



To: Tom Wessels, ESH&A Manager

From: Shawn Nelson, Industrial Safety Specialist
G.P. Jones, Fire Safety Specialist

Date: February 8, 2005

**SUBJECT: Quarterly Performance Analysis and Identification of Recurring Occurrences
(October – December)**

Summary

The "Quarterly Performance Analysis and Identification of Recurring Occurrences" is being performed in accordance with the criteria provided in DOE Occurrence Reporting and Processing of Operations Information (ORPS) Manual M 231.1-2 and Occurrence Reporting and Performance Analysis Guide G 231.1-1. The data being reviewed to complete the performance analysis includes Injury and Illness data, Ames Local Events, Occurrences (ORPS), Noncompliance Tracking System (NTS) and Incidents of Security Concern (ISC).

The ORPS Manual states that sites must perform ongoing, at a minimum of quarterly, analyses of events during a 12-month period to look for trends. Although there have been similar issues in the various data fields, there is not a significant trend of recurrence. As such, a Category R Occurrence will not be submitted. The following summary of information for the various data fields will explain the analysis of data.

Background / Analysis

Injury and Illness Data

There have been sixteen injuries at the Laboratory in the last twelve months. Six of the injuries were deemed to be OSHA Recordable (medical treatment beyond first aid).

Six of the injuries were in the same injury classification (lacerations). Three of the six lacerations were OSHA Recordable. As stated in the last analysis, numerous efforts have been taken since 2002 to reduce / eliminate lacerations including heightened training, communication through various mechanisms including issuance of Lessons Learned, the introduction of two new glove styles and the distribution a Working Safely with Glassware Guide. It is the consensus of the Injury / Illness Committee that the continued actions taken to reduce / eliminate lacerations have been effective. There is not a statistically significant trend of recurring lacerations.

There were four injuries in the acute musculoskeletal injuries (sprains and strains that are not cumulative) classification. Three of the four musculoskeletal injuries were deemed to be OSHA Recordable. Of the four injuries, two were sprains of the lumbar area and both were recordable. One was in operations and the other a researcher. Although not a significant indicator of a trend, corrective actions were taken including the creation and distribution of a Sprains and Strains Prevention Training Module. In addition, a lessons learned has been distributed, heavy items required to be lifted have been labeled with safe lifting techniques and a new mechanism is in place to identify and correct risk factors during the readiness review of all activities.

The two remaining injuries in the acute musculoskeletal classification include a sprained ankle (OSHA

Recordable) and a strained wrist. The sprained ankle occurred at a loading dock with different levels to accommodate delivery trucks of different heights. Four corrective actions are in place to address this issue. The corrective actions are to paint the transition areas to indicate changes in walking and working surfaces, to modify the Condition Assessment Survey procedure to incorporate specific exterior site inspection with component codes and deficiency description that address the painting of such hazards, add a preventive maintenance task to inspect the dock approaches bi-annually and to annually perform a Walk-About of the building exteriors and public spaces by the Industrial Safety Specialist and the Fire Safety Specialist.

The remaining injuries (not OSHA Recordable) are as follows:

- Contusion / Abrasions
- Eye Injury
- Three Cumulative Trauma Disorders (CTD) including tennis elbow, tendonitis and repetitive motion.
- Respiratory Irritant

Although corrective actions have been implemented to address all of the injuries, there is not a significant trend of recurring concerns to warrant the issuance of a recurring ORPS.

Ames Local Events

There have been twelve events categorized as Ames Local Events within the last 12 months.

Two events involved the discovery of legacy radioactive samples and contaminated equipment. All were below reportable thresholds per DOE Manual 231.1-2 (Group 6). Although the samples and equipment didn't meet the reportable thresholds, the Laboratory has chosen to track these incidents in the Ames Laboratory Corrective Action Tracking System (ALCATS) - Ames Local database. The Laboratory recognizes the potential to discover radioactive materials and contaminated equipment as part of renovations and cleanout of lab spaces as a result of work performed in the past (thus the purpose for a Radiological Work Permit). In addition, the Laboratory promotes a positive culture for all employees to inform ESH&A of confirmed or suspected contaminated materials and equipment. The identification of radioactive materials or contaminated equipment is not indicative of a deficiency of the radiation safety program; rather the safety program is functioning as desired. No concerns of recurrence.

In addition to the tracking of the entire list of injuries and illnesses, all OSHA Recordable injuries and illnesses are entered into the Ames Local database as part of the Event Reporting Program. As stated above, there were sixteen injuries of which six are considered Ames Local Events due to them being OSHA Recordable. None of the activities leading to the lacerations or sprains was similar to each other.

The remaining Ames Local Events are not related or similar to each other. There are no recurring concerns.

Reportable Events

There were two concerns that led to an ORPS (Occurrence Reporting and Processing System) in the last 12 months (January 1 to December 31). The first ORPS was that of electrical contact by an Ames Laboratory Associate when accessing an electrical box housing a laser interlock relay. The second ORPS was the discovery of suspect / counterfeit bolts to a commercial piece of equipment identified during a Readiness Review.

There are no recurring concerns.

Noncompliance Tracking System (NTS)

There were no concerns warranting the issuance of an NTS in the last 12 months.

Incidents of Security Concern (ISC)

There were no Incidents of Security Concern for the past 12 months.

The following sources of information are reviewed per the Event Reporting Program 40000.001 by the Event Screening Team for issues, concerns, and other operational data that are potentially reportable events per ORPS (DOE Order 231.1A), PAAA (10 CFR 820) and Incidents of Security Concern (DOE Order 471.1):

Sources Of Information

Independent Walk-Through Concerns	Program/Department Walk-Through concerns reported to ESH&A
Safety/Security Concerns Program Issues	Injury/Illness reports
Issues from Topical Appraisals	Plant Protection Section Tour Discrepancy Reports
Radiological Survey Results	X-ray Inspections and Reviews
Readiness Reviews	Safety Review Committee (SRC) discussions and minutes
Waste Management Pickup Observations	FSG CAMs and Repair Tickets
ALARA Reports and Meeting Notes	IH Chemical Management Laboratory Reviews
IH Exposure Monitoring Reports	Electrical Safety (Committee discussions and observations)
Fume Hood Testing Results	Fire Safety Committee (FSC) discussions and minutes
Building Key Management Issues	Packaging and Transportation Issues

Conclusions

No recurring concerns indicating a significant negative trend were noted in the quarterly performance analysis and identification of recurring occurrences. As a result of this analysis, a Category R Occurrence will not be submitted.

The following indicators / attributes were assessed to determine recurrence:

- Did the trending data for the series/group of events indicate a significant negative trend? **NO**
- Were there a significant number or percentage of implementation failures discovered to indicate that one or more components of the program were not effective in ensuring successful completion of the task or activity? **NO**
- Have multiple control failures within the boundaries of a single occurrence taken place indicating a common breakdown in a program or area of a program? **NO**
- Have small and apparently isolated series /group of events been seen within various aspects of an overall program that collectively indicate a program weakness when viewed from a site perspective? **NO**
- Have failures been discovered that indicate during implementation of a particular program, or portion of a program, that one or more components of the program were not effective in ensuring successful completion of the task or activity? **NO**
- Was there a common underlying cause or weakness in controls that necessitated corrective actions? **NO**
- Did the group of related events indicate a series of common work process breakdowns or a series of common quality criteria issues? **NO**
- Did related series / groups of events breach multiple, but not necessarily all, barriers protecting workers, the public, or the environment from potential or actual adverse impacts of an event? **NO**
- Did related series / groups of events, having the same underlying cause or having contributed to or were the unavoidable consequence of the underlying problem, occur within a single facility or operation? **NO**
- Did a causal factor of the series / group of events indicate a lack of management involvement, or breakdown in management controls, or errors in decisions / directions by managers that resulted in systemic problems or violation of safety rules. **NO**

C: Mike Saar, DOE-Chicago Facility Representative
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 Executive Council: Dr. Barton, Dr. Harmon, Dr. Goldman and Mark Murphy
 ESH&A Assistant Manager, Jim Withers