

**NIST SAFETY COMMISSION
MINUTES¹ OF THE MONDAY, MAY 22, 2023
HYBRID MEETING**

ATTENDANCE: Virtual*

**NIST Safety Commission
Members Attending**

Bagian, James
Hill, Darryl
Hoffman, David*
Jones, Allison
Kolly, Joseph
Merlic, Craig (Vice Chair)
Peters, Mark (Chair)

Designated Federal Officer

Shyam-Sunder, Sivaraj

NIST Leadership Board

Adams, James
Bahar, Mojdeh
Boehm, Jason
Brockett, Delwin
Brown, Essex*
Brown, Hannah
Chin, Joannie
Glenn, Rachel
Hooker, Stephanie*
Huergo, Jennifer
Jenkins, George*
Kushmerick, James (Jim)
Locascio, Laurie
Mackey, Elizabeth

Olthoff, James
Porch, Susanne*
Pritchett, Jeanita
Romine, Charles (Chuck)
Sastry, Chandan
Schlatter, Katie
St. Pierre, Jim
Vanek, Anita
Vaughn, Robert (Skip)
Wixon, Henry

NIST Safety Commission

FACA Secretariat:

Lloyd, Corrine
Travis, Dalia
Brown, Phoebe (Energetics)
Evans, Tracy (Energetics)

NIST Staff

Bald, Kevin*
Benz, Samuel*
Berilla, Michael*
Boggs, Ashley*
Bundy, Matthew*
Camenisch, April*
Dennis, Christopher*
Dohne, Kirk*
Fasolka, Michael*
Fato, Hope*
Fraser, Gerald*

Glick, Millie*
Good, Jeffrey*
Griffith, David*
Grove, Tom*
Hamid, Moose*
Hoehler, Matthew*
Huber, Michael*
Jacobson, David*
Kellerman, Christina*
Kirby, Brian*
Lane, Anne*
Masselle, Diana*
Ng, Lisa*
Nico, Jeffrey*
Rentz, Nikki*
Sharp, Nick*
Szakal, Andrea*
Varadi, Laslo*
Wavering, Al
Weaver, Jamie*
Wong, Wing*
Yashar, David*
Zhang, Yali*

Others

Fisher, Tim*-- *American
Society of Safety
Professionals*

¹ These minutes are a summary of the topics discussed and do not reflect detailed content of the discussions.

Call to Order and Roll Call – Mark Peters, Chair, NIST Safety Commission

Dr. Peters called the meeting to order and took roll call. All seven Commissioners were present, with Dave Hofmann joining virtually. The commissioners introduced themselves. Dr. Peters shared instructions for participation for those who were in person and for those joining virtually. He noted that the meeting agenda and presentations are available on the NIST Safety Commission website link (www.nist.gov/director/nist-safety-commission), gave an overview of the agenda, and introduced speakers for the morning session. He shared that the Commission delivered its [Interim Final Report](#), available on that website. Since then, Commissioners have worked diligently on preparing the draft final report and they will work together on the draft report during the afternoon working session. He noted that since no requests were received by the closing date for the public comment session on the agenda, the time would instead be used for the Commission's working session. Dr. Peters thanked all for attending this Commission meeting, thanked NIST leadership members for their engagement throughout the process, and then introduced Dr. Laurie Locascio, the Under Secretary of Commerce for Standards and Technology and NIST Director, to provide the Director's update to the Commission.

NIST Director's Update – Dr. Laurie Locascio, Under Secretary of Commerce for Standards and Technology and NIST Director

Dr. Locascio welcomed the Commissioners and expressed her deep appreciation for their work over the past five months. She shared that the NIST Safety Commission's [Interim Final Report](#) was shared with the Commerce Secretary and Deputy Secretary of Commerce, to whom she is accountable. She noted their continuing support of the Commission and their full support of her as she continues to make all of the necessary safety changes at NIST. She said that while NIST underpins competitiveness and has an obligation to continue its important work for the nation, the organization has an obligation to its people to make sure they can do their work safely. Upon establishing the Commission, she gave the Commission a short timeline; after the two safety incidents, NIST needed outside perspective, and the Commission brought a wealth of experience and knowledge. Dr. Locascio shared her own commitment, that of the entire leadership team, and the whole of NIST staff to the changes recommended in the Commission's report. She shared that inclusive change is coming and that she will provide a sense of scope and broad areas where change needs to occur, some accomplishments thus far, and activities that are planned. She said that NIST would incorporate external best practices and is seeking an outside safety firm to work with NIST in the coming years. Immediate plans to benchmark against National Renewable Energy Laboratory, Oak Ridge National Laboratory, and Argonne National Laboratory are moving forward.

As a starting point, she noted, NIST must fully integrate safety into decision-making processes for all aspects of the mission, from planning through mission delivery, over the full life-cycle of programs and projects. To achieve lasting and meaningful change to improve safety, NIST recognizes that it must fundamentally change culture and its way of doing business. She said that began with commitment to safety by leaders across the organization. She held a mandatory, two-day meeting on approaches to safety and obstacles; the Commission's Interim Report provided an important foundation for this. The discussion defined the need for participation by all in this movement. Shortly after, the NIST Leadership Board met to review safety practices that each Organizational Unit (OU) has adopted. Dr. Locascio also held a town hall with NIST staff on safety to share updates and noted an eagerness to participate and share ideas. A series of listening sessions is planned, to harness the energy and gather input at a grassroots level.

Dr. Locascio has also chartered an Executive Safety Improvement Team to oversee and track to completion safety improvement actions intended to address specific NIST Safety Commission recommendations. This action-focused team is already establishing working groups from across the organization, including one that is looking at how safety can be more robustly integrated into performance plans. The team has three guiding principles: human factors for safety to make it easier to do the right things, trust through strong partnerships, and communications to make sure safety is clear. A recent idea proposed hiring a usability professional to make safety programs more effective through a user-centered approach. Examples of activities implemented in the last month include new hires, facilities repairs, safety assessments, and professional external safety consulting. First, significant budget has been set aside for

new hires. NIST's Office of Safety, Health and Environment (OSHE) identified the need to hire six people in this fiscal year for the purpose of establishing an audit program, providing a competent person for fall protection, participating more broadly in hazard reviews, and taking the lead in workplace inspections. Funds for additional hiring for safety will be approved on a rolling basis. Dr. Locascio has prioritized establishment of an audit program, mandated that OSHE staff participate in all hazard reviews where potential severity of the hazard is severe or high, and mandated that OSHE staff serve as lead inspectors for all spaces governed by hazard reviews. Second, the Associate Director for Laboratory Programs has established a new fund of \$1.5 million for safety related repairs in this fiscal year. Requests are approved on a rolling basis and coordinated with the Office of Facilities and Property Management so that safety related repairs have priority. Third, Dr. Locascio has allocated over \$400,000 for a comprehensive fall hazard assessment survey to identify potential fall hazards and regulatory non-compliance issues, and to recommend interim abatement plans and long-term solutions. Fourth, NIST is in the process of hiring outside safety consultants to assess NIST's safety management system and corrective action plans.

Next, Dr. Locascio described three executive-level key action areas that are moving forward. The first key action area is focused on Leadership Expectations and Accountability: *NIST must make safety an integral part of the NIST culture and commit to continuous improvement of safety practices and culture.* Dr. Locascio highlighted work that is underway in this area, some of which she covered earlier, such as the team reviewing performance reviews in which NIST wants to emphasize safety responsibilities, authorities, and accountability associated with each of its positions. She recently shared with all NIST staff the results of the NIST Safety Culture Survey, which included the responses of NIST associates for the first time. She noted that there is no quick fix to changing safety culture; it is difficult, takes vigilance, and needs everyone at NIST to be part of the solution. Input is needed from all levels of the organization. Directors are provided survey results and comments for their Organizational Units (OUs) to develop improvement actions that are responsive to the feedback; and those leaders will be assessed by their ability to do so. NIST needs the ideas, actions, and energy generated by the people who best know the workspaces, and the focused, sustained management attention from the top down to ensure goals are achieved. Facilitators from the National Safety Council will lead focus groups that will identify actions.

The second key action area is focused on OSHE's Role and Authorities. Dr. Locascio shared that NIST is raising the level of safety to the NIST Director's office and empowering its safety professionals to ensure that safety is present in every critical discussion regarding the health of the organization. In response to the recommendations included in the Commission's Interim Final Report, she has already begun making changes to the organization and leadership. The NIST Chief Safety Officer will now be accountable to the NIST Director, inform resource allocations for facility improvements as part of the facilities budget review team, and be part of enterprise-level risk assessments. Other changes based on Commission recommendations include revisions that specify OSHE safety professionals have the lead on inspections of workplaces covered by hazard reviews, participate in all hazard assessments for hazardous work, and an OSHE staff member is detailed to the ERM office to assist with risk assessment method development.

A third key action area is related to Processes, Tools, and Communications. Dr. Locascio added that the goal for this area is to ensure NIST has the best processes and tools so that safety can easily be integrated into its culture. She noted several items on this topic that stem from Commission recommendations. Efforts are already underway to assist OSHE in developing an audit and assessment program. NIST will also engage expert consultants and is examining commercial off-the-shelf packages to replace homegrown and often disparate approaches to safety management. She highlighted training to make sure that the incident in September is not forgotten. Plans are being finalized for a NIST Safety Day in late June, during which NIST will hold a safety stand down, pausing all work to come together to hear from the Executive Safety Improvement Team and others and for practical demonstrations, learning sessions, and exercises.

Dr. Locascio provided an update on the NIST Center for Neutron Research (NCNR), which is making progress on improving its nuclear safety culture. As required by the confirmatory order signed with the NRC following its investigation into the February 2021 unplanned shutdown, a report to NIST and the

Nuclear Regulatory Commission (NRC) will be delivered soon and shared publicly. NIST was able to begin low power testing of the reactor in April, and that testing continues.

Dr. Locascio again thanked the Commission and shared that the activities she described were only the beginning of the efforts and activities to make NIST's safety culture robust, lasting, and integrated into everything.

For more information, see [Dr. Locascio's presentation](#).

Discussion. NIST Safety Commission members were encouraged by the informative presentation and positive changes being made. They discussed the following topics:

- Role of external consultants to focus on safety culture and benchmarking against other organizations.
- Value of coaching for the senior leadership team and professional development for OSHE staff.
- Engaging national laboratories and connecting at multiple levels of the organization, including the Directors.
- Ensuring consistent safety approaches across Organizational Units.
- Importance of change management to ensure a systematic approach; considering both cognitive and physical human factors affecting usability; focusing on details that will make a measurable difference; establishing tight timeline (e.g., two years from now)

Report of the Subcommittee 4 on its Review of the National Fire Research Laboratory Incident Investigation Report

Dr. Joseph Kolly presented the approach, observations, and draft recommendations for the *Subcommittee to Review Final National Fire Research Laboratory (NFRL) Incident Investigation Report*. Subcommittee members appointed by the NIST Director include Dr. Kolly, Dr. James Bagian, and Dr. Darryl Hill. Dr. Kolly reviewed the NIST Director's charge for the Subcommittee, which was established to conduct an independent review of the written final NIST investigation report on the death of an experienced NIST staff member in September 2022, in a fall from an elevated height when part of a research structure collapsed. This Subcommittee's written report of this independent review and any recommendations for additional corrective and preventive actions will be incorporated as a standalone appendix in the Commission's final report.

NIST provided the Subcommittee with the NIST Internal Investigation Report ([Director's Message and Executive Summary](#) and [Full Report](#)) and [OSHA notices of violation](#). The Subcommittee held two preparatory meetings to be briefed on the NIST report and proposed corrective actions, a meeting with the lead investigator on the report's scope, methodology, and findings, and a meeting with the NIST Chief Safety Officer on the Corrective Actions in response to the NIST investigation report.

Dr. Kolly presented the Subcommittee's observations on the of NFRL Incident Investigation Report. He noted the correct identification of proximate cause of the accident and that the investigation was sufficiently thorough to find proximate cause, but that root causes (and causal factors) as written are more accurately described as proximate causes, so true root causes had not been identified. Dr. Kolly described illustrative examples of proximate causes and the need to ask additional questions to explore further back into the causal chain to derive root causes. He noted that the Commission's recommendations provided in the NIST Safety Commission Interim Final Report address some of the root causes. The corrective actions as written address the proximate causes, so additional corrective actions that address true root causes, once identified, are needed. Identifying appropriate corrective actions for true root causes is important for making long-lasting change. The Subcommittee also identified additional corrective actions that address OSHA recommended practices for safety and health programs for both general industry and the construction industry, along with corrective actions that should be identified that cover planning, set-up, experiment, tear down, and disposal.

Commissioners added comments during the presentation, reiterating the importance of defining true root causes, building upon the Commission's and this subcommittee's recommendations in the executive action plan, the value of a quality assurance system as part of safety, and behavioral change.

Based on the observations, the Subcommittee proposed two draft recommendations:

- Recommendation 1: OSHE take the time afforded by the NIST Director to further develop the proximate causes they have already identified and go back further into the causal chain, to arrive at organizational and systemic level root causes and contributing factors.
- Recommendation 2: Upon reaching the root causes mentioned in Recommendation 1 above, derive corrective actions that address the deeper elements of the causal chain focusing systemic mitigations for actions taken at the organizational level.

For more information, see the [Subcommittee presentation](#).

Discussion. NIST Safety Commission members discussed the following topics:

- Confirmed that interim recommendations by NIST Safety Commission are applicable to what Subcommittee oversaw in review of the NFRL Incident Investigation Report; do not anticipate changes to initial recommendations for final report.

Working Session

NIST Safety Commission Vice-Chair, Dr. Craig Merlic, led a discussion with Commission members to review the draft final report. Commissioners reviewed each section of the report together, shared input, comments, and questions, and discussed the structure of the report and its appendices. The Commission determined the schedule to revise and produce the final version for submittal to the NIST Director by June 30, 2023.

Adjournment

The meeting was adjourned at 4:33 PM.

I hereby certify that to the best of my knowledge; the forgoing minutes are accurate and complete.

Dr. Sivaraj Shyam-Sunder, Designated Federal Officer, NIST Safety Commission

Dr. Mark Peters, Chair, NIST Safety Commission