

## JChaissonProcPEm Resource

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**From:** Harrison, Deborah  
**Sent:** Wednesday, December 22, 2010 5:23 PM  
**To:** Collins, Elmo; Howell, Art; Hilton, Nick; Caniano, Roy; Wray, John; Fuller, Karla; Kellar, Ray; Woods, Susanne; Faria-Ocasio, Carolyn; Maier, Bill; Maier, Christi; Coleman, Nicole; Dricks, Victor; Erickson, Randy; Sreenivas, Leelavathi; Uselding, Lara; Browder, Rachel; Norman, Kerstun; Cain, Chuck; Spitzberg, Blair; Summers, Robert; Campbell, Vivian; Herrera, Marisa; Einberg, Christian; Whitten, Jack; Burgess, Michele; Villamar, Glenda; Freeman, Denise; White, Duane; Trifiletti, Sue; OEMAIL Resource; OEWEB Resource  
**Subject:** NRC INSPECTION REPORT 030-37780/2009-001 AND INVESTIGATION REPORT 4-2009-066 (ML103560822)  
**Attachments:** PEC\_EA-10-102 TGR\_IR09-01-LTR.doc

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**Subject:** NRC INSPECTION REPORT 030-37780/2009-001 AND INVESTIGATION  
REPORT 4-2009-066 (ML103560822)  
**Sent Date:** 12/22/2010 5:23:10 PM  
**Received Date:** 12/22/2010 5:24:16 PM  
**From:** Harrison, Deborah

**Created By:** Deborah.Harrison@nrc.gov

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
612 EAST LAMAR BLVD, SUITE 400  
ARLINGTON, TEXAS 76011-4125

December 22, 2010

EA-10-102

Texas Gamma Ray, LLC  
ATTN: Steve Steen, President/CEO  
2815 Lilac  
Pasadena, Texas 77053

SUBJECT: NRC INSPECTION REPORT 030-37780/2009-001 AND INVESTIGATION  
REPORT 4-2009-066

Dear Mr. Steen:

This refers to the safety and security inspection conducted on June 4, 2009, at the licensee's temporary job sites in and around Rock Springs, Wyoming; on July 1, 2009, in Green River, Wyoming; and on April 20, 2010, in Rock Spring, Wyoming; with continued in-office review through November 30, 2010. The inspection was an examination of activities conducted under your license as they relate to radiation safety, security and to compliance with the Commission's rules and regulations, as well as the conditions of your NRC license. Within these areas, the inspection consisted of a selected examination of records, observations of activities, and interviews with personnel. In addition, an investigation was conducted by the NRC's Office of Investigations. Preliminary inspection findings were discussed with Robert Denton, Radiation Safety Officer, at the conclusion of the onsite inspection. A final exit meeting was conducted telephonically with you, Mr. Denton, and your consultant on November 30, 2010. The enclosed report presents the results of this inspection and investigation.

Based on the results of this inspection, three apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html](http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html). The apparent violations involved security-related violations and storage of radioactive material at a location in Rock Springs, Wyoming, that was not authorized on the license. Since the NRC has not made a final determination in this matter, a Notice of Violation is not being issued for these inspection findings at this time. In addition, please be advised that the number and characterization of the apparent violations described in the enclosed inspection report may change as a result of further NRC review.

**“Enclosure 2 transmitted herewith contains SUNSI. When separated from Enclosure 2, this transmittal document and Enclosures 1, 3, and 4 are decontrolled.”**

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Texas Gamma Ray, LLC  
EA-10-102

- 2 -

During our telephonic exit meeting conducted on November 30, 2010, we informed you that we planned to conduct a predecisional enforcement conference to discuss the apparent violations. A closed predecisional enforcement conference to discuss these apparent violations will be scheduled at a mutually-acceptable date in the near future. The predecisional enforcement conference will be closed because these issues involve security-related information. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to assist the NRC in making an enforcement decision. This 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.

The conference will provide an opportunity for you to provide your perspective on these matters and any other information that you believe the NRC should take into consideration in making an enforcement decision. 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 violation. The guidance in the enclosed NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful.

You will be advised by separate correspondence of the results of our deliberations on this matter. A response to the apparent violations is not required at this time.

The material enclosed herein contains security-related information in accordance with 10 CFR 2.390(d); its disclosure to unauthorized individuals could present security vulnerability. Therefore, the material will not be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). This letter and its enclosures must be protected from unauthorized disclosure in accordance with Section IC-6 of Attachment B to NRC Order EA 05-090. Security-related information is also discussed in Regulatory Information Summary RIS-2005-031, "Control of Security-Related Sensitive Unclassified Non-Safeguards Information" (ML053480073), which is available on the NRC's Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions concerning this matter, please contact Ms. Vivian Campbell of my staff at 817-860-8287.

Sincerely,

/RA/

Roy J. Caniano, Director  
Division of Nuclear Materials Safety

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Texas Gamma Ray, LLC  
EA-10-102

- 3 -

Docket: 030-37780  
License: 42-29303-01

Enclosures:

1. NRC Inspection Report 030-37780/2009-001
2. Security Related Information – nonpublic
3. Predecisional Enforcement Conference Agenda
4. NRC Information Notice 96-28

cc (w/Enclosure 1):

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Radiological Services Supervisor  
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Texas Gamma Ray, LLC  
EA-10-102

- 4 -

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bcc hard copy:

RIV Materials Docket File (5th Floor)

SUNSI Review Completed: ADAMS:  Yes      Initials: LD  
 Not Publicly Available       Sensitive: Security-related – Periodic review required

Draft: S:\RAS\ACES\ENFORCEMENT\EA CASES - OPEN\TX Gamma Ray\_EA-10-102\_OI\_ICs\PEC\_EA-10-102 TGR\_IR09-01.doc

Final: R:\\_DNMS\2010\TGR\_IR 09-01

**ML103560822**

NMSB-A	C:NMSB-A	C:NMSB-B	ACES	OI	D:DNMS
LDonovan	VHCampbell	JEWhitten	RKellar	CHolland	RJCaniano
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11/23/10	11/23/10	11/23/10	11/23/10	11/30/10	12/22/10

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket: 030-37780

License: 42-29303-01

Report: 030-37780/2009-001

EA No: EA-2010-102

Licensee: Texas Gamma Ray, LLC

Locations: 

- 1) Green River, Wyoming (records review and meeting with the corporate radiation safety officer)
- 2) On the access road to the Anadarko Petroleum Corporation refinery located 40 miles east of Rock Springs on Interstate-80
- 3) 2601 Artesian Circle, Rock Springs, Wyoming
- 4) 1535 Elk Street, Rock Springs, Wyoming

Dates: June 4, 2009, through November 30, 2010

Inspector: Lawrence Donovan, Health Physicist  
Nuclear Materials Safety Branch A

Approved By: Vivian H. Campbell, Chief  
Nuclear Materials Safety Branch A



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## EXECUTIVE SUMMARY

Texas Gamma Ray, LLC  
NRC Inspection Report 030-37780/2009-001

This was an initial inspection of licensed activities involving the use of byproduct material for industrial radiography authorized by NRC License 42-29303-01, issued on January 9, 2009. The scope of the inspection included an interview with the corporate radiation safety officer during a meeting in Green River, Wyoming, and review of records pertinent to licensed activities conducted in NRC jurisdiction. In addition, the NRC inspector interviewed licensee personnel, reviewed records specific to temporary job site activities, and observed licensed activities involving storage and security of radioactive material at three temporary job site locations: 1) on the access road to the Anadarko Petroleum Corporation's refinery located 40 miles east of Rock Springs, Wyoming, on Interstate-80, 2) 2601 Artesian Circle, Rock Springs, Wyoming, and 3) the storage facility at 1535 Elk Street, Rock Springs, Wyoming. Additionally, an investigation was performed by NRC's Office of Investigations. The inspection also included a review of information obtained during the investigation by the Office of Investigations. This report describes the findings of the inspection.

### Program Overview

Texas Gamma Ray, LLC, is a large nondestructive testing company with its main office located in Pasadena, Texas. Texas Gamma Ray, LLC's, NRC license authorizes industrial radiographic operations only at temporary job-site locations where the NRC maintains jurisdiction. Texas Gamma Ray, LLC, had previously conducted licensed activities in NRC jurisdiction under the general license provisions contained in 10 CFR 150.20 using their Texas Agreement State license, but began work under their NRC license May 2009 in Wyoming. (Section 1)

### Apparent Violations Considered for Escalated Enforcement

- The license appears to have failed to comply with NRC's security-related requirements. (Enclosure 2 – contains sensitive information and will not be publicly available)
- The licensee appears to have stored licensed byproduct material at a location not authorized on the license. (Section 2.2)

### Corrective Actions

- The licensee removed the radioactive material from the unauthorized storage location and returned the material to its corporate office.
- The licensee developed new procedures to ensure that no material would be stored at a temporary job site unless specifically approved by the radiation safety officer.
- The licensee trained all industrial radiography personnel on the new procedures.

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## REPORT DETAILS

### **1. Program Overview (87121)**

#### 1.1 Inspection Scope

The inspection included interviews of licensee personnel assigned to work in Wyoming, and observation of licensed activities at three temporary job-site locations: on the access road to the Anadarko Petroleum Corporation refinery located 40 miles east of Rock Springs on Interstate-80 and at 2601 Artesian Circle, Rock Springs, Wyoming, on June 4, 2009, and at the storage facility located at 1535 Elk Street, Rock Springs, Wyoming, on April 20, 2010.

#### 1.2 Observations and Findings

The Texas Gamma Ray, LLC's (TGR), corporate office is located in Pasadena, Texas. The Texas Gamma Ray, LLC, is authorized under NRC License 42-29303-01, issued January 9, 2009, to possess and use byproduct material for industrial radiographic operations only at temporary job sites where the NRC maintains jurisdiction for regulating the use of byproduct material. The Texas Gamma Ray, LLC, began work under its NRC license in May 2009 in the area of Rock Springs, Wyoming.

### **2. Inspection Findings (87121 and TI-2800/038)**

#### 2.1 Inspection Scope

The inspection included a review of selected TGR records maintained by the corporate office and the records that are required to be available for review at the temporary job sites pursuant to 10 CFR 34.89. Interviews were conducted with the corporate radiation safety officer (RSO) on July 1, 2009, and with the radiographers who were assigned to work in Wyoming on June 4, 2009. The inspector conducted inspections of two radiography crews on June 4, 2009. One crew was inspected on the access road to the Anadarko Petroleum Corporation's refinery located 40 miles east of Rock Springs on Interstate-80. The second crew was inspected at the radiographer's temporary residence at 2601 Artesian Circle, Rock Springs, Wyoming. The inspection at the temporary job sites consisted of an assessment of the storage and transportation of radioactive material, and other safety elements associated with radiographic operations.

#### 2.2 Observations and Findings

The NRC License 42-29303-01 authorizes TGR to conduct industrial radiographic operations only at temporary job sites in NRC jurisdiction. A field station for storage or use was not authorized on the license at the time of the inspection.

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### **Apparent Violation of License Condition 11 of NRC License 42-29303-01**

License Condition 11 of the NRC license states that the licensee shall store and use radioactive material only at temporary job sites anywhere in the United States where the NRC maintains jurisdiction for regulation for the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States. The license condition does not authorize storage and use at field stations or permanent radiographic installations.

On the basis of interviews with the radiographer on April 22, 2010, the NRC inspector determined that the licensee stored a source in quantities of concern at 1535 Elk Street, Rock Springs, Wyoming, from mid-December 2009 to April 30, 2010. The radiographer stated that in early December 2009, he attempted to contact the RSO to discuss storage and security of the radioactive material when licensee personnel would not be in Wyoming during the holiday period. The RSO was not available, but the office manager instructed the radiographer to store the material at the facility located at 1535 Elk Street (the permanent storage facility). Consequently, in mid-December 2009, the licensee placed a radiographic exposure device in storage at a facility not authorized on the license. The radiographer stated that the source was continued to be stored at this location when not used at a temporary job site from mid-December 2009.

During the review of the licensee's docket file, the NRC inspector found that the licensee had informed the NRC in an email dated October 16, 2009, that they were planning to add a permanent storage site at 1535 Elk Street. On the same day, the NRC acknowledged receipt of the email and identified additional information that would be needed before the NRC could authorize storage at that location. In an email on October 27, 2009, the licensee stated that they were proceeding with preparations for storage of radioactive material at this site. The licensee indicated that an amendment request would be submitted after the site preparations were complete. However, the licensee did not submit a request to add a field station to their NRC license.

The storage of radioactive material at 1535 Elk Street in Rock Springs, Wyoming, which was not authorized on the NRC license, was identified as an apparent violation of License Condition 11 of NRC License No. 42-29303-01. (030-37780/2009-001-001)

### 2.3 Conclusions

One apparent safety violation is being considered for escalated enforcement. This apparent violation involves the storage of radioactive material at a location in Rock Springs, Wyoming, that was not authorized in License Condition 11 of the NRC license. The NRC considers this violation significant in that it impacted the NRC regulatory process. The NRC was unable to ensure public health and safety and the security of licensed material by assessing the adequacy of the licensee's storage facility prior to the use of the facility.

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**3. Corrective Actions (87121)**

Immediate and long-term corrective actions for some of the apparent violations are not fully known as of the date of this inspection report. The corrective actions listed should not be considered complete or final.

For the apparent violations of License Condition 11 of the NRC license, TGR removed the radioactive material from the storage location at 1535 Elk Street in Rock Springs, Wyoming, on April 30, 2010, and returned the material to its corporate office in Pasadena, Texas. In addition, the RSO developed new procedures to ensure that no material would be stored at a temporary job site unless specifically approved by the RSO. From September 22 through October 31, 2010, radiography personnel were trained on the new procedures.

**4. Exit Meeting Summary (87121)**

A preliminary exit briefing was conducted with Robert Denton, TGR's RSO, by telephone at the conclusion of the inspection. A final telephonic exit briefing was conducted with Steve Steen, President of TGR, Mr. Denton, and TGR's consultant on November 30, 2010, to discuss the findings presented in this report. The licensee acknowledged the inspector's findings.

No proprietary information was identified.

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PARTIAL LIST OF PERSONS CONTACTED

Licensee

Steve Steen, President/CEO  
Robert Denton, Corporate RSO  
James Chaisson, Radiographer  
Michael Hale, Assistant Radiographer  
Pete Moss, Office Manager

INSPECTION PROCEDURES USED

87121 Industrial Radiography Programs

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

030-37868/2009-001-001	APV	An apparent violation involving the failure to confine its possession and use of byproduct materials to the locations and purposes authorized by the license
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Closed

None

Discussed

None

LIST OF ACRONYMS USED

APV	Apparent Violation
CFR	<i>Code of Federal Regulations</i>
EA	Enforcement Action
TGR	Texas Gamma Ray
NRC	Nuclear Regulatory Commission
RSO	Radiation Safety Officer
VIO	Violation

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PREDECISIONAL ENFORCEMENT CONFERENCE AGENDA

TEXAS GAMMA RAY, LLC  
DATE and TIME TBD  
US NRC REGION IV  
ARLINGTON, TEXAS

1. INTRODUCTIONS/OPENING REMARKS --  
ROY CANIANO, DIRECTOR, DIVISION OF NUCLEAR MATERIALS SAFETY
2. ENFORCEMENT PROCESS --  
RAY KELLAR, SENIOR ENFORCEMENT SPECIALIST
3. APPARENT VIOLATIONS & REGULATORY CONCERNS --  
VIVIAN CAMPBELL, CHIEF, NUCLEAR MATERIALS SAFETY BRANCH A
4. LICENSEE PRESENTATION --  
TEXAS GAMMA RAY, INC, MANAGEMENT
5. BREAK - 10 MINUTES
6. RESUMPTION OF CONFERENCE
7. CLOSING REMARKS --  
TEXAS GAMMA RAY, INC, MANAGEMENT
8. CLOSING REMARKS --  
ROY CANIANO, DIRECTOR, DIVISION OF NUCLEAR MATERIALS SAFETY

Enclosure 3

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, D.C. 20555

May 1, 1996

NRC INFORMATION NOTICE 96-28: SUGGESTED GUIDANCE RELATING TO  
DEVELOPMENT AND IMPLEMENTATION OF  
CORRECTIVE ACTION

Addressees

All material and fuel cycle licensees.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to provide addressees with guidance relating to development and implementation of corrective actions that should be considered after identification of violation(s) of NRC requirements. It is expected that recipients will review this information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not new NRC requirements; therefore, no specific action nor written response is required.

Background

On June 30, 1995, NRC revised its Enforcement Policy (NUREG-1600) 60 FR 34381, to clarify the enforcement program's focus by, in part, emphasizing the importance of identifying problems before events occur, and of taking prompt, comprehensive corrective action when problems are identified. Consistent with the revised Enforcement Policy, NRC encourages and expects identification and prompt, comprehensive correction of violations.

In many cases, licensees who identify and promptly correct non-recurring Severity Level IV violations, without NRC involvement, will not be subject to formal enforcement action. Such violations will be characterized as "non-cited" violations as provided in Section VII.B.1 of the Enforcement Policy. Minor violations are not subject to formal enforcement action. Nevertheless, the root cause(s) of minor violations must be identified and appropriate corrective action must be taken to prevent recurrence.

If violations of more than a minor concern are identified by the NRC during an inspection, licensees will be subject to a Notice of Violation and may need to provide a written response, as required by 10 CFR 2.201, addressing the causes of the violations and corrective actions taken to prevent recurrence. In some cases, such violations are documented on Form 591 (for materials licensees)

Enclosure 4

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IN 96-28  
May 1, 1996  
Page 2 of 6

which constitutes a notice of violation that requires corrective action but does not require a written response. If a significant violation is involved, a predecisional enforcement conference may be held to discuss those actions. The quality of a licensee's root cause analysis and plans for corrective actions may affect the NRC's decision regarding both the need to hold a predecisional enforcement conference with the licensee and the level of sanction proposed or imposed.

#### Discussion

Comprehensive corrective action is required for all violations. In most cases, NRC does not propose imposition of a civil penalty where the licensee promptly identifies and comprehensively corrects violations. However, a Severity Level III violation will almost always result in a civil penalty if a licensee does not take prompt and comprehensive corrective actions to address the violation.

It is important for licensees, upon identification of a violation, to take the necessary corrective action to address the noncompliant condition and to prevent recurrence of the violation and the occurrence of similar violations. Prompt comprehensive action to improve safety is not only in the public interest, but is also in the interest of licensees and their employees. In addition, it will lessen the likelihood of receiving a civil penalty. Comprehensive corrective action cannot be developed without a full understanding of the root causes of the violation.

Therefore, to assist licensees, the NRC staff has prepared the following guidance, that may be used for developing and implementing corrective action. Corrective action should be appropriately comprehensive to not only prevent recurrence of the violation at issue, but also to prevent occurrence of similar violations. The guidance should help in focusing corrective actions broadly to the general area of concern rather than narrowly to the specific violations. The actions that need to be taken are dependent on the facts and circumstances of the particular case.

The corrective action process should involve the following three steps:

1. Conduct a complete and thorough review of the circumstances that led to the violation. Typically, such reviews include:
  - a. Interviews with individuals who are either directly or indirectly involved in the violation, including management personnel and those responsible for training or procedure development/guidance. Particular attention should be paid to lines of communication between supervisors and workers.

Enclosure 4

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IN 96-28  
May 1, 1996  
Page 3 of 6

- b. Tours and observations of the area where the violation occurred, particularly when those reviewing the incident do not have day-to-day contact with the operation under review. During the tour, individuals should look for items that may have contributed to the violation as well as those items that may result in future violations. Reenactments (without use of radiation sources, if they were involved in the original incident) may be warranted to better understand what actually occurred.
  - c. Review of programs, procedures, audits, and records that relate directly or indirectly to the violation. The program should be reviewed to ensure that its overall objectives and requirements are clearly stated and implemented. Procedures should be reviewed to determine whether they are complete, logical, understandable, and meet their objectives (i.e., they should ensure compliance with the current requirements). Records should be reviewed to determine whether there is sufficient documentation of necessary tasks to provide an auditable record and to determine whether similar violations have occurred previously. Particular attention should be paid to training and qualification records of individuals involved with the violation.
2. Identify the root cause of the violation.

Corrective action is not comprehensive unless it addresses the root cause(s) of the violation. It is essential, therefore, that the root cause(s) of a violation be identified so that appropriate action can be taken to prevent further noncompliance in this area, as well as other potentially affected areas. Violations typically have direct and indirect cause(s). As each cause is identified, ask what other factors could have contributed to the cause. When it is no longer possible to identify other contributing factors, the root causes probably have been identified. For example, the direct cause of a violation may be a failure to follow procedures; the indirect causes may be inadequate training, lack of attention to detail, and inadequate time to carry out an activity. These factors may have been caused by a lack of staff resources that, in turn, are indicative of lack of management support. Each of these factors must be addressed before corrective action is considered to be comprehensive.

Enclosure 4

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~~OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION~~

IN 96-28  
May 1, 1996  
Page 4 of 6

3. Take prompt and comprehensive corrective action that will address the immediate concerns and prevent recurrence of the violation.

It is important to take immediate corrective action to address the specific findings of the violation. For example, if the violation was issued because radioactive material was found in an unrestricted area, immediate corrective action must be taken to place the material under licensee control in authorized locations. After the immediate safety concerns have been addressed, timely action must be taken to prevent future recurrence of the violation. Corrective action is sufficiently comprehensive when corrective action is broad enough to reasonably prevent recurrence of the specific violation as well as prevent similar violations.

In evaluating the root causes of a violation and developing effective corrective action, consider the following:

1. Has management been informed of the violation(s)?
2. Have the programmatic implications of the cited violation(s) and the potential presence of similar weaknesses in other program areas been considered in formulating corrective actions so that both areas are adequately addressed?
3. Have precursor events been considered and factored into the corrective actions?
4. In the event of loss of radioactive material, should security of radioactive material be enhanced?
5. Has your staff been adequately trained on the applicable requirements?
6. Should personnel be re-tested to determine whether re-training should be emphasized for a given area? Is testing adequate to ensure understanding of requirements and procedures?
7. Has your staff been notified of the violation and of the applicable corrective action?
8. Are audits sufficiently detailed and frequently performed? Should the frequency of periodic audits be increased?

Enclosure 4

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**~~OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION~~**

IN 96-28  
May 1, 1996  
Page 5 of 6

9. Is there a need for retaining an independent technical consultant to audit the area of concern or revise your procedures?
10. Are the procedures consistent with current NRC requirements, should they be clarified, or should new procedures be developed?
11. Is a system in place for keeping abreast of new or modified NRC requirements?
12. Does your staff appreciate the need to consider safety in approaching daily assignments?
13. Are resources adequate to perform, and maintain control over, the licensed activities? Has the radiation safety officer been provided sufficient time and resources to perform his or her oversight duties?
14. Have work hours affected the employees' ability to safely perform the job?
15. Should organizational changes be made (e.g., changing the reporting relationship of the radiation safety officer to provide increased independence)?
16. Are management and the radiation safety officer adequately involved in oversight and implementation of the licensed activities? Do supervisors adequately observe new employees and difficult, unique, or new operations?
17. Has management established a work environment that encourages employees to raise safety and compliance concerns?
18. Has management placed a premium on production over compliance and safety? Does management demonstrate a commitment to compliance and safety?
19. Has management communicated its expectations for safety and compliance?
20. Is there a published discipline policy for safety violations, and are employees aware of it? Is it being followed?

Enclosure 4

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~~OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION~~

IN 96-28  
May 1, 1996  
Page 6 of 6

This information notice requires no specific action nor written response. If you have any questions about the information in this notice, please contact one of the technical contacts listed below.

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Enclosure 4

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