



ERNEST ORLANDO LAWRENCE
BERKELEY NATIONAL LABORATORY

To: File
From: Howard Hatayama, Division Director
Date: May 29, 2008
Subject: Annual Review and Update of Division ISM Plan

The Division ISM Plan was reviewed and revised. The most significant revisions are listed below.

- Section 3 (Responsibility and Accountability) was revised.
- Section 4 (ES&H Safety Committee) was revised.
- Section 5 (Scope of Work Authorized) was revised to include the Hazard Management System (HMS) data base as a reference for EHSD work authorizations and hazard work locations.
- Section 6 (Required Training) was revised.
- Section 8 (EHSD Resource Allocation) was revised.
- Appendix I Organization Chart was updated.
- Appendix II (Improvements to Division's ES&H Programs) was added.
- Appendix III (List of Division Safety Committee members) was updated.

Howard Hatayama
EH&S Division Director

Date:

6/2/08

Richard DeBusk
Division Safety Coordinator

Date:

5-30-08

Mike Ruggieri
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5-30-08

Maram Kassis
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6/5/08

Environment, Health and Safety Division



Integrated Safety Management Plan

Original: May, 1998

Rev 1: Sept, 1999	Rev 6: Dec, 2004		
Rev 2: Oct, 2000	Rev 7, May 2006		
Rev 3: Oct, 2001	Rev 8, March 2007		
Rev 4: Oct, 2002	Rev 9, April 2008		
Rev 5: Oct, 2003			

Environment Health and Safety Division Integrated Safety Management Plan

1.0 Purpose

The Environment, Health and Safety Division (EHSD) will conduct all of its operations in a manner that protects the health and safety of employees and the general public and that does not adversely impact the environment. The activities are in compliance with the Laboratory's Environment, Health & Safety (EH&S) policies and requirements contained in the Regulations and Procedures Manual, [PUB-3000](#), and the Berkeley Lab Integrated EH&S Management Plan. This Plan has been developed and is updated annually to assist in ensuring that the Division's Environment, Safety & Health (ES&H) objectives are met.

2.0 EHSD Charter and Organization

The primary objective of the EHSD is to provide the necessary support to the Berkeley Lab for protecting its workers, the public, and the environment from adverse consequences and for improving ES&H performance. A full description of the EHSD charter along with an organizational chart is shown in [Appendix I](#).

3.0 Responsibility and Accountability

All employees are directly responsible for the safe conduct of work for which they are responsible. EHSD Director, group leaders, other formal supervisors, and individual workers are expected to define work, identify hazards and adverse environmental impacts, implement controls, perform work safely, and provide feedback and continuous improvement as appropriate.

3.1 Director/Deputy Division Director

The Division Director is responsible and accountable for assuring that all EHSD activities are carried out in a safe manner, in accordance with all Laboratory requirements. The Division Deputy assists the Division Director and acts on his behalf when the Director is unavailable. The Division Director and Deputy establish specific safety requirements for each group leader in their annual Performance Review and Development (PRD) documents. The Division Director and Deputy perform safety walkarounds according to the guidance and criteria provided in [Appendix IV](#).

The Division Director is responsible for the timely reporting of adverse and/or abnormal occurrences that occur at EHSD facilities or operations. The Division Director has overall responsibility for ensuring occurrence reporting procedures are properly implemented and corrective actions are instituted to prevent incident recurrence. The Division Director must concur with the decision that a given incident is a reportable occurrence through the Department of Energy (DOE) Occurrence Reporting and Processing System (ORPS) in order for it to be reported; and, if so, must approve the final ORPS report before it is submitted to the DOE ORPS database.

3.2 Group Leaders (and Formal Supervisors as Appropriate)

1. Assure ES&H requirements are integrated into work activities and the necessary resources/controls are provided in a timely manner to do work safely and in accordance with all Berkeley Lab ES&H requirements.
2. Create meaningful and realistic ES&H expectations for staff and hold staff accountable in annual performance appraisals.
3. Identify the ES&H training requirements for their employees, guests, contractors, visitors, students, and matrixed employees and ensure such training is completed and documented. Review Job Hazard Questionnaires/Job Hazard Analysis Process annually (or when duties change significantly) with staff.
4. Conduct quarterly safety walkarounds to interact with staff in their workspaces, recognize safe work practices and conditions, and identify and correct unsafe work practices and conditions. The interaction can include observation, discussion and inspection. Appendix IV provides more details on safety walkarounds and it illustrates how all division walkarounds and inspection activities are integrated. The Division Safety Coordinator provides a checklist for documenting walkarounds and observations, and those checklists are turned into the Division Safety Coordinator upon completion of the walkaround.
5. As part of the employee performance appraisal process, meet at least twice annually with each employee supervised. Supervisors and staff should use these interactions to identify safety hazards and environmental impacts and corresponding prevention or mitigation measures.
6. Ensure that new or significantly modified projects and facilities are reviewed for potential hazards and environmental impacts in the planning stage.
7. Annually review and update (as needed) the Division's Hazards and Equipment, listed in the [Hazards Management System \(HMS\)](#).
8. Group Leaders are responsible for the annual review of authorizations within their jurisdiction.
9. Track ES&H deficiencies in the Laboratory's Corrective Action Tracking System (CATS). Ensure and document that findings are reviewed, approved and closed in a timely manner.
10. Group leaders (and supervisors as appropriate) conduct periodic safety meetings, either as part of routine group meetings or as dedicated safety meetings. Review the Berkeley Lab Lessons Learned and/or the One Minute for Safety websites for applicable meeting agenda topics.
11. Group leaders designate a group representative to the Division Safety Committee. Each group must have a representative present at monthly Safety Committee meetings.
12. Ensure that each division employee, contractor, student and guest has an ergonomic evaluation performed annually, or as required by the Laboratory Ergonomics Program. The purpose of these annual evaluations is to identify precursors to potential injuries and implement timely corrective actions. Group leaders (and supervisors as appropriate) ensure that work loads are managed and distributed appropriately to avoid ergonomic injuries. Staff should be encouraged to take frequent breaks and mix work responsibilities, optimize the use of tools, equipment and software to reduce the risk of ergonomic injuries. Ergonomic issues should be included in safety walkarounds and in staff meetings.

3.3 Work Leads

A Work Lead is anyone who is authorized by their line management to direct, train, and/or oversees the work and activities of one or more workers. Work Leads provide instruction on working safely and the precautions necessary to use equipment and facilities, safely and effectively. As part of the work planning process, Workers and Work Leads are required to plan all work: determine the tasks that will be performed, consider the hazards, risks, and concerns associated with those tasks, and implement appropriate controls. Work Leads must assure that employees know how to perform the work safely and in conformance with applicable requirements, and must provide on-the-job training as needed. Work Leads need not be Line Managers, HEERA-designated Supervisors, or LBNL Employees. All Work Leads are Safety Line Managers.

3.4 Division Staff

All Division employees are responsible for conducting their activities in a safe and environmentally responsible manner at all times, including adherence to all applicable institutional ES&H policies and procedures. ES&H responsibility and accountability is written into the position descriptions of all staff and is reviewed annually during the employee performance appraisal process.

3.5 Subcontractors

EHSD managers are responsible for the safe performance of work conducted on-site by subcontractors. Prior to the start of work, the responsible EHSD manager reviews the subcontractor's statement of work to identify any potential hazards and communicates the potential hazards to the subcontractor. Subcontract labor employees issued an LBNL badge for more than 30 consecutive days are required to complete a Job Hazards Questionnaire/Job Hazard Analysis (similar to an employee) and receive the necessary safety training before beginning work, or they are directly supervised by the responsible EHSD manager. A graded approach based on the hazard potential is used to determine the level of supervision required. For subcontracts that involve the performance of field work on LBNL property, the responsible EHSD manager ensures that the work complies with the relevant procurement and ES&H policies. A [Non-Construction Subcontractor Safety Assurance Plan Program](#) exists to ensure lab requirements are adhered to.

3.6 Matrixed Staff

Matrixed employees' supervisors from the home divisions or departments retain all environment, health and safety responsibilities pertaining to matrixed employees, except where some of the responsibilities have been transferred to the host division or department through a formal Memorandum of Understanding (MOU). When applicable, home and host supervisors are to identify their responsibilities for employee safety in the MOU.

3.7 Students

ISM does not distinguish between students and other personnel working at LBNL. Students are afforded the same protections and assume the same obligations as any LBNL employee or guest for safe work practices.

Before work begins, supervisors are responsible for assuring that each student possesses a thorough understanding of safe work practices. Supervisors are responsible for assuring that each student completes a Job Hazard Questionnaire (JHQ)/Job Hazard Analysis (JHA), EHS010 (New Employee Orientation), and performs work in accordance with [RPM 7.01.C \(Planning a Safe Work Environment\)](#).

Supervisors and mentors of students participating in the Center for Science and Engineering Education (CSEE) program will execute an MOU with CSEE that clarifies the responsibilities of supervisors, mentors, students, and CSEE personnel.

3.8 Telecommuting

Per LBNL policy, [RPM 2.23\(D\)\(5\)](#), telecommuting is a viable work option under certain conditions. Once a telecommuting agreement is officially approved, the employee's offsite work space must be maintained by the employee. EH&S facilitates telecommuting and remote location work by offering support services for LBNL employees using computers off site. Employees using a computer either at a remote location or telecommuting should take Web-based Remedy Interactive self-evaluation & training (EHS0059).

4.0 ES&H (Safety) Committee

The Division maintains a [Safety Committee](#), consisting of a chair representing the Division Director, and will include at least one representative from each Division group or department. ES&H Committee membership is listed in [Appendix III](#). The Safety Committee provides a forum where members will communicate ES&H issues raised at the group level to the Committee. The Committee formulates follow-up actions to address the concerns raised. The Committee members communicate conclusions and actions on raised concerns to their respective groups and monitor the adequacy of ES&H support and resources. Committee attendance and participation is recorded in the minutes, which are posted on the committee's website.

Committee members will report back on committee activities to their respective groups and monitor the adequacy of ES&H support and resources. Committee attendance and participation will be recorded in the minutes, which will be distributed to all division staff through group leaders or group Committee members.

The Division Safety Committee will:

1. Meet monthly.
2. Maintain and monitor implementation of the Division ISM Plan.

3. Review and analyze ES&H reports and data pertaining to Division performance.
4. Promote ES&H awareness and training.
5. Disseminate lessons learned and other appropriate feedback and continuous improvement mechanisms.
6. Conduct annual inspections of selected Division space. Findings and corrective actions arising from self-assessment and other reviews will be tracked to resolution in CATS. More details on the annual self-assessment are provided in Appendix VI.
7. Advise and make recommendations to the Division Director on significant ES&H issues.
8. Analyze SAAR injury and illness data
9. Participate in planning for the EH&S MESH review.

Annually, the Division Safety Coordinator with input from the Safety Committee will prepare a self-assessment report for the Division Director that evaluates the effectiveness of the Division ISM Plan. The report will document the Division's performance in meeting Berkeley Lab's self-assessment performance criteria. [Appendix II](#) summarizes the improvements to be implemented based on the findings from the PY 2006 Self Assessment for the EHSD.

5.0 Scope of Work Authorized

5.1 General.

The primary objective of the EHSD is to provide the necessary support to the Berkeley Lab for protecting its workers, the public, and the environment from adverse consequences and for improving EH&S performance. EHSD staff partner with line management in order to ensure ES&H is integrated into the primary research and support functions of each division or unit. Of equal importance, the EHSD supports and provides expertise directly to each Berkeley Lab worker who seeks ES&H advice and help, or who voices a safety concern. The EHSD Charter ([Appendix I](#)) defines the scope of work for all EH&S personnel, including its contractors.

The HMS database lists the workplace hazards intrinsic to that location. The HMS database provides hazard information to those entering the facility to perform work in that space. Included are all formal authorizations. The HMS queries 10 other data systems in to a Summary Report. The Summary Report is divided into sections by the data system and each data system has a system administrator contact.

5.2 Work Requiring Specific Approval.

Prior to commencing work, Division group leaders will prepare ES&H documentation and obtain required authorizations for potentially hazardous or regulated work using the

guidance specified in [Chapter 6 of PUB-3000](#). In some cases, external authorizations (e.g., permits) may be required for activities with potential adverse environmental impacts. These are described [Chapter 11 of PUB-3000](#). Current EHSD work spaces and authorizations are listed in the HMS data base. Group leaders are responsible for the annual review of authorizations within their jurisdiction.

Building 85, the Hazardous Waste Handling Facility (HWHF), operates under a Part B permit issued by the California Department of Toxic Substances Control. The HWHF safety analysis is documented in the Safety Analysis Document, which cites Operational Safety Requirements (OSR's). The OSR's define the operating safety envelope for the facility. The Waste Management Group is responsible for operating the facility in accordance with its OSR's and all permit conditions.

The HWHF, Building 70 room 147 (Pit Room), and Building 75C (calibration facility) are categorized as Radiological Facilities under requirements of [10 CFR 830](#).

The [Environmental Services Group](#) operates and maintains a number of groundwater treatment systems that are permitted by the Bay Area Air Quality Management District and the East Bay Municipal Utility District. These permits establish operating, testing and reporting requirements regarding emissions into the air and discharges into the sanitary sewer. The Environmental Services Group is responsible for meeting these requirements.

The Division self-authorizes work when hazards are below authorization thresholds through its work procedures. Throughout the Division, specific safety concerns and hazards are identified and controls (engineering or administrative) appropriate to the hazard and tailored to the work are described in the work procedures.

6.0 Qualification and Training

Division supervisors determine the requisite qualifications for all their employees, students, contractors, guests, and visitors to function safely and in an environmentally responsible manner. Supervisors document that staff possess these qualifications.

Qualifications include skills, certifiable work experience, knowledge, training and certifications required by regulation or by Berkeley Lab policy. They may be documented in any manner chosen by Division supervisors provided a copy is placed in the employees' personnel file. Group leaders (and supervisors as appropriate) review JHQs/JHAs annually and when staff job assignments change to assure JHQs/JHAs are current and all required training is complete or scheduled. Compliance with JHQ-mandated training will be reviewed and documented annually in each employee's PRD documents.

A Lab-wide project is underway to develop JHA's. EHSD staff will be developing individual JHA's beginning in June, 2008.

Some training is very specialized and driven by the hazards associated with the work or by external regulations. Examples are Radiological Control / Radiation Technicians training to meet requirements of [10 CFR 835](#) and Hazardous Waste Workers training to meet requirements of [29 CFR 1910.120](#). Until such qualifications are established and documented, individuals are only allowed to work under the supervision of a qualified

employee.

Staff qualifications and training are reviewed as part of the self-assessment program to ensure that skills and talents are commensurate with the technical needs and workplace hazards.

6.1 Supervisor Training

1. All division supervisors are required to complete EHS026, ES&H for Supervisors.
2. Group leaders and supervisors are required to complete EHS027, Performing an Effective Safety Walkaround.

6.2 Ergonomic Training

1. All division employees are required to complete EHS059, Remedy Interactive Web-based self-assessment and training annually.
2. Employees are required to complete an Ergonomic Workstation Evaluation based on the risk result assigned by EHS059, Remedy Interactive Web-based self-assessment and training.
3. Employees that perform lifting activities that meet the JHQ/JHA requirements are required to complete EHS062, WorkSmart Ergonomic training.

6.3 Work Lead Training

1. Work Leads are required to complete EHS027, Performing an Effective Safety Walkaround.
2. Other training requirements will be defined by the JHA

7.0 Resource Allocation

The Environmental Health and Safety Division will allocate appropriate resources to address ES&H concerns in all programmatically and overhead funded activities. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed.

8.0 EHSD Resources

To support the implementation of the Division ISM Plan, the following internal resources are made available (note: These FTE allocations are for the performance of separate tasks under this plan (e.g., participating on the Safety Committee, conducting the annual self assessment, participating in the Incident Review Board, etc.) and not routine work or management activities (such as routine walkarounds, updating work authorizations, training of staff, and monitoring of work activities):

EHSD Staff Resources Required for Implementation of the ISM Plan

ES&H Discipline	FTE
Admin. Services/ Matrixed staff	0.05
Environmental Services	0.05
Health Services	0.05
Industrial Hygiene	0.05
Occupational Safety	0.05
Radiation Protection	0.05
Security & Emergency Ops	0.05
Waste Management	0.05
Division Office	0.05
TOTAL	0.45
EHSD Liaison	0.20
Safety Coordinator	0.30
EHSD Total	0.95

Appendix I

Environment, Health and Safety Division Charter

The primary objective of the Environment, Health and Safety Division (EHSD) is to provide the necessary support to the Berkeley Lab for protecting its workers, the public, and the environment from adverse consequences and for improving EH&S performance.

- The EHSD supports and acts as a partner with line management as it meets direct responsibilities to ensure that protection of workers, the public, and the environment is integrated into the primary research and support functions of each division or unit.
- The EHSD supports and provides expertise directly to each Berkeley Lab worker who seeks ES&H advice, help, or voices a concern.

In carrying out its primary mission, the Division is committed to seven basic goals:

- Provide employees with a safe workplace.
- Design and operate facilities and research activities that are safe, conserve resources and minimize adverse impacts on public health and the environment.
- Procure and use materials that prevent pollution or that minimize wastes, and which can be disposed of properly.
- Promptly communicate to affected persons the known hazards of our activities and the related methods necessary for safety and health protection.
- Maintain a positive, proactive and constructive relationship with our neighbors in the local community, representatives from external regulatory agencies and the Department of Energy, and our other stakeholders.
- Use available technology, engineered safeguards, and responsible science to mitigate all significant risks arising from its research and related activities.
- Train and develop staff to meet the commitments to a safe workplace and minimal adverse impact on public health and the environment.

Organization and Administrative Responsibilities and Authority

The EHSD is organized into seven functional areas: Security & Emergency Operations, Waste Management, Radiation Protection, Environmental Services, Health Services, Industrial Hygiene, and Occupational Safety. Security & Emergency Services includes the Fire Department, which is contracted to Alameda County. Environmental Services includes Environmental Restoration. Group leaders of the eight functional areas report directly to the Division Director. The EHSD organization chart is shown on page 12.

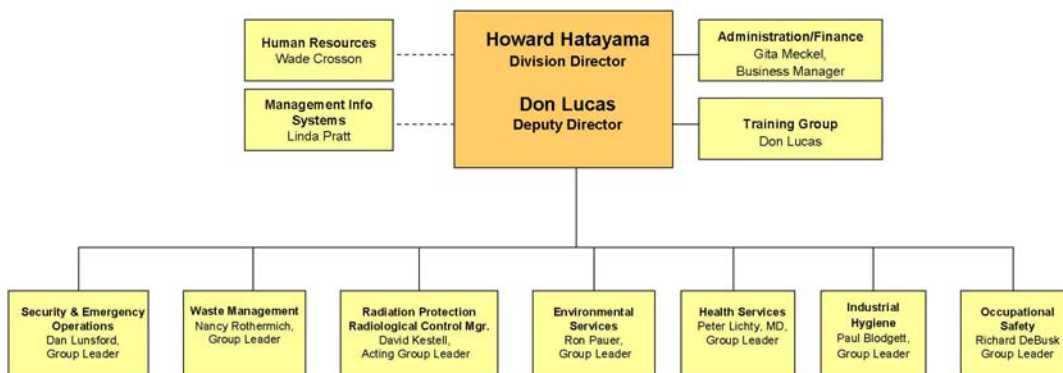
Appendix I (continued)

Environment, Health and Safety Division Charter

The group leaders are responsible for managing their organizations; including planning, staffing, and budgeting; and for developing and implementing Berkeley Lab policies and procedures in their functional areas. The Division Director and group leaders represent the division on matters of major significance to the success of Berkeley Lab to internal and external organizations and individuals.

To enhance service, EHSD Liaisons are designated for each Laboratory organization (see Who to Call – EHS Division Liaisons at http://www.lbl.gov/ehs/html/div_liaisons.shtml) These individuals are considered points of contact between a customer division (typically via Division Safety Coordinator) and the EHSD. They function as troubleshooters, facilitators and problem solvers. Support services include: providing technical consultation and responsive customer service, partnering with customers to implement cost-effective injury and illness prevention/loss control programs, assisting line management with Division ES&H (Safety) Plans, and providing quarterly ES&H briefings to customer division management. This relationship does not preclude any Berkeley Lab employee from directly approaching an EHSD professional/subject matter expert (see Who to Call – Subject Matter Contact at http://www.lbl.gov/ehs/html/subject_matter.shtml) to address a particular issue or need.

ENVIRONMENT, HEALTH & SAFETY DIVISION



Effective 10/11/07

Appendix II

Improvements to Division's ES&H Programs

Based on the findings from the PY 2007 MESH Review and Self Assessment for the EHSD, the following improvements are being implemented:

1. In order to prevent injuries an early intervention ergonomics program for the EH&S Division has been implemented to more aggressively improve ergonomic safety. In addition, a new Ergo advocate for the EH&S Division has been appointed and is included in the monthly Safety Committee meetings. The ergo advocate presents reports and data pertaining to the Division's performance in ergonomic evaluations.
2. To improve compliance with Radiological Work Authorizations the Radiation Protection Group was reorganized and the Group leader has trained the staff to be more attentive to work authorization requirements to avoid future violations. The Self Assessment guidance used by the EH&S Division Safety Committee will be more prescriptive regarding the identification and description of violations.
3. To improve the EH&S compliance rate for updating and completing JHQs/JHA's and to improve completion of required training the Division Safety Coordinator will provide monthly reports on the status of each to the Division Safety Committee. The Safety Coordinator will also review data pertaining to the status of the Division JHQs/JHAs and required training with the Division Group leaders at least quarterly.
4. The Division Director will work with EHSD group leaders, Division Safety Coordinators and the Division Liaison to ensure that responsibilities for performing Division ES&H duties are better defined.
5. The EH&S Division has established a Working Green Initiative as part of our commitment to environmental stewardship. This includes an emphasis on energy and natural resources conservation. The Division encourages employees to adopt specific measures in both areas of conservation.

Appendix III

EH&S Division Safety Committee

NAME	GROUP
Howard Hatayama	Committee Chair Division Director
Don Lucas	Deputy Division Director/Division Office
Susan Broadway	Health Services Group
Richard DeBusk	EH&S Safety Coordinator/ Occupational Safety Group
Mike Ruggieri	Environmental Services Group/Safety Coordinator/Ergo Advocate
Anthony Fernandez	Waste Management
Maram Kassis	EHSD Liaison
Genevieve Pastor-Cohen	Security & Emergency Operations Group
Florence Mou	Administrative Services
Kris Szornel	Radiation Protection Group
Lara Jain	Training/Ergo Advocate
Betsy MacGowan	Industrial Hygiene Group

Appendix IV

EHSD Schedule for Safety Inspections and Walkarounds

Definition of safety walkaround – Interaction with staff in their workplace to recognize safe work practices and conditions and identify/correct unsafe work practices and conditions. The interaction can include observations, discussions, and inspections.

Definition of a safety inspection - Assessment of safety in the workplace specifically looking for unsafe conditions and non-compliant conditions that need to be corrected.

Who	What	Where	When	Why (Purpose)	Notes/Method of Documentation
Division Director and Deputy	Walkaround	Sampling of division spaces	Once a quarter	Primary – Discussion with employees about safety in their workspaces Secondary – Inspection to verify safe working conditions	<ul style="list-style-type: none"> Documented on standard Safety Walkaround Checklist Accompanied by Division Safety Coordinator (DSC) as requested
Group Leaders (and designated supervisors)	Walkaround	GL determines focus of workspace, worker, or work activity	Once a quarter	Primary – Discussion with employees about safety in their workspaces Secondary – Inspection to verify safe working conditions	<ul style="list-style-type: none"> Documented on standard Safety Walkaround Checklist Accompanied by DSC as requested
Group Leaders/ Supervisors	Workplace Inspections	Each workspace	As determined by group	Inspect the safe work conditions of each workspace and compliance with safety requirements	<p>Occupational Safety – performed by GL during walkaround</p> <p>Health Services – performed by group members monthly (HS checklist)</p> <p>Environmental Services – performed by GL during walkaround</p> <p>Waste Management – daily, weekly, monthly, quarterly permit inspections (WM checklist); others performed by GL during walkaround</p> <p>Industrial Hygiene – performed by GL during walkaround</p> <p>Security and Emergency Ops – performed by GL during walkaround</p> <p>Radiation Protection - performed by GL/Supvr. during walkaround</p> <p>Technical Services – performed by GL during walkaround</p>
Division Safety Committee	Annual Self Assessment Inspection	Sampling of Division workplaces	Annually during self assessment	Primary – Sampling of work conditions to verify group safety processes Secondary – verify that previous safety problems have been corrected Tertiary – discussion with employees to determine their safe work attitudes and behaviors	Division Safety Committee divided into teams for inspection. Division Safety Coordinator organizes and leads this effort. Special checklist for this inspection used.

