

MAR 28 1990

Docket Nos. 030-05980
030-05981
030-05982
030-08335
030-08444

License Nos. 37-00030-02 ✓
37-00030-07E
37-00030-08
37-00030-09G
37-00030-10G

Safety Light Corporation
ATTN: Mr. Jack Miller
President
4150-A Old Berwick Road
Bloomsburg, Pennsylvania 17815

Gentlemen:

Subject: Special Inspection No. 89-005

On November 8, 1989, Francis M. Costello, James H. Joyner and myself of this office and Patricia C. Vacca and John T. Greeves of the NRC Office of Nuclear Materials Safety and Safeguards conducted a special safety inspection at the above address of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Larry Harmon of your staff at the conclusion of the inspection. A copy of the NRC inspection report is enclosed.

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 enclosure will be placed in the Public Document Room.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosure:

Combined Inspection Nos. 030-05980/89-005, 030-05981/89-005, 030-05982/89-005,
030-08335/89-005 and 030-8444/89-005

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03/27/90

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37-00030-02 PDC

RETURN ORIGINAL TO
REGION I

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cc:
Public Document Room (PDR)
Nuclear Safety Information Center (NSIC)
Commonwealth of Pennsylvania
Norman Fritz, Radiation Safety Officer

USR Industries, Inc.
ATTN: Mr. Ralph T. McElvenny
Chairman and Chief Executive Officer
550 Post Oak Boulevard
Suite 550
Houston, Texas 777027

bcc:
Region I Docket Room (w/concurrences)
Management Assistant, DRMA
F. Costello, RI
G. Sjoblom, NMSS
M. Knapp, RI
J. Joyner, RI
D. Holody, RI
J. Kinneman, RI
M. Bell, NMSS
J. Lieberman, OE
J. Greeves, RI

FMC
RI:DRSS
Costello/bj

03/28/90

RI:DRSS
Kinneman

03/28/90

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03/27/90

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 030-05980/89-005
030-05981/89-005
030-05982/89-005
030-08335/89-005
030-08444/89-005

Docket Nos. 030-05982
030-05981
030-05980
030-08335
030-08444

License Nos.	<u>37-00030-08</u>	Priority	<u>1</u>	Category	<u>B</u>
	<u>37-00030-02</u>		<u>3</u>		<u>E</u>
	<u>37-00030-07E</u>		<u>5</u>		<u>E</u>
	<u>37-00030-09G</u>		<u>4</u>		<u>E</u>
	<u>37-00030-10G</u>		<u>4</u>		<u>E</u>

Licensee: Safety Light Corporation
4150-A Old Berwick Road
Bloomsburg, Pennsylvania

Facility Name: Safety Light Corporation

Inspection At: Bloomsburg, Pennsylvania

Inspection Conducted: November 8, 1989

Inspectors: *Francis M. Costello* 3/28/90
Francis M. Costello
Senior Health Physicist
date

Approved by: *John D. Kinneman* 3/28/90
John D. Kinneman, Chief
Nuclear Materials Safety Section B
date

Inspection Summary: Inspection conducted November 8, 1989 (Combined Report Nos. 030-05980/89-005, 030-05982/89-005, 030-05981/89-005, 030-08335/89-005, and 030-08444/89-005)

Areas Inspected: Routine, unannounced inspection, including review of status of licensed activities, bioassay, radioactive waste inventory and environmental sampling.

Results: No violations were identified with respect to License Nos. 37-00030-08, 37-00030-07E, 37-00030-08G, 37-00030-10G. With respect to License No. 37-00030-02, the apparent violations identified in Inspection No. 030-05980/86-001 apparently had not been corrected.

DETAILS

1. Persons Contacted

Larry Harmon, Plant Manager
John MacHutchen - Consultant
Charles Berlin - Radiation Safety Technician

2. Scope of Licensed Activities

Safety Light Corporation is authorized by NRC License Nos. 37-00030-08, 37-00030-07E, 37-00030-09G and 37-00030-10G to possess and use any form of hydrogen-3 for research and development, manufacturing, and general and exempt distribution of various products and any byproduct material as sealed sources for use as reference standards. The licensee's current operations include the manufacturing and distribution of luminescent signs, gas chromatograph foils and accelerator targets.

Safety Light Corporation is also authorized by NRC License No. 37-00030-02 to possess any product material as contaminated equipment and facilities for the decontamination, cleanup, and disposal of such material. No current decontamination activities are being conducted under this license. The failure to perform decontamination activities was cited as an apparent violation in NRC Inspection Report No. 030-5980/86-001. This apparent violation has not been corrected. The licensee is continuing to monitor water from bore holes on site and at the perimeter of the licensee's property to evaluate the status of radioactive material that was buried on the property during the 1950's and 1960's. Analysis is performed for the licensee by a contractor.

The licensee has not received any tritium from its supplier, Oak Ridge National Laboratory, since early September. As a result, the licensee's production has been greatly reduced. The inventory of tritium at the time of the inspection was approximately 3,200 curies, excluding the tritium in the form of radioactive waste.

3. Radioactive Waste Disposal

The licensee has packaged approximately 21,000 curies of tritiated foils for disposal as radioactive waste through its contractor, U.S. Ecology. The foils were placed in sealed steel cylinder which have been put in 55-gallon drums. The licensee plans to fill the drums with concrete and dispose of them in the middle of December. The drums are being stored in the licensee's liquid waste building.

The inspector reviewed the licensee's urinalysis records for the workers who packaged the tritiated foils into the steel cylinders. These records indicated that no uptakes had occurred.

No violations were identified.

4. Environmental Sampling

The inspector reviewed bore hole and well water sampling results. It was noted that analyses of on-site subsurface water continue to indicate concentrations of radioactive material in excess of limits for unrestricted areas. The principal isotopes in the subsurface water are strontium-90, radium-226, and tritium.

The licensee also continues to sample drinking water from wells on the properties of nearby residences. The tritium concentration in these samples has been measured to be less than the EPA standard of 20,000 picocuries per liter for tritium in drinking water. Typical measurements vary from 1,000 to 9,000 picocuries per liter. The licensee's minimum detectable concentration for these analysis is approximately 1,000 picocuries per liter. These samples are taken from the nearby residences on a monthly basis.

On September 18, 1989, the licensee instituted a weekly sampling program around its solid waste storage building which involved placing containers of water outside the building and analyzing this water for tritium. The highest concentrations of tritium were measured at a nearby location, southeast of the building. The licensee measured concentrations of tritium which varied between 843,000 picocuries per liter and 3,167,000 picocuries per liter. The licensee stored appropriately 21,000 curies of tritiated foils in the solid waste storage building while these measurements were made. None of these measurements were made after the foils were packaged as waste in sealed steel cylinders and moved to the liquid waste building. The airborne concentration of tritium measured by the licensee at the site boundary continued to remain within regulatory limits.

The licensee also took a grab sample of surface water from a nearby horse pasture. The licensee measured a concentration of 50,000 picocuries per liter. This concentration is less than the 10 CFR 20.106 limit for releases of water to unrestricted areas.

No violations were identified.

5. Training

The inspector reviewed the records of radiation safety training which was provided to workers who have access to the contaminated portions of the site. The inspector noted that the training was given to the employees of other companies which are tenants at the site and that tests were given to determine the results of the training. Employees of Safety Light Corporation, Multimetals Corporation, and USR Metals participated in the training.

No violations were identified.

6. Exit Interview

The inspector and other NRC staff met with the plant manager at the conclusion of the inspection. The scope and findings of the inspection were summarized.