

## Ames Laboratory Environment, Safety, Health, and Assurance (ESH&A)

### Fiscal Year 2007 Trend Analysis

10-4-07

Trend Analysis is used to determine common occurrences or prevailing events that should be addressed with additional inspections, training, reviews, policies, etc. The following sources of information were reviewed for trend analysis from 2003 to 2007:

- Employee Safety and Security Concerns
- Independent Walk-Through Findings
- Program / Department Walk-Through Findings
- Discrepancy Reports
- Injury and Illness Data
- Event Reporting
- Causal Factors

#### Employee Safety and Security Concerns

There was a 30% decrease in the total number of Employee Safety and Security Concerns from the 4 year average. The Ames Laboratory actively promotes that concerns, of all types be brought to the attention of line management and ESH&A. The types of concerns recorded in FY 2007 include snow removal practices and damage to grass, smoking outside entry doors, asbestos in floor tile being buffed, paint odors, burned / scratched floor tile in laboratory, air handling practices in Speeding Hall from 1960- 1970 resulting from Community Meeting, and air quality (odor) concern from a small kitchenette area and microwave use. No specific trends of concerns have been identified and no concerns of major significance.

Employee Safety and Security Concerns							
Category	2003	2004	2005	2006	4-Year Average	2007	% Change from 4-Year Average
Administrative							None
Chemical Spills	2	1	2	1	1.5		Decrease
Fire Safety	4			1	1.25		Decrease
General Safety	6	2	1	2	2.75	3	9% Increase
Security							None
Industrial Hygiene	2	1	2	3	2	2	Same
Environmental	3		1	5	2.25	1	55% Decrease
Security	1				.25	1	300% Increase
Radiological		3			.75		Decrease
Traffic Safety		2	1		.75		Decrease
Property Management	1				.25		Decrease
Other (non-safety)		1	1	1	.75		Decrease
Odors	1	2	2	1	1.5	3	100% Increase
<b>Total Concerns</b>	<b>20</b>	<b>12</b>	<b>10</b>	<b>14</b>	<b>14</b>	<b>10</b>	<b>28.57% Decrease</b>

## Independent Walk-Through Findings

Ames Laboratory continues to experience a gradual reduction of concerns identified during Independent Walk-Throughs (23% from the 4 year average). A few of the concerns would likely not have been cited by an OSHA Inspector in the General Safety Category (i.e., safety glasses stored on lenses, minor housekeeping, unstable chairs, etc.). Because the Laboratory is striving to be “Best in Class”, these were identified to ensure poor practices do not continue.

The sustained reduction in electrical concerns (49% from the 4 year average) is due to education of the workforce and the relocation of electrical disconnects and equipment to allow for safe compliant access. There has also been a reduction in the number concerns related to the use of extension cords and temporary power taps as a result of additional outlets being installed where needed.

Although there was an increase in Environment concerns (22% from the 4-year average), this is attributable to a 2007 emphasis to set fume hood sashes properly and initiating the “Set Back” mode when not in use.

The Independent Walk-Through Program continues to demonstrate its effectiveness in identifying concerns, educating the workforce, and promoting compliance. No specific trends of concerns have been identified.

Independent Walk-Through Findings							
Categories	2003 Totals	2004 Totals	2005 Totals	2006 Totals	4-Year Average	2007 Totals	Percent Change from 4-Year Average
Admin. Controls			1		.25	1	300% Increase
Comp. Gases	14	10	5	8	9.25	4	57% Decrease
Confined Space Entry							
Electrical Safety	112	103	78	50	85.75	44	49% Decrease
Emergency Planning	2	5	3	2	3	2	33% Decrease
Environmental	24	16	16	13	17.25	21	22% Increase
Fire Safety	10	11	4	5	7.5	2	73% Decrease
General Safety	57	47	59	46	52.25	68	30% Increase
Hoisting & Rigging			1		.25		Decrease
Hazard Communication	1	1		2	1	2	100% Increase
Industrial Hygiene	30	30	41	9	27.5	13	53% Decrease
Infrastructure		1			.25		Decrease
Ladder Safety						1	Increase
Laser Safety	1				.25		Decrease
Life Safety Code	8	8	9	6	7.75	4	48% Decrease
Lockout/Tagout		1			.25	1	300% Increase
Machine Guarding	7	3	1	3	3.5	6	71% Increase
Other			1	1	.5	2	300% Increase
PPE	9	16	25	11	15.25	3	80% Decrease
Plumbing		1		1	.5	1	100% Increase

Independent Walk-Through Findings							
Categories	2003 Totals	2004 Totals	2005 Totals	2006 Totals	4-Year Average	2007 Totals	Percent Change from 4-Year Average
Procedural							NONE
Property Management	2	5	1	2	2.5	5	100% Increase
Radiation	1		1	5	1.75	1	43% Decrease
Respiratory	1	4	6	3	3.5	4	14% Increase
Training							None
<b>Totals</b>	<b>279</b>	<b>262</b>	<b>252</b>	<b>167</b>	<b>240</b>	<b>185</b>	<b>23% Decrease</b>
Noteworthy Practices	1	2	1	0	1	2	100 % Increase

### Program / Department Walk-Through Findings

Unlike the rest of the trend analysis, the Program / Department Walk-Through information is collected on a calendar basis (December 31). Therefore the information reviewed for the purpose of this trend analysis is from 2006. The information collected from the programs / departments is requested in percentage (not the total number of findings). So specific comparisons (number of finding), cannot be made to the Independent Walk-Through Concerns, but general observations on the type of concerns identified can be made. The largest category observed was “General Safety” and the second largest category was “Electrical” concerns. This is consistent with the Independent Walk-Through Program. No major concerns are discernable.

### Discrepancy Reports

There have been many changes in the discrepancy reports compared to the previous 4 years, although the total number of discrepancy reports has changed very little from the 4-year average. First, there was a 73% increase in “Coffee Pots On and Hot”. There was also a 700% increase in the “Unattended Flame” category although the total was 4. An emphasis program for the entire laboratory in 2007 is energy conservation which accounts for the “Hood Sash / Set Back” observations. This emphasis of the Plant Protection Section was requested by the Energy Management Steering Committee. Another dramatic increase in FY 2007 was the observation of “Obstructed Hallways and Doors”. This is partially attributable to renovations and relocations of programs and departments in the Ames Laboratory buildings. There are three categories that have had no observations over the last 4 years that had significant increases in FY2007. They are “Improper / Incompatible Storage”, “Obvious Equipment Malfunction”, and “Open Windows”. It is important to note that the number of observations may not be newly identified incidents, rather they may be the same incidents identified daily until the concern is corrected/abated.

The increase in the above concerns will be investigated to determine if there is a group/location tendency and approach management and safety coordinator to rectify the concerns. The follow up and correction of discrepancies by the Plant Protection staff and the ESH&A Staff continues to be effective.

<b>Discrepancy Reports</b>							
<b>Category</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>4-Year Average</b>	<b>2007</b>	<b>% Change from 4-Year Average</b>
Coffee Pots On & Hot	43	57	53	39	48	83	73% Increase
Soldering Pen/Iron on & hot	7	5	9	7	7	3	57% Decrease
Door Cards	1	0	0	0	.25	0	Decrease
Unsecured Gas Cylinder	20	23	18	9	17.5	18	3% Increase
Natural Gas Valve On	22	18	11	10	15.25	19	25% Increase
Main Cylinder Valve	10	9	16	13	12	14	17% Increase
Uncapped Cylinder	32	25	21	14	23	12	49% Decrease
Unattended Flame	0	0	1	1	.5	4	700% Increase
Obstructed Hallway / Door	0	0	0	0	0	15	Increase
Unsecured Door	332	136	122	87	169.25	87	48% Decrease
Hood Sash / Set Back <i>(New Category)</i>	-	-	-	-		64	Increase <i>2007 Emphasis</i>
Improper / Incompatible Storage	-	-	-	-		8	Increase
Obvious Equipment Malfunction	-	-	-	-		13	Increase
Window Open	-	-	-	-		7	Increase
Miscellaneous	189	125	69	45	107	54	50% Decrease
<b>Total Discrepancies</b>	<b>656</b>	<b>398</b>	<b>320</b>	<b>225</b>	<b>399.75</b>	<b>401</b>	<b>.31% Increase</b>

### **Injury and Illness Data**

There has been a 20% increase of total injuries / illnesses but a 27% decrease of injuries / illnesses meeting the criteria of OSHA Recordable (those requiring medical attention beyond first aid). Much effort continues to be targeted towards the reduction / elimination of injuries including lacerations and sprains and strains at the Laboratory, the two leading categories of injuries and OSHA Recordable incidents. The reduction in injuries is attributable to the importance of safety at new employee orientation, line management responsibility for safety, distribution of lessons learned, the circulation of Safety Guides, the use of personal protective equipment, and safety training. To address sprains and strains, activity audits focused on lifting were conducted and a new Sprains and Strains Prevention Module was developed and presented to those who would be at increased risk due to the activities they perform. The reduction / elimination of lacerations and sprains and strains are emphasized in General Employee Training which is required for all new Ames Laboratory employees. In addition, the Laboratory Director continues to send Laboratory wide safety messages stressing the importance of safety and the expectation of all employees to maintain a safe and healthful workplace. The Director continues to stress the importance of supervisors, group leaders and co-workers to provide assistance and oversight of potentially hazardous activities. Because there is a lack of injuries or illnesses to focus on (other than lacerations), the Laboratory will continue to stress the importance of line management responsibilities for safety, identification and correction of hazards, and safety training.

Injury and Illness Data							
Type of Injury / Illness	2003	2004	2005	2006	4-Year Average	2007	% Change from 4-Year Average
Contusion / Abrasions	2 (1)	2	4 (1)	2	2.5	2	20% Decrease
Burn			1	2	.75		Decrease
Eye Injury		1			.25		Decrease
Fracture				1 (1)	.25		Decrease
Laceration	2 (1)	6 (2)	2 (1)		2.5	6 (2)	140% Increase
Puncture						1	Decrease
Acute Musculoskeletal Injury		4 (3)	1 (1)		1.25	2	60% Increase
Cumulative Trauma Disorder		3			.75		Decrease
Miscellaneous:							
Otalgia (Pain in the ear)				1	.25		Decrease
Subungual Hematoma	1				.25		Decrease
Respiratory Irritant		2			.50	1	100% Increase
Avulsion	2				.50		Decrease
Knee (joint popping)	1				.25		Decrease
<b>Total</b>	<b>8</b>	<b>18</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>12</b>	<b>20% Increase</b>
OSHA Recordable	2	5	3	1	2.75	2	27% Decrease
Non-OSHA Recordable	6	13	5	5	7.25	10	38% Increase
Lost Work Days -LWD	1	4	180	0	46.25	0	Decrease
Restricted Work Days – RWD	0	7	0	0	1.75	0	Decrease
Total of LWD and RWD	1	11	180	0	48	0	Decrease
DART Rate	.31	.62	.21	0	.285	0	Decrease
Lost Workday Case Rate (LWCR)	.31	.31	.21	0	.21	0	Decrease
<b>Total Recordable Case Rate (TRCR)</b>	<b>.62</b>	<b>1.52</b>	<b>.62</b>	<b>.24</b>	<b>.75</b>	<b>.24</b>	<b>68% Decrease</b>

( ) indicates OSHA Recordable Injury  
DART: Days Away, Restricted, Transferred

#### Event Reporting (FY)

Categories	2005	2006	2-Year Average	2007	% Change from 2-Year Average
<b>Total Events Screened</b>	<b>45</b>	<b>46</b>	<b>45.5</b>	<b>41</b>	<b>10% Decrease</b>
Occurrence Reports (ORPS)	4	0	2	2	Same
Noncompliance Tracking System (NTS)	0	0	0	0	Same
Incidents of Security Concern (ISC)	0	1	.50	0	Decrease
Ames Local (AL)	14	33	23.5	24	2% Increase
Computer Accident and Injury Tracking System (CAIRS)	3	1	2	2	Same
Other (below reporting threshold)	24	11	17.5	13	26% Decrease

*Did not start screening process along with Causal Analysis of total events until May of 2004 (FY 05)*

## Reportable Events

There were two incidents reported to the Occurrence Reporting Processing System (ORPS) in FY 2007. The two ORPS included a smolder/smoke incident in an area being renovated and an electrical conduit that was penetrated by a self tapping screw during the application of a new roof at the Warehouse. There were no concerns reported to the Non-Compliance Tracking System (NTS) or Incidents of Security Concern (ISC).

No trends were observed with the Reportable Events (ORPS, NTS or ISC's).

Year	Type	Identification	Date	Title	Description
FY 2003	ORPS	ORPS CH-- AMES-AMES- 2003-0001	1-30-03	Peroxide Forming & Shock Sensitive Chemicals	Identify and store peroxide forming and shock sensitive chemicals.
	ORPS	ORPS CH-- AMES-AMES- 2003-0002	2-12-03	Notice of Violation	Notification of intent to perform asbestos abatement.
	ORPS and NTS	ORPS CH-- AMES-AMES- 2003-0003	8-15-03	Sealed Sources	PuBe and AmLi sources were not properly documented as sealed sources.
FY 2004	ORPS	ORPS CH— AMES – Ames- 2004-001	1-29-04	Electrical Contact	Researcher contacts 110 VAC when trying to reduce the clicking noise of an electrical contact / relay within the interlock box.
FY 2005	ORPS	ORPS CH— AMES – Ames- 2004-002	12-20-04	Suspect / Counterfeit Bolts	While performing a Readiness Review, a member of the review team discovered suspect / counterfeit bolts (non load bearing).
	ORPS	ORPS CH— AMES – Ames- 2005-001	2-1-05	Potential High Voltage Exposure	A visiting scientist (not supported by SC Funding) assembled a prototype research system before seeking Readiness Review.
	ORPS	ORPS CH— AMES – Ames- 2005-002	4-20-05	Flash Hazard Analysis Accuracy Questioned	During the SC Electrical Safety Review, the consultant questioned the accuracy of the analysis.
	ORPS	ORPS CH— AMES – Ames- 2005-003	8-10-05	Software Issue Found in Fire Alarm System	A smoke detector in building alarmed at the fire panel and central station but did not activate the alarms.
FY 2006	ISC	ISC – IMI 3(#19) Incident # 51451	2-17-06	System Intrusion	An intruder allegedly from force.coe.neu.edu used a real username/password to access gateway.cmpgroup.ameslab.gov.
FY 2007	ORPS	CH- - Ames- Ames-2007-0001	12-29-06	Smolder /Smoke in Renovation Area	A small crack in the concrete floor between two buildings allowed a spark from plasma-arc cutting to reach expansion joint material.
	ORPS	CH- - Ames- Ames 2007-0002	7-27-07	Electrical Conduit Penetration	Conduit penetrated by screw during roofing operations.

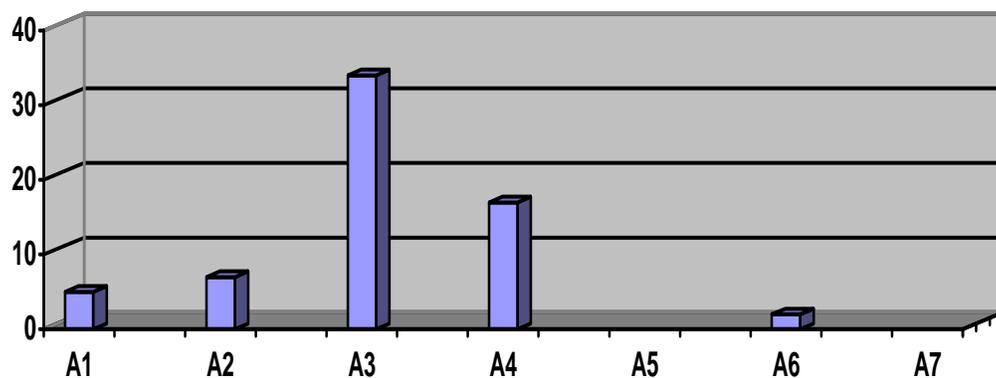
## Ames Local Events

Causal Analysis of Ames Local Events started in May of 2004. An Ames Local Event is one which does not meet the threshold of reportability to DOE, but warrants further investigation and potentially the development of corrective actions. The “Others” are those that were investigated that did not require any corrective actions or further investigation.

The Laboratory also records injuries and illnesses as Ames Local Events that would not be considered reportable to OSHA using the DOE Computerized Accident / Incident Reporting System (CAIRS). The Laboratory includes injuries and illnesses as an opportunity to ensure incidents are evaluated, potential corrective actions are documented and tracked; furthermore Ames Local Events are evaluated for recurrence (trending). Ames Laboratory views the screening program as a positive event trending program.

“Human Performance Less Than Adequate” (A3) from the DOE Guide 231.1-2 is the primary causal factor identified (34 occurrences). Human Performance is further separated into four (4) subsections (Skill of the Craft, Rule Based Error, Knowledge Based Error and Work Practices). The majority of the causal factors were both “Rule Based Errors” and “Knowledge Based Error. Within these subsections there are further numerous options. The two leading options included “Previous success in use of rule reinforced continued use of rule” and “Individual justified action by focusing on biased evidence”.

Possibly there is a lack of focus on the tasks being performed and supervisors need to evaluate how activities are performed, retrain users as necessary and reinforce positive behaviors. It is believed that the corrective actions completed for the events are sufficient to address these causal factors. And there could possibly be a lag from when the corrective actions are initiated and a change in behavior is demonstrated. The Laboratory will continue to stress the importance of line management responsibilities for safety, the identification and correction of hazards and training. Corrective actions are developed, tracked and completed for all Ames Local Events. The Ames Laboratory Corrective Action Tracking System (ALCATS) has a follow up mechanism for effectiveness verification (at 6 month and 12 month intervals) to ensure concerns are addressed adequately. Included in the verification process, Group Leaders / Department Managers and workers are interviewed to determine the results of the implemented corrective actions. The verifications performed to date have been determined to be “Effective”. It is important to note that the severity of some the Ames Local Events are low and were categorized as Ames Local as a proactive initiative. Below are the results of the Causal Factors review.



A1- Design/Engineering Problem - 4  
A2- Equipment/Material Problem - 7  
A3- Human Performance LTA - 34  
A4- Management Problem - 17  
A5- Communications LTA - 0  
A6- Training Deficiency - 2  
A7- Other Problem (Ext. Phenomena, Rad/Haz Mat'l) - 0

The Ames Laboratory mechanisms for feedback and continuous improvement are effective to measure and support the direction of Environment, Safety and Health goals.

<b>Tracking #</b>	<b>Date</b>	<b>Event Reporting Program Changed</b>	<b>Designation</b>
E04-025	10-20-04	Live Work Stand Down	AMES LOCAL - ORPS
E04-028	11-02-04	Orange Material Flash	AMES LOCAL - ORPS
E04-034	12-22-04	Readiness Review Incomplete	AMES LOCAL - ORPS
E05-002	1-07-05	Snow Melt in RWA	AMES LOCAL - ORPS
E05-007	2-10-05	HF Leak	AMES LOCAL - ORPS
E05-018	4-20-05	CO Emergency Prep Audit	AMES LOCAL - ORPS
E05-019	4-15-05	SC Electrical Safety Review	AMES LOCAL - ORPS
E05-021	6-06-05	Trash Flash	AMES LOCAL - ORPS
E05-022	6-14-05	Smoldering Tygon	AMES LOCAL - ORPS
E05-024	6-21-05	Inappropriate tag use	AMES LOCAL - ORPS
E05-027	6-27-05	Laser Safety Audit	AMES LOCAL - ORPS
E05-030	8-22-05	Packaging and Transportation Audit	AMES LOCAL - ORPS
E05-031	8-22-05	S&S Audit 8-16-05	AMES LOCAL - ISC
E05-032	8-31-05	Chemical Mgmt Review	AMES LOCAL - ORPS
<b>FY 05</b>			
E05-036	11-17-05	Environmental Mgmt Audit	AMES LOCAL - ORPS
E05-037	11-17-05	Hoist-Rig Audit	AMES LOCAL - ORPS
E05-039	12-24-05	DEV Steam Leak	AMES LOCAL - ORPS
E06-001	1-06-06	Data Loss/Partial Recovery	AMES LOCAL - ORPS
E06-002	1-11-06	Penetration of Compressed Air Line	AMES LOCAL - ORPS
E06-003	1-12-06	Animal Pathogen Use w/o Approval	AMES LOCAL - ORPS
E06-004	1-23-06	Compromised System (bat)	AMES LOCAL - ORPS
E06-005	12-9-05	ISMS Review	AMES LOCAL - ORPS
E06-007	2-7-06	Powder Release Activating Smoke Detector	AMES LOCAL - ORPS
E06-008	2-13-06	Change of Shift- RWP update	AMES LOCAL - ORPS
E06-010	2-14-06	Solvent Contact, PAC Shop	AMES LOCAL - ORPS
E06-011	2-17-06	SPH Fire Evacuation	AMES LOCAL - ORPS
E06-016	2-23-06	Alleged Improper Disposal of Scrap Metal	AMES LOCAL - ORPS
E06-017	2-27-06	Fire Alarm 135 Metals Development	AMES LOCAL - ORPS
E06-019	3-15-06	Smoking Furnace	AMES LOCAL - ORPS
E06-020	3-16-06	NAS Device Found	AMES LOCAL - ISC
E06-021	3-16-06	Parr Bomb Explosion	AMES LOCAL - ORPS
E06-023	4-26-06	Possible Compromise of B1 System	AMES LOCAL - ISC
E06-024	5-22-06	System Compromise	AMES LOCAL - ISC
E06-026	5-24-06	DEV Dumpster Fire	AMES LOCAL - ORPS
E06-027	6-5-06	HF Alarm	AMES LOCAL - ORPS
E06-028	6-12-06	Hydride-Methanol Reactions	AMES LOCAL - ORPS
E06-029	6-26-06	Thermal Burn from Electrical Source	AMES LOCAL - ORPS
E06-031	7-10-06	Delay in Radiation Survey	AMES LOCAL - NTS
E06-032	7-12-06	Network anomaly discovered	AMES LOCAL - ISC
E06-033	7-31-06	X-Win 32 Vulnerability	AMES LOCAL - ISC (merged into E06-037)
E06-034	7-31-06	Infected System	AMES LOCAL - ISC
E06-035	8-7-06	X-Win32 Vulnerability 8-7-06	AMES LOCAL - ISC (merged into E06-037)
E06-036	8-7-06	Stuck X-ray Shutter	AMES LOCAL - NTS
E06-037	8-8-06	System Vulnerability 8-8-06	AMES LOCAL - ISC (includes E06-033 & 035)

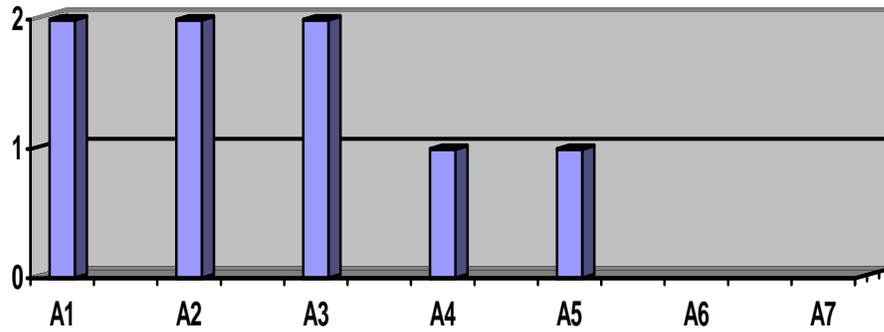
E06-038	8-18-06	Fire/Bldg Evacuation B33-34 SPH	AMES LOCAL - ORPS
E06-040	9-07-06	Slip-Fall in HWH	AMES LOCAL - CAIRS
E06-042	9-15-06	Finger Laceration	AMES LOCAL - CAIRS
<b>FY 06</b>			
E06-043	10-2-06	Site Assistance Visit	AMES LOCAL - ISC
E06-044	10-9-06	Needle Stick (unused needle)	AMES LOCAL - CAIRS
E06-045	11-15-06	Occupational Medicine Review	AMES LOCAL - ORPS
E06-047	11-21-06	ESH&A Review of Management Controls Over Regulations	AMES LOCAL - ORPS
E06-049	11-29-06	Finger Cut while setting up collapsible table	AMES LOCAL - CAIRS
E07-002	1-22-07	Trifluoroacetic Acid Intake (potential)	AMES LOCAL - CAIRS
E07-009	5-9-07	Delayed Spill Reporting - A216 Zaffarano	AMES LOCAL - ORPS
E07-010	5-9-07	Jammed finger on door	AMES LOCAL - CAIRS
E07-012	6-5-07	Chemical Dermatitis	AMES LOCAL - CAIRS
E07-013	6-8-07	Blocked Circuit Breaker Panel	AMES LOCAL - ORPS
E07-014	6-19-07	2007 Review of Material Control and Accountability Program	AMES LOCAL - ISC
E07-015	6-22-07	Sprained Wrist	AMES LOCAL - CAIRS
E07-016	6-24-07	Broken Hose	AMES LOCAL - ORPS
E07-017	6-26-07	Knee Contusion	AMES LOCAL - CAIRS
E07-019	7-10-07	Fire Alarm - HWH	AMES LOCAL - ORPS
E07-020	7-11-07	Infected Desktop Computer	AMES LOCAL - ISC
E07-021	7-11-07	Work Without Survey	AMES LOCAL - NTS
E07-023	7-17-07	Laceration	AMES LOCAL - CAIRS
E07-024	7-23-07	Fire Alarm - MD	AMES LOCAL - ORPS
E07-025	7-24-07	Head Injury	AMES LOCAL - CAIRS
E07-027	7-30-07	Laptop Theft - Switzerland	AMES LOCAL - ISC
E07-028	8-02-07	Finger Laceration	AMES LOCAL - CAIRS
E07-029	8-23-07	Fire Alarm - HWH	AMES LOCAL - ORPS
E07-030	8-28-07	Hand Injury	AMES LOCAL - CAIRS

### TapRoot and Causal Factors

TapRoot is a formal (standardized) method used at Ames Laboratory to investigate and determine causal factors for significant events (those beyond Ames Local Events). It is a method that was recommended by the Chicago Office and is used by other DOE Facilities. The use of TapRoot began in 2004 for Reportable Events (Occurrences (ORPS), Non Compliance Tracking System (NTS) and Incidents of Security Concern (ISC)). There have been five (5) ORPS and one (1) ISC to date since the adoption of TapRoot. All have undergone TapRoot to determine causal factors. No trends are apparent. Below is a chart of the causal factors.

ORPS Number	Causal Factor (TapRoot)
ORPS - 2004 - 001	Electrical Shock - Engineering Services did not communicate to Group Leader not authorized to remove cover.
ORPS - 2004 - 002	Suspect Bolts - Equipment sent from Manufacturer with suspect bolts
ORPS - 2005 - 001	Potential High Voltage Exposure
ORPS - 2005 - 002	Accuracy of Flash Analysis Questioned
ORPS - 2005 - 003	Fire Alarm Annunciation Failed to Activate

ISC – IMI – 3(#19) #51451	Condensed Matter Physics SSH Incident
ORPS 2007 -0001	Smoke – Smoldering Event in Graphics Renovation
ORPS 2007-0002	Electrical Conduit Penetration at Warehouse



A1- Design/Engineering Problem - 2  
 A2- Equipment/Material Problem - 2  
 A3- Human Performance LTA - 2  
 A4- Management Problem - 1  
 A5- Communications LTA - 1  
 A6- Training Deficiency - 0  
 A7- Other Problem (Ext. Phenomena, Rad/Haz Mat'l) - 0