

**TELEPHONE CONVERSATION RECORD
NRC REGION III**

SITE OWNER: U.S. NAVY, NAVAL STATION GREAT LAKES (NSGL)
GREAT LAKES, ILLINOIS

LICENSEE: Englehart Minerals and Chemicals Corporation (Out of Business)

LICENSE NO.: SMC-01207 (Terminated)
SUC-01332 (Terminated)

DOCKET NO.: 040-08306 (Terminated)
040-08680 (Terminated)

SUBJECT: NRC STAFF REQUEST FOR ADDITIONAL INFORMATION
REGARDING AREAS IMPACTED BY PAST THORIUM STORAGE
AND DISCUSSION REGARDING THE STATUS OF
DECOMMISSIONING ACTIVITIES AT THE NSGL SITE

REFERENCES: ATTACHED

DATE OF CALL: May 3, 2007

CALL PARTICIPANTS:

- NRC:**
1. George M. McCann, Senior Health Physicist, NRC, Region III, Division of Nuclear Materials Safety, Decommissioning Branch (630) 829-9856, gmm@nrc.gov
 2. Eugenio A. Bonano, Health Physicist, NRC, Region III, Division of Nuclear Materials Safety, Decommissioning Branch (630) 829-9826, gab1@nrc.gov
- US Navy:**
1. Patricia A. Haworth, Environmental Program Manager, Naval Sea Systems Command Detachment, Radiological Affairs Support Office (RASO), (757) 887-7644, pat.haworth@navy.mil

BACKGROUND: Englehart Minerals & Chemicals Corporation (Englehart), which is no longer in business, was licensed to repackage and ship monazite sand from the Great Lakes Naval Training Center to other U.S. Atomic Energy Commission (AEC)/NRC licensees. The area was used by the U.S. General Services Administration (GSA), which transferred control to the Defense Logistics Agency. The Englehart license to ship the material was terminated in 1975 (SMC-01207), and 1983 (SUC-01332). The former licensee was authorized to possess 119,829.33 kilograms (SMC-01207) and 67,965 kilograms (SUC-01332) of natural thorium (Monazite Sand). The Navy, which is the site owner, assumed responsibility for the Great Lakes site cleanup.

A radiological scoping survey conducted in March 2000, indicated radiological concentrations of Th-232 ranging from 0.93 picocuries per gram (pCi/g) to 64.31 pCi/g with an average concentration of approximately 17.0 pCi/g. The monazite sand encompasses an area of approximately 90,000 square yards (yds) in a former tank farm area located within the boundaries of the Great Lakes Naval Training Center. Due to the relatively insoluble nature of the thorium, groundwater impact is not a concern. Up until 2005, the Derived Concentration Guideline Level (DCGL_w) is 1.0 picocuries per gram (pCi/g) of Th²³² (soil) for this site.

On July 7, 2005, NRC inspectors identified additional thorium-232 contamination outside of the site boundaries east of the affected areas near a stream. On July 12, 2005, Region III management met with members of the Navy's Radiological Affairs Support Organization (RASO), personnel from the Great Lakes Environmental Department, and Cabrera Services (contractor) management to discuss the need to further characterize the site, establish new site boundaries, and develop new work plans (remediation and final status survey) for the site. Additionally, during the meeting the establishment of a new site-specific Derived Concentration Guideline Level (DCGL) was discussed, including the submittal of new timelines to the NRC for the completion of the project. Additional information can be found in inspection report, IR 040-08306/05-001 (ML052560100). Based on the identification of this offsite contamination, the Navy was not able to release the site for unrestricted use in December 2005, as was earlier planned.

In a September 7, 2006 letter, the Navy submitted an update to its on-going thorium remediation project (ML062630173). Additional contamination was identified in a housing area, "Public-Private Venture (PPV) Forrestal Village Area," adjacent to a previously identified Monazite sand contamination area. The Navy submitted a sampling plan, "Sampling Plan for Task 3: Coal Ash Determination," dated December 2006 (ML070800402) for the Region III decommissioning staff to review. The objective of the sampling plan is to determine if on-site contamination is from the monazite sand or coal fly ash from local smoke stacks. Review of the sampling plan for the coal ash determination was completed by the Region III decommissioning staff and was determined to be adequate for use by the Navy's contractor, Cabrera Services.

On March 21 and 22, 2007, the Navy submitted the Coal Ash Determination Sampling Report (ML070810101), the Site-Specific DCGL Determination Report (ML070860326), and on April 13, 2007 the Final Status Survey Plan Building 3214 and Vermont Court Housing (ML071060175) to the NRC Region III decommissioning staff for review.

Discussion: The purpose of this call was to communicate to Ms. Haworth of RASO that M. McCann will be the project manager and point of contact for the NRC concerning the NSGL Site as of May 3, 2007; to communicate the completion and discuss the results of our review of the documents listed in the reference section of this telephone conversation record. Overall, we determined that the documents reviewed were adequate and that no additional information was needed.

In the document titled, "Site-Specific DCGL Determination Report," page 1-1, paragraph 1.1, "Purpose," the first and second sentences contained references to a restricted release in accordance with 10 CFR 20.1403. The NRC staff requested clarification regarding the statement dealing with "restricted release" in the report. The Navy

representative indicated that this was a typo and the NSGL Site is to meet criteria for an unrestricted release in accordance with 10 CFR 20.1402. Ms. Haworth indicated that a replacement page would be emailed to the NRC with the correct reference.

The NRC staff informed Ms. Howard, that NRC had no objection to the Site-Specific DCGL Determination report, and that the new DCGL of 5 pCi/g (Th-232) for the NSGL Site was acceptable. Also, discussed with Ms. Haworth, an ALARA DCGL of 1.1 pCi/g for the PPV Vermont Court Housing was acceptable as well.

Ms. Haworth will contact M. McCann as soon as a start date is established for work to begin for the final status surveys of building 3214 and the Vermont Court Housing. M. McCann indicated that the Navy did not need to wait for NRC approval for demolition of the Class 3 buildings, if their surveys indicated that the residual contamination levels were below the unrestricted release limits. The licensee must keep survey and disposal records for inspections. M. Haworth was requested to inform the NRC when sub-surface remediation and final status surveys are conducted, so the NRC can inspect these activities.

We also discussed the need for a comprehensive and detailed schedule for the remaining decommissioning activities and what those activities would entail. This will allow for appropriate inspection resource allocation and preparation. A projected completion date of December 2007 was agreed on, thou subject to change.

M. McCann close the meeting emphasizing that good and timely communication is essential. M. McCann also told Ms. Haworth to go ahead with work and that a formal NRC letter will be sent to her office indicating our completion of the review of the three referenced documents. M. McCann agreed to e-mail this telephone conversation record to Ms. Haworth, and requested that he be contacted if there are any questions or the need for clarification in the conference record.

REFERENCES:

**SITE-SPECIFIC DCGL DETERMINATION REPORT DATED MARCH 2007
(ML070860326);**

**COAL ASH DETERMINATION SAMPLING REPORT DATED MARCH 2007
(ML070810101),**

**FINAL STATUS SURVEY PLAN BUILDING 3214 AND VERMONT COURT HOUSING
REPORT DATED APRIL 2007 (ML071060175),**