

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 40-1202/82-01

Docket No. 40-1202

License No. SMB-211

Licensee: National Lead Company

Titanium Alloy Manufacturing Division
Research Laboratory
Niagara Falls, New York

Facility Name: National Lead Company (NL Industries)
Titanium Alloy Manufacturing Division
Research Laboratory
Hyde Park Boulevard
Niagara Falls, New York

Inquiry Conducted: May 5, 1982 - July 2, 1982

Inspector: Jenny M. Johansen 8/2/82
Jenny M. Johansen, Radiation Specialist date

Approved by: John D. Kinnehan 8/2/82
John D. Kinnehan, Chief, Materials Program date
Section No. 1

Inquiry Summary:

This inquiry consisted of telephone discussions and review of records provided by NL Industries and NMSS to determine whether the facility at Hyde Park Boulevard, Niagara Falls, New York, formerly used for research and development and storage of source material meets current criteria for release for unrestricted use.

Results: The site meets current criteria for unrestricted use.

DETAILS

1. Persons Contacted

A. George Stukenbroeker, Division Director, Decontamination
NLO, Inc.
P.O.Box 39158
Cincinnati, Ohio 45239
FTS 774-8742

B. Jeffrey L. Jacobs, Group Counsel
NL Industries, Inc./Office of General Counsel
P. O. Box 420
Hightstown, New Jersey 08520
609-443-2438

2. Background

The Titanium Alloy Manufacturing Division of National Lead Company (NL Industries) was authorized by License No. SMB-211 to possess and use uranium and thorium as reagents in general chemical, physical, ceramic and metallurgical research and to store thorium fluoride and monazite ore. The authorized place of use was the NL Industries Research Laboratory, Hyde Park Avenue, Niagara Falls, New York. License No. SMB-211 expired on June 30, 1962; however, it appears from NMSS records that the license may have been extended.

3. Telephone Discussions with Individuals

Individual A stated that a close-out survey of National Lead Company's (NL) facilities on Hyde Park Avenue, Niagara Falls, New York was performed in 1979 and that the inspector should contact Individual B to obtain a copy of the report. He further stated that NL Industries no longer owns the property and that the new owners were given a copy of the close-out survey report when they purchased the facility from NL. Individual B provided a copy of NL's close-out survey entitled, "Summary of Radiological Survey of NL Industries, Niagara Falls Plant, Spring 1979."

4. Review of Documents

The 1979 radiological survey describes the NL Industries site as approximately 28 acres fronting on Hyde Park Boulevard, Niagara Falls, New York. One half the site is improved with manufacturing, warehousing and transportation facilities; approximately 12 acres in the eastern section consists of a waste storage and disposal area containing obsolete equipment and process wastes. Soil samples, water samples, air samples and radiation measurements were taken during the survey and documented as to location on a site diagram. Results of surveys are documented in tabular form.

Radiation levels in the environs and within five buildings did not exceed 13 micro R/hr above background except for one point in a warehouse which was 52 micro R/hr above background.

Fourteen soil samples were taken from 8 excavation holes in the waste storage and disposal area. These samples did not exceed 1.1 pCi/gm Ra-226, 2.0 pCi/gm Th-228, 2.0 pCi/gm Th-230, 2.8 pCi/gm Th-232, and 10 ug/gm (3.4 pCi/gm) fluorometric uranium. These levels are well within the 10 pCi/gm thorium (Th-232 + Th-228) and 10 pCi/gm natural uranium limits contained in the recent Uranium Fuel Licensing Branch position paper and the proposed 5 pCi/gm above background radium-226 limit.

Five ground water samples were taken from five of the excavation holes. These samples did not exceed 2×10^{-9} uCi/ml Ra-226, 2×10^{-9} uCi/ml Th-228, 1.4×10^{-9} uCi/ml Th-230, 1.4×10^{-9} uCi/ml Th-232 and 20 ug/l (6.8×10^{-9} uCi/ml) fluorometric uranium. The radium, thorium and uranium samples are well within the limits contained in 10 CFR 20 Appendix B, Table II, Column 2.

On-site air samples taken at selected points on the perimeter of the site did not exceed 5×10^{-9} uCi/ml nor a 5×10^{-5} working level (WL), below the 10 CFR 20, Appendix B limits. Radon concentrations were measured at 8 points in 6 buildings and did not exceed 1.3×10^{-7} uCi/ml nor 0.0014 WL.

The inspector concluded that a typographical error occurred in Appendix D.III of the report since the radiation levels reported in mR/hr are the same points reported in micro R/hr in Table 6A.

5. Conclusion

Region I concludes that the NL survey was adequate and that the site meets the current NRC criteria for release for unrestricted use. No on-site survey is necessary.