Managing Procedural Training

Workshop on Accelerator Operations
April 14, 2010

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Overview

- ALS Background
- Why do we need procedures?
- Role of the ALS Procedures Center
- Procedure Training - Who, when & how?
- Concerns in Procedure Training
- Procedures Training Database
- Training Trends
- Questions & Answers

ALS Background

- Construction Completed 1993
- Third-generation light accelerator
- Top-off mode: 500mA / 1.9 GeV
- 51 beamlines
- Total ALS Staff: 185
- Operations Staff
  - 8 Accelerator Operators (24/7) – accelerator and shielding configuration control
  - 2 Floor Operators – beamline and shielding configuration control
  - 2 Cross-trained as AFO (Accelerator/Floor Op.)
- Visiting Researchers/Users:
  - 1900+ per year and growing
- ALS Website: www.als.lbl.gov

Why do we need procedures?

To provide written instructions when operations are:

- Infrequent
- Complex
- High consequence / Safety-critical
- Frequently changing

and because personnel either turnover, retire, or forget

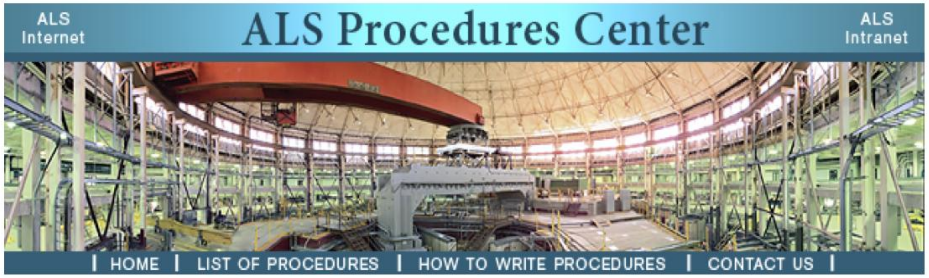
How did you fix this the last time?

Role of the Procedures Center

To ensure that procedures are:

- **Current** - Reviewed within past 3 years?
- **Accurate** - Does it reflect present practice?
- **Consistent** - Does it have standard structure, language & format?
- **Clear**
  - Are the hazards clearly identified with controls?
  - Do the instructions make sense? Need pictures, checklist, or form?
- **Accessible**
  - Is it available on ALS Procedures website?

ALS Procedures Website



List of ALS Operating Procedures

Click on the procedure number to download a PDF document of that procedure.
For more information contact the ALS Procedures Center, 80-160, 486-6535.
*indicates LOTO procedures that require an annual LOTO Inspection during performance

Procedures Groups

- ALS Global (ALS)
- Beamline User & Floor Operator (BL)
- Controls (CS)
- Elec Coordinators (EC)
- Elec Eng (EE)
- Elec Maintenance (EM)
- Health Physics (HP)
- Insertion Devices (ID)
- Mech Techs (MT)
- Accelerator Operations (OP)
- Power Supply (PS)
- Radio Frequency (RF)
- Survey & Alignment (SA)
- User (US)

Checklists & Tests

- EPS Interlock Tests
- Key-enable Checklists
- RSS/Interlock & Survey Tests

ALS (Global) Procedures

ALS 01 01 Procedure Training and Documentation

- Presently 360 active procedures
- Only active procedures are on the website

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PROCEDURE Page 1 of 8

Number:	ALS 01-01
Revision:	Rev. 3
Issue Date:	October 17, 2008
Review Period:	3 years
Supercedes Issues:	Rev. 2

Title: Procedure Training and Documentation

Section where used: *(List all sections/groups that will use this procedure)*
ALS Section Leads, ALS Users Office, ALS ES&H, Experiment Set-up Coordination, Floor Operations, and Beamline Scientists

Type of Procedure: *(Administrative / Technical)*
Administrative

Prepared by	Date	Reviewed by	Date	Approved by	Date
Tennessee Gock		Rick Bloemhard		David Robin	
Karen Nuñez		Warren Byrne			
		Jim Floyd			
		Ken Woolfe			

Revision Log:

No.	Date	Pgs. Affected	Type of Change	Brief Description of Revision
1	6/29/93	1, 2, Appen. I	--	Pg. 1: Training in revised procedures and destroyed previous issues added to SCOPE. Pg. 2: Step 4 in Sect. 5.0 expanded. Appendix: Revision check box and statement added to Instructor's Signature box.
2	9/23/96	1-3	--	Pg. 1: Sec. 1.0 revised for other areas, participant documentation; Sec. 2.0, 2nd and 3rd sentences new; Sec. 3.0, references updated; Pg. 2: Sec. 4.0, step [1] deleted and moved to Sec. 2.0; Pp. 2-3: Sec. 5.0 steps [1]-[4] revised for clarity, step [5] new; Appendix from Rev. 1 remains valid.
2	9/23/99	--	--	Renewed for 3 yrs. following relevancy review.
2	9/23/02	--	--	Renewed for 3 yrs. following relevancy review.
2	9/23/05	--	--	Renewed for 3 yrs. following relevancy review.
3	10/17/08	1-8, Appen.I	Major	Changed title to include "Training"; updated signature block; changed Sections Where Used from All Areas to Specified Groups; added info on the ALS Procedures Training Database throughout the Procedure; rewrote Procedure to add Sections 5.1 - 5.4 to cover types of training, guidelines for selecting training for staff, training communication and documentation for ALS staff and BL Scientists.

1.0 PURPOSE

To provide a uniform method for communicating, delivering, and documenting training in the Conduct of Operations Procedures and for other areas or topics where participant documentation is required.

Role of the Procedures Center

For Procedure Training:

- **Notification**
  - To inform supervisors of a new procedure or revision that requires training
- **Guidance**
  - To recommend what form of training to use and provide overview on changes made
- **Course Development**
  - To work with technical experts to create online training and testing
- **Records**
  - To maintain training records
- **Compliance**
  - To ensure supervisors maintain group training

Procedure Training: Who?

Training requirements must be established for individuals* working at the accelerator facility

- whose activities could affect safety and health conditions, or
- whose safety and health conditions could be affected by facility activities.

(Safety of Accelerator Facilities, DOE 420.2B)

*Includes the following:

- ALS Operations Staff
- Technicians
- Engineers
- Beamline Scientists and Staff
- Beamline Users
- Administrative Staff
- Vendors / Contractors

Procedure Training: When & How?

When

- For new procedures/changes to existing procedures
- Staff changes and new employees

How

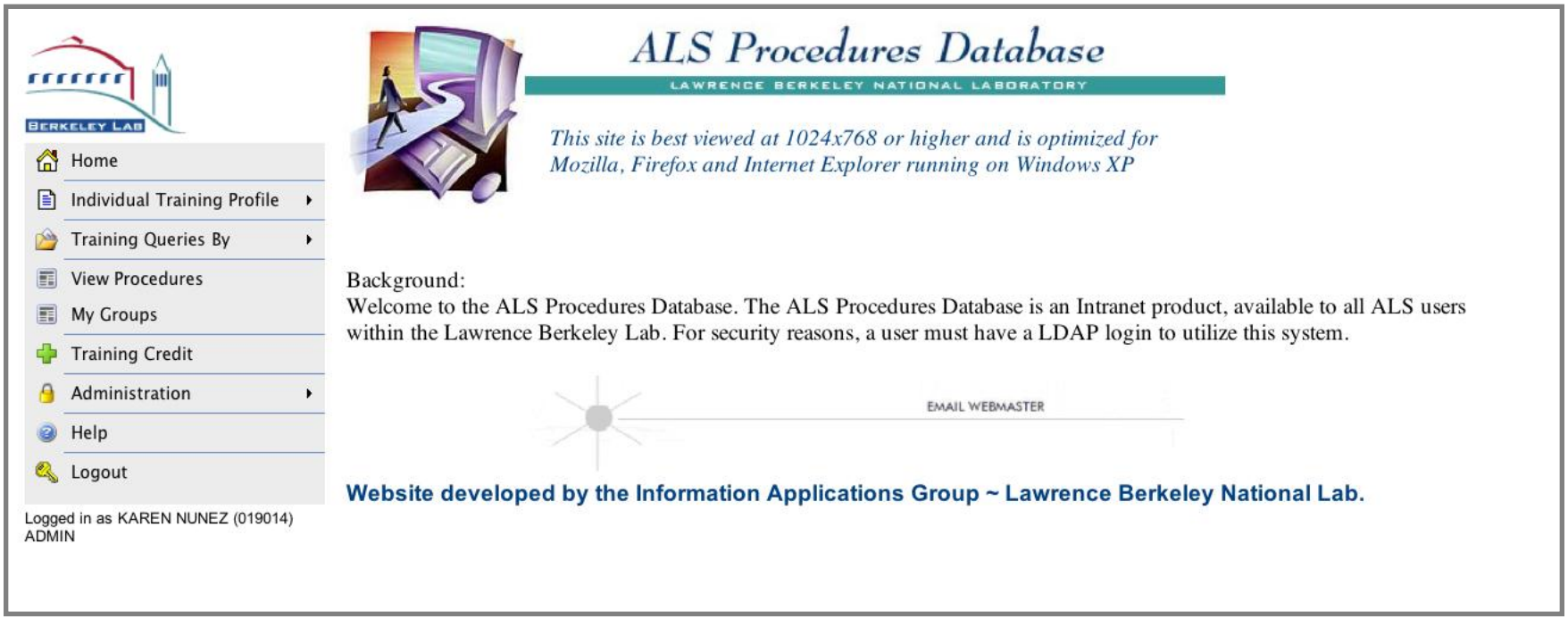
- Supervisor is responsible and decides method of delivery
- Types of Training
  - **Read Only** - most commonly used for minor changes to procedures
  - **Qualification** - for major changes for technical procedures; e.g., lecture, walk-through, testing
  - **Online courses** - helpful for large groups, for ease of training record-keeping and for retraining

Concerns in Procedure Training

- Keeping up with frequent review periods
- Staying current and tracking training completion
- Scheduling training for shift workers
- Reducing paperwork & data entry
- Making training less ‘painful’ to do

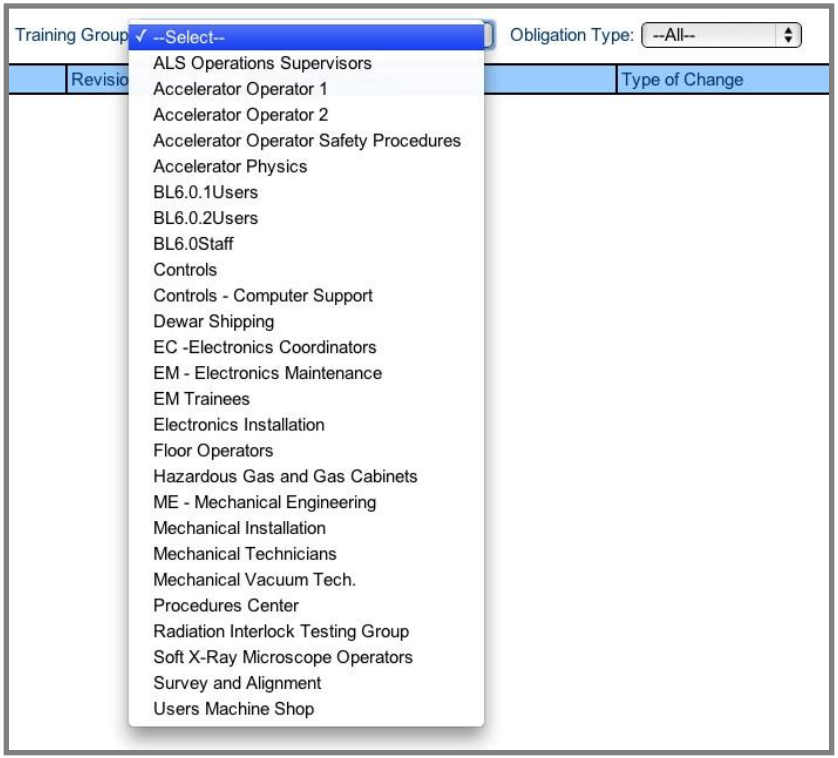
Procedure Training Database

- Set up functional groups and assign required procedures to groups
- Maintain training records
- Track training completion



Report Options

- There are several options to view and run reports
- Example of the training groups created



Sample Report: By Supervisor

Required Training By Supervisor

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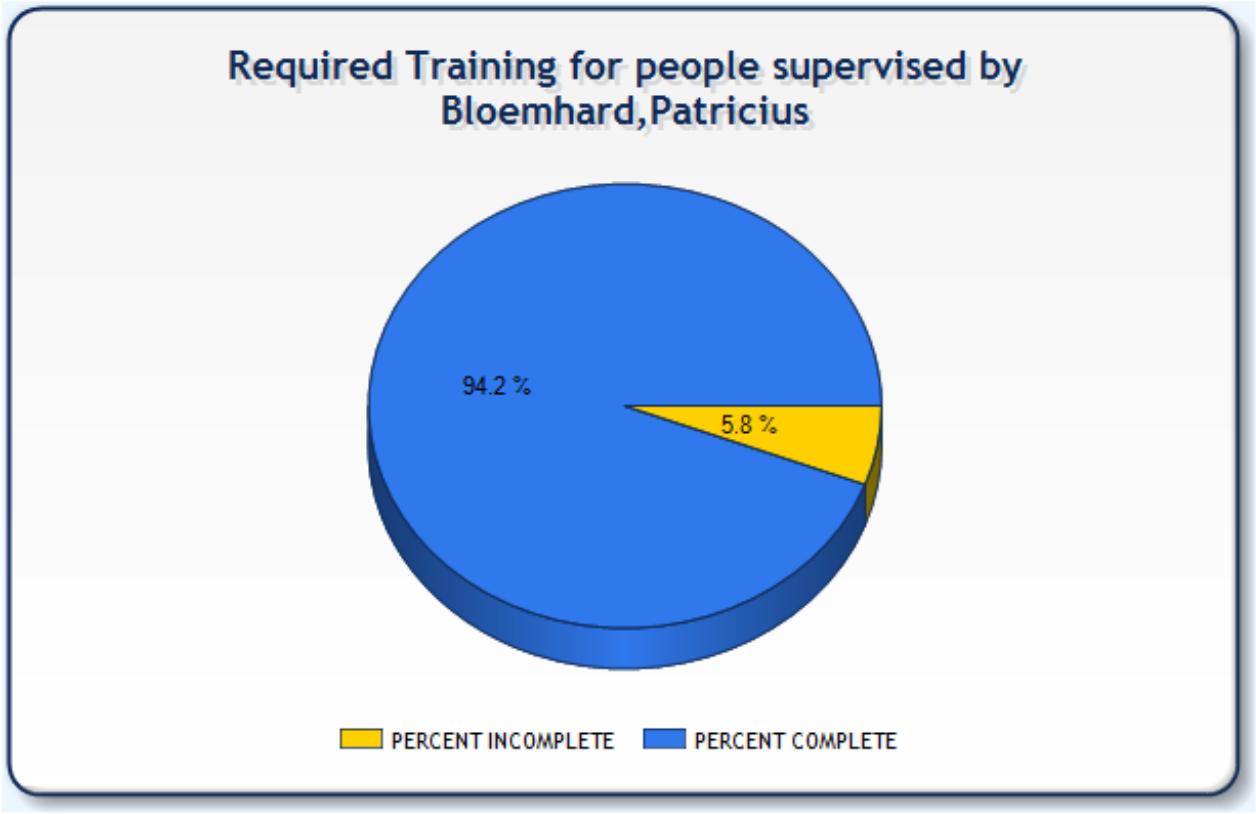
Below is a Pie Chart showing the percentages of complete and incomplete required training for this supervisor. Click on the sections to view the names that make up these percentages.



Sample Report: By Group

Export to Excel

Training Group: Accelerator Operator 1 | Obligation Type: --All--

Procedure	Revision	Type of Procedure	Type of Change	Note	017604 Abreu,Matthew J	007016 Beaudrow,Michael J	016151 Bloemhard,Patricius	003464 Brothers,David J
ALS 01-01	3	Administrative			11/06/2008	11/15/2008	10/17/2008	11/07/2008
ALS 01-02	5	Administrative	Major	Add verif. mitigation install	02/06/2010	02/25/2010	11/05/2009	01/30/2010
ALS 01-04	6	Administrative	Major	Training reqs & afterhrs	Rev. 5 (06/04/2007)	Rev. 5 (05/03/2006)	03/16/2010	Rev. 5 (04/25/2006)
ALS 01-05	5	Administrative			07/12/2009	12/10/2007	07/12/2009	12/10/2007
ALS 02-01	12	Administrative			11/06/2008	11/15/2008	10/29/2008	11/07/2008
ALS 02-05	0	Administrative			08/05/2009	08/15/2009	08/03/2009	08/15/2009
BL 08-02	3	Technical			06/04/2009	07/09/2009	06/26/2009	06/25/2009
BL 08-08	7	Technical			06/15/2009	07/13/2009	06/26/2009	07/14/2009
BL 08-11	3	Technical			08/25/2008	12/10/2007	06/17/2009	12/10/2007
BL 08-23	3	Technical	Minor	New storage locations & append	02/10/2010	02/25/2010	Rev. 2 (07/30/2009)	02/22/2010
BL 08-24	7	Technical			07/25/2008	01/23/2009	06/26/2009	01/21/2009
BL 11-01	5	Administrative	Minor	Update terms, update append.	11/18/2009	12/11/2009	11/18/2009	12/08/2009
CS 02-02	2	Administrative			11/06/2008	11/15/2008	07/30/2009	11/07/2008
CS 02-03	7	Technical	Minor	New controls	03/16/2010	Rev. 6 (06/06/2009)	03/12/2010	Rev. 6 (06/06/2009)
EC 02-27	2	Technical			03/12/2009	01/23/2009	05/06/2009	05/17/2006
EC 02-80	0	Technical			06/25/2009	07/13/2009	08/24/2009	07/14/2009
EC 02-82	2	Administrative	Minor	Temp key release for EC 02-80	03/16/2010	Rev. 1 (07/09/2009)	Rev. 1 (07/09/2009)	Rev. 1 (08/28/2009)
EE 08-01	3	Administrative			11/26/2008	11/15/2008	08/24/2009	11/07/2008
HP 01-04	7	Administrative			06/02/2008	06/02/2008	12/17/2007	05/22/2008
HP 01-06	5	Technical			06/25/2009	07/13/2009	07/28/2009	06/25/2009
HP 02-01	10	Administrative	Major	T-4 and ALS1005 Training	Rev. 9 (12/13/2007)	Rev. 9 (12/12/2007)	Rev. 9 (06/25/2009)	Rev. 9 (12/08/2007)
ID 02-08	1	Technical			12/20/2008	01/04/2009	08/24/2009	12/20/2008
MT 08-02	1	Administrative			01/21/2009	12/02/2008	06/25/2009	12/02/2008
OP 02-01	2	Technical			04/22/2008	04/19/2008	06/17/2009	04/30/2008

Sample Report: By Individual

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ALS PROCEDURES TRAINING PROFILE

Employee:	Mahic,Haris (017874)	**Supervisor:**	Bloemhard,Patricius (016151)
Division:	Advanced Light Source	**Job Title:**	Accelerator Operator
Employee Status:	Active	**Hire Date:**	03/01/2007

Training Requirements that have NOT been fulfilled. Training Requirements that have been fulfilled.

Obligation Type	Procedure	Title	Current Version	Version Credited	Date Credited	Date Expires
Required	ALS 01-01	Training Doc for Procedures	3	3	11/07/2008	
	ALS 01-02	Proc Temp Bypass of Personnel	5	5	01/16/2010	01/16/2011
	ALS 01-04	*Reqd Training for Keycard Acc*	*6*	*5*	*07/11/2007*	
	ALS 01-05	Equip. temp. Bypass Procedure	5	5	08/11/2007	
	ALS 02-01	Authorized Persons List	12	12	11/06/2008	
	ALS 02-05	Work Permit Process at the ALS	0	0	08/05/2009	
	ALS 08-01	Accelerator Project Review Pro	1	1	08/10/2009	
	ALS 09-01	Electrical LOTO Training Proc.	8	8	08/10/2009	
	ALS 16-01	ALS Proc. Format & Guidelines	4	4	10/23/2009	
	BL 08-02	Taking Beamlines Offline	3	3	06/25/2009	
	BL 08-04	Inspec.&Test for part/comp FE	5.1	5.1	10/24/2009	
	BL 08-08	BL Abbreviated Key-enable Proc	7	7	07/28/2009	
	BL 08-11	Beamline (BL) 3.1 Filter Chnge	3	3	04/25/2007	
	BL 08-16	BL Review Committee	5	5	08/15/2009	
	BL 08-23	Hazardous Gases and Gas Cabs	3	3	02/23/2010	
	BL 08-24	BL Mini-Hutch Maint/Mod Access	7	7	07/16/2008	
	BL 11-01	ALS Beamline Logkeeping	5	5	11/25/2009	
	CS 02-02	Testing RemoteControl Software	2	2	11/07/2008	
	CS 02-03	*Operating ID Gap Motor Control*	*7*	*6*	*06/06/2009*	

Future Goals in Training

- Increase online training
  - No need to schedule training
  - Online exam tool to assess understanding
  - Training credit automated (less paperwork)
- Walk-through observations
  - Observation by person outside group
  - Important for safety-relevant procedures
- More cross-training staff

View Above ALS

jc/ALSaerial/11-96

Thank you!