NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTY

Uniroyal Goodrich Tire Company
Akron, Ohio

Docket No. 030-12542
License No. 34-09024-05
EA 89-198

During an NRC inspection conducted on September 27-29, 1989, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1989), the Nuclear Regulatory Commission proposes to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violations and associated civil penalty are set forth below:

A. 10 CFR 30.41(a) requires that no licensee transfer byproduct material to any person or entity except as specifically authorized in Section 30.41(b).

Contrary to the above, on September 7, 1989, the licensee transferred two Industrial Nucleonics Model U-2 source holders, each containing a 12.2 millicurie strontium-90 sealed source, to Omni Source Corporation in Ft. Wayne, Indiana, an entity not authorized to receive the byproduct material under the terms of 10 CFR 30.41(b).

B. 10 CFR 20.207(a) requires that licensed materials stored in an unrestricted area be secured from unauthorized removal from the place of storage. As defined in 10 CFR 20.3(a)(17), an unrestricted area includes any area which is not controlled by the licensee for the purpose of protecting individuals from exposure to radiation and radioactive materials.

Contrary to the above, between the weeks of June 12, 1989 and September 7, 1989, two Industrial Nucleonics Model U-2 source holders, each containing a 12.2 millicurie strontium-90 sealed source, were stored in an unrestricted area at the licensee's facility and were not secured from unauthorized removal.

C. License Condition No. 17 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in a letter dated July 23, 1987. The letter dated July 23, 1987 names Mr. Ed B. Katzenmeyer, Jr. as the radiation protection officer.

Contrary to the above, Mr. Katzenmeyer terminated employment with the licensee in September 1988, and from September 1988 through September 29, 1989, an individual who was not authorized by License Condition 17 acted as the radiation protection officer.

D. License Condition No. 17, dated February 18, 1988, which is identical to and supersedes License Condition No. 17, dated August 16, 1982, requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in the application dated January 27, 1982. The application dated January 27, 1982 requires, in Item 15, No. 11, that the radiation protection officer audit the integrity of the radiation protection program.

Contrary to the above, no audits of the radiation protection program were conducted by the radiation protection officer from the inception of the requirement on August 16, 1982 through September 29, 1989.

E. License Condition No. 17 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in the application dated January 27, 1982. The application dated January 27, 1982 requires, in Section 11, that the licensee's Victoreen Model 491 survey meter be calibrated annually.

Contrary to the above, the licensee's Victoreen Model 491 survey meter had not been calibrated between 1982 and September 29, 1989.

F. License Condition No. 17 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in the application dated January 27, 1982. The application dated January 27, 1982, requires in Item 15, No. 9.a.3, that before replacing the mylar window the licensee is required to use its Victoreen instrument to detect any radiation in the gap or in the window area of the gauge.

Contrary to the above, the licensee replaced mylar windows on February 25, 1989, March 27, 1989, April 12, 1989, and July 24, 1989, without using its Victoreen instrument to detect any radiation in the gap or in the window area of the gauge.

G. License Condition No. 15, dated February 18, 1988, which is identical to and supersedes License Condition No. 16, dated August 16, 1982, requires that the licensee conduct a physical inventory every six months to account for all sealed sources received and possessed under the license. It also requires that the records include the location of the sealed sources.

Contrary to the above, the licensee did not, in all cases, conduct physical inventories every six months to account for all sealed sources received and possessed under the license. For example, inventories were not conducted between November 14, 1984 and June 27, 1985; between June 25, 1986 and January 9, 1987; between July 16, 1987 and February 4, 1988; and between February 4, 1988 and September 23, 1988. In addition, with the exception of the inventory conducted on July 16, 1987, since November 14, 1984, inventory records have not included the location of sealed sources.

H. License Condition No. 12.A.1, dated February 18, 1988, which is identical to and supersedes License Condition No. 14.A.1 dated August 16, 1982, requires that the licensee test its sealed sources containing byproduct material for leakage and/or contamination at intervals not to exceed six months.

Contrary to the above, the licensee did not, in all cases, leak test its sealed sources containing byproduct material at intervals not to exceed six months. For example, sealed sources were not tested between November 14, 1984 and June 27, 1985; between June 25, 1986 and January 9, 1987; between July 16, 1987 and February 4, 1988; and between February 4, 1988 and September 23, 1988.

I. 10 CFR 20.401(a) requires that the licensee maintain records showing radiation exposures on Form NRC-5, in accordance with the instructions contained in that form or on clear and legible records containing all the information required by Form NRC-5. The instructions contained in the form require that the records include the date of birth of individuals for whom personnel monitoring is required.

Contrary to the above, from January 1977 through September 29, 1989, the licensee's radiation exposure records did not include the date of birth of two individuals for whom personnel monitoring is required.

These violations have been categorized in the aggregate as a Severity Level III problem (Supplements IV and VI).

Cumulative Civil Penalty - $500 (assessed equally among the 9 violations).

Pursuant to the provisions of 10 CFR 2.201, Uniroyal Goodrich Tire Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation; (2) the reasons for the violation if admitted; (3) the corrective steps that have been taken and the results achieved; (4) the corrective steps that will be taken to avoid further violations; and (5) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the license should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required under 10 CFR 2.201, the Licensee may pay the civil penalty by letter to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with a check, draft, or money

order payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or may protest imposition of the civil penalty, in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the Licensee fail to answer within the time specified, an order imposing the civil penalty will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalty, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violations listed in this Notice in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalty should not be imposed. In addition to protesting the civil penalty, in whole or in part, such answer may request remission or mitigation of the penalty.

In requesting mitigation of the proposed penalty, the factors addressed in Section V.B of 10 CFR Part 2, Appendix C, should be addressed. Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalty.

Upon failure to pay any civil penalty due which subsequently has been determined in accordance with the applicable provision of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalty, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The responses to the Director, Office of Enforcement, noted above (Reply to a Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Regional Administrator, Region III, U.S. Nuclear Regulatory Commission, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

FOR THE NUCLEAR REGULATORY COMMISSION

Carl J. Paperiello for

A. Bert Davis
Regional Administrator

Dated at Glen Ellyn, Illinois
this 8th day of November 1989

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 030-12542/89001(DRSS)

Docket No. 030-12542

License No. 34-09024-05 Category K Priority 7

Licensee: Uniroyal Goodrich Tire Company (Uniroyal)
500 South Main Street
Akron, OH 44318

Inspection Conducted At: Uniroyal Goodrich Tire Company
P.O. Box 277
U.S. Highway 24 East
Woodburn, IN 46797

Inspection Conducted On: September 27-29, 1989

Inspectors: W. P. Reichhold — 13 October 1989
W. P. Reichhold — Date

Roy Caniano for C. Casey — October 13, 1989
C. Casey — Date

Reviewed By: Roy Caniano — October 13 1989
Roy Caniano, Chief — Date
Nuclear Materials Safety Section 2

Approved By: Bruce S. Mallett — October 13, 1989
Bruce S. Mallett, Ph.D., Chief — Date
Nuclear Materials Safety Branch

Inspection Summary

Inspection on September 27-29, 1989 (Report No. 030-12542/89001(DRSS))
Areas Inspected: This special announced safety inspection was performed in response to a notification to the NRC that two gauges containing strontium-90 had been inadvertently sent to a scrap yard for disposal. The inspection included the circumstances surrounding the loss of the gauges, a search of the scrap yard and a review of Uniroyal's licensed program. This included a review of Uniroyal's organization; enforcement history; radiation protection procedures; training and instruction to workers; inventory of sealed sources; radiation protection staffing; a tour of the Woodburn, Indiana plant; posting

and labeling; receipt and transfer of sealed sources; leak test results; radiation detection instruments; notifications and reports; direct radiation measurements and wipe tests; radiological dose assessments, and personnel monitoring.

Results: Nine violations were identified: (1) 10 CFR 20.207(a) licensed materials stored in an unrestricted area were not secured from unauthorized removal (see Section 5); (2) 10 CFR 30.41(a) byproduct material was transferred to a person not authorized to receive it (see Section 5); (3) License Condition No. 17 - individual acting as Radiation Protection Officer was not authorized by the license (see Section 6.b); (4) License Condition No. 17 - audits of the radiation protection program were not conducted (see Section 6.f); (5) License Condition No. 17 - survey meter was not calibrated annually (see Section 6.e); (6) License Condition No. 17 - a G-M meter was not used to detect radiation levels around the gauges before the Mylar window was replaced (see Section 6.c); (7) License Condition No. 15 - a physical inventory of sealed sources was not done every six months and the record of inventories did not include the location of sealed sources (see Section 6.g); (8) License Condition No. 12 - sealed sources were not tested for leakage at six month intervals (see Section 6.g); (9) 10 CFR 20.401(a) - exposure records did not include the dates of birth for two persons who require radiation exposure monitoring (see Section 8).

In addition to the above violations, the inspectors also identified the following concerns regarding Uniroyal's licensed program:

1. There appears to be a lack of management oversight with regards to the radiation safety program to ensure that activities are conducted safely and in compliance with license and NRC requirements (see Section 6.f).

2. The lack of an onsite Radiation Protection Officer appears to have contributed to the problems found in their licensed program (see Section 6.b).

DETAILS

1. Persons Contacted

*Joseph T. Harner, Plant Manager, Uniroyal
*Don Merchant, Plant Engineer, Uniroyal
John Maloney, Radiation Protection Officer, Uniroyal
*Dan O. Stuart, Electronic Systems Engineer, Uniroyal
Don Zurbuch, Senior Draftsman, Uniroyal
William Ronk, Mechanic, Uniroyal
Wilber Lothamer, Maintenance Technician, Uniroyal
Gary Reece, Maintenance Technician, Uniroyal
David E. Lallow, Dispatch Manager, OmniSource Corporation (Omni), Scrap Yard
David Thompson, Superintendent, Omni
William McKinney, Crane Operator, Omni
Anthony Smith, Leadman, Omni

*Indicates those present at the exit meeting on September 29, 1989.

2. Purpose of Inspection

This was a special inspection performed in response to a telephone call from Uniroyal to the NRC Region III office on September 27, 1989, regarding the loss of two gauges containing strontium-90. The inspection included a review of the circumstances surrounding the loss of the gauges, a search of the scrap yard, and a routine inspection at Uniroyal's Woodburn, Indiana plant.

3. Organization

The organization for the corporation and the Woodburn, Indiana plant is shown in Attachment A.

4. Licensed Program and Enforcement History

Uniroyal's License 34-09024-05 was originally issued on February 23, 1977, and renewed in its entirety by Amendment No. 3 issued on February 16, 1988. Uniroyal is authorized to use strontium-90 sealed sources in Industrial Nucleonics (currently named Accuray/Combustion Engineering) gauges for measuring the thickness of fabric and rubber. The maximum activity allowed for each sealed source is 70 millicuries. The authorized place of use for the gauges is at the Uniroyal plant in Woodburn, Indiana.

As of September 1989, the Woodburn Plant had five sealed sources in four gauges. Two gauges are used under a general license. One generally licensed gauge contains a 16 millicurie strontium-90 sealed source and the other gauge contains a 70 millicurie strontium-90 source and a 1000 millicurie americium-241 sealed source. The remaining two gauges are used under the specific license and each gauge contains a 70 millicurie strontium-90 sealed source.

Although Uniroyal does not have an enforcement history because there had been no previous NRC onsite inspections, a telephone inquiry was conducted on September 14, 1989, by Region III to gather information regarding their licensed program. There were no apparent problems identified as a result of that inquiry, although the inquiry was limited in scope to general questions such as types and quantities of licensed material possessed.

5. Incident Summary

Uniroyal's NRC license authorizes removal, installation, and servicing of gauges containing licensed materials. In December 1988 Uniroyal removed three U-shaped Industrial Nucleonics (Accuray/Combustion Engineering) gauges containing strontium-90 sealed sources from their production line. The three gauges were put in storage in the Raw Materials Warehouse at Uniroyal until Accuray removed the sources in February 1989. The individual in charge of surplus equipment told the warehouse workers to scrap the empty gauges and they were sent to the scrap yard (Omni) in March 1989.

During the week of June 12, 1989, two more U-shaped gauges were removed by Uniroyal. These gauges had Industrial Nucleonics (Accuray/Combustion Engineering) U-2 source holders, each containing a 12 millicurie strontium-90 sealed source. The device serial numbers were 1161222 and 1161223 and the sealed sources had serial numbers S-512-K and S-513-K. The gauges were stored in the Raw Materials Warehouse waiting for Accuray to remove the radioactive sources. In August 1989 a technician from Accuray inspected the gauges, but he did not remove the sources because he needed a kit for packaging the sources. The Accuray technician ordered a packaging kit and planned to return and remove the sources when the kit arrived. In August 1989, the individual in charge of surplus equipment saw the gauges in the warehouse and assumed that these were the ones that were removed in December 1988. He saw the radiation warning tags on the gauges, but thought the tags had been left on by mistake so he removed the tags. The gauges were then inadvertently sent to the scrap yard on September 7, 1989 under the assumption that they were the gauges removed from line in December and contained no sources.

On September 26, 1989, Uniroyal's authorized gauge user checked the Raw Materials Warehouse to make sure the gauges removed in June 1989 were ready for Accuray's technician to remove and package the strontium-90 sources. He noted the gauges were missing from the Raw Materials Warehouse and searched the Uniroyal plant.

During the search it was discovered that the gauges had been sent to OmniSource Corporation (Omni) a scrap yard in Fort Wayne, Indiana. That afternoon Uniroyal representatives searched the scrap yard, but could not locate the gauges. Uniroyal left a sketch of the U-shaped gauges at the scrap yard and offered a $1,000 cash reward to anyone finding the gauges.

On the morning of September 27, 1989, Uniroyal informed the NRC Region III Office and the Indiana State Board of Health that the gauges were missing and had been sent to the scrap yard by mistake.

Following the notification, two NRC Region III inspectors were dispatched and arrived at the scrap yard (Omni) in the early evening on September 27, 1989. The inspectors performed G-M surveys and wipe tests on and around the scrap metal shear because it was thought that the gauges may have been shredded. Survey results and G-M analysis of wipe tests showed no contamination. During discussions with personnel, a crane operator at the scrap yard remembered he put the gauges in a 800 ton pile of scrap metal in September 1989. The crane operator stated he would search the scrap pile in his spare time the next day.

On September 28, 1989, the NRC inspectors began their inspection at the Uniroyal plant in Woodburn, Indiana, to review the circumstances surrounding the event.

Based on that inspection, it was determined that the two missing Industrial Nucleonics (Accuray/Combustion Engineering) U-shaped gauges were removed from Uniroyal's production line during the week of June 12, 1989. The gauges were stored next to the production line from the week of June 12 to the week of June 26, 1989. The gauges were taken to the Raw Materials Warehouse and stored there from the week of June 26 to August 28, 1989. The gauges were put in the dumpster at Uniroyal and stored there between August 28 and September 7, 1989.

The gauges had not been secured from unauthorized removal while they were in storage next to the production line, in the Raw Materials Warehouse and the dumpster at Uniroyal. 10 CFR 20.207(a) requires that licensed material stored in an unrestricted area shall be secured from unauthorized removal. The regulations (10 CFR 20.3(a)(17)) define an unrestricted area as any area to which access is not controlled by the licensee for protecting individuals from exposure to radiation and radioactive materials.

Failure to secure the gauges from unauthorized removal while they were stored next to the production line, in the Raw Materials Warehouse and the dumpster appears to be a violation of 10 CFR 20.207(a).

It was also determined that the two Industrial Nucleonics (Accuray/Combustion Engineering) gauges had been sent to the scrap yard (Omni) on September 7, 1989. Omni does not have a license to receive any radioactive material. 10 CFR 30.41(a) requires that byproduct material (radioactive material) may only be transferred as described in Section 30.41. This section states that byproduct material (radioactive material) may only be transferred to persons authorized or licensed to receive it.

Transferring the gauges that contained radioactive material to the scrap yard (Omni) appears to be a violation of 10 CFR 30.41(a).

On September 28, 1989, the NRC inspectors returned to the scrap yard (Omni) to monitor the recovery activities and conduct additional radiation surveys. The NRC inspectors searched scrap piles, conducted direct

radiation surveys and wipe tests for contamination. No radiation levels above background radiation were detected and G-M analysis of the wipe tests showed no contamination. The scrap yard superintendent was given rope and radiation warning signs to be used if the gauges were found.

On September 29, 1989, at the request of the NRC Region III office Uniroyal developed an action plan to be followed in the event that the gauges were found (Attachment B). That plan outlined activities such as notifications, leak testing, and radiation surveys to be conducted when the gauges were found, and procedures for packaging and removal of the sources. On September 29, 1989, Uniroyal submitted their plan to the NRC Office Region III where it was reviewed and found to be adequate.

At approximately 1:15 p.m. on September 29, 1989, one of the gauges was found at the scrap yard (Omni) by a crane operator. Since the NRC inspectors had already left the site and were on their way back to the NRC Region III office, Uniroyal put their action plan into effect. The plan included roping off the area, notifying the NRC, and contacting a local physicist to conduct surveys and leak tests. After it was determined that the source was not leaking, the gauge was placed in a locked warehouse at the scrap yard until a representative from Accuray removed the source on October 2, 1989. The source was transferred back to Uniroyal and put in storage until it was shipped to Accuray on October 5, 1989.

On Sunday, October 1, 1989, Uniroyal hired the scrap yard's crane and crane operator at $200 per hour and continued the search for the second gauge, but it was not found.

Since one gauge has been recovered, Uniroyal is still confident that the second gauge is still in the 800 ton scrap pile. The scrap yard (Omni) and Uniroyal are continuing their search for the second gauge. Recovery efforts may take from one week to one month to remove the scrap from the pile where the remaining gauge is believed to be located. Uniroyal will again follow their action plan if the second gauge is found. As agreed upon, Uniroyal will contact the NRC Region III Office if they make any revisions to their plan.

On October 3, 1989, the licensee submitted an event log to the NRC Region III Office (Attachment C).

Two apparent violations of NRC requirements were identified.

6. Routine Inspection Elements

Routine inspection elements for the licensed program were also included in the inspection and are described in this section.

a. Training

The licensee's training program for employees responsible for the gauges containing byproduct material consists of successfully

completing one of the vendor's courses. On-the-job training is provided in conjunction with course completion. Only certain trained individuals named by the licensee may perform specific minor repairs on the gauges, in accordance with procedures described in the license. 10 CFR 19.12 required training for workers who are not routinely involved with the gauges has consisted of vendor training, most recently completed in February 1989. Records documenting this training, as well as authorized users' training, were available for review during this inspection and they appeared to be adequate.

b. Radiation Protection Staff

Condition No. 17 of the license requires that all licensed material be possessed and used in accordance with statements, representations and procedures contained in letter dated July 23, 1987. This letter named Ed. B. Katzenmeyer Jr., from the licensee's office in Akron, Ohio, as the individual responsible for the radiation program. During the inspection it was learned that Mr. Katzenmeyer discontinued his employment in September 1988 and his responsibilities were assumed by Mr. John Maloney, also of the Akron, Ohio office. As determined during the inspection, the licensee failed to notify the NRC of the change in the individual responsible for their radiation program. The licensee's use of an individual responsible for their radiation program other than Mr. Katzenmeyer constitutes an apparent violation of License Condition No. 17.

Although Mr. Maloney was not authorized by the NRC to serve as the individual responsible for the radiation program, a review of his credentials determined that he is qualified to serve in that capacity.

The licensee's use of two individuals serving as responsible parties for the radiation program and not being located onsite to oversee some of the day-to-day activities, was addressed as an area of concern during the inspection and may have been a contributing factor to the numerous violations identified during the inspection.

One apparent violation of NRC requirements was identified.

c. Radiological Protection Procedures

The licensee's radiological protection procedures consist primarily of gauge removal, repair, relocation and installation procedures. Condition No. 17 of the license requires that all licensed material be possessed and used in accordance with statements, representations and procedures contained in application dated January 27, 1982. This application requires that, before damaged Mylar windows on gauges are replaced, a survey instrument will be used to detect any radiation in the gap or in the area of the window. During a review of repair records it was learned that Mylar windows were replaced on one of your gauges containing licensed material on February 25, 1989, March 27, 1989, April 12, 1989, and July 24, 1989, and a survey

instrument was not used to detect radiation in the gap or in the area of the window before servicing. The licensee appears to be in violation of License Condition No. 17 for its failure to use a survey instrument to detect radiation before replacing Mylar windows on the gauges. With the exception of this repair violation and the incident involving the release of a gauge to the public domain, the licensee appeared to understand and correctly apply these procedures.

One apparent violation of NRC requirements was identified.

d. Receipt and Transfer of Licensed Material

The licensee received two generally licensed nuclear gauges in 1989. Receipt records from the gauge vendor are maintained and were reviewed during the inspection. The licensee also transferred three nuclear gauges in March 1989 to the vendor and it appears that proper procedures were followed in accordance with their license conditions and the regulations. The licensee's transfer of the two gauges to Omni in September 1989 constituted a violation of transfer requirements and is described in Section 5 of this report.

No violations were identified.

e. Instrumentation

The licensee possesses one survey instrument, a Victoreen Model 491 G-M survey meter. Condition No. 17 of the license requires that all licensed material be possessed and used in accordance with statements, representations and procedures contained in application dated January 27, 1982. This application requires an annual calibration of the Victoreen Model 491 survey meter. However, the licensee informed the inspectors that the survey meter had not been calibrated since 1982. The licensee appears to be in violation of License Condition No. 17 for its failure to calibrate its survey meter since 1982.

One apparent violation of NRC requirements was identified.

f. Audits

Condition No. 17 of the license requires that all licensed material be possessed and used in accordance with statements, representations and procedures contained in application dated January 27, 1982. This application requires, in Item 15, Section 11, that the Radiation Protection Officer audits the integrity of the radiation protection program, reviews the operating permits, performs periodic leak surveys, and provides guidance to insure a complete and effective radiation protection program. During this inspection, the licensee informed the inspectors that their Radiation Protection Officer has not performed the audits since the inception of the requirement on

August 16, 1982. The licensee appears to be in violation of License Condition No. 17 for its failure to perform required audits of the radiation protection program.

The licensee's failure to audit their licensed program was also addressed as an area of concern during the inspection and appears to indicate a lack of management oversite to the licensed program. This lack of management oversite appears to have been a significant contributing factor to the numerous violations identified during this inspection.

One apparent violation of NRC requirements was identified.

g. Inventories/Leak Tests

License Condition No. 15 of Amendment No. 03, dated February 18, 1988 (superseding License Condition No. 16 of Amendment No. 02 dated August 16, 1982) requires the licensee to conduct a physical inventory every six months to account for all sealed sources received and possessed by the licensee. This License Condition also requires that records of inventories include the location of sealed sources. During a review of the licensee's inventory records, the inspectors determined that the licensee failed to conduct physical inventories every six months and to include the location of sealed sources on inventory records. Specifically, inventories were not conducted between November 14, 1984 and June 27, 1985; between June 25, 1986 and January 9, 1987; between July 16, 1987 and February 4, 1988; and between February 4, 1988 and September 23, 1988; intervals of more than six months. In addition, with the exception of the inventory conducted on July 16, 1987, inventory records have not included the location of sealed sources. The licensee appears to be in violation of the above License Conditions 15 and 16 for its failure to conduct physical inventories every six months and to include the location of sealed sources on its inventory records.

License Condition No. 12 of Amendment No. 03, dated February 18, 1988 (superseding License Condition No. 14 of Amendment No. 02, dated August 16,1982) requires the licensee to test their sealed sources containing byproduct material for leakage and/or contamination at intervals not to exceed six months. During a review of the licensee's leak test records, the inspectors determined that the licensee failed to test any of their sealed sources containing byproduct material for leakage and/or contamination at intervals not to exceed six months. Specifically, sealed sources were not tested between November 14, 1984 and June 27, 1985; between June 25, 1986 and January 9, 1987; between July 16, 1987 and February 4, 1988; and between February 4, 1988 and September 23, 1988; intervals of more than six months. The licensee appears to be in violation of the above License Conditions No. 12 and No. 14 for its failure to test its sealed sources for leakage at intervals not to exceed six months.

Two apparent violations of NRC requirements were identified.

h. Facility Tours

The inspectors toured the licensee's tire manufacturing operations and personally observed four nuclear gauges, of which two were generally licensed. 10 CFR 19 and 20 required postings and labelling were observed and appeared to be adequate. The inspectors observed the No. 3-3 Roll Calendar where the lost nuclear gauges had been located, as well as the Raw Materials Warehouse, where the lost gauges were stored temporarily, and a forty cubic foot dumpster similar to the one in which the lost gauges were inadvertently deposited. The inspectors also visited the OmniSource scrap yard on September 27 and 28, 1989 to assist with the visual search for the gauges and perform surveys and wipe tests of equipment, personnel, and the various piles of scrap metal. No evidence of contamination or radiation levels in excess of background were identified. The inspectors interviewed the crane operator who is believed to have seen the gauges while placing them on the scrap pile. They interviewed other scrap yard workers, especially the shift superintendent, who may have been in the vicinity of the gauges during their processing. The inspectors also interviewed several licensee employees concerning both the incident investigation and the routine inspection.

No violations of NRC requirements were identified.

i. Notifications and Reports

Notifications and reports required by 10 CFR 19 and 20 were inspected, focusing on the lost gauges incident. On September 27, 1989, when the licensee became aware of the release of the gauges into the public domain, Mr. Stuart contacted the NRC Region III Office by telephone. Region III then notified NRC Headquarters.

No violations were identified.

7. Independent Measurements and Radiological Dose Assessments

The inspectors used the following NRC survey instruments to conduct independent measurements: an Eberline PRM-7 micro-R meter, Serial No. 681, calibrated June 27, 1989; an Eberline PRM-7 micro-R meter, Serial No. 350, calibrated September 12, 1989; an Eberline E-520 Geiger-Muller (GM) meter Serial No. 2123, calibrated July 19, 1989; an Eberline E-520 GM meter, Serial No. 2187, calibrated September 6, 1989; and an Eberline E-520 GM meter, Serial No. 2123, calibrated July 19, 1989.

Using the micro-R and GM meters, the inspectors performed surveys of the scrap piles, shear machine and conveyor, crane jaws and personnel, with special emphasis on the shear and piles of scrap. No measurements exceeding background levels were observed (3-4 micro-R per hour and 0.03-

0.04 milliroentgen per hour equalled background). These surveys were performed in conjunction with a visual search that failed to locate the gauges. In addition, wipe tests were taken by the inspectors of the crane jaws, conveyor bed, and shear machine which also resulted in negative results when analyzed with the thin end window probes on the GM counters onsite. The Region III laboratory confirmed the absence of contamination on these wipe test samples.

During the facilities tour at the licensee's tire manufacturing plant, a 16 millicurie strontium-90 sealed source in a gauge (generally licensed) measured 25 micro-R (uR) at a distance of six feet with the shutter open and the meter outside the beam. Two other gauges, identical to the lost gauges, but each containing 70 millicuries of strontium-90, measured a maximum of 13 milliroentgen per hour at the surface with the shutter open, 1.5 milliroentgen per hour at the surface with the shutter closed, and 0.05 milliroentgen per hour with the shutter open at a worker's normal standing distance from the gauge.

A radiological dose assessment for the incident was performed based on data obtained from survey results and interviews with OmniSource and Uniroyal Goodrich employees. The individual who spent the most time in relatively close proximity to the gauges was the maintenance worker who removed the gauges' "Caution . . ." tags while the gauges were in the Raw Materials Warehouse.

It took approximately six minutes to remove the warning tags from the gauges. The worker would have received a dose of approximately 0.15 millirem. This dose was estimated from the radiation levels (1.5 milliroentgen per hour) from a gauge at Uniroyal that was similar to the ones he worked on. The 0.15 millirem dose is conservative because it was estimated from the radiation levels of a gauge that contained about 43 millicuries of stronitum-90 whereas the worker removed the warning tags from gauges that only contained about 12 millicuries of strontium-90. The radiation dose to the worker is well below the NRC limits to radiation workers, which is 1,250 millirem (whole body dose) per calendar quarter and 18,750 millirem (extremity dose) per calendar quarter. The radiation dose to the worker is also below the 500 millirem (annual whole body dose) limit for non-radiation workers.

No violations were identified.

8. Personnel Monitoring

The inspectors also reviewed the licensee's personnel monitoring records from 1977 through 1988. The maximum annual exposure received to an individual's whole body was 70 millirem. 10 CFR 20.401(a) requires the licensee to maintain records showing radiation exposures on Form NRC-5, in accordance with the instructions contained on that form or on clear and legible records containing all the information required by Form NRC-5. During the inspectors' review of the radiation exposure records, it was noticed that the dates of birth were not included on the records

for two persons who require monitoring. As these records constitute the equivalent of Form NRC-5, the licensee appears be in violation of 10 CFR 20.401(a) for its failure to maintain all the information required on that form for its personnel being monitored for radiation exposure.

One apparent violation of NRC requirements was identified.

9. Exit Interview

The inspectors met with those individuals denoted in Section 1 at the conclusion of the site inspection on September 29, 1989. The apparent violations, corrective actions, and NRC's enforcement options were discussed.

Attachments:
A. Uniroyal Goodrich Tire Company
   Organization Chart
B. Action Plan for Gauge Recovery
C. Event Log

ATTACHMENT A

UNIROYAL GOODRICH TIRE COMPANY ORGANIZATIONAL CHART

Sheldon R. Selzman - Chief Executive Officer

Lloyd Spalter - Executive Vice President of Operations

E.J. Goode - V.P. of Tire Manufacturing

H.A. Heachert - V.P. of Engineering

R.G. Havener - Director Safety Industrial Hygiene and Environmental

J.T. Harner - Uniroyal Plant Manager, Woodburn, IN

J. Maloney - Manager Industrial Hygiene, Toxology, and Health. Radiation Protection Officer

R.D. Merchant - Plant Engineer

G.T. Easter - Maintenance Manager

D. Stuart - Electronic System Engineer

C. Calhoun - Facilities Manager

Lon Van - Design Manager

D. Oepey - Area I Maintenance Manager

D. Steffens) Maintenance
L. Schwartz) Foreman
B. Cayot)

D. Zurbuch - Senior Draftsman

M. Hopewell - Senior Engineer

W. Lothamer)
G. Reece) Instrument
E. Klender) Maintenance
R. Mosier)

ATTACHMENT B

ACTION PLAN FOR WHEN SR90 SOURCES ARE LOCATED

The following steps will be followed when the two missing U-frames containing SR90 isotopes are located at the OmniSource Corp. scrap processing facilities at 3101 Maumee Av. in Fort Wayne, Indiana. This plan and the proper response procedures will be reviewed with OmniSource personnel on 9/29/89.

Step 1: Upon locating the U-frames, OmniSource personnel will cordon off the area where the U-frames are located. They will use the rope and radiation warning signs left with Dave Thompson, OmniSource Corp. superintendent, by Bill Reichhold and Colleen Casey from the Materials Section of the U.S. Nuclear Regulatory Commission, Region 3. All personnel will remain clear of the cordoned off area.

Step 2: An OmniSource representative will contact Dan Stuart from Uniroyal Goodrich Tire Company. Mr. Stuart can be reached at work at (219)-493-8172. He will also carry a pager so he can be contacted at anytime by calling on a touch tone phone, (219)-482-0566 and after hearing a recorded message enter the return phone number followed by hitting the # key.

Step 3: Dan Stuart will contact John Agnew, a Health Physicist in the local area. Mr. Agnew will respond by coming to the scrap processing plant and performing a radiation survey. Dan Stuart will also be present. Mr. Agnew can be reached at work at (219)-484-6636, Ext. 4567 or at home at (219)-482-1831.

Step 4: If the radiation survey performed by Mr. Agnew shows the sources to be intact with no leakage, then the U-frames will be placed on a pallet, taken to a secure area at the OmniSource facility, cordoned off with rope and radiation warning signs, and personnel instructed to stay clear of the area. If the radiation survey indicates radiation leakage, then the U-frames will be left in their discovered location, while continuing to be cordoned off.

Step 5: Combustion Engineering will be contacted (414-739-2381) and appraised of the situation. Combustion Engineering has committed to respond with qualified personnel within 24 hours of notification to the OmniSource location. If the sources are intact with no leakage, Combustion Engineering will remove the sources from the U-frames, package the sources and remove them from the OmniSource facility. If the sources are found to be leaking, Combustion Engineering will handle appropriate clean-up actions.

Step 6: The U.S. Nuclear Regulatory Commission will be notified immediately upon discovery of the U-frames and will continue to be updated as the above steps proceed. The contacts at the N.R.C. are: Roy Caniano, Bill Reichhold, or Colleen Casey at (312)-790-5500. During the weekend or at night the contact will be the N.R.C. Duty Officer at (202)-951-0550.

ATTACHMENT C

10/3/89

Roy Caniano, Section Chief Materials Section
U.S. Nuclear Regulatory Commission, Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Caniano:

On the afternoon of Tuesday, September 26, 1989, I became aware that two AccuRay U-frames, each containing a sealed SR90 isotope, were missing from their storage location at the Uniroyal Goodrich Tire Plant in Woodburn, Indiana. After a thorough search of the plant, it was found out that these U-frames had been improperly removed from the plant by dumping them in a scrap metal container. This container was sent to OmniSource Corp. at 3101 Maumee Ave. in Fort Wayne, Indiana on September 7, 1989.

Don Zurbuch, UGTC Senior Draftman, and I went to the OmniSource Corp. scrap processing plant on Maumee Ave. in late afternoon on Tuesday, September 26 in hopes of locating and retrieving the U-frames. Our efforts were unsucessful. We left, at the scrap yard, a sketch of the U-frames and their description along with a verbal commitment of a $1000 cash reward to anyone locating and retrieving the U-frames.

I contacted your offices at 8:25 a.m. on Wednesday, September 27, 1989 to notify the NRC of the missing isotopes. I talked with Bill Reichhold and reviewed the situation. An event log has been maintained relating to this incident and a copy is attached.

Uniroyal Goodrich Tire Company recognizes the seriousness of this incident and has responded accordingly. The attached documents detail the steps UGTC has taken. UGTC is working closely with OmniSource Corp. and pursuing all feasible methods for recovering the remaining missing radioactive source.

UGTC also is moving forward as quickly as possible to correct the apparent violations noted by your inspectors who audited our facility on 9/28/89 and 9/29/89. Your office will be kept informed of the progress of correcting the noted apparent violations. Steps have already been taken to update our training program with the assistance of Combustion Engineering, the film badge records are being upgraded to include all emplyee birthdates, and the maintenance procedures have been reviewed with the appropriate plant craftsmen. A new inventory record showing source locations is going into effect immediately. I have begun filling out a new specific license application to amend out current license #34-09024-05. Requested changes will include an on-site radiation safety officer, address of license holder being the Woodburn Plant, and updating the licensed material.

UGTC is deeply disturbed by this incident, but is using it to renew and establish a comprehensive radiation safety program at the

Woodburn Plant. These steps will avoid any future incidents. Again, I will keep your office informed of all future events related to this incident, the actions taken by UGTC to correct radiation program violations and deficiencies, and submit a final report upon the conclusion of this incident.

Cordially,
Daniel D. Stuart, Electronics Sys. Engr.
Daniel D Stuart

cc: Bill Reichhold, NRC Radiation Specialist
Colleen Casey, NRC Radiation Specialist
J.T. Harner
R.D. Merchant
C.A. Calhoun
L.L. Van
R.D. Eberwine
E.M. Hirsch
J.C. Maloney , Akron D/6018, UGB-2
F.D. Gemlick , Akron D/6001, UGB-2
file

EVENT LOG OF LOSS OF TWO STRONTIUM 90 ISOTOPES

The following is a log of the events as they relate to the loss of two sources of SR90 isotope:

Material Description:
Isotope SR90 ; Quantity: 25 millicuries each with date of measure August 1960 ; SR90 has a half-life of 28 years which means that the present quantity of each isotope is slightly less than 12.5 millicuries ; Each was lost in a sealed source, AccuRay model U-2, with each sealed source contained within an AccuRay U-frame ;
one source: Device serial # 1161222, Source serial # S-512-K
2nd source: Device serial # 1161223, Source serial # S-513-K

Event History:

Week of June 12, 1989: The U-frames with sealed sources enclosed were removed from the Fort Wayne plant's No. 3 - 3 Roll Calender at the direction of Mark Hopewell, Sr. Design Engineer D/6710. The units were removed as part of a modernization project on this calender. Norm Byers, D/6710 Electrician disconnected the electical wiring to the U-frames and Dave Wright and Jim Gleason, D/6710 maintenance mechanics, mechanically removed the frames and placed them on a pallet adjacent to the calender.

Week of June 26,1989: The pallet with the U-frames was moved from the calender to the Raw Materials Warehouse by Dave Wright and Jim Gleason.

Late July to early August, 1989: Dan Stuart, D/6710 Electronics System Engineer, contacted John Johnston, Combustion Engineering field service technician, to arrange for the proper packaging and shipment of the two SR90 sources to Combustion Engineering.

Mid to Late August, 1989: John Johnston inspected the two U-frames and sources in the Raw Material Warehouse and determined that he needed to order a kit for packaging the sources for shipment. John Johnston notified Dan Stuart that he had order this kit and would remove and package the sources when the kit arrived.

August 28, 1989: Don Zurbuch, D/6710 Sr. Draftsman, was supervising the disposal of surplus equipment. Don ran across the two U-frames in the Raw Material Warehouse and mistakenly assumed them to be the frames removed from the 4-Roll Calender in December, 1988. The frames from the 4-Roll Calender had their sources properly removed and shipped to Combustion Engineering in March 1989. With the sources removed from the frames, the frames were identified to be scraped by Dan Stuart. The frames were scraped in late March to late April 1989. Don Zurbuch believing the 3-Roll Calender U-frames to be the ones from the 4-Roll Calender and void of the radioactive sources removed the radiation warning tags from the frames and directed Bill Ronk, D/6710 mechanic to load the U-

frames into a 40 cu.yd. open top scrap container.

September 7, 1989: The 40 cu.yd. scrap container was picked up and delivered to OmniSource Corp.,3101 Maumee Av., Fort Wayne, Indiana. This is a scrap metal processing facility.

September 26, 1989: On the afternoon of 9/26, Dan Stuart went to the Raw Materials Warehouse to check on the U-frames in preparation of Combustion Engineering's John Johnson coming to the plant and packaging the sources for shipment. Dan Stuart was unable to locate the U-frames and began a plant search for the units. Don Zurbuch was eventually contacted as part of the search to determine his possible knowledge of the location of the frames. Don recalled having had them placed in the scrap container as described above. Dan Stuart and Don Zurbuch went to the scrap yard on Maumee Av. in late afternoon to attempt to locate the U-frames. A search of the facilities was unsuccessful. A sketch of the U-frames was made and left with a supervisor for distribution to the employees at the Maumee Av. facility. The supervisor was verbally notified that a $1000 cash reward would be given to anyone finding the U-frames.

September 27, 1989:

7:00 A.M.: Dan Stuart called Jim Fannin in Akron to explain the situation and ask for counsel. Mr. Fannin stated that he would have Mr. John Maloney , Akron Uniroyal Goodrich Tire Co. Manager Industrial Hygiene, Toxicology & Health, call Mr. Stuart for further instruction on how to proceed.

8:00 A.M.: John Maloney called Mr. Stuart and reviewed the situation. Mr. Maloney suggested that Combustion Engineering, manufacturer of the U-frames be contacted next, followed by the State Board of Health, and then the NRC. Mr. Maloney stated that a meeting should be held with all concerned individuals on proper handling of radioactive materials.

8:10 A.M.: Dan Stuart called the Radiological Department of Combustion Engineering in Columbus, Ohio and talked to Don Stephens. Mr. Stephens looked up their records of the two sources and the information that the plant had was verified. It was noted that these sources were last wipe tested in March 1989. The health risks were reviewed and it was noted that the sources were smaller than the end of ones thumb. Mr. Stephens stated that Combustion Engineering did not have anyone for the purpose of locating lost sources. It was noted that the SR90 sources are Beta emmitters and the Beta particles could not penetrate more than 0.001 to 0.002 inches of metal. Therefore detection of the sources with instrumentation would be extremely difficult, especially with the sources in their source holders. Mr. Stephens also stated that the NRC should be notified before notifying the State.

8:25 A.M.: Dan Stuart called the U.S. Nuclear Regulatory

Commission, Region III, and talked to Bill Reichhold in the Materials Section. Mr. Reichhold was filled in on the situation and was told of the planned efforts to locate the missing sources. Mr. Reichhold stated that he would be reviewing the case with his superiors and would call back with their planned course of action.

8:50 A.M.: Dan Stuart called the Indiana State Board of Health, Radiation Health Section (317-633-0152) and talked to Marsh Howard. Ms. Howard stated that she would contact John Agnew who is on the state radiation response crew and works at Parkview Hospital in Fort Wayne, Indiana (219-484-6636 ext. 4567). Mr. Agnew would be asked to assist in doing a radiation survey at the scrap processing facilities. Ms.Howard asked that a full description of events be sent to her as a preliminary report and when the situation is concluded a final report be sent to her, noting what steps are being taken to prevent this type of occurance from happening again.

9:00 - 10:00 A.M.: Don Zurbuch called Dave Lallow, scale dispatcher at OmniSource Corp.(426-5461). The shipping papers for the load of scrap containing the U-frames was checked on and it was confirmed that the particular scrap container in question was unload at the Maumee Av. location of September 7, 1989. Mr. Lallow was informed that a group from UGTC would be arriving at their facility in late morning to continue searching for lost sources. Six posters were made showing a drawing and a photograph of the U-frame and a message noting a $1000 reward to anyone locating the U-frames. Dan Stuart recieved a phone call from John Agnew and it was agreed to meet at the scrap processing plant at 1:30 p.m. for a radiation survey.

9:50 A.M.: Dan Stuart recieved a call from Marsha Howard and asked about notifying foundaries where the sources could have been shipped from the scrap processing plant. She was told that OmniSource Corp. had already been requested by Don Zurbuch to furnish a list of where the sources could have been shipped.

9:55 A.M.: Dan Stuart received a call from Wayne Slawinski, Acting Section Chief for the Nuclear Materials Safety Section #1 of the Nuclear Regulatory Commission. Mr. Stuart reviewed the history of the situation up to that point. Mr. Slawinski stated that he would verify the state of Indiana's response.

10:30 A.M. - 1:00 P.M.: Dan Stuart, Don Zurbuch, Mark Hopewell, and Rick Steffens from the UGTC Engineering Dept. visited the scrap processing plant at 3101 Maumee Ave. The group met with Barry Pass, Vice President of OmniSource Corp. (422-5541). Mr. Pass stated that OmniSource Corp. would assist as much as possible in the efforts to recover the missing

sources. Mr. Pass was given the reward posters and he said he would have them posted in appropriate locations. Mr. Pass also stated that he had been contacted by the NRC and notified that two NRC inspectors would be arriving late afternoon at the Maumee Ave. location. With this information, Dan Stuart notified Mr. Agnew by phone of the planned inspection by the NRC. Mr. Agnew, after confering with the State Board of Health, decided to cancel the plans to inspect the scrap processing plant at 1:30 p.m. Mr. Pass had John Bisentine, OmniSource Corp. foreman, escort the four UGTC personnel on another visual search of the scrap processing facility. No evidence of the missing U-frames were found and the group returned to the UGTC plant. Dan Stuart had asked Mr. Pass about what arrangement could be made to make a dedicated search for the U-frames. Mr. Pass stated that he would look into the possibilities and call Mr. Stuart later that day.

2:20 P.M.: Barry Pass called Dan Stuart saying that a dedicated search could be made on Sunday, October 1, 1989. The cost to UGTC would be $200/hour for a crane and a crane operator. Mr. Stuart gave Mr. Pass the okay to proceed with scheduling this work.

2:50 P.M.: Dan Stuart recieved a call from John Maloney. Reviewed all events up to that point in time. Mr. Maloney requested to be copied on all correspondence related to this event.

2:55 P.M.: Dan Stuart recieved a call from Henry Jaggers at Combustion Engineering. Reviewed situation and Mr. Stuart asked for assistance in presenting an updated radiation safety training program at the plant to help insure against future events of this nature.

3:40 P.M.: Dan Stuart recieved a call from Roy Caniano, Section Chief for Materials Section of NRC Region III. Mr. Caniano read an internal loss memo that had been written and asked if it was accurate. Mr. Stuart agreed with the accuracy of the memo. Mr. Caniano stated that Bill Reichhold and Colleen Casey from his office were on their way to Fort Wayne and should errrive between 5-6 p.m.

4:25 P.M.: Dan Stuart recieved a call from Bill Reichhold stating that he was currently in Warsaw, Indiana and would be staying at the Mariott Motel in Fort Wayne. He said they would call Mr. Stuart upon arriving in Fort Wayne.

5:30 P.M.: Dan Stuart recieved a call from Bill Reichhold saying they were in Fort Wayne. It was agreed to meet at the scrap processing plant on Maumee Ave. at 6:00 p.m.

6:00 P.M.: Dan Stuart met Mr. Reichhold and Ms. Casey at scrap

processing plant. Then met with Steve Barver, President Operation Division, OmniSource Corp. Mr. Barver pledged his cooperation and introduced us to Dave Thompson, Superintendent who escorted us through their facility explaining their operation and possible locations of the missing U-frames. The NRC specialists, using their sensitive instruments, surveyed the facilities with a major emphasis on the large shearing machine. No evidence of radiation was found.

September 28, 1989:

9:00 A.M.: Bill Reichhold and Colleen Casey arrived at plant and conducted an audit. The audit included a review of the details of the missing U-frames and a review of all records relating to the radiation instruments and radiation safety program at the UGTC Woodburn plant. Mr. Reichhold and Ms. Casey conducted a tour of the facilities and interviewed equipment operators and plant maintenance personnel. At approximately 3:00 p.m. they concluded their investigation at the plant for that day and reviewed with Mr. Stuart a list of apparent violations. A listing of the apparent violations is included in the attachments.

3:00 P.M.: Purchase order placed with OmniSource Corp. for 10/1/89 search for missing U-frames.

September 29, 1989:

9:00 A.M.: Mr. Reichhold and Ms. Casey returned to plant to wrap up audit. They requested of Mr. Stuart that an action plan be filed with the NRC on what steps would be followed when the sources are found at the scrap processing plant. Mr. Stuart began to prepare this action plan while the NRC personnel interviewed Don Zurbuch.

9:30 A.M.: Mr. Stuart called Combustion Engineering and got commitment of their response to come to Fort Wayne and package and remove the sources once they are found.

9:35 A.M.: Mr. Stuart called John Agnew and identified how he could be contacted at anytime to come and inspect the sources when they are found.

10:30 A.M.: Mr. Stuart finalized action plan, reviewed with Mr. Reichhold and Ms. Casey, and copy was faxed to Roy Caniano for his review. Recieved okay on action plan.

11:00 A.M.: Mr. Reichhold and Ms. Casey conducted a wrap-up meeting with Dan Stuart, Joe Harner, UGTC Fort Wayne Plant Manager, and Dan Merchant, UGTC Fort Wayne Plant Engineer. A review of the apparent violations was made and a list of concerns were presented at this wrap-up. Also several suggestion for improvements were made by the NRC personnel.

11:30 A.M.: Mr. Stuart went to the scrap processing plant and

reviewed the action plan with Dave Thompson and left copies.

1:15 P.M.: OmniSource Corp. employee, Harry Russel, locates one of the U-frames in a scrap iron pile. The area is cordoned off and UGTC is notified, followed by John Agnew, a health physicist.

2:30 P.M.: Mr. Agnew arrives at scrap processing facility, checks U-frame, and determines that there is no radiation leakage and the sources are intact. The U-frame is relocated to a secure area inside one of the OmniSource buildings, rechecked for radiation leakage, and cordoned off.

4:15 P.M.: Dan Stuart attempts to notify Roy Caniano at NRC of discovery of one of the missing sources. Left phone message for Mr. Caniano.

4:30 P.M.: Dan Stuart notifies Combustion Engineering of discovery of source and requests schedule for Combustion Engineering to remove source. Talked to Steve Cutshall who said he would have Don Riesbeck contact me to make final arrangements.

5:00 P.M.: Dan Stuart recalled NRC and talked to duty officer. Related findings to the duty officer.

October 1, 1989: Over 10 hours of operation with a crane were used in sorting through a scrap iron pile looking for the other missing U-frame. No evidence of the other U-frame was found. Dave Thompson stated that OmniSource would begin running their shearing unit operations 20 hours per day in order to get through the scrap iron pile in question, in hopes of locating the other missing U-frame. Even with this level of effort it may still take weeks before the scrap iron pile can be gotten through.

October 2, 1989:

8:20 P.M.: Dan Stuart talked to Bill Reichhold at NRC reviewing the finding of the one source and attempts to locate the other source.

11:00 A.M. - 1:30 P.M.: John Johnston from Combustion Engineering along with Dan Stuart went to the scrap processing plant where Mr. Johnston packaged the SR90 source and transported it back to the UGTC Woodburn Plant. There it was locked up in the Engineering offices while paperwork is being prepared and arrangements made to ship the source to Combustion Engineering in Columbus, Ohio. The source which had been found was source serial # S-513-K.

3:30 P.M.: Dan Stuart talked to Bill Reichhold at NRC to notify him that one source was back in plant and secured while arrangement were being made to ship the source to Combustion

Engineering. During this conversation, Mr. Reichhold asked why in a telephone conversation with Walter King of the NRC on September 22, 1989, Mr. Stuart identified Ed Katzenmeyer as the radiation safety officer when in actuality he had been replaced September 1988. Mr. Stuart replied that he was not aware of the change of Mr. Katzenmeyer until this incident occured.

October 3, 1989: Dean Depew, UGTC Area I Maintence Manager, received a call at 10:00 a.m. from Colleen Casey asking that Willie Lothamer and Gary Reece call her to discuss work order logs on the maintenance of the SR90 instruments.

less.

It was noted that the violations are considered apparent at this point in time. The NRC inspectors will issue a report to their superiors regarding their findings. This will be reviewed and a final report will be issued. Any violations cited in the final findings will be assigned a severity level from 1 to 5, with 1 being the most severe. Violations with severity levels 1 -3 can result in escalated enforcement which could include civil fines and apperance before the NRC.

The NRC inspectors also noted two concerns, these being the followings

1) Management control of radiation control program
2) Not having radiation safety officer as on-site employee

The inspectors made the following recommendations:

1) Perform periodic training of all employees in radiation safety
2) Issue renewed policies and procedures on radiation program
3) Keep list of procedures in maintenance log books kept for any maintenance procedure on the radiation systems.
4) Develop and maintain a "Radiation Safety Management Schedule."
5) Post new NRC "Notice To Employees" bulletins in several appropriate plant locations.

...ed.

ACTION PLAN FOR WHEN SR90 SOURCES ARE LOCATED

The following steps will be followed when the two missing U-frames containing SR90 isotopes are located at the OmniSource Corp. scrap processing facilities at 3101 Maumee Av. in Fort Wayne, Indiana. This plan and the proper response procedures will be reviewed with OmniSource personnel on 9/29/89.

Step 1: Upon locating the U-frames, OmniSource personnel will cordon off the area where the U-frames are located. They will use the rope and radiation warning signs left with Dave Thompson, OmniSource Corp. superintendent, by Bill Reichhold and Colleen Casey from the Materials Section of the U.S. Nuclear Regulatory Commission, Region 3. All personnel will remain clear of the cordoned off area.

Step 2: An OmniSource representative will contact Dan Stuart from Uniroyal Goodrich Tire Company. Mr. Stuart can be reached at work at (219)-493-8172. He will also carry a pager so he can be contacted at anytime by calling on a touch tone phone, (219)-482-0366 and after hearing a recorded message enter the return phone number followed by hitting the # key.

Step 3: Dan Stuart will contact John Agnew, a Health Physicist in the local area. Mr. Agnew will respond by coming to the scrap processing plant and performing a radiation survey. Dan Stuart will also be present. Mr. Agnew can be reached at work at (219)-484-6636, Ext. 4567 or at home at (219)-482-1831.

Step 4: If the radiation survey performed by Mr. Agnew shows the sources to be intact with no leakage, then the U-frames will be placed on a pallet, taken to a secure area at the OmniSource facility, cordoned off with rope and radiation warning signs, and personnel instructed to stay clear of the area. If the radiation survey indicates radiation leakage, then the U-frames will be left in their discovered location, while continuing to be cordoned off.

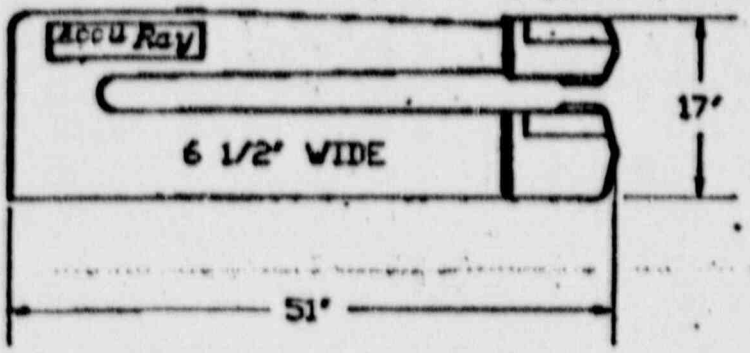
Step 5: Combustion Engineering will be contacted (414-739-2381) and appraised of the situation. Combustion Engineering has committed to respond with qualified personnel within 24 hours of notification to the OmniSource location. If the sources are intact with no leakage, Combustion Engineering will remove the sources from the U-frames, package the sources and remove them from the OmniSource facility. If the sources are found to be leaking, Combustion Engineering will handle appropriate clean-up actions.

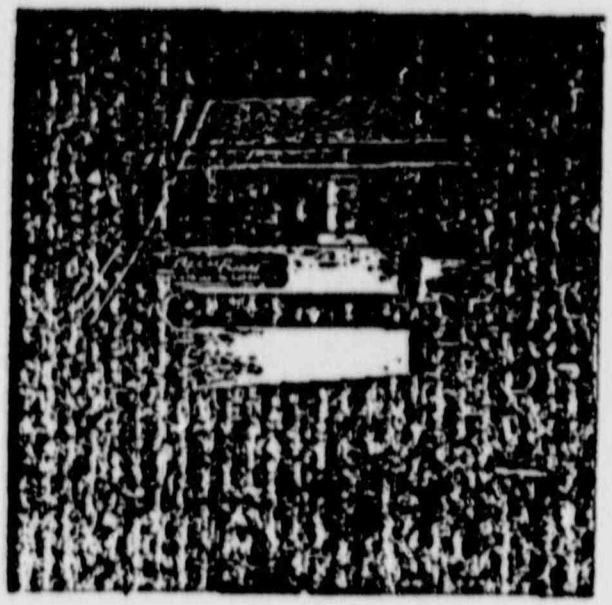
Step 6: The U.S. Nuclear Regulatory Commission will be notified immediately upon discovery of the U-frames and will continue to be updated as the above steps proceed. The contacts at the N.R.C. are: Roy Caniano, Bill Reichhold, or Colleen Casey at (312)-790-5500. During the weekend or at night the contact will be the N.R.C. Duty Officer at (202)-951-0550.

$1000 REWARD

UNIROYAL GOODRICH TIRE COMPANY IS OFFERING A $1000 REWARD TO ANYONE WHO LOCATES THE FOLLOWING 2 ITE

ACCURAY U-FRAME





THERE ARE TWO UNITS WHICH WERE MISTAKENLY SENT OUT AS SCRAP ON 9/7/89. IF THESE UNITS ARE LOCATED, PLEASE HO THEM BACK AND NOTIFY DAN STUART OR LON VAN AT UNIROYA GOODRICH TIRE COMPANY. PHONE #493-8100