

January 15, 2008

EA-07-300  
NMED NO. 070630

Mr. Morgan Subbarayan, P.E.  
President  
CTI and Associates, Inc.  
12482 Emerson Drive  
Brighton, MI 48116

SUBJECT: NOTICE OF VIOLATION [NRC INSPECTION REPORT  
NO. 030-12040/2007-001 (DNMS)] - CTI AND ASSOCIATES, INC.

Dear Mr. Subbarayan:

This refers to the inspection conducted on October 30, 2007, at your Brighton, Michigan facility. An apparent violation of 10 CFR 20.1802 was identified during the inspection and considered for escalated enforcement. This apparent violation involved the failure of a gauge operator to control and maintain constant surveillance of a portable moisture density gauge at a temporary job-site in Detroit, Michigan. The inspection report discussing this apparent violation was transmitted to you in our letter dated November 29, 2007.

In the letter transmitting the inspection report, we provided you with the opportunity to address the apparent violation identified in the report by either attending a predecisional enforcement conference or by providing a written response before we made our final enforcement decision. You subsequently provided a written response in a letter dated December 14, 2007.

Based on the information developed during the inspection and information provided in your written response, the NRC determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. On October 16, 2007, one of your gauge operators was performing soil compaction tests at a temporary job-site when a moisture density gauge was struck by a bulldozer. As a result, the gauge handle and top of the source rod were damaged. The operator had walked less than 20 feet away from the gauge to prepare for the next soil compaction test. The gauge was not in use at the time of being struck and the source rod was locked in the shielded position. Subsequent observation, radiation surveys and a leak test confirmed that the source had not been compromised. You verbally reported the incident to the NRC and submitted a written report dated October 29, 2007. The failure of the operator to control and maintain constant surveillance of the gauge was a violation of 10 CFR 20.1802, "Control of Material not in Storage."

The root cause of the violation was negligence on the part of the gauge operator while performing soil compaction tests. The failure to control and maintain constant surveillance of the gauge could have caused unnecessary radiation exposure to the gauge operator and/or members of the public that could have exceeded regulatory limits, and is a significant regulatory concern. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$3,250 is considered for a Severity Level III violation. Because your facility has not been the subject of escalated enforcement actions within the last two inspections, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. Credit was warranted for your corrective actions which included securing the gauge and surveying the surrounding area; preventing the gauge operator from working alone by having a CTI field supervisor onsite with the gauge operator and subsequently terminating the gauge operator for cause; conducting an emergency safety meeting with all gauge operators on the day of the event; having a second safety meeting a week later; reinforcing in-house training procedures; conducting monthly meetings with the gauge operators during your peak operating season; reviewing radiation safety, transportation, gauge storage, proper handling and site awareness with the gauge operators every two weeks; and conducting weekly site visits by your project managers, field supervisors or Radiation Safety Officer.

Therefore, to encourage prompt and comprehensive correction of violations, and in recognition of the absence of previous escalated enforcement action, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty. In addition, issuance of this Severity Level III violation constitutes escalated enforcement action, which may subject you to increased inspection effort.

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to be taken to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in Inspection Report No. 030-12040/2007-001 (DNMS) and your letters dated October 29, and December 14, 2007. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). The NRC also includes significant enforcement actions on its Web site at (<http://www.nrc.gov/reading-rm/doc-collections/enforcement/actions/>).

Please contact John Madera, Chief, Materials Inspection Branch, with any questions. Mr. Madera can be reached at telephone number (630) 829-9834.

Sincerely,

**/RA/**

James L. Caldwell  
Regional Administrator

Docket No. 030-12040  
License No. 21-17007-01

Enclosure:  
Notice of Violation

cc: State of Michigan

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Sincerely,

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James L. Caldwell  
Regional Administrator

Docket No. 030-12040  
License No. 21-17007-01

Enclosure:  
Notice of Violation

cc: State of Michigan

DISTRIBUTION:

See next page

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**OFFICIAL RECORD COPY**

Letter to Morgan Subbarayan from James L. Caldwell dated January 15, 2008

SUBJECT: NOTICE OF VIOLATION [NRC INSPECTION REPORT  
NO. 030-12040/2007-001 (DNMS)] - CTI AND ASSOCIATES, INC.

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## NOTICE OF VIOLATION

CTI and Associates, Inc.  
Brighton, MI

Docket No. 030-12040  
License No. 21-17007-01  
EA-07-300

During an NRC inspection conducted on October 30, 2007, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 20.1802 requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

Contrary to the above, on October 16, 2007, at a temporary job-site at 6825 West Jefferson Avenue, Detroit, Michigan, the licensee did not control and maintain constant surveillance of licensed material contained in a portable moisture density gauge that was being used in an unrestricted area. Specifically, a gauge operator left a gauge unattended and unsecured, while he was preparing for another density test, which resulted in the gauge being damaged by a bulldozer at the temporary job-site.

This is a Severity Level III violation (Supplement IV).

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to be taken to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in Inspection Report No. 030-12040/2007-001 (DNMS) and your letters dated October 29, and December 14, 2007. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-07-300," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator and the Enforcement Officer, Region III, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days.

Dated this 15<sup>th</sup> day of January 2008