

Final Minutes of the Tier I Working Group Meeting FY 10 Q2 held May 14, 2010
Safety and Health Services Division
Brookhaven National Laboratory

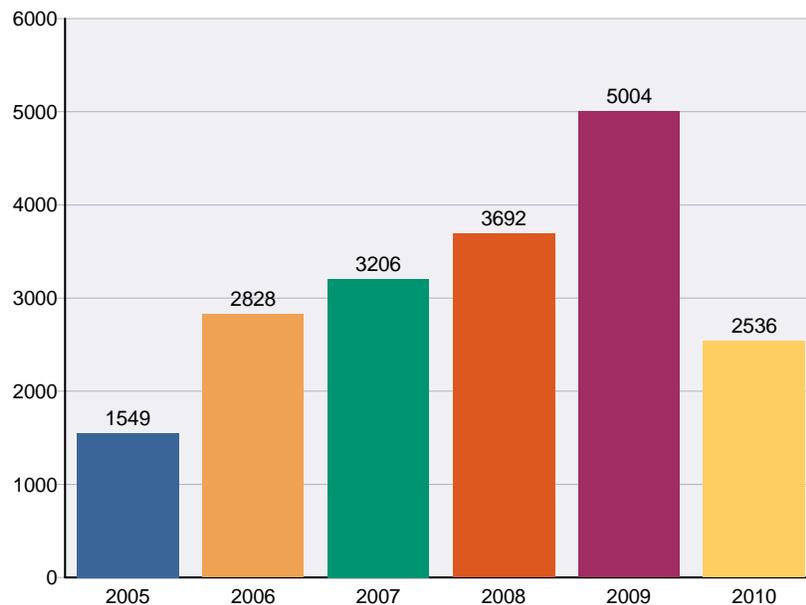
Attendees

P. Carr, B. Colichio, K. Conkling, C. Conrad, P. Eterno, A. Frosina, D. Galligan, S. Kane, K. Klaus, P. Martino, A. Moodenbaugh, E. Nowak, M. Paquette, A. Piper, M. Rankine, M. Van Essendelft

Agenda

- 1 Rollup of 2nd Quarter FY 2010 Tier I Inspection Findings
- 2 Minimum Inspection Criteria for Every Room/Lab in Tier I Inspection
- 3 Electrical Equipment Inspection
- 4 Latest Status on Maximo Upgrade and Timetable for Common Database
- 5 Tier I and BLUEPRINT
- 6 Open Discussion (Issues & Good Practices)

Data Rollup of Tier I Findings by Fiscal Year



The following point was made by S. Kane:

- 1 So far this year we are on pace to exceed last year's number of findings.

The following points were made by E. Nowak:

- 1 E. Nowak is the task owner of four Project BLUEPRINT initiatives: the safety observations program, traffic safety, construction safety, and the Tier I program.
- 2 E. Nowak showed a chart used to update the Policy Council and was also used by the DOE in its audit last week.
 - 2.1 Paul Golan from SLAC assessed for Mike Holland how we are doing against Project BLUEPRINT, and this chart generates a lot of questions, i.e., why are we finding these issues.
 - 2.2 People are out there identifying the issues and are getting Subject Matter Experts (SMEs) to be on the Tier I teams.

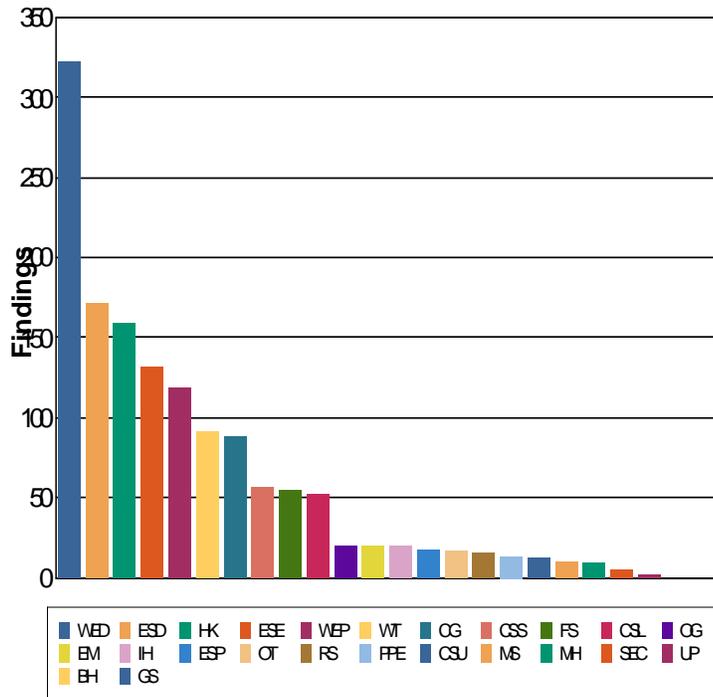
The following points were made by the Working Group:

- 1 The Global and Regional Solutions (GARS) Directorate & Environmental Sciences Dept. Tier I Team includes the ES&H Coordinator, Facility Support (FS) Rep, Safety and Health Services (SHS) Rep,

Environmental Compliance Rep (ECR), and the associated Building Managers (BMs)/Alternate BMs. Management and SMEs are invited to go on the Tier I inspections.

- 1.1 Corrective actions are assigned to the responsible person, i.e., if the action is owned by an outside organization, the BM contacts Facilities and Operations (F&O) to issue a work order, if the action is in a lab, the Principal Investigator (PI) gets the action.
- 1.2 Findings are tracked in a database and the Tier I Team, on its next inspection, takes the last Tier I Report and physically verifies that each item has been corrected.
- 1.3 GARS can tell if a finding is a recurring issue, and addresses trends in its Management Reviews.
- 1.4 Adam Janczewski, the BHSO rep, goes on almost all GARS Tier I Inspections.
- 1.5 Other organizations have the same or very similar programs.
- 2 Another organization enters its inspection data into a spreadsheet.
- 3 The same checklist is not used by all organizations and having one checklist would be cumbersome as there are different hazards in the various facilities, i.e., high bays, basements, chem. labs, equipment labs, and offices.
 - 3.1 Guidance documents are used depending upon which SME goes on the Tier I.
- 4 All organizations' Tier I Inspection results are not consolidated into one data set, but the people could provide how many findings are closed and what the turnaround time is in resolving these findings.
 - 4.1 The organizations provide BHSO with an updated status of the Tier I's.
- 5 E. Nowak worked at a facility where a major fire at an R&D lab resulted in an injury.
 - 5.1 There were a number of leading indicators that could have been improved upon, i.e., laboratory inspections.
 - 5.2 He fostered a partnership with the R&D community to come up with a separate checklist for each facility, i.e., biology lab, chemistry lab, mechanical room.
 - 5.2.1 This checklist is shared with the owner of the laboratory, PI, or supervisor, and each person owns the checklist.
 - 5.2.2 In order to know what caused an issue, you have to know if it was due to capital funding not being available to fix the problem, a lack of training, or a code of conduct or behavioral issue (the person knew what had to be done but ignored doing it).
 - 5.3 Findings were tracked, had to be corrected within 30 days, and then signed off by the supervisor. If not completed within 30 days, this finding would go up the chain to the ALD and eventually to the Lab Director.
- 6 If you do not know what people are concentrating on, you may not always get a good indication of what the trends are for each facility, and therefore you may not always get a good indication of what the trends are for the institution.

Data Rollup of FY 2010 Q2 Tier I Findings by Category

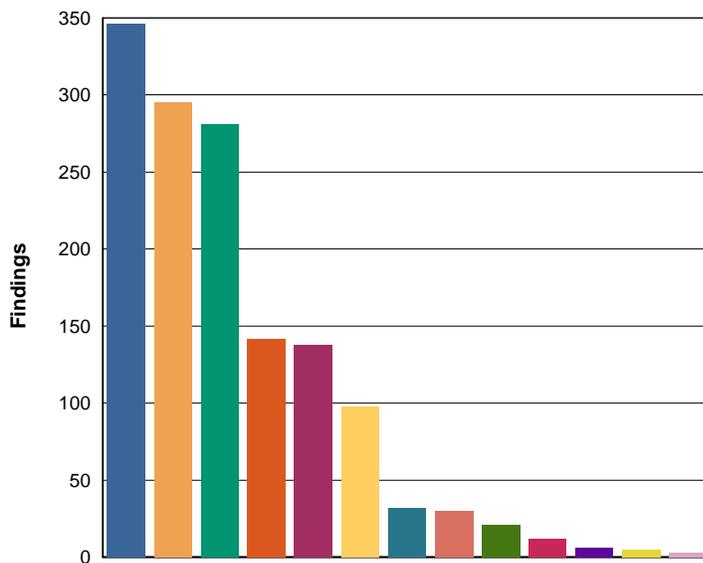


WED	Working Environment: Department	323
ESD	Electrical Safety: Distribution	172
HK	Housekeeping	159
ESE	Electrical Safety: Equipment	132
WEP	Working Environment: Plant	119
WT	Waste	92
CG	Compressed Gas/Cryogenics	88
CSS	Chemical Safety: Storage	57
FS	Fire Safety	55
CSL	Chemical Safety: Labeling	52
OG	Outside and Grounds	20
EM	Environmental	20
IH	Industrial Hygiene Issues	20
ESP	Electrical Safety: Programmatic	18
OT	Other	16
RS	Radiation Safety	15
PPE	Personal Protective Equipment	13
CSU	Chemical Safety: Use	12
MS	Machine Shop Safety	10
MH	Material Handling and Equipment	9
SEC	Security	5
UP	Unsafe Practices	2

The following points were made by S. Kane:

- 1 The Working Environment: Department (WED) category has the single greatest number of findings.
- 2 This indicates that you are looking at yourselves first and what you can control; you are not looking at others to blame.
- 3 Electrical Safety: Distribution (ESD), Housekeeping (HK), and Electrical Safety: Equipment (ESE) follow next, with half the number of findings of WED. Compressed Gas (CG) and Waste (WT) are also up there.

Data Rollup of FY 2010 Q2 Tier I Findings by Directorate

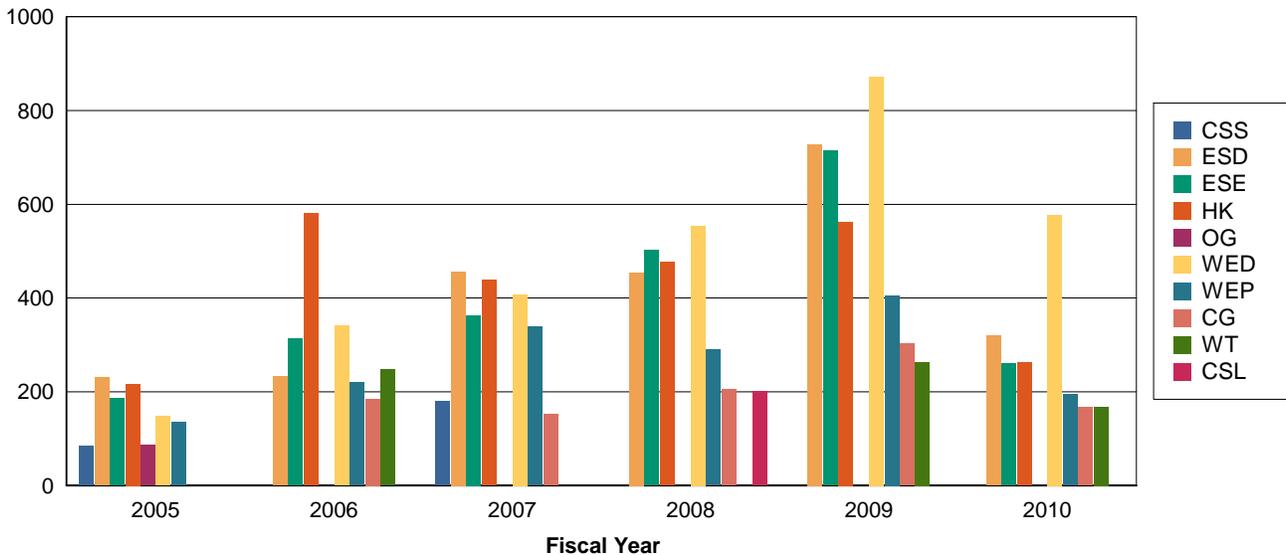


Light Sources	Basic Energy Sciences
Nuclear and Particle Physics	Life Sciences
GARS	F&O
ESH&Q	Science & Tech.
ERP	Human Resources
Finance	Director's Office
CEGPA	

The following points were made by S. Kane:

- 1 The Light Sources, Basic Energy Sciences, and Nuclear and Particle Physics are doing pretty well, and the next directorates, Life Sciences and GARS, have about half as many findings.
- 2 F&O has fewer findings which raises the question “why” considering that F&O is comprised of many buildings and industrial facilities.
 - 2.1 F&O corrects some findings on the spot and includes these findings in its total.
 - 2.2 F&O does inspections of some facilities twice a year; for example, the workplace, and Staff Services is done quarterly.

Data Rollup of Tier I Findings by Top 7 Categories by Fiscal Year



WED	Working Environment: Department	577	WEP	Working Environment: Plant	194
ESD	Electrical Safety: Distribution	319	WT	Waste	168
HK	Housekeeping	262	CG	Compressed Gas/Cryogenics	167
ESE	Electrical Safety: Equipment	260			

The following points were made by S. Kane:

- 1 Over the past six years the same five categories have been the top five (ESD, ESE, HK, WED, and WEP).
- 2 Waste (WT) and Compressed Gas (CG) are the next two categories which indicate that the folks are starting to look at these areas.

Minimum Inspection Criteria for Every Room/Lab in Tier I Inspection

The following points were made by S. Kane:

- 1 Several incidents lately indicate that Tier I items are not being addressed properly.
 - 1.1 The BHSO Electrical Safety Assessment found inaccurate or missing panel schedules, missing knockouts, modified panels, blocked panels, and flexible wiring.
 - 1.1.1 These items are supposed to be on the Tier I checklist.
 - 1.1.2 Missing knockouts have been an issue since the 2003 Tiger Team and two reasons why this may still be a problem is that we are creating missing knockouts every day, and the other is that we are not finding the missing knockouts to begin with.
 - 1.1.3 LS has staff electricians do electrical inspections upon a job’s completion which should identify missing knockouts.
 - 1.1.4 BHSO issued only one Level 1 finding which is for missing knockouts, and some folks on the Working Group will be on the extent of cause and causal analysis team to determine if the missing knockouts were identified on the Tier I’s.

- 1.1.5 Because there is no documented program to address these issues, we are compelled to develop an electrical safety strategic plan and request that BNL provide funding to fix those particular issues (i.e., cable trays, missing knockouts, frayed cords).
- 1.1.6 Blocked panels may be due to people putting objects in front of the panel.
- 1.2 For missing knockouts and flexible cords, put in a work order and indicate it is an OSHA finding.
- 1.3 The multi-topic assessments found compressed gas cylinders secured with phone cord and no static inventory postings, and this comes on the heels of the BHSO surveillance done last fall.
- 1.4 An OSH auditor found extension cords on the floor for a project which had been running for a couple of months, and this should have been picked up on a Tier I.
- 1.5 During a casual inspection, an EEI inspector found 40 pieces of electrical equipment requiring inspection, and this should have been picked up on the Tier I.

Electrical Equipment Inspection

The following points were made by S. Kane on behalf of Jim Durnan:

- 1 The Safety Engineering Group is finding equipment in labs, high bays, workshops, etc. that have not been inspected.
- 2 Every procurement requisition for a piece of electrical equipment asks if the equipment is NRTL tested. If “no” is indicated, the requisition says to be sure that the equipment is inspected when it is received at BNL.
- 3 The EEI program has been going on for 5 years, and there is no reason to be finding equipment in use that has not been inspected if you are looking for this on Tier I’s.
 - 3.1 Some departments did not inspect equipment which was in storage; the plan was that the equipment would be tested when taken out of storage.
- 4 Colored dots are placed on electrical equipment indicating the equipment’s approval status.
 - 4.1 A green dot stating “Approved” indicates that at the time of the inspection the equipment was OK. However, this does not relieve the equipment’s user from the obligation of inspecting the equipment before use to be sure the equipment is still OK.
 - 4.1.1 There were two recent incidents where equipment with a green dot caused a problem: someone got a shock from an air pump due to damaged insulation and someone got a burn from using a tea pot with a damaged cord.
 - 4.2 A yellow dot stating “conditional” means that while the equipment is safe to use, there are deficiencies which need to be corrected and the equipment can be used for a short period of time. Either have your own electrician fix the equipment or put in a work order to get the equipment fixed.
 - 4.3 A red dot indicating “Rejected” means the equipment should not be used. Either fix the equipment so it gets approved or get rid of the equipment so there is no temptation to use it.
 - 4.4 A blue dot indicates that the equipment has been UL or NRTL inspected and the marking is not readily visible (i.e., your desktop computer has the UL marker on the back).
 - 4.5 Equipment that is not UL or NRTL inspected gets its own inspection at BNL by the Authority Having Jurisdiction (AHJ). Here at BNL the Laboratory Electrical Safety Committee has trained over 56 people to do these inspections.
- 5 Experimental safety reviews (ESRs) will address equipment that users bring to BNL, while an existing ESR may not.

The following points were made by the Working Group:

- 1 A Working Group member asked for the definition of “short term use” for equipment with a yellow conditional dot. The individual was told if there is a definition, it would be in the subject area. (Addendum: C. Conrad could not find in the Electrical Safety Subject Area the definition of “short term”.)

Tier I Database Status

The following points were made by S. Kane:

- 1 There will be an 8 week delay in completing the database as there are problems with Peoplesoft and Maximo communicating with each other.
- 2 A consultant, retained for 3 weeks to review the Tier I application, may be asked to assist with the completion of the application.
- 3 The Tier I database will be at least one year late from last September’s projected due date, and completing the database this year is a requirement of BLUEPRINT.

- 4 When the database is Beta tested, a review of the Requirements Document will be conducted to compare the requirements with the features of the database.
- 5 In the Requirements Document, there are two levels of closure. One is the action owner assigned to an action thinks the action is closed, and the other is the Tier I administrator verifies that the action has actually been closed.
- 6 Comments received from Working Group members are being incorporated in the categories/subcategories list which will be incorporated in the database.

Tier I and Project BLUEPRINT

The following points were made by S. Kane:

- 1 Tier I appears in BLUEPRINT's Work Breakdown Structure 4.4, and the actions taken to meet BLUEPRINT's objectives are as follows:
 - 1.1 Assess the existing Tier I program to better define needed improvements.
 - 1.1.1 This has been done which is how we came up with the database.
 - 1.2 Develop and conduct a workshop to redesign or enhance the existing Tier I program that will include input from the Laboratory.
 - 1.2.1 This is how the Requirements Document for the database was developed.
 - 1.3 Develop a plan to drive sustainable Tier I program improvements that meet the aforementioned objectives – the plan will include communication with and training of the Laboratory stakeholder community.
 - 1.3.1 This cannot be done until there is an active database at which time we can see what the new database is, how it is used, and what the inspection criteria is.
 - 1.4 Implement Tier I program improvements.
 - 1.4.1 This will be the time when the people are told to stop using whatever system they are currently using and begin using the new database to record their findings and corrective actions.
 - 1.5 Once the new database is implemented, have an assessment on how well the improvement is working.
 - 1.5.1 After having used the new database system for two years, we will evaluate how things are working out, i.e., documenting the findings, tracking them, and closing them out.
- 2 The Policy Council has been told that we have developed additional specialty checklists, developed training materials, and conducted training (i.e., hazardous waste training that Steve Ferrone developed and conducted).

Open Discussion (Issues and Good Practices)

The following points were made by S. Kane and E. Nowak:

- 1 The improvements that we will see with the new database are the capability of tracking and trending, determining how quickly findings are being fixed, and determining which findings are closed or open.
- 2 Knowing that there are electrical equipment distribution findings doesn't really tell us very much, but if we know that 90% of these findings are panel schedules, then we can focus on panel schedules.
 - 2.1 While some organizations can provide this level of detail, the information cannot be obtained on an institutional level by the push of one button.
- 3 Tier I's are a critical leading indicator and this new database, having an institutional trending capability, will allow BNL to see what corrective actions are taken across the board, what actions are still outstanding across the board, and the time to completion.
 - 3.1 This will provide information on what additional risks there might be across the institution which can be passed along to DOE, thereby giving DOE an understanding of the risks that we have at the institution, and this in turn will drive safety.
- 4 While trending may not help the individual department, knowing that there are 1 or 2 findings across many areas at the Lab will show BNL has a far reaching problem.
- 5 In the database there will be categories and subcategories; each subcategory will contain "Other".
 - 5.1 If there are many occurrences of a particular finding in "Other", it will be made its own subcategory.
- 6 The idea of using electronic tablets for recording Tier I inspection data was discussed.
 - 6.1 S. Kane bought two tablets which he is evaluating with construction safety.
 - 6.2 On the tablet, you will be able to call up an open or closed inspection, even by room number.
 - 6.2.1 The room numbers in the tablet are based on Peoplesoft's list which does not necessarily reflect reality.
 - 6.3 I-pads are the same size and weight as tablets and the maintenance people are using I-pads.

- 6.4 The challenge with using the tablets is getting the wireless tie-in to the BNL network from the firewall.
- 6.5 The number of wireless connections is increasing and getting better.

The following points were made by the Working Group:

- 1 The involvement from SHSD is much appreciated.
- 2 Questions were asked concerning whether the responsibility for conducting Tier I's will change with the Integrated Facility Management and new facility owners, and what the lab will do to assure there are no gaps during the changeover.
 - 2.1 S. Kane mentioned that folks are looking at doing an ORE or ERE for the new organizational structure.
 - 2.2 One organization is asking F&O to go on Tier I's so that F&O can understand the infrastructure findings that get written up.

Action for S. Kane:

- 1 Within the next two weeks, send an updated list of categories and subcategories to the Tier I Working Group.

Action for Working Group:

- 1 If you have OSHA issues, notify Mike Paquette. When he has many OSHA issues, he can justify requesting additional funding.