



Argonne
NATIONAL
LABORATORY

... for a brighter future

ANL Acquires ISO 9001 and 14001 Certification via the Laboratory Management System (LMS)

William G. Ruzicka

June 17, 2009



U.S. Department
of Energy

UChicago ►
Argonne_{LLC}

A U.S. Department of Energy laboratory
managed by UChicago Argonne, LLC

Why did Argonne Adopt ISO?



The laboratory management felt that we needed to establish our processes and gain control of how we do business, and that the International Organization for Standardization (ISO) certification (9001 and 14001) provided the best fit to establish these controls and position us for continued improvement.

ISO 9001 Management Standards focuses on business management systems - what the organization does to fulfill customer quality requirements, as well as applicable regulatory requirements. It also focuses on enhancing customer satisfaction and continual improvement of performance.

ISO 14001 focuses on environmental systems. The Department of Energy has recognized the use of ISO 14001 standards to comply with DOE Order 450.1A, its Environmental Management System requirements.

If you were to start a family business – a company that would manufacture Widgets, – ISO 9000 would be a good way to ensure you had all the potential requirements satisfied.

The ISO Standard

ANSI/ISO/ASQ Q9001-2000

AMERICAN NATIONAL STANDARD

Quality management systems— Requirements

Approved as a American National Standard by:
American Society for Quality

An American National Standard Approved on December 13, 2000

Reprinted with permission of the American Society for Quality.

As a minimum

Control of Documents

Control of Records

Internal Audits

Control of Nonconforming Products

Corrective Actions

Preventive Actions

ISO 9001 Not a Daunting Document – Only 23 Pages Long (13 Pages of Specific Instructions)

Contents	Page
1 Scope	1
1.1 General	1
1.2 Application	1
2 Normative reference	1
3 Terms and definitions	1
4 Quality management system	2
4.1 General requirements	2
4.2 <u>Documentation requirements</u>	2
5 Management responsibility	3
5.1 Management commitment	3
5.2 Customer focus	4
5.3 <u>Quality policy</u>	4
5.4 Planning	4
5.5 Responsibility, authority and communication	4
5.6 Management review	5
6 Resource management	5
6.1 Provision of resources	5
6.2 Human resources	6
6.3 Infrastructure	6
6.4 Work environment	6
7 Product realization	6
7.1 Planning of product realization	6
7.2 Customer-related processes	7
7.3 Design and development	8
7.4 <u>Purchasing</u>	9
7.5 Production and service provision	10
7.6 <u>Control of monitoring and measuring devices</u>	11
8 Measurement, analysis and improvement	11
8.1 General	11
8.2 Monitoring and measurement	11
8.3 Control of nonconforming product	12
8.4 Analysis of data	13
8.5 Improvement	13
Annexes	
A Correspondence between ISO 9001:2000 and ISO 14001:1996.....	15
B Correspondence between ISO 9001:2000 and ISO 9001:1994	19
Bibliography.....	23

Basic instructions on how to
run a business.

**ARGONNE NATIONAL LABORATORY
9700 S. CASS AVE BUILDING 201
ARGONNE, ILLINOIS USA**

6Q721

Audit Type

Readiness Review Audit
09-MAR-2009 - 09-MAR-2009

Lead Auditor

GORDON BELLEN

Team Auditors

IRENE GRABOWSKI
TERRANCE WILSON

Standard

ISO 9001:2000

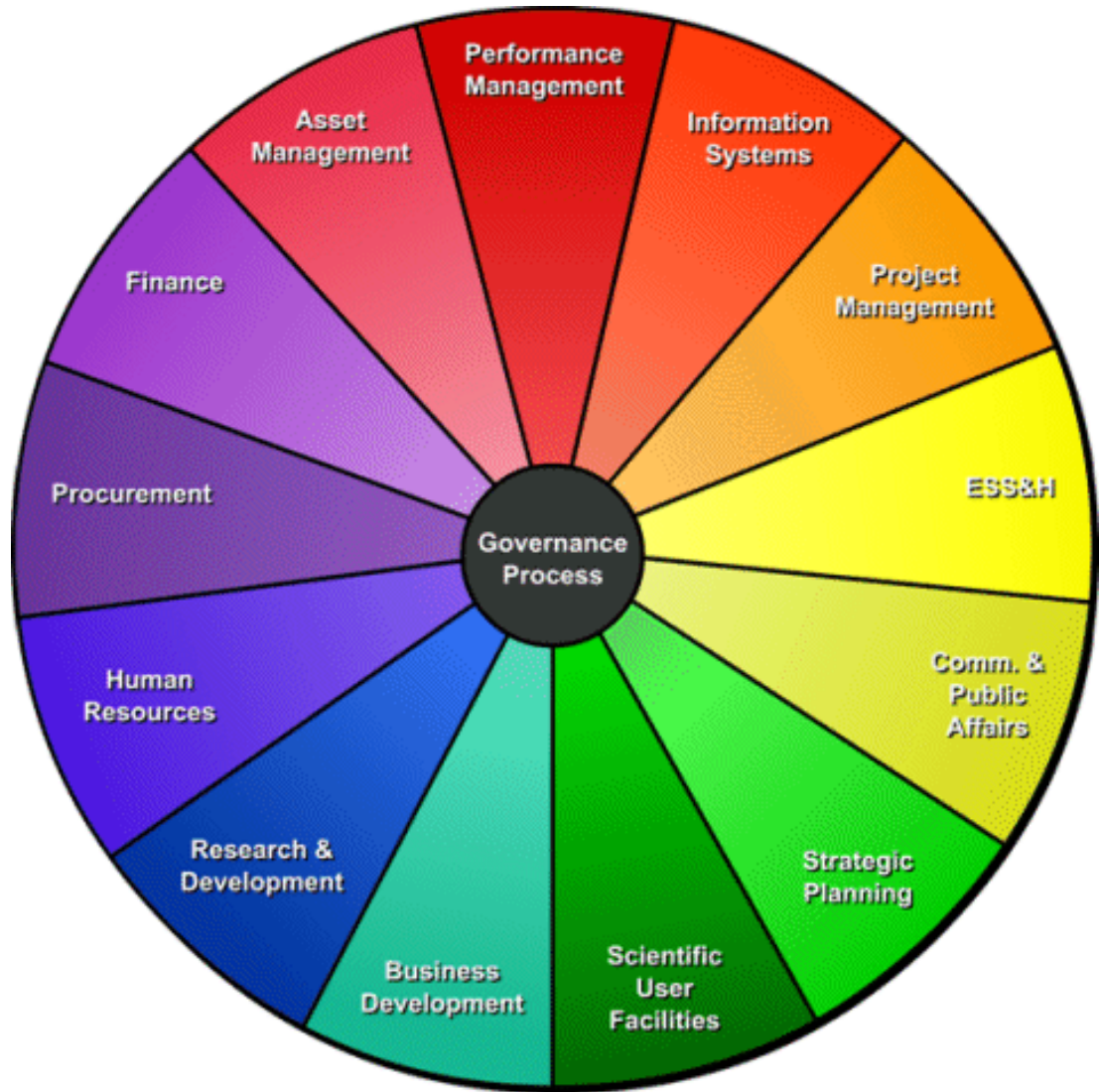
Recommendation

ISO 9001:2000: Readiness Review complete: Proceed

- ANL Obtained ISO 9001 & 14001 Registration in June
- NSF to redo audits every six-months

How did Argonne Obtain ISO 9001/14001 Registration? We implemented the Laboratory Management System (LMS)

LMS – 17 Core Processes



***Governance oversees all
core processes***

17 Core Processes

1. Asset Management
2. Business Development
3. Communications
4. Contract Management
5. Environment
6. Financial Management
7. Governance
8. Human Resources
9. Information Services
10. Procurement
11. Project Management
12. R,D&E
13. Risk Management
14. Safety and Health
15. Scientific User Facilities
16. Security
17. Strategic Planning

17

Process Owners

- Gail Stine/OPS
- Dick Cirillo/ESE
- Mike Papka/CLS
- Rab Maholtra/OTD
- Mike Dunn/OPS
- Mike Besancon/OCF
- Steve Richardson/OTD
- Stephen Streiffer/CNM
- Charlie Catlett/OPS
- Carol Giometti/CLS
- Ed Temple/OPS
- Mike Pellin/ESE
- Mark Peters/ESE
- Bill Ruzicka/PSC
- Rod Gerig/PSC
- Denny Mills/PSC
- Greg Morin/OTD

9 of 17 have programmatic owners

Team Leaders

- John Daum/FMS
- Gary Kiger/OTD
- Cindy Wilkinson/CPA
- Rab Maholtra/OTD
- Mike Dunn/FMS
- Connie Markewicz/OCF
- Ed Jedlicka/CLS
- John Hyzer/HR
- K. Sidorowicz/P. Domagala
- D. Bugielski/J. Ingraffia/OCF
- Karen Hellman/FMS
- Tom Ewing/NE
- Bo Arnold/OPS
- D. Whitaker-Sheppard/ESQ
- Paul Davé/LCF
- Ed Mickulas/SCD
- Ed Jedlicka/CLS

- In the past programmatic input was not always solicited for new policies and procedures
- No more central control - stakeholders can have input
- No taxation without representation

LMS-SH Core Process Constitution

■ Preconditions:

- Compliance with DOE requirements is a precondition/requirement for continuing operations at ANL
- Activities at ANL should follow good ESH practices

■ Goal

- Each S&H Team's goal is to ensure; efficient compliance and good S&H practices are implemented in support of R&D at ANL.

■ Policy

- The LMS S&H Team will be used as a standing issue analysis team for procedures designated with S&H as the core process.
- Each ALD will have a spokesperson;
 - The spokesperson will be appointed by the ALD and represent their ALD-ship. (for example PSC = Tom Barkalow)
 - The spokesperson will not have veto power but their dissent will be included in recommendations to the Process Owner.
- A cost benefit analysis shall be developed for each issue.

How the LMS Process Works

❖ Roles & Responsibilities Interaction

- E. Isaacs.....
- J.M. Gibson.....
- S. Richardson.....
- A. Sattelberger.....
- R. Stevens.....

**Executive
Committee**

- Approve process structure
- Approve process owners
- Approve process objectives & measurements
- Approve lab wide budget
- Approve process changes

**Process Owner
Committee**

- Review and recommend process changes

**Process
Owner**

- Manage core process

**Team Leader
Committee**

- Provide change recommendations

**Issue
Teams**

- Work issue

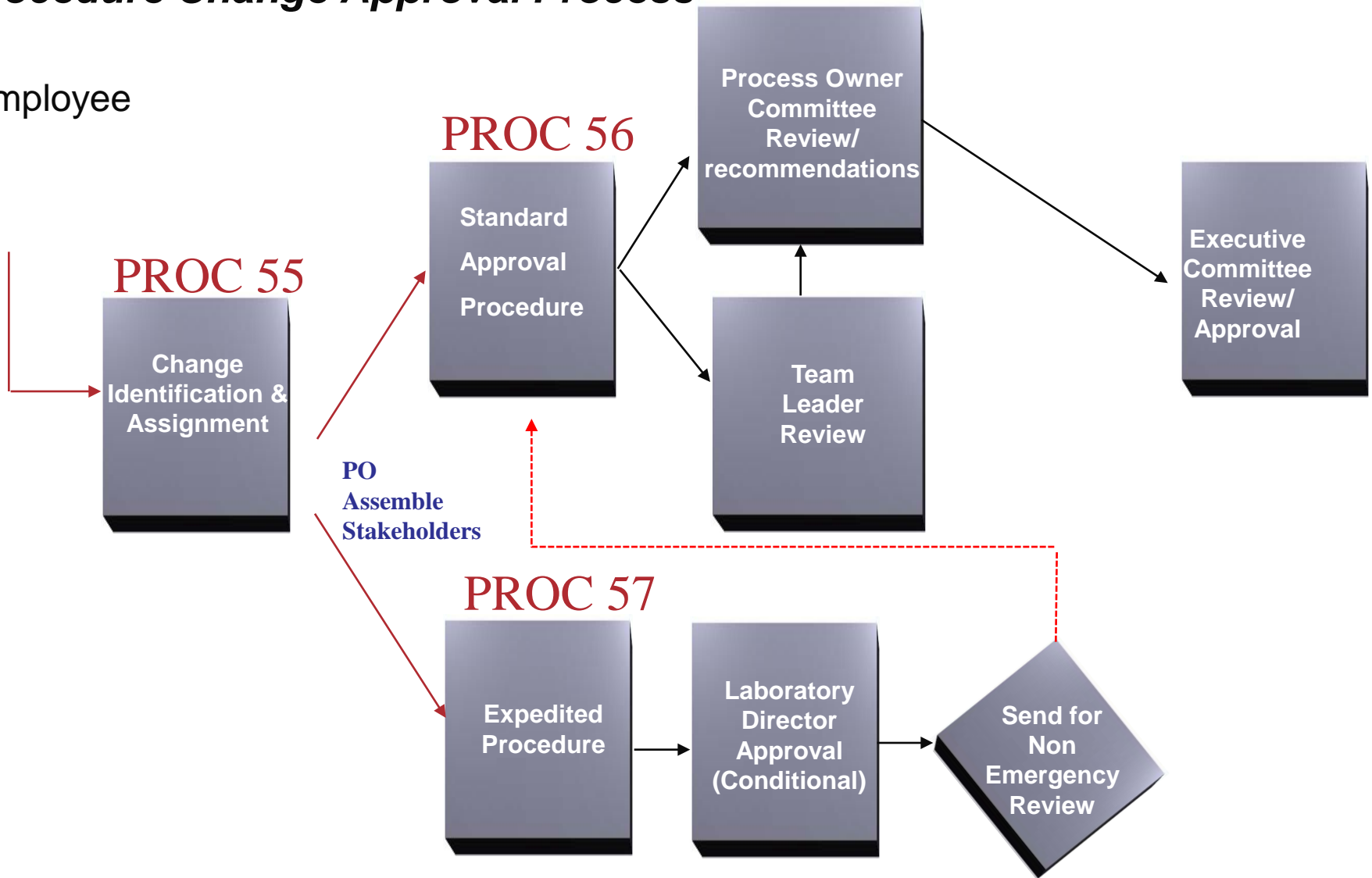
LMS Process Standing Committees

Committee	Purpose	Members	Meeting Frequency
<u>Executive Committee</u>	<ul style="list-style-type: none"> ■ Approve process objectives and measurements ■ Approve/assign process owners ■ Approve/maintain process structure ■ Approve lab budgets ■ Review all process performance 	<ul style="list-style-type: none"> ■ Laboratory Director ■ Deputy Laboratory Director for Programs ■ Laboratory Chief Operating Officer ■ All Associate Laboratory Directors 	<ul style="list-style-type: none"> ■ <u>Yearly (Minimum) for process reviews</u> ■ <u>Monthly for change approvals</u>
<u>Process Owner Steering Committee</u>	<ul style="list-style-type: none"> ■ Approve process changes and improvements: ■ Lab wide Policy and Procedures 	<ul style="list-style-type: none"> ■ LMS Project Manager ■ Process Owners 	<ul style="list-style-type: none"> ■ <u>Every two weeks</u>
<u>Process Team Leader Committee</u>	<ul style="list-style-type: none"> ■ Provide recommendations to process owners on process changes and improvement requests 	<ul style="list-style-type: none"> ■ Process Team Leaders 	<ul style="list-style-type: none"> ■ <u>Every two weeks</u>

Issue Identified by Employee

Procedure Change Approval Process

Employee



1 Purpose

Establish the process for responding to Laboratory Management System (LMS) process issues and improvement opportunities identified by Argonne employees.

2 Scope

This procedure applies to the following Argonne activities and entities.

LMS core processes:	all
Organizations:	all
Buildings:	all
Specific locations:	all
Exclusions:	none

3 Work Process

3.1 Introduction

No introduction is needed.

3.2 Step-by-Step Procedure

The steps below are mandatory unless noted otherwise.

3.2.1 Identification of Issue

Step	Job Role	Action
1	<u>Any employee</u>	<u>Upon identifying an LMS process issue or improvement opportunity</u> , report it in one of the following ways: <ul style="list-style-type: none"><u>Notify the LMS project manager, using the feedback window on the LMS web site.</u>Notify the LMS project manager or any core process owner or team leader verbally or by email.
2	LMS project manager or process owner	2.1 Review the issue identified by the employee and determine whether to forward or reject the issue. Proceed to step 2.2 or step 2.3 as appropriate. 2.2 If a decision is made to forward the issue, identify the organizational scope of issue or opportunity and continue with the appropriate section of this procedure. The scope may be one of the following.

PROC-56

Issue Analysis and Process Change: Standard Method

Laboratory-Wide Argonne Procedure LMS-PROC-56, Rev. 0

Effective Date: 12/01/08

3.2 Step-by-Step Procedure

The steps below are mandatory unless noted otherwise.

3.2.1 Stage 1: Determine Whether to Propose Changes to Laboratory-Wide Policies or Procedures

Step	<u>Job Role</u>	Action
1	<u>LMS core process owner</u>	<p><u>After accepting an assignment</u> to consider changing a work process as part of LMS-PROC-55, LMS-PROC-59, LMS-PROC-60, or LMS-PROC-61, take the following actions:</p> <p>1.1 <u>Create an issue analysis team</u> consisting of an issue manager and stakeholders. 17-member</p> <p>1.2 Notify the LMS team leaders committee and LMS process owner committee of the creation of the issue analysis team and the team's assignment.</p> <p>1.3 Document the establishment of issue analysis team in the LMS issue tracking system</p>

New Issue Idea Identifier Must Justify Change



Form ANL-753

Change Request for a Laboratory-Wide Policy or Procedure

This form requests and documents approval to issue a new or revised Argonne policy or procedure ("document"), or to eliminate an existing policy or procedure, of Laboratory-wide applicability. This form accompanies a draft policy or procedure through the Laboratory Management System review and approval process.

PART 1: DESCRIPTION OF POLICY OR PROCEDURE CHANGE

Document author completes Part 1 electronically.

Fill in shaded boxes to complete, or attach separate electronic files and reference those files in the shaded boxes.

Shaded boxes may be completed by entering the words "not applicable."

PART 1.1: DOCUMENT IDENTIFICATION

Enter "none" or "same" if appropriate

Current document number, if any

New document title

Draft date of new document

New document number

(assigned by LMS-PPS Administrator)

Author's name

Are there any national security or export control reasons to limit the availability of this document on the Argonne intranet?

Enter "yes" or "no" – if "yes," explain.

Does this document require DOE Argonne Site Office or other external approval before it is issued?

Enter "yes" or "no" – if "yes," explain.

PART 1.2: TYPE OF DOCUMENT AND DESCRIPTION OF CHANGE

Check one box in each column

Type of document

- Policy
 Procedure

Type of change

- Issue new document
 Revise existing document
 Reissue existing document without change
 Eliminate existing document

Notes:

Form ANL-753

Document draft date:
New document title:

Reason for change

Check as many as apply

- Nonsubstantive editorial corrections¹ of existing document that do not change work processes
If only this box is checked, skip ahead to Part 3.
- Scheduled periodic review
- Change in external drivers
- LMS team or issue analysis team recommendation
- Other

Summary of issue addressed by proposed policy/procedure change

--

Summary of proposed change

--

Gap analysis

Explain any differences between the way in which Argonne operates today and the way in which Argonne would operate if the requested change is approved.

--

Risk analysis

What risks would Argonne assume if the requested policy/procedure change is NOT approved?

--

What risks would Argonne assume if the requested policy/procedure change is approved?

--

Potential impacts (positive and negative) if requested change is approved

Allocation of effort

Would employees be required to devote more, less, or the same time to the activity that is the subject of the document? Estimate any change in effort level and identify types of employees affected.

--

Cost of materials and services

Would Argonne's costs for purchased materials and services increase, decrease, or stay the same? Explain the nature of any change and estimate any cost difference in thousands of dollars.

--

Effect on compliance with prime contract requirements

How would Argonne's compliance with its contract be affected by the requested change?

--

Other impacts: positive

Describe any other positive impacts.

--

LMS Issues Open > 90 Days

Key	Summary	Status	Resolution	Assignee	Created	Updated	Processes or Line Management	Issue Manager	Issue Status	Received Date	Solution Approval Due Date	Type of Issue	Days Open
LMS-63	Minor nonconformity: LMS Proc 33, Project Management per pre-assessment audit in January, 2009	Open	Unresolved	Hellman, Karen B.	1/29/2009	1/30/2009	Project Management	Karen Hellman	Assigned	1/29/2009	2/6/2009	Process issue	134
LMS-64	Proc 14 creates issues for FMS and requires a review.	Open	Unresolved	Beach, A. Bill	1/30/2009	5/7/2009	Safety and Health	Terri Bray	Assigned	1/29/2009		Process issue	134
LMS-69	Message: With so many people having to sign a hire package (even for students), it takes at least 3 weeks to arrive in HR.	In Progress	Unresolved	Hyzer, John E.	1/30/2009	5/14/2009	Human Resources	NA	Assigned	1/29/2009	5/12/2009	Process issue	134
LMS-59	Minor Nonconformity: The Science & Technology Advanced Recruitment (STAR) procedure needs a standardized approach to document search activity by hiring division.	Open	Unresolved	Hyzer, John E.	1/29/2009	5/14/2009	Human Resources	John Hyzer, Interim HR Director - HR	Assigned	1/19/2009	2/6/2009	Process issue	144
LMS-52	LMS-Pre-assessment Audit Risk Warning: Environment, Safety and Health Manual Chapter 1 Section 1.1	Reopened	Unresolved	Ruzicka, Bill	1/26/2009	4/29/2009	Safety and Health	T. Bray	Accepted	1/16/2009	2/6/2009	Process issue	147
LMS-32	Need to develop lab-wide policy/procedure that supports the principle of "least privilege" to computer user accounts.	Open	Unresolved	Schmitt, Donald G.	1/19/2009	2/22/2009	Information Services	Mike Skwarek	Assigned	1/14/2009	2/6/2009	Lab wide issue	149
LMS-72	<u>A Safety Observation Report</u> system is needed at Argonne. As a result of the consulting work completed by Dupont for Argonne, Argonne requires specific actions be taken to support the safety culture and improve the safety goals	Open	Unresolved	Ruzicka, Bill	2/18/2009	3/24/2009	Safety and Health	Bill Ruzika	Accepted	1/14/2009	3/6/2009	Lab wide issue	149
LMS-73	<u>Argonne needs Safety Leadership Training.</u> As a result of consulting work completed by Dupont for	Open	Unresolved	Ruzicka, Bill	2/18/2009	5/14/2009	Safety and Health	Eddi Langenburg	Accepted	1/14/2009	3/6/2009	Lab wide issue	149

New Semi-user Friendly LMS Website

<https://docs.anl.gov/lms/documents/index.html>

The screenshot displays the Argonne National Laboratory LMS website. The header includes the Argonne logo, the text "Inside Argonne", and a search bar. A navigation bar contains links for HOME, NEWS & EVENTS, TOOLS & TASKS, DIVISIONS, COMMUNITY, and My ARGONNE. The left sidebar features a "LMS Laboratory Management System" menu with categories like Overview, Education & Training, Core Processes, Policies & Procedures (highlighted with a red circle), and Issues Management. The main content area is titled "Policies & Procedures" and includes a search section with a search box and a "Search" button (circled in red), and a "Browse by core process" section (circled in red) listing various categories such as Asset Management, Business Development, and Safety and Health. A "Feedback" section on the right offers a link to "Suggest an improvement or ask a question", and a "Dictionary" section provides information about the Argonne Policies & Procedure Dictionary.

Argonne Safety and Health

■ Improvement still needed

April 24, 2009



Department of Energy

Washington, DC 20585

April 30, 2009

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dr. Robert Rosner
President, UChicago Argonne, LLC
Director, Argonne National Laboratory
9700 South Cass Avenue
Argonne, Illinois 60439

WEA-2009-04

Dear Dr. Rosner:

This letter refers to the U.S. Department of Energy's (DOE) Office of Health, Safety and Security's Office of Enforcement investigation into the facts and circumstances surrounding the March 3, 2008, incident at the Argonne National Laboratory (ANL) that resulted in the release of arsenic oxide into a laboratory room, and the March 11, 2008, incident that resulted in an overexposure of a laboratory researcher to carbon monoxide. The results of the on-site investigation were provided to UChicago Argonne, LLC (UChicago Argonne) in an Investigation Report dated November 25, 2008. An enforcement conference was held on January 9, 2009, with you, senior management of the University of Chicago, and members of your staff to discuss the report's findings and UChicago Argonne's corrective action plans. A summary of the enforcement conference is enclosed.

ANL HSS ASSIST ASSESSMENT

During the period of April 13, 2009 through April 23, 2009 a HSS assist assessment was conducted for the Advanced Photon Source Division at Argonne National Laboratory in the area of Work Planning and Control. This report identifies issues found, documents reviewed, personnel interviewed and information gathered using lines of inquiry listed in CRAD 64-10 *Work Planning and Control.*

ISSUES FOUND

APS Issue 1:

JSA 2009-03-13 Construction Job Safety Analysis for ECMs 5.1 APS Lighting Upgrades, and APS Light Controls Upgrade – ANL ESPC Project Attachment 1, LOTO Procedure, paragraph 7 allows the use of a proximity voltage tester. Proximity voltage testers do not meet requirements to verify zero electrical energy.

Conclusion – LMS Status

- Sustain a world-class research facility where researchers and work and funding agencies want to work
- Consistently achieve results that reflect the highest principles
- Continually improve the system

Easier

Cheaper

Better

Easier = have patience Cheaper = have patience Better = coming now and more in the near future

LMS system provides checks and balances, transparency, all voices will be heard, and common protocols.