

February 23, 2006

EA-05-120  
EA-05-238

Michael Lange  
Chief Executive Officer  
MISTRAS Holdings Group, d/b/a Conam Inspection and  
Engineering Services, Inc./Quality Services Laboratories, Inc.  
899 Carol Court  
Carol Stream, IL 60188

SUBJECT: PREDECISIONAL ENFORCEMENT CONFERENCE SUMMARY

Dear Mr. Lange:

On January 31, 2006, representatives of MISTRAS Holdings Group met with NRC personnel in the Region III office located in Lisle, Illinois, to discuss the apparent violations identified in NRC Inspection Report Nos. 030-35114/05-003 and 030-35114/05-004(DNMS). The predecisional enforcement conference was held at the request of Region III. The conference attendees are listed in Enclosure 1.

The NRC opened the conference with introductions, provided an overview of the Enforcement Policy, and presented the apparent violations (Enclosure 2). During the conference, you and your staff agreed with six of the seven apparent violations, and presented the root cause for each of the violations and your immediate and long-term corrective actions to prevent recurrence. Your corrective actions are documented in your letter and 30-day report dated December 1, 2005, and our commitment and acknowledgment letter to you dated December 9, 2005. You also discussed your plans to implement a companywide Human Behavioral-based Safety program.

It is our understanding that you disagreed with the apparent violation of 10 CFR 34.41(a) and License Condition 21 of License No. 12-16559-02 that pertain to the conduct of radiography when only one qualified individual is present. Your representatives stated that they considered it acceptable if one of the qualified individuals is not constantly observing the radiography operations as long as he is in the immediate area and can render assistance if needed. Specifically, you indicated that it was acceptable for the radiographer to leave the radiographer's assistant alone at the restricted area boundary when radiography is in progress while the radiographer returned film to the radiography truck because the truck was in the immediate area and the radiographer could render assistance if needed.

NRC will continue its review of the apparent violations. Accordingly, no response to this letter is required. You will be informed of our final review on these issues in separate correspondence.

M. Lange

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

**/RA by G. Shear Acting for/**

Steven A. Reynolds, Director  
Division of Nuclear Materials Safety

Docket No. 030-35114  
License No. 12-16559-02

Enclosures:

1. Attendance List
2. Slides

Distribution w/encls:

Docket File  
G. Morell, NMSS  
G. E. Grant, RIII  
RIII Enf. Coordinator

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NAME	Wiedeman:mb		O'Brien		Madera		Reynolds	
DATE	02/03/06		02/10/06		02/21/06		02/23/06	

**OFFICIAL RECORD COPY**

List of Attendees  
MISTRAS Holdings Group, d/b/a Conam Inspection and  
Engineering Services, Inc./Quality Services Laboratories, Inc.  
Predecisional Enforcement Conference  
Tuesday, January 31, 2006

Licensee

Michael Lange, Chief Executive Officer  
Dennis Bertolotti, President  
Robert Slack, Director of Regulatory Affairs  
George Huber, Eastern Regional Manager  
Scott Krasnicka, Corporate Radiation Safety Officer

Nuclear Regulatory Commission

Region III

Geoffrey E. Grant, Deputy Regional Administrator  
Bruce Berson, Esq., Regional Counsel  
Gary L. Shear, Deputy Director, Division of Nuclear Materials Safety  
John R. Madera, Chief, Materials Inspection Branch  
Kenneth G. O'Brien, Enforcement/Investigations Officer  
Charles Weil, Enforcement Specialist  
Darrel Wiedeman, Senior Health Physicist

Headquarters

\*Gregory Morell, Enforcement Coordinator, Office of Nuclear Materials Safety and Safeguards  
\*Sally Merchant, Enforcement Specialist-Materials, Office of Enforcement

Region I

\*Judith Joustra, Senior Health Physicist  
\*Ronald Rolph, Health Physicist  
\*Michelle Beardsley, Health Physicist

\*Participation by telephone

**SLIDE 1**

**APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW**

- A. 10 CFR 20.1201(a)(2)(ii) requires, in part, that the licensee control the occupational dose to the skin of the whole body or the skin of the extremities to an annual dose limit of 50 rem shallow-dose equivalent.

Contrary to the above, on October 27, 2005, the licensee did not limit the annual dose to the extremity of an adult radiographer to 50 rem shallow-dose equivalent. Specifically, the individual received a radiation exposure of approximately 99 rem to the right hand on October 27, 2005.

## SLIDE 2

### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- B. 10 CFR 34.49 (b) requires, in part, that the licensee conduct a survey of the radiographic exposure device and guide tube after each exposure when approaching the device or the guide tube to determine that the sealed source has returned to its shielded position before dismantling equipment.

Contrary to the above, on October 27, 2005, the licensee did not conduct a survey of the radiographic exposure device and guide tube after taking an exposure. Specifically, after an exposure was made at the Sunoco refinery-Unit 1332, the radiographer approached the exposure device and guide tube and started to dismantle the equipment without performing the required survey.

### SLIDE 3

#### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- C. 10 CFR 34.23(a) requires, in part, that during radiographic operations, the sealed-source assembly must be secured in the shielded position each time the source is returned to that position.

Condition 21 of License No. 12-16559-02 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in the letter dated August 10, 2004. Item 15.9.1 of the licensee's Operating and Emergency Procedures Manual, an attachment to letter dated August 10, 2004, requires that after retracting the source, rotate the selector ring to the lock position, and depress the plunger lock.

Contrary to the above, on October 27, 2005, the radiographer did not secure the sealed source in the shielded position after the source was returned to the shielded position. Specifically, the licensee's radiographer did not rotate the selector ring to the lock position and did not depress the plunger lock before disassembling the guide tube.

## SLIDE 4

### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- D. 10 CFR 34.41(a) requires that when radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of 10 CFR 34.43(c). The additional qualified individual shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Radiography may not be performed if only one qualified individual is present.

Condition 21 of License No. 12-16559-02 requires, in part, that the licensee conduct its program in accordance with statements, representations, and procedures contained in the letter dated August 10, 2004. Item 11.0 of the licensee's Operating and Emergency Procedures Manual, an attachment to letter dated August 10, 2004, states, in part, that "Two individuals must be present whenever radiography is actively being performed at a temporary radiographic area. A minimum of one radiographer accompanied by either another radiographer, or an assistant/trainee, shall be in attendance. If an assistant/trainee is part of the radiography crew, the radiographer is required to be present at the site where the sealed source is being used, available to give immediate assistance, and directly observing the assistant/trainee's performance of operations. . ."

Contrary to the above, on October 27, 2005, radiography was performed with only one qualified individual present. Specifically, while an exposure was being conducted, the radiographer assistant observed the restricted area while the radiographer walked to the licensee's truck, which was out of the line of sight of the radiographer assistant for approximately 1 to 3 minutes. As a result, the radiographer did not observe the operation and was not capable of providing immediate assistance to prevent unauthorized entry and did not directly observe the radiographer assistant during the performance of operations.

## SLIDE 5

### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- E. 10 CFR 20.1801 requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. 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. As defined in 10 CFR 20.1003, *controlled area* means an area, outside of a restricted area, but inside the site boundary, access to which can be limited by the licensee for any reason; and *unrestricted area* means an area, access to which is neither limited nor controlled by the licensee.

Contrary to the above, on January 31, 2005, the licensee did not secure from unauthorized removal or limit access to 24.5 curies of iridium-192 in a radiography camera located in a licensee vehicle, which was located in an uncontrolled area, nor did the licensee control and maintain constant surveillance of this licensed material. Specifically, the radiography camera was found in an unlocked darkroom of a company vehicle parked in a parking lot of their Woodbridge, New Jersey facility.



## SLIDE 6

### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- F. 10 CFR 20.2201 (a)(1)(i) requires the licensee to report immediately after its occurrence becomes known to the licensee, any lost, stolen or missing licensed material in an aggregate quantity greater than 1,000 times the quantity specified in Appendix C to Part 20.

Contrary to the above, the licensee failed to immediately report the missing 24.5 curies of iridium-192, an aggregate quantity greater than 1,000 times the quantity specified in Appendix C to Part 20, when the material was missing for the inventory on January 31, 2005.

## SLIDE 7

### APPARENT VIOLATION THAT MAY CHANGE AS A RESULT OF FURTHER REVIEW

- G. Condition No. 21 of License Number 12-16559-02 requires, in part, that the licensee conduct its program in accordance with the procedures contained in the letter dated August 10, 2004. In that letter, the licensee's Radiation Safety Operating and Emergency Procedure Manual, Revision M, Section 11.6, requires that a survey be performed of the perimeter of a posted area to assure proper posting as soon as the source is exposed when performing radiographic operations at a temporary job site.

Contrary to the above, on October 25, 2005, the licensee failed to perform a perimeter survey when the source was exposed at a temporary job site at their Trainer, Pennsylvania facility. The licensee uses a shielded room located at the Trainer facility as a temporary job site.