



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 28, 2003

Docket No. 03005222

License No. 29-00139-02

John Mamone
Vice President, Operations Support
E. R. Squibb & Sons, Inc.
311 Pennington-Rocky Hill Road
Mail Stop HW8T-1.12
Pennington, NJ 08543-2130

SUBJECT: INSPECTION 03005222/2003001, E. R. SQUIBB & SONS, INC., NEW
BRUNSWICK, NEW JERSEY SITE

Dear Mr. Mamone:

On April 29, 2003, Betsy Ullrich of this office conducted a safety inspection at One Squibb Drive, New Brunswick, New Jersey of activities authorized by the above listed NRC license. The inspection was limited to a review of final status surveys of Building 124. The findings of the inspection were discussed with Michael Vala and John Frankowski of your organization at the conclusion of the inspection.

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

In accordance with 10 CFR 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html>. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

Original signed by John D. Kinneman

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

Enclosure: Inspection Report No. 03005222/2003-001

cc w/ Enclosure:
Michael Vala, C.H.P., Radiation Safety Officer
State of New Jersey

J. Mamone
E. R. Squibb & Sons, Inc.

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DATE	04/30/2003		05/28/2003					

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03005222/2003001
Docket No. 03005222
License No. 29-00139-02
Licensee: E. R. Squibb & Sons, Inc.
Address: 311 Pennington-Rocky Hill Road
Pennington, New Jersey
Locations Inspected: One Squibb Drive
New Brunswick, New Jersey
Inspection Date: April 29, 2003

Inspector: _____ /RA/ _____ April 30, 2003
Betsy Ullrich date
Senior Health Physicist

Approved By: _____ **Original signed by** _____ **May 28, 2003**
John D. Kinneman, Chief **John D. Kinneman** _____ date
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

E. R. Squibb & Sons, Inc.
NRC Inspection Report No. 03005222/2003001

The license currently authorizes the possession and use of various radionuclides in curie and millicurie quantities for research and development. Formerly authorized manufacturing, processing and distribution activities permanently ceased on June 29, 2001. As a result, the licensee decommissioned Building 124, where manufacturing took place. Various radionuclides were used in Building 124, such as carbon-14, cobalt-60, selenium-75, strontium-89, strontium-90, molybdenum-99, cesium-137, mercury-197, thallium-201, and mercury-203. Tritium may have been used for research and development in laboratories in Building 124 in the 1960s. Although many of the radionuclides used in the building have half-lives of less than 65 days, it is likely that long-lived impurities were present in the bulk solutions, such as manganese-54, cobalt-57, cobalt-60, cesium-137, technetium-99, and iodine-129.

The licensee planned a three-phase decommissioning of the building and associated facilities. First, characterization surveys were performed. Inspection Report No. 03005222/2002001 discusses the review of E. R. Squibb & Sons, Inc.'s (Squibb) characterization of their former manufacturing and distribution facility in Building 124 and other nearby areas, including outdoor storage tanks, at the licensee's New Brunswick, New Jersey location of use. Based on the results of the characterization surveys and a review of the conditions of the license, a decommissioning plan was not required to be submitted to the NRC by Squibb. Second, decontamination and remediation of areas was performed based on the results of the characterization surveys. Inspection Report No. 03005222/2002002 discusses the review of Squibb's decontamination and decommissioning activities in Building 124, the nearby areas and outdoor storage tanks.

The third phase of Squibb's decommissioning process was to perform final status surveys to verify if the facility met the NRC license termination criteria. A Region I inspector visited the site to observe the procedures, equipment, and methods used by the licensee during final status surveys and determined that a confirmatory survey by the NRC is not required prior to release of Building 124 and associated facilities for unrestricted use.

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

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

This inspection was limited to a review of the licensee's program for performing final status surveys of Building 124 which was formerly used for manufacturing, packaging, and distribution of licensed products, and of facilities related to activities performed in Building 124.

b. Observations and Findings

E. R. Squibb and Sons, Inc. (Squibb) is in the third phase of a planned three-phase decommissioning of their former manufacturing and distribution facility in Building 124 and other nearby areas, including outdoor storage tanks, at the licensee's New Brunswick, New Jersey location of use. The first phase, performance of characterization surveys, is discussed in Inspection Report No. 03005222/2002001, issued March 15, 2002. The second phase, decontamination and remediation, is discussed in Inspection Report No. 03005222/2002002, issued April 11, 2003. The third phase of the decommissioning program, final status surveys, began in March 2003 and is expected to be completed in early May. After the final status surveys are completed, Squibb plans to request that the former manufacturing facilities be released for unrestricted use. Following release, the licensee expects to renovate Building 124.

The inspection was limited to a review of the licensee's implementation of their "Final Status Survey Plan for Radiodiagnostic Manufacturing Facility and Associated Equipment" (Plan) dated December, 2002.

c. Conclusions

The licensee is following their Plan for performing final surveys. No safety concerns or violations were identified.

II. Management Oversight of the Program

a. Inspection Scope

The inspector reviewed the licensee's management and oversight of the implementation of the final status survey Plan.

b. Observations and Findings

Squibb maintains a staff of health physicists and support technicians to oversee the daily activities of research and development using licensed materials in New Brunswick, Lawrenceville, Hopewell and Ewing, New Jersey. In order to have as little impact on the required daily health physics activities, Squibb contracted with GTS Duratek, Inc.

(Duratek) to perform final status surveys. Squibb also contracted with TLG Services (TLG) to provide independent oversight of the activities of Duratek. Representatives of Squibb, Duratek, and TLG met weekly to discuss progress made on the planned schedule, and to outline specific tasks that were expected to be completed during the coming week. A summary of this meeting was provided each week to the NRC. The licensee also interacted with the State of New Jersey Department of Environmental Protection (NJDEP) on a regular basis to ensure compliance with NJDEP and Environmental Protection Agency (EPA) regulations and concerns.

c. Conclusions

Management oversight of the final status surveys was performed as planned. No safety concerns or violations were identified.

III. Equipment

a. Inspection Scope

The inspector reviewed the equipment used by personnel to support the final status surveys.

b. Observations and Findings

The equipment used by Duratek for performing the final status surveys was similar to that used during the characterization and remediation phases. Duratek primarily used a Ludlum 2350-1 Datalogger attached to a Ludlum Model 43-68 gas-flow proportional detector to perform scanning and static surveys of building surfaces and equipment. Instruments encountered in the field were found to be functioning properly. Instruments were in calibration, and daily checks were performed. Personnel using the devices were found to be knowledgeable regarding their operation and limitations. Other instrument types used by the licensee were appropriate for the radiation types and conditions expected.

c. Conclusions

Equipment used for final status surveys was appropriate, and were operable and in calibration. No safety concerns or violations were identified.

IV. Security, Control and Radiation Protection

a. Inspection Scope

The inspector evaluated the process to control access to the facilities during implementation of the final status survey Plan, and to provide radiation protection to workers and the public.

b. Observations and Findings

Squibb's routine security procedures required all visitors to sign in at the main entrance and be escorted by an authorized individual while on site. Access to buildings at Squibb is controlled by a keycard system. During the final status survey phase, the licensee limited access to Building 124 and adjacent related facilities to persons who had the required training to work in the area, or persons who were directly escorted by an individual with the required training.

Based on the results of the surveys performed during the decontamination and remediation phase, all signage referring to the presence of radioactive materials or radiation areas was removed from Building 124 and related areas. However, other potential safety concerns remain in the building, such as uneven floors due to removal of sub-floor pipes; rubble; metal pins or other projections in overhead or floor areas due to removal of equipment; and limited lighting and ventilation in some areas. Areas where open trenches remained were restricted by installing locking doors to prohibit entry to those areas, except when work in those areas was being performed.

A contaminated pipe chase and a contaminated duct remain embedded in walls in the area of the Mini-Tec cave. Contamination is located internally in the pipe and the duct, and no radiation levels above background were identified outside the pipe and duct. The ends of the pipe and the duct were filled with concrete, and painted orange to identify their location. The pipe and the duct cannot be removed until the walls are demolished. The licensee expects removal of these items to be accomplished without breaching the pipe or the duct.

c. Conclusions

Security and control of the facilities during performance of final status surveys was adequate, and were consistent with the low levels of radiation and radioactivity involved. Adequate radiation protection was maintained. No safety concerns or violations were identified.

V. Radioactive Waste Management

a. Inspection Scope

The inspector reviewed the licensee's records for disposal of solid radioactive waste generated during the decommissioning of Building 124 and adjacent areas.

b. Observations and Findings

Dry low-level radioactive waste included items removed from Building 124 that could not be decontaminated, cleaning materials, disposable protective items such as gloves, contaminated soil removed from a damaged pipeline area, and other similar items. Six shipments of radioactive waste were made between November 2002 and April 2003. Some of the radioactive waste was transferred to Duratek's facility in Tennessee for processing through their "Green Is Clean" or "Best Metals" programs. Other waste was disposed of by burial at the Envirocare's low-level radioactive waste facility in Utah. Waste manifests were properly used to document transfers of waste material for disposal.

The licensee removed 37 generally-licensed EXIT signs containing tritium that had been located in Building 124. The EXIT signs were returned to the manufacturer.

c. Conclusions

Radioactive waste was disposed of in accordance with licensee procedures and the regulatory requirements. No safety concerns or violations were identified.

VI. Independent Surveys

a. Inspection Scope

The inspector performed independent surveys to assess ambient radiological conditions at the facility.

b. Observations and Findings

The inspector performed independent surveys of Building 124 and related areas using a Ludlum 19 microR meter to identify areas of significant radioactive material presence not otherwise identified by the licensee. Radiation levels measured using the microR meter did not exceed 15 microR per hour. Similar radiation levels were measured in unaffected buildings at the licensee's facility.

c. Conclusions

Inspector measurements of radiation levels in Building 124 were similar to those in unaffected buildings. No safety concerns or violations were identified.

VII. Exit Meeting

a. Inspection Scope

The inspector reviewed the findings of the inspection with licensee representatives.

b. Observations and Findings

The inspector met with licensee and contractor staff at the end of the inspection to review the findings of the inspection. The inspector also discussed the administrative actions needed to release Building 124 for unrestricted use. Licensee representatives stated that they expect to submit the results of the final status surveys to the NRC by August, with a request to release the facilities for unrestricted use.

c. Conclusions

No safety concerns or violations were identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

#*Michael Vala, Radiation Safety Officer, Bristol-Meyers Squibb (BMS)
#*John Frankowski, BMS

Duratek, Inc.

#*Paul Ely, Duratek, Inc., On-site Manager
Doug Kjos, Duratek, Inc., Health Physics Technician

TLG Services

#*Beverly Good, TLG Services

State of New Jersey

#*Ed Truskowski, NJDEP

* present at exit meeting

present at entrance meeting