

# CONSOLIDATED NDE, INC.

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November 23, 1990

US Nuclear Regulatory Commission  
Region 1  
475 Allendale Road  
King of Prussia, PA 19406

Attention: Regional Administrator

Subject: Response to assessment report, as required by  
May 2, 1990 Suspension and Modification Order

Reference: Docket No. 30-20787  
License No. 29-21452-01  
EA 90-080

Gentlemen:

The following is in response to the findings and recommendations of Scientific Ecology Group, Inc.'s assessment report, of the radiation safety program of Consolidated NDE, Inc.

The response shall be in a section by section format with clarification notes and corrective action taken, as applicable.

The retraining and testing required by the Modification Order and the recommendations concerning the responsibilities of the CNDE Radiation Safety Officer and shall be addressed at the end of the response to the assessment report.

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**SECTION 1.0 INTRODUCTION**

No Response Applicable

**SECTION 2.0 SCOPE AND BASIS OF ASSESSMENT**

No Response Applicable

**SECTION 3.0 ASSESSMENT METHODOLOGY**

No Response Applicable

**SECTION 4.0 MANAGEMENT CONTROL SYSTEM**

Apparent Deficiencies:

(1) Reassignment of radiation safety management responsibilities.

**Clarification - Item 4.1:**

The proposed addition and accompanying resumes of a New Jersey and New England Operations Manager were included in the application for license renewal, submitted to USNRC Region 1, in January 1989.

During the review period, which continues, two separate written requests for specific clarification statements and revisions, to the application, were requested. The qualifications or ability of the additional Operations Managers were not in question. Due to management concern for proper supervision and expanded operational growth, the individuals were assigned to duties prior to approval of the license renewal application.

The assessment interviews conducted with the individuals "revealed that they were knowledgeable and experienced in both the routine and emergency operations related to radiography activities. They appeared, in general, to have appropriate skills in understanding and administering Commission rules and regulations,"

**Corrective Action - Item 4.1:**

1a. CNDE does not anticipate any regulatory objection to the formal addition of the individuals to the license conditions and they continue to perform administrative duties.

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**SECTION 5.0 PERSONNEL TRAINING AND QUALIFICATION**

Apparent Deficiencies:

- (1) Initial training documentation
- (2) Refresher training documentation.
- (3) Periodic training documentation
- (4) Incomplete refresher training documentation
- (5) Approval of New Jersey and New England Operations Managers

**Clarification - Item 5.1:**

The documentation of field examinations for radiographers and assistant radiographers had been incorporated with practical examinations conducted for ASNT certifications. A section of the practical examination included an evaluation of radiographer's and assistant radiographer's competence to safely operate the equipment utilized in radiography.

Copies of ASNT practical examinations have been placed in the files of radiographers, employed up to three years prior to 1990.

**Corrective Action - Item 5.1:**

- 1a. A separate practical examination to evaluate radiographer's and assistant radiographer's competence to operate the equipment utilized in radiography was submitted with the CNDE license renewal application and has been incorporated for all personnel employed since April 1990.

**Clarification - Item 5.2:**

Informal refresher training had been conducted throughout the years, during employee discussions, at the time of regulatory or procedure revisions, when new or modified equipment was purchased, after items of noncompliance or violations were identified by CNDE or a regulatory agency, and on an as needed basis.

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**Corrective Action - Item 5.2:**

- 2a. Formal refresher training shall be conducted on an annual basis for all full time personnel and yearly rehired casual (seasonal) personnel. Personnel whose employment termination (lay off) exceeds one year shall be given formal refresher training before rehire or on the first day of participation in radiographic operations. This formal refresher training shall consist of a review of safety regulations, procedures, and practices, including a practical evaluation of competence to operate the equipment utilized in radiography operations. Implementation and the documentation of this formal refresher training program shall commence in January 1991.

**Clarification - Item 5.3:**

Periodic training had previously been conducted during the field performance audits of radiographers and assistant radiographers.

**Corrective Action:**

- 3a. Periodic training shall be conducted throughout the year, continuing on a yearly basis, during employee discussions, at the time of regulatory or procedure revisions, when new or modified equipment is purchased, when items of noncompliance or violations are identified by CNDE or a regulatory agency, and on an as needed basis. The documentation of periodic training shall commence in January 1991.
- 3b. Field performance audit documentation of radiographers and assistant radiographers have been revised to include a check if the audit qualifies as periodic training and a comment section to list the subjects covered as periodic training.

**Clarification - Item 5.4:**

The signature of two individuals, the instructor's name, and the date of retraining was omitted on one documentation record. The training was conducted July 23, 1990, by Daniel Williams. This date is verified by a review of the individual's time sheets, including the attendance of the two individuals who printed, but did not sign their name.

**Corrective Action - Item 5.4:**

- 1a. The instructor has written his name and the date of the refresher training on the record.

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Clarification and Corrective Action - Item 5.5:

Addressed in: Clarification and Corrective Action - Item 4.1

**SECTION 6.0 CONSOLIDATED NDE, INC. AUDIT PROGRAM**

Apparent Deficiencies:

- (1) Intercompany audit program
- (2) Documented refresher training
- (3) Transportation Quality Assurance Program

Clarification - Item 6.1:

Woodbridge, New Jersey is the CNDE Corporate Office location. The President/Senior Radiation Safety Manager's office is in the building, which is a small, two story unit. During the everyday operations, the management routinely evaluates items covered in the audit form. The President is kept abreast of all operating procedures and record keeping and would be aware of any items of noncompliance or procedure violations. No unsafe operating practices or items of noncompliance could have been conducted without Radiation Safety Management instituting immediate corrective action. Intercompany audits were documented at all other branch offices.

Corrective Action - Item 6.1:

- 1a. Intercompany audits of the Woodbridge, New Jersey office shall be documented and kept on file for review, as required. The documentation shall commence in January 1991.

Clarification - Item 6.2:

The refresher training was conducted for Radiographer 3, the date of his rehire, July 20, 1990, by Daniel Williams. This date is verified by a review of the individual's time sheets.

Corrective Action - Item 6.2:

- 1a. The instructor completed a documentation record.

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**Clarification - Item 6.3:**

For the reasons stated in Clarification - Item 6.1., during the everyday operations, the Radiation Safety Management routinely evaluates the transportation quality assurance program. No unsafe operating practices or items of noncompliance could have been conducted without Radiation Safety Management instituting immediate corrective action. Transportation quality assurance program audits of the branch offices are conducted as part of the intercompany audits, which were documented.

**Corrective Action - item 6.3:**

- 1a. Transportation quality assurance audits of the Woodbridge, New Jersey office shall be documented, the audits for branch offices shall be documented on a separate form and both kept on file for review, as required. The documentation shall commence in January 1991.

**SECTION 7.0 RADIOGRAPHY FIELD SITE OPERATIONS**

"There were no apparent items of noncompliance in this area."

**Additional Note:**

The assessment of field auditor performances stated, "It is the opinion of the SPC that the CNDE audit staff has the ability to adequately assess radiographer performance in the field. The audit staff also appropriately ascertains radiographers knowledge, understanding of, and adherence to radiation safety requirements required by CNDE procedures."

The field audit performed at a CNDE job site in Norwalk, CT revealed two violations. According to the revised Violation, Enforcement and Escalation Policy, the violations were recorded, the radiographer was assessed a monetary penalty, and a record was placed in the individual's file.

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## **SECTION 8.0 RADIOGRAPHY EQUIPMENT INSPECTION AND MAINTENANCE**

### **Apparent Deficiencies**

- (1) Calibration source activity

#### **Clarification - Item 8.1:**

In January 1990, records for survey instruments, as they came due for calibration, were converted to a computer file program. Hard copies were printed out of the data bank onto a meter file form. At this time the strength of the Cesium-137 calibration source was also revised to reflect decayed activity and the lower value inserted into the computer file form. All members of Radiation Safety Management were not fully capable of accessing and utilizing the new computer program and continued to record the calibration information manually, on blank forms.

All of the calibration forms previous to the revision were not destroyed and mistakenly used occasionally. CNDE has had only one calibration source. Therefore, no instrument response would have been calibrated incorrectly or outside the allowable range.

#### **Corrective Action - Item 8.1:**

All outdated survey instrument calibration forms have been removed from the master copy file and destroyed.

## **SECTION 9.0 FACILITIES, MATERIALS, AND OPERATIONS**

There were no items of noncompliance."

## **SECTION 10.0 PERSONNEL RADIATION EXPOSURE CONTROLS**

"There were no items of noncompliance in this area."

#### **Additional Note:**

In response to recommendation, CNDE shall conduct more in depth review and compare in more detail, the corresponding pocket dosimeter and film badge readings. CNDE shall also evaluate whether a correction factor should be developed between pocket dosimeter and film badge readings. Dosimeter Corp., the supplier for dosimeters and film badge services, shall be contacted and their advise solicited for the evaluation.

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**SECTION 11.0 RADIOLOGICAL SURVEYS, POSTING, AND LABELING**

"There were no items of noncompliance in this area."

**Additional Note:**

As stated in the assessment report:

"...topography and geography of the Linden site made it physically impossible to rope off the complete perimeter. Specifically, the one side of the restricted area extended into a back bay marsh. As it was not safe to make a determination of water depth..."

The radiographer "...had unobstructed visual surveillance over the high radiation, radiation, and restricted areas..."

"...had the radiographer roped off the complete available perimeter, it would have satisfied the Modification Order requirement. However, one side would have been very close to the exposure assembly, thus creating an artificial boundary due to topography and geography. It would have exceeded the limits of 10 CFR 20.105(b)(1)..."

In view of field inspections reference in the Modification Order, Consolidated NDE, Inc understands the NRC concerns about the safe performance of field radiography, specifically, adequate surveillance and boundary control. However, CNDE believes the requirement to utilize rope barriers to establish restricted areas at all field sites can be dangerous to radiographers, can lead to noncompliance with other federal and/or state regulations, is an undue burden when the radiographer is physically present and maintains an unobstructed visual surveillance over the entire radiographic operation, may be discriminatory in nature, and is contradictory to the standard review plan utilized by the NRC in evaluating applications for industrial radiography. The review states "The presence of signs and ropes does not prevent access."

CNDE intends to revise and submit in December 1990, the applicable sections of the license renewal application to clarify specific circumstances under which ropes or other materials shall be utilized to established restricted areas at all field sites.

The assessment report states: "CNDE management has provided effective refresher training in the area of boundary placement." Under these circumstances, CNDE respectfully requests the NRC to relax the Modification Order with respect to the use of rope barriers to establish restricted areas at all field sites.



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**SECTION 12.0 INDEPENDENT MEASUREMENTS AND SECURITY**

"There were no items of noncompliance in this area."

**SECTION 13.0 TRANSPORTATION**

Apparent Deficiencies

(1) Transportation Quality Assurance Program

Clarification and Corrective Action - Item 13.1:

Addressed in: Clarification and Corrective Action - Item 6.3

**ADDITIONAL ITEMS REQUIRED BY THE MODIFICATION ORDER:**

Radiographers shall be retrained and testing on all the radiation safety procedures revised as a result of the Modification Order. Specifically, surveillance and boundary control, exposure device and guide tube survey techniques, utilization log records, posting requirements, and the proper use of personal monitoring equipment. The program shall commence in January of 1991.

The Radiation Safety Officer and individual Auditors shall attend a three day seminar conducted by RTS Technology, Inc. The course shall consist of a Radiation Safety Program Administrator Seminar and a review of specific radiation safety procedures. Refer to Page 11 of 11 for the confirmation letter. The seminars shall be scheduled for attendance in the first quarter of 1991.



**CONSOLIDATED  
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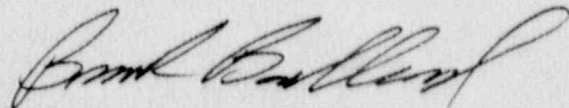
**RESPONSE SUMMARY:**

The CEO and President of Consolidated NDE, Inc. have removed several of the commercial responsibilities formally assigned to the Radiation Safety Officer and have reassigned support staff to assist the RSO in the performance of his duties.

The assessment report states "... in the opinion of the SPC, CNDE has the appropriate resources to manage and direct the program and make the necessary upgrades based on the finding documented in this report.

Consolidated NDE, Inc. believes it has adequately address the violations and deficiencies identified in the Modification Order and the assessment report.

Respectfully submitted,



Bruce R. Ballard  
Radiation Safety Officer  
Consolidated NDE, Inc.

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RTS TECHNOLOGY, INC.



A Company of the Sauerwein Group

23 November 1990

Mr. Bruce R. Ballard  
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Dear Bruce,

With reference to our several telephone conversations, we would be pleased to have your auditors and Radiation Safety Officer attend our Radiation Safety Program Administrators Seminar. As you know, this two day seminar consists of a review of the regulatory requirements applicable to the performance of industrial radiography. We are also prepared to spend an additional day with your auditors and Radiation Safety Officer to discuss your company's specific radiation safety procedures.

We look forward to your group attending our seminar.

Sincerely,

  
John J. Munro III  
Managing Director