CZOP / SPECTER, INC.

Consulting Engineers & Surveyors

1741 VALLEY FORGE ROAD - RTE. 363

P.O. BOX 669

WORCESTER, PA 19490

215-584-0880 - FAX # 584-8133

February 25, 1994

U.S. NUCLEAR REGULATORY COMMISSION
Attn: Document Control Desk
Washington, DC 20555

Re: Reply to a Notice of Violation
Routine Inspection No. 030-33249/94-001
License No. 37-30059-01

Gentlemen:

Pursuant to the subject routine inspection, and in accordance with applicable regulations, I am providing the enclosed "Reply to a Notice of Violation".

I am also providing a copy of this letter and reply to your Regional Administrator for Region I, in the self-addressed envelope provided.

I trust that this reply satisfactorily addresses all items contained in the subject notice.

Very truly yours,
CZOP/SPECTER, INC.

Arthur W. Boester, P.E.

AWB/clk
encl.

cc: Regional Administrator, Region I

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CZOP / SPECTER, INC.

REPLY TO A NOTICE OF VIOLATION DATED FEBRUARY 1, 1994
DOCKET NO. 030-33249
LICENSE NO. 37-30059-01

A-1 Nuclear gauge packaging not sealed (padlocked) during transport.

A misinterpretation of our license item #16 which states ..... "the gauge or its container shall be locked when in transport or when not under the direct surveillance of an authorized user". We assumed that with the gauge being locked and the vehicle used for transportation being locked we were abiding by the regulations. Gauge was transported in a company vehicle by a company employee, and was not shipped by a commercial shipping company.

Corrective action taken: A padlock has been purchased and installed on the gauge's storage box.

A-2 Shipping papers not with the gauge. The original shipping papers were with the gauge when received from the Troxler Company. The papers were and continue to be stored with the gauge. The gauge was not shipped commercially to the construction site in Oxford, Pennsylvania.

A-3 The package placed in the back of our van without some type of blocking to prevent movement around the interior of the van.

Corrective action taken: Bracing with strapping has been installed at the rear of the van to prevent the package from moving around the van's interior.

B-1 Licensee never obtained a copy of the manufacturer's training program certificate prior to designating the individual as a user.

Corrective action taken: Certificate had been obtained prior to our obtaining our license, but was misplaced in our personnel files. We have located the certificate and it is now stored with Robert Gerstemeier's certificate, in our NRC file.

C-1 Use of incorrect badges for monitoring gamma and neutron radiation. We were using Siemens Thermoluminescent Dosimeters (SLD Badges) supplied by RSO, Inc., Laurel, MD. which we thought were in compliance. (See attached excerpt form RSO, Inc., letter.)

Corrective action taken: SLD760 badges have been ordered from RSO, Inc., which will also monitor neutron radiation.

D-1 Failure to post form NRC-3 "Notice to Employees" The gauge is currently in use at our Oxford job site and will remain there until work is completed. We did not think that it was necessary to have the warning signs posted until we were ready to store the gauge at our office.

Corrective action taken: Post the storage area at our office in compliance with the regulations.

E-1 Failure to post the warning signs "Caution Radioactive Materials". An oversight on our part.

Corrective action taken: Post the proper warning signs, bringing both our office site and our temporary job site into compliance with the regulations.

F-1 Failure to post Part 21, and other documents and the location where they may be inspected. This was an oversight on our part.

Corrective action taken: A binder with all documentation required will be stored in Robert Gerstemeier's office at the licensee location, and required posting will be placed at the licensee location and the temporary job site location.

In order to prevent a future violation of the regulations, we are going to institute a monthly in-house monitoring meeting, with our RSO and a principal officer of the company to ensure that we maintain compliance with the regulations.

Corrective actions to bring us into compliance with the regulations will be completed by March 15, 1994.

RSO, Inc.
P.O. Box 1526
Laurel, MD 20725-1526

* The radiation exposure report includes the energy range for photon radiation which can be very helpful in determining the source of unusual exposures.

* Exposure from gamma and X-rays having energies from 15 keV to 3 MeV will be reported in millirem. Exposures outside these limits may be reported but not necessarily in millirem. Beta calibration is based on Strontium-90 Yttrium-90. Fast neutron calibration is based on Californium-252 neutrons.

* The minimum detectable fast neutron exposure is 30 millirem. The minimum exposure reported by an X-ray beta gamma film dosimeter is 10 millirem for X-ray and gamma radiation and 20 millirem for beta.

* The maximum reportable fast neutron dose is 20,000 millirem. For other radiation types the maximum reportable dose depends on both the radiation type and badge type. For all badge types the maximum reportable dose exceeds 400 rem for gamma radiation.

B. Siemens Thermoluminescent Dosimeter (SLD Badges).

* They are compact in size and shape.

  They are available in both clip-on and wrist styles.

* They are worn for weekly, bi-weekly, monthly, or quarterly monitoring periods.

* For low risk personnel, quarterly SLD badges save money and reduce the administrative work load involved in changing badges monthly.

* SLD badges are insensitive to heat and humidity.

* SLD badges use Harshaw lithium fluoride high-sensitivity SLD-100 ribbons which provide nearly tissue equivalent response, thereby eliminating the need for complex energy corrections. The dosimeter is energy independent for X and gamma radiation down to 100 keV with less than 40% energy dependence for lower energies. The minimum beta energy detected is 150 keV. The badge will measure doses from 20 millirem to 10,000 rem and is dose rate independent to 20,000 R per second.

C. TLD Ring Badges.

* Ideal for radioisotope handling, fluoroscopy, or other activities where hand exposure may be high.

* Can be cold sterilized.

* Smooth low profile allows easy use under surgical gloves.

* Made of tough, unbreakable plastic in two adjustable sizes to ensure a comfortable fit.

* Name, identification number, and start date appear on each ring to simplify distribution.