

Occurrence Report

After 2003 Redesign

DECISION & INFO SCIENCE DIVISION

(Name of Facility)

Laboratory - Research & Development

(Facility Function)

Argonne National Laboratory East

Argonne National Laboratory - East

(Site)

(Contractor)

Name: GUDGEL, DONNA S.

Title: ADMINISTRATIVE SPECIALIST

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(Facility Manager/Designee)

Name: BRINDLE, SUSAN K

Title: ORPS COORDINATOR

Telephone No.: (630) 252-6286

(Originator/Transmitter)

Name:

Date:

(Authorized Classifier (AC))

1. Occurrence Report Number: SC--ASO-ANLE-ANLEDIS-2009-0001

Management Concern - Fiber Optic Data Cable Cut Resulting in Loss of Internet Service

2. Report Type and Date: NOTIFICATION/FINAL

	Date	Time
Notification:	12/15/2009	18:43 (ETZ)
Initial Update:	12/15/2009	18:43 (ETZ)
Latest Update:	12/15/2009	18:43 (ETZ)
Final:	12/15/2009	18:43 (ETZ)

3. Significance Category: 4

4. Division or Project: DIS/Bdg. 221 Voice and Data Communication Work

5. Secretarial Office: SC - Science

6. System, Bldg., or Equipment: Building 221 Room D131A

7. UCNI?: No

8. Plant Area: Bldg 221 Rm D131A

9. Date and Time Discovered: 12/07/2009 10:35 (CTZ)

10. Date and Time Categorized: 12/11/2009 14:30 (CTZ)

11. DOE HQ OC Notification:

Date	Time	Person Notified	Organization
NA	NA	NA	NA

12. Other Notifications:

Date	Time	Person Notified	Organization
12/11/2009	14:45 (CTZ)	Craig Schumann	DOE-ASO
12/11/2009	14:30 (CTZ)	Sue Brindle	ANL-COA

13. Subject or Title of Occurrence:

Management Concern - Fiber Optic Data Cable Cut Resulting in Loss of Internet Service

14. Reporting Criteria:

10(2) - An event, condition, or series of events that does not meet any of the other reporting criteria, but is determined by the Facility Manager or line management to be of safety significance or of concern to other facilities or activities in the DOE complex. One of the four significance categories should be assigned to the occurrence, based on an evaluation of the potential risks and the corrective actions taken. (1 of 4 criteria - This is a SC 4 occurrence)

15. Description of Occurrence:

On Monday, December 7, 2009 at 1035 two Decision and Information Science (DIS) employees cut a fiber optic cable that resulted in the disruption of internet service laboratory wide.

A Supervisor and worker were removing legacy data cables in Building 221. The work began with a supervisor and worker pulling a bundle of six cables starting in Room C120. The supervisor had checked the source and end of the six cables. The six cables were not connected to any source. When they reached a wall on the exterior of B132, two additional cables met the original six. Neither the supervisor nor the employee checked the source and end of the two additional cables. They pulled the 8 cables to D130 and then to D131A. A 9th cable had joined the cables that were being pulled D131A. The Supervisor asked the employee to cut all 9 cables. Nothing remarkable was noticed at that time.

Shortly thereafter the worker and supervisor returned to their offices in Building 240. It was then they discovered laboratory wide internet service had been disrupted. The supervisor immediately sent a text message to Computer and Information Systems (CIS) to let them know about the cables they had just been cutting. CIS knew by the notifications in their division systems that a disruption had resulted from a problem in Building 221. Both the supervisor and a CIS employee went to Building 221 to investigate. It was determined at that time at least one of the eight cables that was cut resulted in the interruption of the internet service.

The appropriate people were notified and work began to reconnect the cables and resume internet service. Internet service resumed at 1305 on December 7, 2009.

No one was injured and there was no damage, other than the live fiber optic cable and loss of internet service.

The Argonne Site Laser Safety Officer has reviewed the laser/fiber optic cable system. He concurred that the system is considered as a Class 3a laser system. It was also understood that the system operated in a safe mode of a Class 1 laser system - within one second of detecting loss of network connectivity (link). CIS confirmed that there was no risk of laser injury to the employee at the time the cable was cut.

Security and Counter Intelligence, Argonne Fire Department and Computer and Information Systems all reported that there was no compromise of Argonne safety and security as a result of the internet outage.

Following a fact finding and investigation it was determined to report this event as a management concern to alert other sites of the potential for a single source failure of internet access.

16. Is Subcontractor Involved? No

17. Operating Conditions of Facility at Time of Occurrence:

Normal

18. Activity Category:

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

19. Immediate Actions Taken and Results:

Source of internet outage was identified and reconnection work began immediately.

20. ISM:

- 1) Define the Scope of Work
- 2) Analyze the Hazards
- 3) Develop and Implement Hazard Controls
- 4) Perform Work Within Controls

21. Cause Code(s):

22. Description of Cause:

23. Evaluation (by Facility Manager/Designee):

Argonne has been using a repurposed system with a single cable for the internet service many years. Argonne has

purchased a new system that will make the internet service on two cables. The new system will not allow the internet to go entirely down when one cable is cut. The new system is due to be installed in early 2010.

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:

29. User-defined Field #2:

30. HQ Keyword(s):

01N--Inadequate Conduct of Operations - Inadequate Job Planning (Other)

07D--Electrical Systems - Electrical Wiring

08C--OSHA Reportable/Industrial Hygiene - Industrial Hygiene Exposure

12B--EH Categories - Conduct of Operations

14E--Quality Assurance - Work Process Deficiency

14H--Quality Assurance - Inspection and Acceptance Testing Deficiency

31. HQ Summary:

On December 7, 2009, two Decision and Information Science employees cut a fiber optic cable that resulted in the disruption of internet service laboratory wide. The two employees were removing legacy data cables in Building 221. During the course of their work, nine cables were cut. The employees returned to their offices in Building 240 and they discovered laboratory-wide internet service had been disrupted. It was determined at that time that at least one of the cables that were cut resulted in the internet service interruption. Notifications were made and work began immediately to reconnect the cables to resume internet service. The Argonne Site Laser Safety Officer (LSO) has reviewed the laser/fiber optic cable system. The LSO concurred that the system is considered as a Class 3a laser system. It was also understood that the system operated in a safe mode of a Class 1 laser system - within one second of detecting loss of network connectivity. It was confirmed that there was no risk of laser eye injury to the employee at the time the cable was cut. A fact finding meeting was held.