable.

6. Is there evidence that the site was involved in the Manhattan Project or any Manhattan Engineering District (MED) activities (1942-1962)?

Not applicable.

7. Was the site ever involved in the support of nuclear weapons testing (1945-1962)?

Not applicable.

8. Were any facilities on the site used as a weapons storage area? Was weapons maintenance ever performed at the site?

Not known.

9. Was there every any decontamination, maintenance, or storage of radioactively contaminated ships, vehicles, or planes performed onsite?

Trucks hauling metals containing radioactive materials were monitored as they were being loaded and unloaded, and they also were sprayed down with water and after dry, they were again monitored for any loose contamination.

10. Is there a record of any aircraft accident at or near the site (e.g., depleted uranium counterbalances, thorium alloys, radium dials)?

Not applicable.

11. Was there ever any radiopharmaceutical manufacturing, storage, transfer, or disposal onsite?

Not applicable.

12. Were uranium, thorium, or radium compounds (NORM) used in manufacturing, research, or testing at the site, or were these compounds stored at the site?

These compounds have only existed within the various metals, and have only ever been stored on the site.

13. Has the site ever been involved in the processing or production of Naturally Occurring Radioactive Material (e.g., radium, fertilizers, phosphorus compounds, vanadium compounds, refractory materials, or precious metals) or mining, milling, processing, or production of uranium?

The site has never been involved with processing, as it has only ever served as a storage depot.

14. Were coal or coal products used onsite? If yes, did combustion of these substances leave ash or ash residues onsite? If yes, are runoff or production ponds onsite, and where would they be found?

Long ago, coal was likely used in warehouse furnaces, with boilers in the basements of the warehouses; however, this is not the case anymore. There used to be a pile of coke nearby Area 7A; however, it has been removed and only remnants remain.

15. Was there ever any onsite disposal of material known to be high in naturally occurring radioactive materials (e.g., monazite sands used in sandblasting)?
None known.

16. Did the site process pipe from the oil and gas industries?
Not applicable.

17. Can you identify any locations/areas/buildings of known use or storage of radioactive material used at the selected installation, including fuel, raw materials, experiments, products, and liquid and solid effluents and wastes? (Be specific; Bldg/room numbers, outdoor areas, etc.) How was it stored (loose, containerized, form)? Are you aware of any radioactive materials on the site that are not listed in any permits?
The listing on the inventory, already provided to Cabrera, should be all-inclusive.

18. Where and how was the shipping and receiving of radioactive material handled?
Shipping and receiving was handled almost exclusively by truck; however, rail cars were used for the zirconium ore stored at Area 7A. Shrink wrapping of materials in rail cars occurred on Track 12 near building 124. Any excess radioactive materials in this area would likely have already been taken care of and documented in an ERS report.

19. Did any of the radioactive commodities or devices contain radium-226, cesium-137, hydrogen-3 (tritium) or cobalt-60? How did you handle these items (e.g., standard procedures, contamination controls, personal protective equipment, etc.)?
Cesium and thorium were used in sealed check sources. Cesium was used for gamma check sources, and thorium was used for alpha check sources.

20. Was the site ever licensed for the manufacture, use, or distribution of radioactive materials under Agreement State Regulations, NRC licenses, or Armed Services permits, or for the use of 91B material?
There should be no radioactive materials on the site that would not be on the NRC license.

21. Did the site ever have permits to dispose of, or incinerate, radioactive material onsite or by sanitary sewer? Is there evidence of such activities? Has the site ever had deep wells for injection or permits for such?
Not applicable.

22. Did the site ever have permits to perform research with radiation generating devices or radioactive materials except medical or dental x-ray machines?
Not applicable.

23. As a part of the site's radioactive materials license were there ever any Soil Moisture Density Gauges (Americium-Beryllium sources), or Radioactive Thickness Monitoring Gauges stored or disposed of onsite?
Thickness Monitoring Gauges were used, but none contained radioactive materials.

24. Did your standard operating procedures address specific locations for the use, storage, handling, transfer, disposal, or control of radioactive materials or contaminated material/waste? Are you aware of any disposal, or incineration, of radioactive material onsite or if rad material was transferred to an industrial landfill as non-rad trash?
Long ago, standard operating procedures were pretty much verbal, but it was fairly common knowledge that nothing moved without approval from headquarters.

25. Was animal research, with radioactive material, ever performed at the site? Describe.
Not applicable.

26. Are you aware of the presence of any radionuclide-containing exit signs or smoke alarms?
Not known for sure, but most look to be newer (possibly running on either electric or battery).

27. Were electronic maintenance activities performed on equipment with electron tubes? Where?

Not known.

28. Describe what would happen if a radioactive commodity or device was damaged or broken. Whom would you tell? What special procedures would have been implemented?

Environmental people at headquarters would have been notified, and they would have given the go-ahead to clean it up.

29. Do you recall any instance of spills, broken/leaking sources and/or containers, or any other contamination incidents or accidents? Describe as accurately as can be recalled, including dates, specific rad materials and forms, contamination levels, areal extent of contamination, and disposition.

One incident occurred whereby a drum containing rare earth sodium sulfate fell down and spilled. The supervisor was notified, and then headquarters was notified. Headquarters gave the go-ahead to clean it up, and it was cleaned up. Then, the QA people came through with counters to ensure that the area was fully clean.

30. Are you aware of any studies/reports that may have identified contaminated areas and the isotopes activated? Describe.

All reports have already been given to Cabrera.

31. Are you aware of any chemical use/storage/spills/releases involving any type of solvents or fuels?

There have been a few incidents, but they have all been taken care of. The issue with the leaking UST may not entirely be complete, however.

32. Are there any other individuals you feel should be interviewed regarding the above items?

Mr. Snow

33. What areas would you concentrate on if you were conducting a radiological close out survey of the site?

Areas to concentrate on would be everything on provided inventory: 7A, 200-series of warehouses, and buildings nearby the old office building, as well as the scale area, the shrink-wrapping area, and the coal/coke pile.

34. Additional Notes / Comments:

None.