



ESTING TECHNOLOGIES, INC.

TESTING AND
INSPECTION SERVICES

1241 FEATHERSTONE ROAD • WOODBRIDGE, VA 22191 • 703-491-5500/Metro 643-5578 • Fax: 703-491-9245

December 7, 2000

U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike,
Rockville, MD 20852-2738

Attention: Mr. R.W. Borchardt, Director
Office of Enforcement

Subject: Reply to a Notice of Violation
(NRC Inspection Report No. 45-25007-01/2000-002)

Gentlemen;

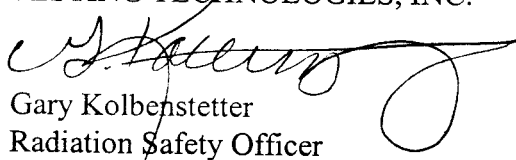
Testing Technologies, Inc. is in receipt of your letter dated November 14, 2000. We have reviewed the violations and the civil penalty imposed and concur with your findings.

As you are aware, on October 18, 2000 during our Enforcement Conference, we provided your office with our response to each of the five violations noted. Please refer to that letter for our response to each of the violations imposed on Testing Technologies, Inc. We are aware that these violations existed on August 27, 2000 and do not wish to pursue this matter further.

Please be advised that we will continue to perform additional audits on the two technicians involved in this matter, over and above the Quarterly Audits which we perform, for the next year. Also be advised that all of the corrective measures we proposed in our Response to Violations dated October 13, 2000, have been implemented and have had a positive effect on our operations in occupied buildings.

Should you have any further questions concerning this letter, please contact us at your convenience.

Sincerely;
TESTING TECHNOLOGIES, INC.


Gary Kolbenstetter
Radiation Safety Officer

attachment: Response to Violations, dated October 13, 2000

cc; Regional Administrator, USNRC, Region II



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October 13, 2000

U.S. Nuclear Regulatory Commission
Region II
61 Forsyth St. SW Ste. 23T85
Atlanta, GA. 30303-8931

Subject: NRC INSPECTION REPORT NO. 45-25007-01/00-02

Dear Mr. Collins;

Testing Technologies, Inc. is in receipt of your letter dated October 4, 2000. We have read the report and offer the following for five apparent violations:

ITEM 1:

Contrary to 10 CFR 20.1301 (a) (2), the dose in unrestricted areas exceeded 2 mr/hr.

CORRECTIVE ACTION:

TTI acknowledges that mistakes were made by the radiographers performing work on this project. TTI maintains clear written procedures regarding the posting of radiologically restricted areas and these procedures were not followed. TTI has instructed, not only those radiographers present at the site, but all other radiographers in our employ, as well as assistants, of proper surveying of Restricted Radiation areas to determine the posting locations of the 2 mr boundaries. We also pointed out that not only are the levels which our work is being performed must be posted but also other levels which may be effected and that those areas must also be posted and surveillance maintained.

ITEM 2:

Contrary to 10 CFR 20.1902 (a) and (b), failure to post each radiation area and high radiation area with the appropriate sign;

CORRECTIVE ACTION:

TTI has met with all technicians in our employ to discuss the proper procedure for posting the restricted boundary as well as the high radiation boundary. We emphasized the need for proper surveys not only on levels which we are working but levels above and below the levels where our equipment is located. Again, operating procedures were not followed, and the scope of our emphasis on posting and surveillance requirements has extended well beyond the individuals present that day.

ITEM 3

Contrary to 10 CFR 1501, failure to perform surveys necessary to demonstrate compliance with the regulations and to evaluate radiation hazards;

CORRECTIVE ACTION

TTI has instructed each of our technicians in the proper procedures in performing surveillance of our restricted boundaries, both on the level we are working on but for several floors above and below our location. We have informed them that it is not acceptable for them to expose the source and remain in one area for the duration of the exposure. All areas within the restricted area are to be posted, as required, and patrolled to prevent any unauthorized entry.

ITEM 4

Contrary to 10 CFR 34.51, failure to maintain continuous surveillance of the high radiation radiation areas.

CORRECTIVE ACTION:

TTI has instructed all technicians in our employ that continuous surveillance **MUST** be maintained during all exposures, not only on the elevations which we are working but on any elevation where boundaries are to be posted due to radiation levels exceeding the 2 mr/hr limit.

ITEM 5

Contrary to 10 CFR 34.43 (a) (1), neither radiographer involved in this event was certified through a radiographers certification program.

CORRECTIVE ACTION:

TTI must take exception to this violation, in that both technicians had taken the certification exam on June 23, 2000 as described in 10 CFR 34.43. However we were unaware after reading the CFR that the technicians had to have in their possession the certification card with picture. TTI had been notified on June 28, 2000 that both technicians had passed the IRRSP exam and that the practical and a picture were to be mailed to the examiner by December 23, 2000. We did not realize from reading the CFR that the technicians could not work as radiographers after receiving written results of a passing grade on the exam.

TTI has now instructed all radiographers that certification cards must be in their possession at all times while performing radiographic inspection.

In Conclusion: Testing Technologies, Inc. realizes that mistakes had been made on the 27th of August while performing radiographic inspection at 1100 L St. N.W. Washington D.C. In realizing the problems involved with the work which was being performed that day, we have taken steps to correct these types of situations. 1). We have changed our Radiographic Concrete Checklist to require each checklist to be returned to TTI prior to work being done, and to include the building management's contact name and phone number so that we are able to contact the buildings management to insure that all tenants are aware of our work times and dates. The checklist also stresses the importance of our technicians being able to gain access to each office, room, and corridor in our restricted boundaries on each floor we are working on as well as floors above and below the work floors. 2). All TTI technicians have been instructed NOT to radiograph any locations where access can not be gained prior to any exposure. 3). Technicians involved in the August 27, 2000 incident have been or are in the process of being retrained in safety related topics and will be retested on TTI's Operating and Emergency Procedures Manual. 4). Each of those technicians have been suspended, a minimum of three months, from performing the duties of a radiographer as well as a monetary reduction in pay for the suspension period. 5). TTI has held two company meetings to discuss the mistakes made during the incident and to get input from other radiographers as to the steps they feel are needed to prevent this from happening in the future.

Quite frankly, TTI's Operating and Emergency Procedures thoroughly addresses each of the apparent violations with the exception of #5 (radiographer certification.) Our procedures clearly state the proper procedures regarding posting and surveillance of restricted and high radiation areas. Our procedures also clearly state that deviating from our written safety procedures may result in immediate termination. While reserving the right to terminate these individuals, TTI has not done so at this time. What we have done is restrict their activities in radiography to that of an assistant, and they are undergoing extensive re-training in the areas that they are clearly lacking.

Additionally, we have communicated all details regarding this event company-wide with the intent of strengthening the commitment of all radiography personnel conduct operations in strict accordance with TTI's Materials license conditions and our Operating and Emergency Procedures. Safety, both the safety of members of the general public and the safety of our employees is and has always been the number one priority at Testing Technologies.

In over ten years of maintaining our radioactive materials license, we have never had a safety related violation. We feel that this record attests to the fact that our program works effectively when followed. The management of Testing Technologies is firmly committed to ensuring that procedures are followed to the letter precluding any situation such as that which occurred at 1100 L Street.

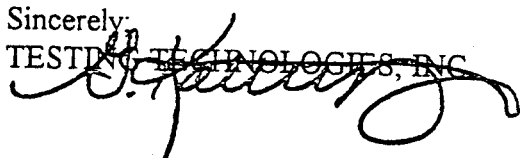
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We feel that with the changes we have made and the discussions we have had with the technicians involved as well as the other radiographers in our company we can prevent another occurrence such as this from happening.

Should you ave any further questions concerning this letter, please contact us at your convenience.

Sincerely,

TESTING TECHNOLOGIES, INC.


Gary Kolbenstetter
Radiation Safety Officer

CONCRETE RADIOGRAPHY CHECKLIST

PROJECT NAME:

PROJECT LOCATION:

PURCHASE ORDER #:

JOB #:

COMPANY NAME:

COMPANY ADDRESS:

PHONE NO:

FAX NO:

HOW DID YOU HEAR ABOUT TESTING TECHNOLOGIES?

1. AREAS TO BE RADIOGRAPHED:

◇ ELEVATED SLAB ◇ WALLS ◇ COLUMNS ◇ BEAMS ◇ OTHER

2. NUMBER OF PENETRATIONS AND/OR AREAS TO INSPECT:

3. THICKNESS OF SLAB:

4. DIAMETER OF PENETRATIONS:

5. OCCUPIED BUILDINGS ARE GENERALLY INSPECTED AFTER NORMAL WORKING HOURS

6. ELEVATIONS/FLOORS TO BE WORKED ON (I.E., 2 THROUGH 8, ETC):

7. PROJECTS LOCATED IN THE STATE OF MARYLAND REQUIRE A 3 WORKING DAYS ADVANCE NOTICE BY THE MARYLAND DEPARTMENT OF RADIOLOGICAL HEALTH. TTI WILL ARRANGE NOTIFICATION.

THE CONTRACTOR/CLIENT MUST PROVIDE:

- ◇ ACCESS ABOVE THE SLAB-REMOVE TRACK, DRYWALL, STUDS, DEBRIS, PROTRUSIONS, CARPETS, ETC. FROM THE INSPECTION/PENETRATION AREA TO ALLOW FLAT CONTACT BETWEEN THE CONCRETE AND FILM CASSETTE.
- ◇ ACCESS BELOW THE SLAB - REMOVE CEILING TILES, DUCT WORK, PROVIDE CLEAR ACCESS TO THE BOTTOM OF THE SLAB.
- ◇ NECESSARY LADDERS/SCAFFOLDING TO REACH THE BOTTOM OF THE SLAB.
- ◇ ELECTRIC POWER-115 VOLT, 15 AMP IS REQUIRED FOR FILM PROCESSING ONLY. THIS MUST BE AVAILABLE IN THE LOADING DOCK AREA OR OTHER STREET LEVEL ACCESS.
- ◇ LAYOUT OF THE AREAS TO BE INSPECTED OR CORED MUST BE MARKED ABOVE AND BELOW THE SLAB OR EACH SIDE OF WALL. MARKS MUST BE WITHIN INCHES OF EACH OTHER. THE FILM IS PLACED ON THE UPPER LEVEL OF THE SLAB, AND THE EQUIPMENT IS SET UP DIRECTLY UNDER THE FILM ON THE FLOOR BELOW.
- ◇ IF PENETRATION SIZES VARY, GIVE SIZES AND NUMBER OF EACH.

◇ AREAS TO BE TESTED MUST BE CLEAR OF ALL NON-RADIOGRAPHIC PERSONNEL AS FOLLOWS*:

IR192 ISOTOPES (SLABS UNDER 12" THICK)		CO60 ISOTOPES (SLABS OVER 12")	
TOP SIDE OF SLAB:	40' - 50' HORIZONTALLY	TOP SIDE OF SLAB:	75 - 80' HORIZONTALLY
BOTTOM SIDE OF SLAB:	100' - 125' HORIZONTALLY	BOTTOM SIDE OF SLAB	175' - 200' HORIZONTALLY

* THESE DISTANCES APPLY TO OPEN AREAS. THEY MAY BE DECREASED IF EXISTING STRUCTURES PROVIDE SHIELDING, SUCH AS WALLS, MECHANICAL ROOM MACHINERY, ETC. NORMAL CLEARANCES ARE ON FLOORS WHICH WE ARE ACTUALLY WORKING, HOWEVER, IF PENETRATIONS USING CO60 ARE CONCENTRATED IN A SMALL AREA OTHER LEVELS MAY BE AFFECTED.

- ◇ NOTIFY TENANTS, SECURITY, BUILDING ENGINEERS, MAINTENANCE AND CLEANING PERSONNEL, OF DATES AND TIMES OF RADIOGRAPHIC OPERATIONS. BUILDINGS WHICH ARE OCCUPIED MUST HAVE ALL PERSONNEL CLEARED ON THE FLOORS WHICH ARE BEING RADIOGRAPHED, AND POSSIBLY ONE TO TWO LEVELS ABOVE AND BELOW. FOR EXAMPLE, WHEN RADIOGRAPHING THE 3RD FLOOR, THE 2ND AND 3RD MUST BE CLEARED. WHEN USING COBALT 60, THE ABOVE HOLDS TRUE, PLUS THE 1ST AND 4TH FLOORS MUST ALSO BE CLEARED. ACCESS TO ALL OFFICES MUST BE MADE AVAILABLE TO ALLOW TTI TECHNICIANS TO PHYSICALLY VERIFY THAT NO UNAUTHORIZED PERSONS ARE PRESENT, IF THIS CAN NOT BE DONE RADIOGRAPHY WILL NOT BE PERFORMED IN THOSE AREAS.
- ◇ INFORM TENANTS OF POSSIBLE DAMAGE TO UN-EXPOSED AND UN-PROCESSED PHOTOGRAPHIC OF MEDICAL X-RAY FILM, AS WELL AS WHOLE BLOOD OR SERUMS.
- ◇ PROVIDE TTI WITH A TIME FRAME WHEN WORK CAN BE PERFORMED WHEN THE LEAST NUMBER OF NON-RADIOGRAPHIC PERSONNEL ARE PRESENT.
- ◇ RETURN THIS FORM COMPLETED AND SIGNED, ALSO, GIVE BUILDING MANAGERMENTS

Name: _____ Phone No.: _____

- ◇ CLIENT SHOULD HAVE A REPRESENTATIVE ON SITE TO ASSIST WITH LOCATING SHOTS OR ASSISTING WITH ANY RE-SHOTS. FOR SECURE AREAS A REPRESENTATIVE MUST BE PRESENT TO ALLOW TTI ACCESS TO SECURE AREAS TO INSURE NO UNAUTHORIZED PERSONS ARE PRESENT.
- ◇ INSURE THAT ADEQUATE LIGHTING EXISTS TO ENABLE US TO OPERATE SAFELY.
- ◇ AREAS TO BE INSPECTED MUST BE CLEAR OF DIRT/DEBRIS AS WELL AS DRY.
- ◇ NOTE FOR JOBS REQUIRING COBALT 60 ISOTOPES:
THESE UNITS ARE NOT PORTABLE IN THAT THEY CANNOT BE MANEUVERED UP OR DOWN STAIRS DUE TO THEIR WEIGHT. WE MUST HAVE ELEVATOR ACCESS.

Thank you.

CLIENT

TESTING TECHNOLOGIES, INC.

Company Name: _____

Representative: _____

Date: _____ (Signature)