

# Ledoux & Company

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INDEPENDENT CONTROL AND RESEARCH CHEMISTRY, INSTRUMENTAL AND CHEMICAL ANALYSIS • SAMPLING  
WEIGHING, SHIPPERS' REPRESENTATION, BENEFICIATION AND STORAGE OF ORES AND METALS

CABLE ADDRESS: LEDDOX TEANECK  
TELEX: 134940

November 15, 1990

U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406  
Attn: J.D. Kinneman, Chief  
Nuclear Materials Safety Section B  
Div. of Radiation Safety and Safeguards

Ref. Your letter of October 18, 1990 regarding Inspection 90-001

Docket Nos. 070-00314  
040-08188  
030-05260

License Nos. SNM-296  
SMC-1181  
29-01442-01

Dear Mr. Kinneman:

In response to the violations cited in your letter, Ed Kehoe, our Radiation Safety Officer, and Maurice Slater, Manager of our Nuclear Department have taken various corrective actions detailed in the attached memo. They are in the process of revising our Radiation Manual to reflect more accurately our radiation safety program and thereby to eliminate certain technical violations. The revised manual will be submitted to NRC to support certain amendments to our licenses. We expect to have all of the necessary materials in your hands before December 31, 1990.

In regard to our having exceeded our license limit for enriched uranium, we have instituted weekly instead of monthly material balance calculations. Further, the balance will be calculated prior to accepting any shipment covered by a 741 form indicating more than 25 g of U-235. Every effort will be made to keep the U-235 inventory below 300 g in order to avoid temporarily exceeding the license limits when unexpected samples arrive.

We trust that the changes which we have made will serve to remedy the violations for which we were cited. Should you have any further questions, please get in touch with us.

Yours very truly,  
Ledoux & Company

Everett W. Hobart  
Laboratory Director

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REG1 LIC30  
29-01442-01 PDR

Ledoux & Company

DATE: NOVEMBER 7, 1990

TO: EVERETT W. HOBART

FROM: EDWARD KEHOE AND MAURICE SLATER

RE: CORRECTIVE ACTION IN RESPONSE TO NRC INSPECTION 90-001 APPENDIX A

- 1) Caution Radioactive Material signs are now in place in all areas where applicable. Caution Radiation Area signs have been ordered and will be posted in any area where the radiation levels could exceed 2 mR/hr.
  - 2) Our instruments were calibrated in July of 1990 and will be calibrated every six months henceforth.
  - 3) All packages received containing special nuclear material are now monitored for external hazards and smears are taken of the sample container. All data are recorded in a log book. These data consist of the date of receipt, name of shipper, identifying package or RIS number and readings or limits of detection.
  - 4) Smears have been taken since August 1990 after completion of a project to ensure the area is free of radioactive contamination. Air samples are also taken while work is in progress and counted for 200 minutes on a low-background gas proportional counter. Ledoux & Company purchased a Ludlum #177-45 ratemeter with an air proportional alpha probe that is permanently stationed near the exit door of the Nuclear department for workers to monitor themselves before leaving the controlled area. External radiation levels are evaluated each week in control work areas and checked each day work is done in waste and storage areas.
  - 5) We are amending our radiation safety manual to have training sessions twice a year or as necessary for new employees and hope the NRC finds this satisfactory. We have contacted Dr. Norman Cohen at NYU radiation studies laboratory about obtaining video tapes regarding radiation safety.
- B 1) In June of 1990 urine samples were submitted to TMA Eberline for analysis. Arrangements have been made for the December 1990 analysis.
- 2) We are amending our Radiation Safety Manual to have our meters calibrated by an outside qualified laboratory. Our meters are due for calibration in January 1991 and will be sent to Teledyne Isotopes in Westwood, New Jersey.