

DEC 22 1977

✓ Docket No. 03005294

N L Industries, Incorporated
ATTN: Mr. G. D. Maxwell
General Manager
Nuclear Division
P. O. Box 2046
Wilmington, Delaware 19491

Gentlemen:

Subject: Inspection 03005294/77-03

This refers to the inspection conducted by Mr. P. Clemons of this office on December 1, 1977, at the Industrial Reactor Laboratory in Plainsboro, New Jersey, for the purpose of assessing the radiological status of the facility and to the discussions of our findings held by Mr. Clemons with Mr. D. Leigh of your staff at the conclusion of the inspection.

Areas examined in this inspection are described in the Office of Inspection and Enforcement Report which is enclosed with this letter. Within these areas, the inspection consisted of selected examinations of areas covered by the data provided in your report entitled, "Report of IRL Site Restoration and Follow-up Radiological Survey", dated November 28, 1977, and observations made by the inspector.

At the conclusion of the inspection the site conditions were found to be in conformance with this report.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

OFFICE ▶	FFMS <i>PC 12/22</i>	FFMS <i>Wite</i>	FFMS <i>Knapp</i>	RONS <i>Brunner</i>	FFMS <i>Nelson</i>	
SURNAME ▶	Clemons/cc	Wite	Knapp	Brunner	Nelson	
DATE ▶	12/21/77	12/22	<i>(PSP) 12/22</i>	12/22	12/23/77	

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No response to this letter is required; however, should you have any questions we would be pleased to discuss them with you.

Sincerely,

Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

Enclosure: Office of Inspection and Enforcement Inspection
Report Number 03005294/77-03

bcc w/encl:
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State of New Jersey

OFFICE ▶						
SURNAME ▶						
DATE ▶						

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 03005294/77-03

Docket No. 03005294

License No. 29-03686-02 Priority 1 Category _____

Licensee: NL Industries, Inc.

P. O. Box 2046

Wilmington, Delaware 19801

Facility Name: Industrial Reactor Laboratories (IRL)

Inspection at: Plainsboro, New Jersey

Inspection conducted: December 1, 1977

Inspectors: *P. E. Clemons*
P. E. Clemons, Radiation Specialist

12/22/77
date signed

date signed

date signed

Approved by: *P. J. Knapp*
P. J. Knapp, Chief, Radiation Support
Section, FF&MS Branch

12/22/77
date signed

Inspection Summary:

Inspection on December 1, 1977 (Report No. 03005294/77-03)

Areas Inspected: Special, announced inspection of the laboratory facilities for the purpose of verifying the radiological status of the facility as necessary for termination of license No. 29-03686-02. The inspection included the performance of radiological measurements, the performance of surveys, examination of the latest survey report submitted, and observations pertaining to the decontamination effort. Three inspector-hours were expended in this effort.

Results: The areas addressed in the licensee's latest survey report submittal were monitored and observed. The site conditions appeared to be in conformance with the report.

DETAILS

1. Person Contacted

Mr. David Leigh, NL Industries, Project Manager, Industrial Reactor Laboratories.

2. Scope of Inspection

This inspection was conducted to verify information presented in the licensee's report entitled "Report of IRL Site Restoration and Follow-up Radiological Survey" dated November 28, 1977.

The inspection consisted of surveys and radiological measurements made by the inspector, and observations of the licensee's decontamination effort.

The major emphasis of this inspection was concerned with the licensee's removal of the small, localized spots of contaminated concrete foundation located in the South Corridor and the High Level Laboratory excavation, the removal of the apparently contaminated dirt in the field areas adjacent to the Containment Building and access road, and the removal of the visible evidences of previous radiological operations, i.e. signs, labels, postings, etc.

3. Methodology

The inspector used the following technique for surveying surfaces identified in the licensee's report of November 28, 1977.

- a. The surfaces of the poured concrete floors and the soil were scanned with gamma sensitive, portable instrumentation. (Ludlum Model 16 Analyzer with Model 44-2 scintillation probe).
- b. Dose rate measurements were made within one centimeter of the surfaces using an Eberline E-120 with HP-190 beta-gamma probe.

4. Survey Effort

a. South Corridor

The South Corridor (and the High Level Laboratory) excavations had been completely filled, tamped and a four inch concrete floor had been poured prior to this inspection. The licensee representative stated that the small, localized spots of contamination, as cited in Details #5 of 50-217/77-02, had been removed. Using the Eberline E-120, the inspector measured the dose rates at the concrete floor surfaces of the locations cited in Details #5 of 50-217/77-02. The dose rates varied from 0.02 mrad/hour to 0.06 mrad/hour. In every instance the measurements were made at a distance of one centimeter.

b. Field Areas Adjacent to Containment Building

The inspector observed that soil from the Field Areas, as shown in Figure 7 of 50-217/77-02, had been removed to a depth of approximately two to three inches. These areas were also measured with the Eberline E-120, and the dose rates observed varied from 0.02 mrad/hour to 0.06 mrad/hour.

The results cited above are in agreement with the information presented in the licensee's report of November 28, 1977.

5. Housekeeping

The licensee representative stated in the November 28, 1977 report that "All non-contaminated items having radiation warning labels and any other indications of the presence of radiological material have been removed."

The inspector observed, during his tour of the facilities with the licensee representative, approximately fifteen instances where items were labelled indicating the presence of radioactive materials. The licensee representative took prompt action to have the labels removed.

All observed labels, signs, postings, etc., indicating the presence of radioactive material were removed prior to the conclusion of the inspection.

6. Exit Interview

The inspector met with the NL Industries Project Manager at the conclusion of the inspection on December 1, 1977. The inspector summarized the scope and findings of the inspection.