Safety Review Committee
July 18, 2008
10:00 AM – 12:00 PM

Minutes

Committee Member	Representing	Present
Banda, Michael J.	Computing Sciences Directorate	X
Bello, Madelyn	Human Resources Advisor	
Blodgett, Paul M.	Environment, Health and Safety Division	X
Dubon, Oscar	Materials Sciences Division	X
Francino Puget, Maria Pilar	Genomics Division	X
Kadel, Richard W.	Physics Division	X
Kostecki, Robert	Environmental Energy Technologies Division	X
Leitner, Daniela	Nuclear Science Division	
Li, Derun	Accelerator & Fusion Research Division	
Lucas, Donald	Safety Review Committee Chair	X
Lukens Jr., Wayne W.	Chemical Sciences Division	X
Martin, Michael C.	Advanced Light Source Division	X
Nakagawa, Seiji	Earth Sciences Division	X
Ohearn, Jerry	Facilities Division	
Petzold, Christopher J.	Physical Biosciences Division	X
Sopher, Ted	Information Technology Division	X
Taylor, Scott E.	Life Sciences Division	
Thomas, Patricia M.	Safety Review Committee Secretary	X
Twohey, Daniel	Directorate/Operations	
Wong, Weyland	Engineering Division	X

Others Present: Hattie Carwell, Richard DeBusk. Michelle Flynn, Michael Kritscher, Florence Mou, Bill Wells

Chairman's Comments – Don Lucas

- The minutes from the June 2008 meeting were approved.
- Ted Sopher is the new SRC Representative for Information Technology Division. Ted was an SRC member a few years ago, during the Feinberg era.
- **MESH Status** – There was a concern that the information provided by the Office of Contract Assurance to MESH teams before reviews may be insufficient for the teams to develop a line of inquiry. Don Lucas clarified that team leaders can request additional documentation. The amount of documentation required from divisions was reduced because some review teams weren't using all the documents and it was a burden for Divisions to assemble. The template for the MESH report is being posted on the SRC website. It will be the responsibility of the MESH team leader to draft the MESH report.

- **LBNL Status –** DOE Berkeley Site Office sent a letter to Dr. Chu expressing their dissatisfaction with LBNL's implementation of Integrated Safety Management and threatening to re-compete the contract with UC and/or reduce funding to the Laboratory. We are seeing more on-site reviews by DOE enforcement personnel. SRC members should help to educate their Division Directors on the importance of compliance with contract safety performance measures.

PUB-3000, Chapter 32, Job Hazards Analysis – Don Lucas (for John Seabury)

The Job Hazards Analysis (JHA) process has been rolled out. LBNL has promised DOE that 75% of JHAs will be completed by the end of September. We are at 18% completion today, and the number of JHAs is increasing daily. We will need to continue to improve to reach the goal. Don Lucas met with LBNL management and proposed that the first division to achieve 100% should receive a party. Dr. Chu suggested that the two slowest divisions should pay for the party. One division is already at 95% and is likely to be the winner. The process of developing Work Groups is holding up the progress of some divisions. Supervisors can edit the required hazard controls for their people on the JHAs.

Don Lucas is going to approve the minor editorial changes and clarifications to Chapter 32. The significant change under consideration today would allow divisions to develop alternative systems equivalent to the JHA, if the system is approved by the Environment, Health and Safety Division Director, and the data from the system is reportable to the Lab. For example, the Advanced Light Source has an experiment summary sheet system. Everyone needs to be working under some type of job hazards analysis.

The amendment to allow approved equivalent systems as an alternate to the institutional JHA was approved by a consensus vote of all SRC members present, with no objectors.

PUB-3000, Chapter 31, Non-Construction Safety Assurance for Subcontractors, Vendors, and Guests at LBNL Facilities – Mike Ruggieri

The subcontractor safety pilot program has been conducted since March 2008. Some changes have been made based on lessons learned from the pilot program. Mike Ruggieri reviewed his responses to SRC comments on the draft chapter.

There was a concern about subcontractors having to list all tools used in a job. If they forget to list a tool, or decide to use a tool in a different way, do they have to stop work? Mike Ruggieri responded that EHS will provide training to safety coordinators and procurement in how to implement the requirements. The requirement is to exercise "due diligence" and discretion in determining what are "dangerous" tools. It was asked whether tools could be described by general category, such as "hand tools for woodworking" or by giving examples of the types of tools, rather than naming each tool. Mike Ruggieri said that this approach would be acceptable. The SJHA questionnaire is intended to initiate discussion between the Requester/Division and subcontractor/ vendor

about safety, not to produce a comprehensive list. We need to be sure the big (high-risk) issues are covered.
There was a question about how would a vendor know whether he is going to be removing lead-based paint, and whether all painted surfaces would need to be tested prior to a work order. Mike Ruggieri responded that the process allows several opportunities to discuss potential hazards and find out about them. Subcontractors may not know all the answers before the pre-job meeting. Subcontractors should know the common risks of their type of work and what kind of questions to ask. They are not expected to have read all of PUB-3000. The Division/Requester may need to help them by checking with EHS to see if there are already records for the paint, or asking to have the paint tested. SRC members asked Mike Ruggieri to ensure that the pre-amble to the questionnaire explains to subcontractors that it is acceptable to indicate that they don't know the answer to some of the questions, by leaving the answer blank or having a don't know/to be determined response available.

There was a question about a confusing page number reference. Mike Ruggieri responded that he is working to reduce the number of page call-outs and clarify the ones that remain.

There was a comment that identifier "long term (working >30 days) is confusing and not necessary and should be removed. People should have either a regular JHA or a SJHA. Mike Ruggieri agreed and will delete the phrase.

There was a question about whether computer work should be considered "hands on" to reduce ergonomics injuries. Mike Ruggieri explained that the SJHA would be used mostly for people working <30 days at LBNL, and the risks for ergo injuries during that time frame are low. The comment was withdrawn.

There was a question about what "SafetyNet is. Mike Ruggieri explained that it is a commercial database that is currently being used by our Construction Safety program and Procurement. EHS will use SafetyNet to monitor performance. We will not be creating a new database.

There was a question about recordkeeping requirements. Who will keep the records? Mike Ruggieri responded that he wanted to give the Divisions flexibility regarding how they assign responsibility for maintaining records. The records must be maintained on-site for at least 3 years. The effectiveness of the recordkeeping will be monitored. EHS will provide training on the recordkeeping requirements.

There were questions about statements in Appendix B about the requirements to enter significant non-compliances into CATS, after they have been corrected on the spot. Mike Ruggieri explained that there needs to be some way of recording and communicating significant non-compliances. He said that in cases where there were multiple similar non-compliances, these might also warrant a CATS entry, even if they were corrected on the spot. It was suggested that the Lessons Learned program could be used. It was agreed

that the wording would be changed to provide that significant or multiple non-compliances could be recorded on CATS or other appropriate system.

Some systems are rated as Class 1 laser systems because they contain Class 3b or 4 lasers that are completely enclosed. The hazard rating of the system changes if the work exposes the lasers. It was recommended that the checklist question about class 3B and 4 lasers be revised to ensure such systems are considered. Mike Ruggieri agreed to this change.

There was a concern that the SJHA form does not have enough space to fully answer the questions. Mike Ruggieri explained that the web version will expand the space as text is entered.

There was a question about whether there should be an explanation of LBNL's penetration permit policy in the questionnaire. Mike Ruggieri said that the policy may change, and it is better to discuss it at the pre-job meeting.

There were comments about some formatting issues. Mike Ruggieri explained that the draft will be submitted for professional editing before the final version is posted.

It was suggested that the terms "low hazard" and "high hazard" work refer to the definitions in 31.4.4 and 31.4.5. These references will be changed.

There was another question about recordkeeping – could control of the documents be centralized in Procurement or EHS Division? At this time, the Requestor or Requesting Division need to maintain the records. The possibility of establishing a central recordkeeping system is being considered. There will be institutional SJHAs for subcontractors that work for multiple divisions. An existing JHA can be used for more than one job if the hazards and people are the same.

There was a recommendation that we explicitly state how seriously LBNL enforces Lockout/Tagout requirements. SRC members asked Mike Ruggieri to ensure that there is a specific item in the checklist about LOTO. It was noted that LOTO applies to control of both electrical and non-electrical energy. Mike Ruggieri agreed to add a question to the SJHA regarding LOTO.

There was a question about whether it is necessary to require everyone who works on the LBNL site take General Employee Radiation Training, if they are only working in buildings that do not contain any radiation hazards. The problem is that people can go into other areas. It was decided to retain the GERT training policy.

Don Lucas asked for a vote to approve Chapter 31 with the changes discussed. The chapter was approved with a vote of 9 division representatives in favor and 1 (Physics) opposed.

Electrical Safety – Keith Gershon

DOE conducted an assessment of LBNL's electrical safety program in February. We received a report of findings in May and started corrective actions. There were seven findings:

- The administrative control of electrical safety gloves needs improvement. There were problems with improper storage, expired testing dates, and inadequate field testing. Most of the problems were with subcontractors. There were some gaps in individual employees' understanding of the requirements (OSHA, 10 CFR 851, NFPA 70E). We need to identify who is using gloves through the JHA system.
- The Lockout/Tagout (LOTO) program is inadequate. This is the most important finding. There was a recent Occurrence in Bldg. 71 where energized wires were left exposed and uncontrolled. The investigation is ongoing. Divisions are supposed to be doing an annual inspection of their LOTO procedures. Keith Gershon has asked Divisions to submit their reports to EHS between November 1 – December 1 2008. The DOE inspectors found some spare LOTO keys not in control. Keith Gershon is considering not allowing spare keys. He plans to change to a single identifiable LOTO lock and tag system. The inspectors also found some confusion about group LOTO rules. Any LOTO findings are serious.
- LBNL has not fully implemented a testing program for electrical equipment that is not certified by a Nationally Recognized Testing Laboratory (NRTL). The Authority Having Jurisdiction (AHJ) is responsible for accepting equipment. It will take years to accomplish the inspections. Meanwhile, we need to document conditional acceptance of existing equipment. There are three AHJs at Berkeley Lab: the Facilities Director (construction and utilities), the Engineering Director (design and fabrication of new equipment), and the EHS Director (existing equipment). Each of the Directors has delegated authority to a designee. EHS is managing the overall program.
- Training records for high-voltage substation workers were incomplete. This finding only affects a few people in Facilities.
- Insulating electrical blankets are required to be tested by an independent lab. The testing had expired.
- The hazard signs at the substation did not meet current standards.
- Some people could not correctly identify insulating tools. We need to identify the people who use these tools and train them.

People often ask Keith Gershon how LBNL's electrical safety record compares with other DOE Office of Science labs. LBNL is about 1.56 times the size of the average lab. Keith looked at a 26-month period when LBNL had 10 electrical safety occurrences, and looked at the number of electrical safety occurrences at other labs during the same period. Adjusting for population differences, we are about average. We still have room to improve – no electrical accidents are acceptable.

The Energy Facilities Contractor Operating Group (EFCOG) electrical safety group has been working on a method of scoring the severity of Occurrences. They are proposing

changes to ORPS that would take the severity of incidents into account in categorizing them. Using the proposed method, 6 of the 10 LBNL incidents would have been characterized as Low Significance/Non-Reportable, 3 incidents would have been Medium Significance/Category 4 Reportable, and 1 incident would have been High Significance / Category 3 Reportable.

There was a comment that it would be nice to have a graded approach for rating other types of incidents. Different labs are reporting ergonomics injuries differently.

An electrical equipment inspection pilot program is underway. Steve Chow, Max Ramirez, and Cruz Peragrina are helping Keith Gershon. Keith estimates that we have about 10,000 pieces of equipment. 1,336 pieces of equipment have been inventoried, and about 100 pieces have been inspected and approved. The database is working. When an inspection is completed, the database sends the inspection report to the owner and indicates the status (approved, deficient, out of service, reinspected). There will be three types of people involved in the program:

- Some people will be trained as "surveyors" to inventory equipment. A training module is being prepared. Each Division will identify people to do their surveys. The training will be on-line.
- Level 1 inspectors will look at 120V commercial, cord and plug equipment. These inspections typically take an hour or less. 3 people have been trained.
- Level 2 inspectors will look at the higher hazard equipment.

Some equipment may require Underwriters Laboratories (UL) inspection. These inspections cost about $2,000 - $4,000 each. Materials Sciences is using UL for equipment over $20,000 in value. This was prompted by their recent experiences with a poorly manufactured piece of equipment (see posters in Bldg. 2 for details). UL inspections will be entered into LBNL's database with the inspection report attached.

There was a question about whether non-NRTL equipment should be included in the Subcontractor JHAs. Legal Counsel interpretation is needed as to how the inspection requirements apply to subcontractor equipment.

The inspection program applies to equipment $\geq$ 50 Volts or 5 milliamps. User/student equipment at LBNL is included. Some related pieces of equipment can be identified and inspected as one system.

The meeting was adjourned at 11:45 AM
Respectfully submitted, Patricia M. Thomas, SRC Secretary