REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 18, 2009

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

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

SUBJECT: NRC INSPECTION REPORT NO. 03011069/2008001 AND INVESTIGATION REPORT NO. 1-2008-037, ADVEX CORPORATION, HAMPTON, VIRGINIA SITE

Dear Mr. Hill:

On June 10-12, 2008, Kathy Modes of this office conducted the onsite portion of a special safety inspection at the above address of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection examined 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. The inspection also included observations by the inspector, interviews with personnel, and a selective examination of representative records. 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. The enclosed report presents the results of this inspection.

In addition, on March 20, 2008, the NRC Office of Investigations (OI), Region I Field Office initiated an investigation to determine whether a radiographer and an assistant radiographer at Advex Corporation (Advex), Hampton, Virginia, 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. OI found that the subject radiographer and assistant radiographer deliberately caused Advex to violate its O&E procedure, Item 10.C.5, required by Condition 19 of your NRC License, because each individual was aware of the requirement and chose not to follow it. The basis for this conclusion is provided in the enclosed factual summary.

Based on the results of this inspection and OI investigation, three apparent violations were identified. Two of the apparent violations are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. These two apparent violations involved the failure 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 third apparent violation, which is not being considered for escalated enforcement action at this time, involved the failure to record the actual pocket dosimetry readings on the daily utilization log. The current Enforcement Policy is included on the NRC's Website at www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html.

During a telephone conference on April 14, 2009, Ms. Marie Miller of this office, informed your staff that the NRC had sufficient information regarding these apparent violations and your corrective and preventative actions to enable the NRC to make an enforcement decision. However, Ms. Miller offered your organization an opportunity to provide an additional written response, attend a predecisional enforcement conference (PEC), or request an Alternative Dispute Resolution (ADR) mediation session prior to the NRC determining the appropriate enforcement action.

If you choose to provide an additional written response, it should be clearly marked as a "Response to Apparent Violations in Inspection Report No. 03011069/2008001; EA-09-030" and should include for each apparent violation: (1) the reason for the apparent violation, or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and, (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. If your response is not received within 30 days or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision. In addition, if you choose to provide a written response, to the extent possible, your response should not include any personal privacy, proprietary, or safeguards information.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on the apparent violations and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the conference may include: information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned to be taken. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in the enclosed excerpt from NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful. If you request a PEC, the NRC will issue a press release to announce the time and date of the conference. The PEC will be closed to the public observation because the findings are based on an NRC OI report that has not been publically disclosed. The PEC will be transcribed.

Instead of a PEC or written response, Advex Corporation may request ADR with the NRC in an attempt to resolve these issues. ADR is a general term encompassing various techniques for resolving conflict outside of court using a neutral third party. The technique that the NRC has decided to employ is mediation. In mediation, a neutral mediator with no decision-making authority helps parties clarify issues, explore settlement options, and evaluate how best to advance their respective interests. The mediator's responsibility is to assist the parties in reaching an agreement. However, the mediator has no authority to impose a resolution upon the parties. Mediation is a confidential and voluntary process. If the parties (the NRC and Advex) agree to use ADR, they select a mutually agreeable neutral mediator and share equally the cost of the mediator's services. Additional information concerning the NRC's ADR process can be obtained at www.nrc.gov/about-nrc/regulatory/enforcement/adr.html. The Institute on Conflict Resolution (ICR) at Cornell University has agreed to facilitate the NRC's program as an intake neutral. Intake neutrals perform several functions, including: assisting the parties in determining ADR potential for their case, advising parties regarding the ADR process, aiding the parties in selecting an appropriate mediator, explaining the extent of confidentiality, and providing other logistic assistance as necessary. Please contact ICR at Cornell University at

(877) 733-9415 within **10** days of the date of this letter if you are interested in pursuing resolution of these issues through ADR.

Please contact Marie Miller at (610) 337-5205 within **10** days of the date of this letter to notify the NRC of your decision. If you do not contact us regarding your participation in either a PEC or ADR within the time period specified, and an extension of time has not been granted by the NRC, we will make an enforcement decision based on available information.

In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and an additional written response, if you so choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or form the Publically Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (The Public Electronic Reading Room). To the extent possible, you response should not include any personal, privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions concerning this matter, please contact Marie Miller of my staff at (610) 337-5205.

Sincerely,

Original signed by John D. Kinneman

John D. Kinneman, Director
Division of Nuclear Materials Safety

Enclosures:
1. Inspection Report No. 03011069/2008001
2. Factual Summary of Office of Investigation Report No. 1-2008-037
3. Excerpt from NRC Information Notice 96-28

cc:
Lawrence R. Stippich, Radiation Safety Officer
Commonwealth of Virginia

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Sincerely,

/RA/
John D. Kinneman, Director
Division of Nuclear Materials Safety

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3. Excerpt from NRC Information Notice 96-28

cc:
Lawrence R. Stippich, Radiation Safety Officer
Commonwealth of Virginia

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NAME	MMiller/MTM		JKinneman/JDK		DHolody (aed for)		EWilson/EPW	
DATE	5/11/09		5/14/09		5/15/09		5/15/09	
OFFICE	RI/ORA	N	OE*		OGC**		DNMS/RI	
NAME	KFarrar/KLF		LSreenivas/LXS		C Jochim-Boote/CAJ		JKinneman/JDK	
DATE	05/15/09		5/15/09		5/18/09		5/18/09	

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* per discussion 5/15, L. Sreenivas ok w/ OGC's review.
** per email and discussion 5/18, OGC completed review. C. Jochim-Boote

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Factual Summary
OI Report No. 1-2008-037

On March 20, 2008, an investigation was initiated by the U.S. Nuclear Regulatory Commission's Office of Investigations (OI), Region I to determine if a Radiographer and an Assistant Radiographer (Assistant) at Advex Corporation (Advex) deliberately violated the licensee's Operating and Emergency procedures when they failed to stop work and report an incident to the Radiation Safety Officer (RSO) while performing a radiographic operation.

The OI investigation revealed that the Radiographer and Assistant were radiographing pipe welds in the source vault at the Advex facility on January 22, 2008. In between radiographic exposures, the RSO entered the vault (after verifying that the source was not exposed) to ask the Radiographer questions about another job. The RSO testified that, upon exiting the vault, he kicked the source control cable to prevent people from stepping on it. The Radiographer testified that, soon after the RSO left, his alarming rate meter chirped and that he and the Assistant exited the vault and reviewed their pocket dosimeters. Both individuals testified that the Assistant's dosimeter read off-scale high. Although the Radiographer had been working next to the Assistant, the Radiographer's dosimeter was not off-scale. The employees also testified that the Assistant was not wearing his alarming rate meter before starting the job.

Advex procedures require an individual with an off-scale dosimeter to immediately notify the RSO. The Radiographer testified that he knew this requirement, but did not notify the RSO of the Assistant's off-scale dosimeter because of the discrepancy between the readings and because he did not want to get the company in trouble for having an over-exposure. The Assistant testified that he also knew the requirement and that it was his decision to not report the incident to the RSO. The Radiographer and Assistant testified to checking the radiographic film and visually determining that it had not been overexposed. The Radiographer testified that he required the Assistant to obtain an alarming rate meter and they completed their work.

The RSO became aware of the January 22 event on March 10, 2008 when he received and reviewed the quarterly exposure report for Advex employees' film badges. The report indicated that the Assistant received an exposure exceeding 6 rem for the period of November 10, 2007 through January 9, 2008 (the RSO testified that the employees wore these badges until February 15, 2008, at which point he collected and sent them for processing). When asked how he may have received such a dose, the Assistant informed the RSO of the January 22 incident. The RSO testified that he investigated the January 22 incident by having the Assistant medically examined and conducting dose reconstruction. As a result of his investigation, the RSO determined that the January 22, 2008 event could not have led to more than 650 mrem of exposure and that the badge exposure most likely occurred on one of several possible dates during which the Assistant may have left his film badge on his coat in a location where it became exposed. The Assistant testified that the RSO's explanation was plausible.