Jefferson Lab Staff Recommendations and Observations from the 28 July 2016 Safety All Hands Meetings

1. A recommendation was made to add an “electron gun permit” state to the five existing LERF safety states. This would enable gun turn on without beam in the LERF

   ACTION: Assigned to Accelerator Operations, Research, and Development for study.

2. A recommendation was made to improve communication of changes, like removal of FEL Operator status, so all impacted employees are aware.

   ACTION: Assigned to Accelerator Operations, Research, and Development for implementation.

3. A recommendation was made to improve team awareness of LERF operations.

   ACTION: The 08:00 CEBAF and 08:30 LERF meetings are the forum to achieve team awareness, particularly for late changes.

4. A recommendation was made to require more thorough and structured handoffs of equipment in the LERF to include adequate documentation and training. Risk assessments should receive greater attention when schedules or funding require accelerated work.

   ACTION: Assigned to Accelerator Operations, Research, and Development for implementation.

5. A recommendation was made to capture and institutionalize lessons learned from the commissioning run of the LERF so it is retained and exploited for the experimental run.

   ACTION: Assigned to Accelerator Operations, Research, and Development for implementation.

6. A recommendation was made to do a better job sweeping the LERF before the doors are locked. Doors were locked after a recent sweep with employees inside and the crash button was used to get out.

   ACTION: Assigned to Accelerator Operations, Research, and Development for implementation.

7. An observation was made that the Hall C SHMS Detector hut has a large opening on the right side and not all workers with access to this area know that a man-lift will be used. Also, there may be a need for a barrier after hours.

   ACTION: Assigned to the 12 GeV Project Office to investigate.

8. A recommendation was made that hazard analysis and work planning for the Solenoid magnet arrival, installation, and commissioning should start now.

   ACTION: Assigned to 12 GeV Project Office to initiate.

9. A recommendation was made to add a more precise definition of the spatial extent of the radiation barrier so all employees understand it extends from floor to ceiling.

   ACTION: The exclusion area is based on distance from the source but this is difficult to mark and subject to misinterpretation by non-experts. Operationally the radiation barrier extends from floor to ceiling along the imaginary surface created by the marked barrier. ESH&Q confirms this is well treated by existing training materials and was the subject of a

previous ISM poster. At this point no further action is required other than employee compliance.

10. An observation was made that evaluations and safety requirements for oxygen deficient hazards are not consistent.

    ACTION: Assigned to ESH&Q to investigate and determine if corrective action is necessary.

11. An observation was made that evaluations and safety requirements for buffer dewars are not consistent.

    ACTION: Assigned to ESH&Q to investigate and determine if corrective action is necessary.

12. A recommendation was made to clarify the organizational responsibility for safety training and oversight of temps and non-lab employees.

    ACTION: Associate Directors and Division Managers working through their supervisory channels are responsible for verifying that all temp and non-lab employees operating in their work areas or under their direction receive required training before work begins.

13. A recommendation was made that peer reviews of equipment from other labs being used here be given higher priority and the review teams include JSA employees with the relevant knowledge of installation and operation requirements and environments. For example, the reviews should include the technicians who will perform the installations.

    ACTION: Assigned to Accelerator Operations, Research, and Development and Physics Division for implementation.

14. A recommendation was made to include users in the all hands safety meetings.

    ACTION: Future all hands safety meetings will include users. This will be explicitly stated in future safety meeting announcements and distributed to the CUGA email list.

15. Several observations were offered that notification of lab wide safety issues and their resolutions and lessons learned are not consistent across different groups.

    ACTION: It is our intent to make all safety issues and their resolutions visible to the entire lab population, our response to the recent cluster of safety incidents and this communication to all employees reflects this intent. We will continue to work to meet this objective and welcome feedback if this intent is not being achieved.

16. An observation was offered that personnel from other institutions do not have the same safety culture as Jefferson Labs and their equipment does not receive the same level of review as that developed here, both of which increase risk.

    ACTION: See 12-14 above.

17. An observation was offered that it didn't appear that non-Jefferson Lab employees working at TJNAF receive the same training and are held to the same standards as Jefferson Lab employees.

    ACTION: See 12 above.

18. A recommendation was made to revisit the time between training and when the work is performed. Long intervals result in loss of required knowledge.

ACTION: To maintain alignment between job requirements and training proficiency JSA employees and supervisors must review JTAs annually and update when necessary.

19. An observation was offered that budget limitations are causing work to "stop and go" which increases risk.

    ACTION: Laboratory operations are, by their nature, dynamic. This characteristic has been amplified by our desire to seek out the most challenging projects to enhance our reputation and opportunities for our staff. The increased risk created by schedule and priority changes should not compromise safety if we make the corresponding adjustments and operate in a thoughtful and coordinated manner. In other words, this is not something to fear or avoid but recognize and manage.

20. An observation was offered that working conditions in the 12 GeV era are continuously changing and it's hard to stay current with all of the new procedures.

    ACTION: See previous observation. Moving into the 12 GeV era requires updating our procedures, training, and organization to reflect the new capabilities and operations. All levels of the organization share this responsibility.

21. An observation was offered that budget reductions are constraining the time and resources available to perform proper levels of maintenance and upgrades.

    ACTION: As an organization we must continue to seek out new and creative solutions to maintain the high standards of operation and maintenance performance and project execution so our resources can be deployed in ways that best promote lab objectives.

22. An observation was offered that the drive to meet gradient was trumping the drive to maintain reliability.

    ACTION: To have a successful long term research program CEBAF must deliver gradient and reliability, both characteristics are equally important. We have teams working on both objectives.

23. An observation was offered that notification of an incident, injury, or damage to lab or personal property should be a condition of employment.

    ACTION: Jefferson Lab employees are required to call 911 in case of an injury and report all incidents (including near-misses) and damage to lab or employee property to their supervisor. Employees who fail to report receive additional training and coaching or disciplinary action depending on the circumstances.

24. An observation was offered that use of required PPE should be a condition of employment

    ACTION: Jefferson Lab employees are required to use PPE appropriate for the task and conditions. Employees who fail to use the appropriate PPE receive additional training and coaching or disciplinary action depending on the circumstances.

25. An observation was offered that CTList and ATList provide a good start to the job planning process but are constantly evolving documents throughout the work process.

    ACTION: Agreed. Supervisors must continue to notify all affected employees of document revisions as they are issued.

26. A recommendation was made to alter the travel on the second floor atrium doors, they swing out and create a safety hazard to passing individuals.

    ACTION: Assigned to Facilities and Logistics to investigate and add caution signs or markings if necessary.

27. A recommendation was made to investigate possible improvements for CEBAF Center building exit doors that swing out with no visual checks possible of who is outside (e.g. signage, windows, etc).

    ACTION: Assigned to Facilities and Logistics to investigate and add caution signs or markings if necessary.

28. A recommendation was made to improve the faucets on the F Wing bathroom sinks in CEBAF Center, they drain onto counters and floors often creating a slip and fall hazard.

    ACTION: Assigned to Facilities and Logistics to investigate and if appropriate correct.

29. A recommendation was made to place the paper towel dispensers (or additional paper towels) in CEBAF Center bathrooms closer to the sinks, the current distance results in water dripping on the floor which creates a slip hazard.

    ACTION: Assigned to Facilities and Logistics to investigate and if appropriate correct.

30. A recommendation was made to add signs directing staff to stay on the sidewalk between CEBAF Center and the SSC Building.

    ACTION: Drivers on TJNAF must follow Virginia law and give way to pedestrians. Pedestrians in turn should use marked sidewalks to minimize their exposure to vehicle traffic. Continued employee care should preclude the need to add additional outdoor signage.

31. An observation was made that staff parking and driving habits, particularly around the construction areas, requires improvement.

    ACTION: The security subcontractor will be asked to increase surveillance of driving and parking behavior lab wide and in construction areas. Any employee who observes reckless driving and parking on campus should report their observations to security.