NA--LASO-LANL-MATSCCMPLX-2012-0003 NOTIFICATION/FINAL

Occurrence Report

After 2003 Redesign

Materials Science Complex

(Name of Facility)

Laboratory - Research & Development

(Facility Function)

Los Alamos National Laboratory Los Alamos National Laboratory

(Site) (Contractor)

Name: Rick Alexander
Title: STO Facility Operations Director **Telephone No.:** (505) 665-7020

(Facility Manager/Designee)

Name: YAZZIE, ALVA M
Title: OCCURRENCE INVESTIGATOR **Telephone No.:** (505) 664-0666

(Originator/Transmitter)

Name: Michelle Kirsch **Date:** 10/26/2012

(Authorized Classifier (AC))

1. Occurrence Report Number: NA--LASO-LANL-MATSCCMPLX-2012-0003

Discovery of Potentially Defective Laser Protective Eyewear

2. Report Type and Date: NOTIFICATION/FINAL

	Date	Time
Notification:	10/26/2012	16:16 (ETZ)
Initial Update:	10/26/2012	16:16 (ETZ)
Latest Update:	10/26/2012	16:16 (ETZ)
Final:	10/26/2012	16:16 (ETZ)

3. Significance Category: 4

4. Division or Project: Materials Physics and Applications Division

5. Secretarial Office: NA - National Nuclear Security Administration

6. System, Bldg., or Equipment: Kentek Corporation Spectacle, Part No. KRZ-C505C

7. UCNI?: No

8. Plant Area: TA-3-1420-2210

9. Date and Time Discovered: 10/18/2012 16:09 (MTZ)

10. Date and Time Categorized: 10/19/2012 07:31 (MTZ)

11. DOE HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

12. Other Notifications:

Date	Time	Person Notified	Organization
10/24/2012	11:05 (MTZ)	Susan Stewart	NNSA
10/19/2012	08:47 (MTZ)	Susan Stewart	NNSA

13. Subject or Title of Occurrence:

Discovery of Potentially Defective Laser Protective Eyewear

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14. Reporting Criteria:

4C(3) - Discovery of any defective item or material, other than a suspect/counterfeit item or material, in any application whose failure could result in a loss of safety function, or present a hazard to public or worker health and safety.

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15. Description of Occurrence:

MANAGEMENT SYNOPSIS: On October 18, 2012, at 1609, the operations manager of the Science and Technology Operations Facility Operations Directorate became aware that a Materials Synthesis and Integrated Devices (MPA-MSID) worker (W1) unexpectedly observed through the center of the field of view of the laser safety glasses a diffused reflection of a green 527 nanometer (nm) beam during laser installation at Technical Area 3, Building 1420, Room 2210. The MPA-MSID worker, who is also the group's laser safety officer (LSO), was observing subcontractor personnel install a Coherent Ultrafast Laser. He wore a pair of Kentek Corporation manufactured laser glasses, Part No. KRZ-CC505C, with an optical density of 7 at 532 nm that was approved and prescribed for the work. W1 paused the work and borrowed another similar pair of laser safety glasses from a co-worker. He donned the borrowed laser safety glasses and resumed work. W1 no longer observed the green diffused reflection. W1 removed the first pair of safety glasses from service and secured them pending disposition. No personnel

injury resulted from the event.

Later on October 18, 2012, W1 reported the potentially defective laser protective eyewear to his line management. As a precaution, the MPA-MSID management took W1 to the Laboratory's occupational medicine facility for evaluation. Laboratory medical personnel referred W1 to Eye Associates of New Mexico for evaluation. Eye Associates medical personnel evaluated W1, determined that he did not sustain an eye injury, and released him to work.

At 0731 on October 19, 2012, the STO FOD Designee categorized the event as sub-threshold reportable pending a critique. At 1030 on October 24, 2012, a critique was convened. At 1057, based on the fact that the laser protective eyewear may be defective, found in use and its failure could pose a hazard to worker safety and health, the STO FOD conservatively re-categorized the event under the defective items reporting criteria.

BACKGROUND: In accordance with Laboratory Procedure P101-24, "Laser Safety Program," Integrated Work Document (IWD) No. CINT-3-1420-2210-5, "Installation of Coherent Lasers," was generated for the Class 4 laser installation. The IWD specified the use of an appropriate wavelength eyewear based on the laser hazard analysis for the Class 4 laser eye hazard. The laser hazard analysis report indicated that the laser operating at that time would generate a wavelength of 527 nm requiring protective eyewear with an optical density of 5.62. The laser installation occurred in a laboratory in the MPA Center for Integrated Nanotechnologies (MPA-CINT) facility.

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16. Is Subcontractor Involved? Yes

Name: Coherent

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17. Operating Conditions of Facility at Time of Occurrence:

Normal Operations

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18. Activity Category:

03 - Normal Operations (other than Activities specifically listed in this Category)

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19. Immediate Actions Taken and Results:

1. W1 removed the potentially defective laser safety glasses from service and secured them pending disposition.

2. As a precaution, MPA-MSID management took W1 to the Laboratory's occupational medicine facility for evaluation. Laboratory medical personnel referred W1 to Eye Associates of New Mexico for evaluation. Eye Associates medical personnel evaluated W1, determined that he did not sustain an eye injury, and released him to work.

3. Following the event, the MPA-CINT management inspected their laser protective eyewear and found thirty (30) other pairs of similar design from the same manufacturer. The disposition path forward of these items will be determined in consultation with the Laboratory laser safety committee.

4. The Laboratory's Chief Laser Safety Officer (LSO) will notify the Laboratory's Legal Counsel of the event and request for guidance on how to disposition the defective laser protective eyewear.

5. The Laboratory's laser safety committee will generate an event lessons learned and disseminate to LSOs.

6. The Laboratory Chief LSO will follow up with the Laboratory medical director to determine where previous medical eye evaluation records for laser workers are maintained. The MPA-MSID management subsequently indicated that the previous medical eye evaluation records for W1 could not be located when he was taken to occupational medicine for evaluation.

20. ISM:

5) Provide Feedback and Continuous Improvement

21. Cause Code(s):

22. Description of Cause:

23. Evaluation (by Facility Manager/Designee):

24. Is Further Evaluation Required?: No

25. Corrective Actions

(* = Date added/revised since final report was approved.)

26. Lessons Learned:

27. Similar Occurrence Report Numbers:

28. User-defined Field #1:

amy

29. User-defined Field #2:

PFITS Record No. 2012-4092

30. HQ Keyword(s):

31. HQ Summary:

32. DOE Facility Representative Input:

33. DOE Program Manager Input: