

July 2, 2009

EA-09-030

George Hill
President
Advex Corporation
121 Floyd Thompson Drive
Hampton, VA 23666-1307

SUBJECT: NOTICE OF VIOLATION – (NRC Inspection Report No. 03011069/2008001 and Investigation Report No. 1-2008-037)

Dear Mr. Hill:

This refers to the inspection conducted on June 10-12, 2008 at the Advex Corporation (Advex) facility in Hampton, Virginia. The purpose of the inspection was to examine an off-scale pocket dosimeter event that was reported to the NRC by Lawrence Stippich, your organization's Radiation Safety Officer (RSO), on March 11, 2008. Additional information provided in your correspondence dated March 2 and 6, 2009, was also examined as part of the inspection. On April 14, 2009, the findings of the inspection were discussed with Mr. Stippich during an exit meeting.

In addition, on December 23, 2008, the NRC Office of Investigations (OI), Region I Field Office completed an investigation to determine whether a radiographer and an assistant radiographer at Advex deliberately violated Advex's Operating and Emergency (O&E) procedure, when they failed to stop work and report to the RSO that the assistant radiographer's pocket dosimeter went off-scale while performing a radiographic operation. The NRC concluded, based on the results of the OI investigation, that the lead radiographer and the assistant radiographer deliberately failed to follow the O&E Procedure for the off-scale pocket dosimeter.

An NRC letter transmitting the inspection report and a factual summary of the OI investigation was sent to you on May 18, 2009. This letter also indicated that based on the results of this inspection and OI investigation, the NRC identified apparent violations, and two of the apparent violations were being considered for escalated enforcement action. The apparent violations involved the failures to: (1) wear an alarming ratemeter while performing radiography; and (2) follow your O&E procedure, when a pocket dosimeter was found to be off-scale. The May 18, 2009 NRC letter also provided you with the opportunity to address the apparent violations by attending a predecisional enforcement conference, providing a written response, or using the Alternative Dispute Resolution process, before the NRC made a final enforcement decision. In a letter dated June 2, 2009, that was reviewed by this office on June 10, 2009, you provided a written response to the apparent violations.

Based on the information developed during the inspection and the investigation, as well as the information that you provided in your response, the NRC has determined that violations of NRC requirements occurred. These violations are cited in the enclosed Notice of Violation (Notice)

and the circumstances surrounding them are described in detail in the subject inspection report and factual summary of the OI investigation transmitted to Advex in the NRC letter, dated May 18, 2009.

The first violation, cited in Section I of the Notice, involved the failure of an assistant radiographer to wear an alarming ratemeter while performing radiography, on January 22, 2008. The failure to wear the ratemeter was apparently due to an oversight that occurred on the part of the assistant radiographer and the lead radiographer overseeing his work. Although the assistant radiographer did not receive an overexposure during the time that he failed to wear an alarming ratemeter, he had a potential for becoming overexposed without being aware of it. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level (SL) III.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$6,500 is considered for a SL III violation. Because your facility has not been the subject of escalated enforcement action within the last two years or 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 for corrective action is warranted because Advex took prompt and comprehensive corrective actions to address the violation and prevent recurrence. These actions include: (1) developing a computer-based training program, which will allow the radiation worker to receive refresher training throughout the year; (2) committing the RSO to perform more frequent field audits, in addition to the required performance reviews conducted every six months, to ensure proper radiation safety procedures are being followed at all times; (3) holding "tool box" training periodically, to discuss non-destructive testing issues, including radiographic operation issues and radiation safety; and, (4) taking disciplinary action against the assistant radiographer and the lead radiographer. 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 for this violation.

The second violation, also cited in Section I of the Notice, involved the deliberate failure of the lead radiographer and the assistant radiographer to follow the O&E Procedure and related NRC regulation, when the assistant radiographer had an off-scale pocket dosimeter. Specifically, neither individual notified the RSO after the radiographers realized the assistant radiographer's dosimeter was off-scale. This was contrary to both the Advex procedure, which requires an individual with an off-scale dosimeter to immediately notify the RSO, and 10 CFR 34.47(d), which requires that an individual may not resume work with licensed material until a determination of an individual's radiation exposure is made by the RSO. The lead radiographer testified to OI that he was aware of this requirement, but did not notify the RSO of the assistant's off-scale dosimeter because of the discrepancy with the reading of his dosimeter, the fact that the radiography film did not show visual evidence of an overexposure, and because he did not want to get the company in trouble for having an overexposure. The assistant radiographer testified that he knew the requirement, and that it was his decision to not report the incident to the RSO, because he felt that his dosimeter reading was faulty, since the lead radiographer's dosimeter was not off-scale.

Although no overexposure occurred to the lead or assistant radiographers, this violation is of concern to the NRC given that it was deliberate. In addition, the failure to notify the RSO about the off-scale pocket dosimeter caused a delay in evaluating the assistant radiographer's actual occupational radiation exposure. Therefore, this violation has been categorized in accordance

with the NRC Enforcement Policy at SL III. As stated above, in accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$6,500 is considered for a SL III violation. Because this violation involved willfulness, the NRC considered whether credit was warranted for both *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. The NRC has concluded that identification credit is warranted, because Advex identified this violation on March 10, 2008, when the RSO received and reviewed the quarterly exposure report for Advex employees' film badges, and provided a written evaluation of this event (LER 2008-011) by letter dated April 8, 2008 (ML08120277). The NRC has also concluded that corrective action credit is warranted, because Advex's corrective actions were prompt and comprehensive. The corrective actions included: (1) reviewing the O&E procedure and making needed adjustments, with a projected completion date of August 15, 2009; (2) having the radiographer involved in the above-described events take and pass the Industrial Radiography Radiation Safety Personnel recertification test; (3) providing additional training for the RSO in the Inspection and Maintenance of Equipment and Retrieval, by QSA Global; (4) having all radiographers and assistants re-test on NRC regulations and the O&E procedures; and, (5) ensuring each radiographer and assistant received a minimum of 40 hours of on-the-job training from the RSO, prior to resuming full radiographic operations.

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

A third violation that is not subject to escalated enforcement was also identified as a result of the inspection and investigation, and is cited in Section II of the Notice. This violation involved the failure to read and record exposure in the daily utilization log at the end of the shift on January 22, 2008, and has been categorized as SL IV in accordance with the NRC Enforcement Policy.

The NRC has concluded that information regarding the reasons for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved is already adequately addressed on the docket in this letter, in Inspection Report No. 03011069/2008001, and in the Advex letter dated June 2, 2009. 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 and its enclosure 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, if you choose to provide one, 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/>).

Sincerely,

/RA/

Samuel J. Collins
Regional Administrator

Docket No. 030-11069
License No. 45-16452-01

Enclosure: Notice of Violation

cc:
Commonwealth of Virginia

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/>).

Sincerely,

/RA/

Samuel J. Collins
Regional Administrator

Docket No. 030-11069
License No. 45-16452-01
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| DATE | 06/ 22/09 | 06/25 /09 | 6/30/09 | 6/30/09 | 07/02/09 |

NOTICE OF VIOLATION

Advex Coporation
Hampton, Virginia

Docket No. 03011069
License No. 45-16452-01
EA-09-030

During an NRC inspection conducted on June 10–12, 2008, and an NRC Office of Investigations investigation completed on December 23, 2008, an inspection completed on April 14, 2009, and a subsequent review of information provided in the Advex Corporation letter dated June 2, 2009, violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

I. VIOLATIONS SUBJECT TO ESCALATED ENFORCEMENT

- A. Condition 19 of License No. 45-16452-01 requires, in part, that the licensee shall conduct its program in accordance with statements, representations, and procedures contained in the letter dated May 20, 2002 (ML021420458).

Item 10.V.A.1 of the letter dated May 20, 2002 states “all personnel working in a restricted area shall, at all times, wear a Luxel (OSL) dosimetry, a 0-200mr range charged dosimeter and an alarm ratemeter.”

Contrary to the above, on January 22, 2008, an assistant radiographer worked in a restricted area (permanent radiography vault) and did not wear an alarm ratemeter.

This is a Severity Level (SL) III violation (Supplement VI).

- B. 10 CFR 34.47(d) requires, in part, that if an individual’s pocket chamber is found to be off-scale and the possibility of a radiation exposure cannot be ruled out as the cause, the individual’s personal dosimeter must be sent for processing within 24 hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual’s radiation exposure has been made. This determination must be made by the Radiation Safety Officer (RSO) or the RSO’s designee.

Condition 19 of License No. 45-16452-01 requires, in part, that the licensee shall conduct its program in accordance with statements, representations, and procedures, including the Operating and Emergency (O&E) Procedure, contained in the letter dated May 20, 2002 (ML021420458).

Item 10.C.5 of the letter dated May 20, 2002 states, that if a dosimeter is found to be off-scale, an emergency situation shall be considered to exist, and the following steps shall be followed: (a) The individual shall immediately remove himself from the restricted area and notify the RSO and (b) The individual shall not work with or around radioactive material until a thorough evaluation of the problem is completed and he is authorized to return to work by the RSO.

Contrary to the above, on January 22, 2008, an assistant radiographer's pocket dosimeter was off-scale and the assistant did not remove himself from the restricted area, did not notify the RSO, and continued to work with and around radioactive material. Additionally, the assistant radiographer was allowed to continue working with and around radioactive material although he was not authorized to return to work by the RSO.

This is a SL III violation (Supplement VI).

II. OTHER VIOLATION OF NRC REQUIREMENTS

10 CFR 34.83(a) requires, in part, that each licensee shall maintain direct reading dosimeter readings as required by 10 CFR 34.47(b). 10 CFR 34.47(b) requires, in part, that direct reading dosimeters, such as pocket dosimeters, must be read and exposure recorded at the end of each shift and records maintained in accordance with 10 CFR 34.83.

Contrary to the above, on January 22, 2008, the licensee failed to record two pocket dosimeter readings at the end of the shift on the daily utilization log.

This is a SL IV violation (Supplement VII).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the letter transmitting this Notice of Violation (Notice), in Inspection Report No. 03011069/2008001, and in the Licensee's letter dated June 2, 2009. Therefore, a response to this Notice is not required. 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-09-030," 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, Region I within 30 days of the date of the letter transmitting this Notice.

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 2nd day of July 2009