



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

March 6, 2000

Docket No. 030-33938

License No. 37-30243-01

Thomas F. Keelty  
Assistant Director of Operations  
Nycomed Amersham  
101 Carnegie Center  
Princeton, NJ 08540-9998

SUBJECT: INSPECTION NO. 030-33938/00-001

Dear Mr. Keelty:

On January 27, 2000, Eric Reber of this office conducted a safety inspection at 466 Devon Park Drive, Wayne, Pennsylvania of activities authorized by the above listed NRC license. The inspection was limited to observations by the inspector, interviews with personnel, and confirmatory surveys of your facility at 466 Devon Park Drive, Wayne, Pennsylvania. The findings of the inspection were discussed with you at the conclusion of the inspection. The enclosed report presents the results of this inspection.

Within the scope of this inspection, no violations were identified.

Please note that the inspection results do not constitute approval by the NRC for release of your facility for unrestricted use. The results of this inspection, and all other applicable information available to the NRC, will be examined to determine if your facility may be released for unrestricted use by the reviewer who is responsible for amending your license.

In accordance with Section 2.790 of the NRC's "Rules and Practices," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

***Original signed by Elizabeth Ullrich***

John D. Kinneman, Chief  
Nuclear Materials Safety Branch 2  
Division of Nuclear Materials Safety

Enclosure:  
Inspection Report No. 030-33938/00-001

cc:

T. Keelty  
Nycomed Amersham

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State of New Jersey  
Commonwealth of Pennsylvania

T. Keelty  
Nycomed Amersham

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 030-33938/00-001  
Docket No. 030-33938  
License No. 37-30243-01  
Licensee: Nycomed Amersham  
Address: 101 Carnegie Center  
Princeton, NJ 08540-9998  
Locations Inspected: 466 Devon Park Drive  
Wayne, PA 19087-8630  
Inspection Dates: January 27, 2000

Inspector: \_\_\_\_\_  
Eric H. Reber  
Health Physicist  
date

*Original signed by*  
*Elizabeth Ullrich*  
*March 6, 2000*

Approved By: \_\_\_\_\_  
John D. Kinneman, Chief  
Nuclear Materials Safety Branch 2  
Division of Nuclear Materials Safety  
date

## **EXECUTIVE SUMMARY**

Nycomed Amersham  
NRC Inspection Report No. 030-33938/00-001

A confirmatory survey was conducted at Nycomed Amersham's Wayne, Pennsylvania facility on January 27, 2000. No removable or surface contamination in excess of NRC guidelines for unrestricted release was detected at the facility. Also, no radioactive materials were observed at the facility.

## REPORT DETAILS

### **I. Background**

License No. 37-30243-01 authorizes licensed activities at Nycomed Amersham's (Nycomed) facility at 466 Devon Park Drive, Wayne, Pennsylvania. The license authorizes the use of many (primarily beta emitting) unsealed radionuclides for use in research and development as defined in 10 CFR 30.4, including animal studies. Iodine-125 sealed sources are also authorized for possession and use incident to brachytherapy research and development in animals, and a cesium-137 sealed source is authorized for calibration of instrumentation.

License No. 37-30243-01 was initially issued on October 30, 1995. The licensee submitted a NRC Form 314 dated November 30, 1999, to the NRC requesting termination of their license. The licensee submitted a survey of their facility with their license termination request that indicated that no residual radioactivity remained at the facility in concentrations above the minimum detectable activity of the instruments used in the survey.

According to information provided in the licensee's survey report that was submitted with their license termination request, licensed materials were only used on the first floor of the Nycomed facility in 18 standard bench biochemistry laboratories and a waste storage facility.

### **II. Surveys for Removable Contamination**

#### a. Inspection Scope

Nycomed's Wayne, Pennsylvania facility was surveyed for removable contamination.

#### b. Observations and Findings

On January 27, 2000, 72 removable contamination wipe samples of 100 cm<sup>2</sup> each were taken at Nycomed's Wayne, PA facility. Areas surveyed included counters, sinks, hoods, radioactive material storage areas and floors in Laboratories 432, 434, 436, 438, 461, 463, a walk-in freezer (Room 421) and the radioactive waste storage room.

The samples were analyzed with a Packard Tri-Carb 2250CA Liquid Scintillation Analyzer (S/N NRC 24726) at the NRC Region I office. Gross beta counts of 20 minutes per sample were made. Because of the wide range of nuclides authorized for the facility, the efficiency for C-14 (84.8%) was used as a conservative approximation of the efficiency of the detector. The efficiency of the detector and a background count of 994 counts in 20 minutes was used to determine a minimum detectable concentration (MDC) of 9 dpm/100 cm<sup>2</sup>. No counts of the wipe samples indicated radioactive contamination in excess of the MDC.

#### c. Conclusions

No removable contamination in excess of NRC guidelines for unrestricted release was detected at the facility.

### **III. Surface Radioactive Contamination Survey**

a. Inspection Scope

Surveys of surface contamination levels were conducted at the facility.

b. Observations and Findings

On January 27, 2000, surface contamination measurements were made in Nycomed's Wayne, Pennsylvania facility. Areas surveyed included counters, sinks, hoods, radioactive material storage areas and floors in Laboratories 432, 434, 436, 438, 461, 463, a walk-in freezer (Room 421) and the radioactive waste storage room.

An Eberline Model E120 Geiger-Müller Counter (Eberline) with an end window probe and a Berthold Contamination Monitor LB122 with Beta-Gamma Counter Tube with Xenon Filling (portable proportional counter) (Berthold) were used to survey the facility. The Eberline (NRC S/N 896) was calibrated on March 3, 1999 by ROS, Inc. and the Berthold (NRC S/N 4178) was calibrated by the inspector prior to the inspection with a 0.143  $\mu\text{Ci}$  C-14 source. Scanning surveys were made by moving the survey meters slowly from side to side over surfaces in the facility at a height of approximately 1 cm. The background count rate for the Eberline was approximately 0.02 millirem/hour and approximately 10 counts per second for the Berthold. No contamination was measured that caused an increase in the count rates of these meters greater than twice the background count rates.

The Berthold was used to make numerous integrated measurements in areas where radioactive contamination is sometimes found in facilities of this type (i.e., sinks, fume hoods, counters, and isotope storage areas). Using the efficiency of the detector for detecting C-14 (1.6%), a background count of 10 counts per second, an effective probe surface of 160  $\text{cm}^2$  and an integration time of 200 seconds, a MDC of 2471 dpm/100  $\text{cm}^2$  was calculated for the detector. No integrated measurements made with the Berthold indicated contamination of greater than the MDC.

c. Conclusions

No surface contamination in excess of the NRC guidelines for unrestricted release was detected at the facility.

### **IV. Presence of Radioactive Materials**

a. Inspection Scope

The presence of radioactive materials at the facility was reviewed.

b. Observations and Findings

No radioactive materials were observed during a tour of the facility that included various corridors and many rooms including Laboratories 432, 434, 436, 438, 461, 463, a walk-in freezer (Room 421) and the radioactive waste storage room.

Mr. Keelty indicated that there were no radioactive materials at the facility and that all radioactive materials were transferred to authorized recipients.

c. Conclusions

No radioactive materials were observed at the facility.

## **V. Exit Meeting**

The initial findings of the inspection were discussed with Mr. Thomas Keelty at the conclusion of the inspection.



**PERSON CONTACTED**

Licensee

Thomas F. Keely, Assistant Director of Operations