Superconducting Magnet Division

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Memo

date: *January 17, 2003*

to: *Distribution*

from: *C. Porretto*

subject: *Minutes – SMD Self-Assessment – December 17, 2002*

Meeting Agenda (See Attachment)

Attendees (See Attachment) – *Attendees are SMD unless otherwise noted*

T. Kirk (High Energy & Nuclear Physics Directorate), M. Harrison, M. Anerella, R. Ceruti, J. Cintorino, T. Dilgen, M. Gaffney (SHSD), G. Ganetis, G. Goode (ESP), H. Hocker, G. Jochen, D. McChesney, G. McIntyre (C-AD), T. Monahan (HP), J. Peters (SHSD), P. Pfund (FNAL), C. Porretto, P. Ribaudo, L. Sbarra (OMC), R. Spellman (CSD), M. VanEssendelft (ESD), P. Wanderer, B. Zimmerman (EM)

Meeting Purpose

The Superconducting Magnet Division's Annual Self-Assessment Review was held on December 17, 2002. The format of the meeting was a series of presentations given by Division members and invited speakers. Presentations by Division members were structured as a review of an individual element of the program as it is implemented within the Superconducting Magnet Division. Invited speakers gave presentations on customer feedback (this year's theme) and other topical areas of interest. This feedback of good points and areas for improvement is an integral part of the continuous improvement cycle.

Topics Discussed

- Division Overview
- FY02 ES&H
- OSHA Compliance Impact
- Customer Feedback
  - C-AD Feedback
  - LHC Feedback
  - Central Shops Feedback
- Sports Injuries
- Conclusion

Presentations and Discussions

(Comments by Presenters are bulleted. Participants' comments are italicized)

- **Overview** – Mike Harrison

  Overview Presentation

  - The theme of this year's meeting is customer feedback.
  - No significant changes in Division activities for CY02; most significant was repair of CQS magnet with low level radioactivity.
  - Training being maintained at 96 -97%. 30-day training reminders have not been effective; this is an area for supervisors to pay attention to.

    Beth Schwaner does not expect that Departments and Divisions achieve 100% training completion; it's more important that staff do not perform work for which they are not trained.
  - Supervisors should be aware of R2A2s and changing job requirements, promotions, etc.
  - The EMS audit revealed good awareness throughout the organization - credit is due to tech supervisors.

- **Formal ES&H FY02** – Mike Gaffney

  Formal ES&H Presentation

  - Environmental Management Program targets have been completed.

    Have all targets been met? Yes. Work Planning is in process.
  - Existing curing press in building 924: process evaluated and changed so that cooling water no longer discharges into unmonitored sump.

    How much water was saved? 25 million gallons.
  - Pollution Prevention: submitted proposal for air - oil cooler outside building 924, to construct containment/roof over long system exchanger and isolate and remove short system exchanger.

    Is this the biggest environmental issue? Based on probability, a spill is likely to occur, and if it does, it would be costly because there is nothing preventing it from getting into the ground. The fix is inexpensive, and we would like to get P2 to pay for it.

- Pollution Prevention: Dunn & Busch compressor had heat transfer fluid leak out of building. Recommend putting angle iron on floor with RTV and gasket for containment; will reduce environmental impact and cleanup costs.

  What was the cost of the cleanup? It's not known. The cleanup was initially done by Magnet Division cryogenic technicians, then by Plant Engineering Division. *Roughly how long did it take?* Approximately two days. It took a long time to decide who should be involved.
  Because the spill was called in, the fire department and other emergency personnel had to evaluate the situation. George Goode has an estimate of the cost of response to small spills.

- Pollution Prevention: Unused magnet cooling system: aspects were never identified, noted as a minor nonconformance on the EMS audit. System needs to be classified and placed out of commission.

  System probably dates back to when the cosmotron was shut down. Yes, it was assumed to be from the cosmotron.

- Waste Management:

  Are there any areas where the Magnet Division can reduce waste and save money, or is this just the cost of doing business? Much of the waste comes from the cryogenic area; one leak generates about 200 lbs. of waste material. *What is the cost of this?* Around $200, it's not expensive.
  It may be beneficial to look at data from waste management, and look at cost and volume slides, and focus on areas that provide cost savings.

  Are there programs to inventory chemicals? Yes.

  In the 90-day area, have inspections been effective? There has not been much waste; there are no real problems.

  George has looked at the inspections, and the Magnet Division is doing a good job. The inspections contain notes; they are not just checking the boxes.

- FY03 Objective and Targets: EMS documentation needs to be streamlined.

  This has been a priority lab wide - to keep paperwork to a minimum.

- <u>Record of Decision</u>

  Is the EMS Program effective in achieving environmental policy commitments (P2C4)?

  Yes, it appears that the program in proactive and is looking at cost reduction.

Is the EMS Program effective in achieving environmental objectives and performance measures?

Yes, the program is in place, but we are always looking to improve.

Is the EMS Program adequate to identify and manage significant environmental aspects, and to identify resource allocations?

Yes.

Are objectives and performance measures suitable to actual environmental impacts, stakeholder concerns, current and future regulatory requirements, and SMD interests?

Yes.

- FY-03 Safety Initiatives: an Industrial Hygiene Rep, Fred Horn, has been assigned to the Magnet Division.

  Will he come around on Tier Inspections? Yes. *What is industrial hygiene?* Noise, health issues, etc.

- Ergonomics: evaluation initially performed on Design Room by Leslie Querlios.

  Is this ongoing? Yes.

  General Impression on safety is that we are no longer working on gross things. Yes, but we need to get more feedback from technicians.

- **OSHA Compliance Impact** – Terry Monahan

  OSHA Compliance Presentation

  - Injuries: the SMD has a large number for a small group; many unrelated to work. For small groups, a single injury can have a large impact on statistics.

  - OSHA Transition Inspection

    If BNL were held to OSHA standards last year, would it have been compliant? No. Fines can be up to $7000 per day, per violation.

  - Estimated cost for OSHA compliance is $9.6 - $9.9 million. This is comparable with other DOE labs.

  - In general, BNL's vulnerabilities were in the area of program implementation at the work level. The people doing the work were just not taking the time to do it right.

- While each of the OSHA examples/photos is fixable, they may each represent a $7000 fine.

  How many of the OSHA noncompliances would also be DOE noncompliances? The majority would also be DOE noncompliances. These are very often not getting picked up during Tier inspections because the teams don't have the necessary expertise; for example, they lack radiation experts.

  What about legacy issues? For instance, the building contains old switch gears that wouldn't pass standards. They would be included as part of the fire protection issue. They've identified $4 million for upgrade of electrical service and distribution.

  Is there any intent to adopt a policy of OSHA compliance? We are waiting for the letter of the law from EH-10, and we'll have no choice but to adopt, but it hasn't happened yet.

- **Customer Feedback - C-AD** – Gary McIntyre

  C-AD Feedback Presentation

  - Need access to drawings and parts lists related to RHIC. Drawings are available on SMD website; will follow up on details with Chris Porretto to gain access to MRP system for parts lists.

    Access to Proman is required for drawings? Yes, parts lists are separate documents contained in Proman; they are not contained on the field of the drawing as they are in AGS.

  - Suggest adding customer rep on design team.

  - Would like to know where we are at with spares stores - if something fails in ring, want to know what turnaround time would be.

  - Good communication and teamwork is the key to successful customer service.

- **Customer Feedback - LHC** – Phil Pfund

  LHC Feedback Presentation

  - Design and Development: BNL was diligent in paying attention to cryostat interfaces; the interfaces could have been a nightmare.

  - Design and Development: shipping design was well done; FNAL will copy.

  - Fabrication: there was a smooth transition with NGC tooling; it went better than expected.

    Some of Gary McIntyre's guys from NGC helped to reassemble tooling.

- Cost Management: not immune to cost overruns - "best of sorry lot".
- Project Management: reporting is fragmented and could be more integrated.

- **Customer Feedback -** Central Shops Division – Rich Spellman

  Central Shops Feedback Presentation

  - There has been a dramatic reduction in the amount of work coming from the Magnet Division - 16% of workload for FY02, compared with approximately 35% during the RHIC Project.
  - RFQs need to be clearer regarding quantities and revisions.
  - Estimates need to be approved quicker; materials can't be ordered beforehand.
  - Meetings should be held at least monthly.

    We haven't been meeting on a regular basis? No, but we will start again.

- **Sports Injuries**– Laura Sbarra

  Sports Injuries Presentation

  - Data shown is for 1997 to 2002 and was obtained from Jack Ellerkamp. It represents sports injuries only, not occupational injuries. Costs were allocated by Liberty Mutual in a complex fashion, but provide a general idea of cost to BNL.
  - Important to distinguish that data shown are not OSHA reportable, since they are not directly related to employment.
  - Softball is the worst, basketball is a close second. Softball is the most prolific, but some injuries are serious: someone has been knocked unconscious, someone had an orbit break, and someone lost a kidney because of a collision.
  - There has been no decision to screen people for sports activities. There is not much one can do to prevent injuries, but once they occur, early intervention and case management is important, as in the case of occupational injuries.

    The most surprising numbers are the total days away, 194, and the total days on restricted duty, 7. Why aren't people on restricted duty sooner? Every case that is managed is encouraged for light duty; perhaps many were surgical or severe. Will look into why so many lost days.

    Is there anything that could be done in a preventative sense to limit injuries? We could use breakaway bases for sliding. Also, perhaps people can be taught to stretch and to slide.

Are the games supervised? Yes, they are officiated by Brookhaven Town umpires.

Are the participants overly aggressive? No.

If an injury were to occur off site in a non-BERA-sponsored event, would it be included in the statistics? No, it's a different class of insurance provider.

How does the Magnet Division compare to BNL? No comparison has been done.

Can anything be done or are injuries unavoidable? Sliding rules could be implemented and people could be taught to slide.
Some things have been done - in the mixed league, they utilize a double first base and an imaginary line at home plate; this could be instituted in the men's league, though it would detract from the game. Also, alcohol use has been curtailed.

- Softball is very popular; people don't want to give it up. Maybe we need to perform accident investigations to determine what needs to be remediated. We should use the same standard as occupational injury investigations.

  Have any investigations been done? No, just started for verification that injuries occurred at BERA-sponsored events.

- Will look into why there are so many lost workdays, will pull those cases and try to determine cause.

  Are there health experts available like at Healthfest? Yes, but not for sports.
  What about a consciousness raising? I don't like to implement things that won't work. I will discuss it with Mary Wood.

- We have an aging population who perform physical labor. With an aging population, injuries will go up. This will conflict with DOE requirements to reduce injuries.

- **Close Out -** Mike Harrison

  Close-out Presentation

  - Conclusions

    - ESH: we need to streamline systems for evaluating/remediating problems. Also, we need more feedback from technicians.

    - Customer Feedback: common elements in presentations were good and early communications, and flexibility when problem solving.

    - Sports Injuries: softball injuries are a significant issue - they are perhaps inevitable.

Dist: Attendees