

August 14, 2000

Mr. Mark R. Schultz, Head
Environmental Division
ACOS Installation & Environment, Code N45
201 Decatur Avenue
Great Lakes, IL 60088-5600

SUBJECT: NRC INSPECTION REPORT 040-08306/2000002(DNMS)

Dear Mr. Schultz:

This refers to the inspection and the confirmatory survey of portions known as Construction Zone adjacent to Building 3215 Naval Training Center, Great Lakes on July 26, 2000. A copy of our report of this inspection is enclosed for your information.

The primary purpose of the inspection was to conduct an independent confirmatory survey of portions known as Construction Zone at the Naval Training Center site. The confirmatory survey was to demonstrate whether the Construction Zone had met the dose criteria of Subpart E, Section 20.1402, and if it can be released for unrestricted use.

During the inspection, the NRC verified that the Construction Zone has met the dose criteria of Subpart E, Section 20.1402, and can be released for unrestricted use.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html>* (the Public Electronic Reading Room).

Should you have any questions regarding the inspection, please do not hesitate to contact Mr. Ed Kulzer at (630) 829-9875, Dr. Peter Lee at (630) 829-9870 or me at (630) 829-9615.

Sincerely,

/RA/

Bruce L. Jorgensen, Chief
Decommissioning Branch

Docket No. 040-08306 (Terminated)
License No. SMC-01207(Terminated)

Enclosure: Inspection Report 040-8306/2000002(DNMS)

See Attached Distribution

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 040-08306(Terminated)
License No. SMC-01207(Terminated)

Report No. 040-08306/2000002(DNMS)

Licensee: Engelhard Minerals & Chemicals
Currently occupied by Great Lakes Naval Training Center

Location: Great Lakes, IL

Dates: July 26, 2000

Inspectors: E. L. Kulzer, CSP, CIH, Radiation Specialist
P. Lee, Ph.D., CHP, Radiation Specialist

Approved By: Bruce L. Jorgensen, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Engelhard Minerals & Chemicals Great Lakes, Illinois NRC Inspection Report 040-08306/00002(DNMS)

This was an NRC confirmatory survey and inspection of the Defense Reutilization Materials Office supply area at the Great Lakes, Illinois site of the former Engelhard Minerals and Chemicals Company.

The NRC inspectors determined that the Construction Zone (CZ) adjacent to Building 3215 Naval Training Center has met the dose criteria of Subpart E, Section 20.1402, and can be released for unrestricted use. In order to prevent the cross contamination from the Perimeter Area around the CZ, the original existing fence was modified to include a buffer zone on the north, west, and south sides of the CZ.

Report Details

1.0 Background

In 1974 a license was granted to Engelhard Minerals & Chemicals to repackage monazite sand at Great Lakes, Illinois; Savanna, Illinois; and Ravenna, Ohio. The Great Lakes site, which is now the DRMO supply area, had three tanks which held the monazite sand. Some of these tanks have been removed from the site. At the time of the survey a warehouse was being built at this location. The land had been leveled and a foundation had been poured for the building. The surface dirt that had been cleared was piled on the west side of the site near the west fence line.

The NRC conducted a scoping survey on January 7-8, 2000, and found the presence of licensed radiological material. As a result of this scoping survey, a more detailed characterization was requested. The Navy contacted its Radiological Affairs Support Office (RASO) located in Yorktown, Virginia to characterize the extent of contamination at the site. RASO used a contractor, Cabrera Services Inc., located in East Hartford, Connecticut for this work.

RASO issued a memo dated June 28, 2000, in which the construction zone (CZ) was free released for construction activities. The NRC inspectors responded to the June 28, 2000, memo with a meeting with RASO and a confirmatory survey at the CZ.

2.0 Confirmatory Survey

a. Inspection Scope

The inspectors reviewed and evaluated the final status survey performed by the Cabrera Services, Inc. A 100 percent surface scan using 2x2 NaI scintillation detector was conducted at the CZ to determine whether the release was in accordance with the final survey.

b. Observations and Findings

The final status survey was performed in accordance with the MARSSIN guidance. Systematic sampling data in all the survey units in the CZ passed the WRS statistical test. Due to elevated measurements in two isolated areas, the unity rule was used to demonstrate that the total dose is within the release criterion.

During the inspection, elevated areas were found in Units 3 and 4, which were in the same locations as identified by Cabrera Services, Inc. The radiation levels of the elevated areas were consistent with that identified by Cabrera Services, Inc. Also, there were no additional elevated areas found. Therefore, the inspectors agreed with the result of the final status survey.

c. Conclusion

The CZ has been met the dose criteria of Subpart E, Section 20.1402, and can be released for unrestricted use.

3.0 Cross Contamination

Because areas along the established south, west and north perimeters of the Construction Zone do not meet the free release criteria, during the inspection, the inspector raised a concern about potential cross contamination. RASO agreed to modify the current fence with a buffer zone on the north, west, and south sides of the CZ.

RASO issued a memo dated August 1, 2000, in which the CZ had been modified with a buffer zone on the north, west, and south sides of the CZ. (Attachment)

4.0 Exit Meeting

The NRC inspectors met with Mr. M. Schultz and M. Slack of Great Lakes Environmental Department, Environmental Remediation on July 26, 2000, summarizing the preliminary findings.