NIST Safety Update

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NIST | OFFICE OF SAFETY, HEALTH & ENVIRONMENT

Agenda:

➢ Fiscal Year 2024 Goals: Status and Key Accomplishments

➢ Status of Action Plans

➢ VCAT follow up: ESC Metrics Established

➢ Safety Dashboard

➢ ISO 45001 Pre-Certification Assessment

➢ FY 2024 Incident data, focus on incident severity

2024 Goals and Actions Taken to Date

NIST

1 Complete and Fully Functional SMS

- Issue and Implement Audit Program; conduct first external ISO 45001 Pre-certification assessment
- Develop and issue remaining SMS Directives
- Operating Units (OUs) finish re-reviews of existing hazard reviews

Actions Taken

- ✓ External ISO 45001 Pre-certification audit
- ○ Consultants to develop remaining programs
- ○ Electrical Safety Program developed by OSHE, in stakeholder review
- ○ Lab staff 80% complete re-reviews

2 Improve NIST Safety Culture

- Communicate Status of Implementation of the NIST Safety Culture Action Plan developed by multi-level, multi-OU teams (nine actions)

Actions Taken

- ✓ Status of Implementation of the NIST Safety Culture Action Plan posted and maintained on Safety website
- ✓ ESC monitors progress of actions

Final 2024 Goals (Presented to VCAT February)

3 Strengthen OSHE Roles & Responsibilities

- Strengthen role and responsibility of the CSO
- Define stronger roles for OSHE staff to ensure consistent hazard mitigation across NIST
- Implement a phased approach to increasing safety staffing, services provided, OU embeds

Actions Taken

- ✓ CSO named Special Assistant for Safety to NIST Director, voting member of ERM Council
- ✓ 5 safety inspectors hired; 3 embeds hired
- ○ Fall fall protection specialist position in progress; interim action, fall hazard assessment underway
- ○ Workplace Inspection and Hazard Review Program revisions underway, specify OSHE roles

4 Improve NIST Safety Culture

- Communicate Status of Implementation of the NIST Safety Culture Action Plan developed by multi-level, multi-OU teams (nine actions)

Actions Taken

- ✓ ESC established goals for improving KPI metrics
- ✓ Completed dashboard for Incidents, Corrective Actions and Training data
- ○ Future dashboard updates to include inspection data

ISO Pre-Certification Assessment Gaps   (Draft Report May 2024)

75%
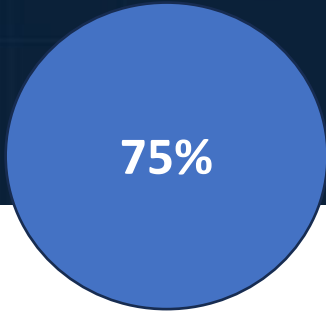
Positive (conforms/exceeds)	OFIs (generally conforms)	Gaps (non-conformance)
15	24	13

Gaps (Non-Compliance) 25%

1. Add union representatives to OSH policy, SAC and local councils where applicable (two gaps)
2. Address psychosocial hazards and mitigation strategies
3. Develop and document processes used to assess NIST-level opportunities and risks
4. Document process used to determine legal and other requirements
5. Establish and document competencies for all SMS roles
6. Include training on ISO 45001 in NIST General Safety and NIST Safety Leadership training
7. Clean up documents and records to comply with internal OSHE PR (underway)
8. Develop and implement a Management of Change Program (ESC Draft under Contractor review)
9. Develop and implement an Audits and Assessments program (Contractor Task 4)
10. Develop and implement a Corrective and Preventive Actions program to address non-compliances
11. Document a single comprehensive process used to evaluate SMS performance, include input from Audits
12. Include data from 3, 9-11, in management reviews

Safety 2.0 Action Plan, 65% Complete
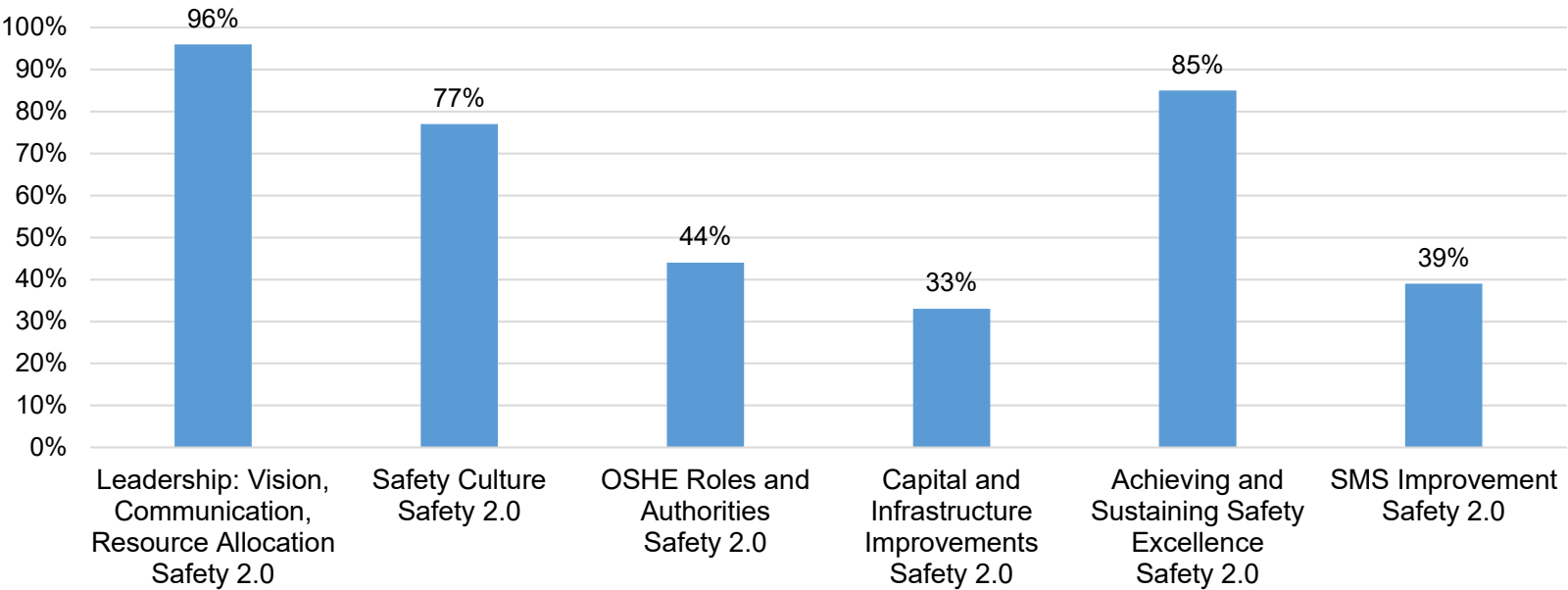
NIST

ACTUAL START DATE

FRI 10/3/22 — **TUE 3/31/26**

PLANNED END DATE

% COMPLETE BY PROJECT WITH TIMELINE

47%

65% Completion of 35 items

	Category Name	% Complete	Start	Finish	Obligated Cost	Cost
1	Leadership: Vision, Communication, Resource Allocation	96%	Fri 10/7/22	Tue 9/30/25	$397,653.38	$397,653.38
2	Safety Culture	77%	Mon 12/12/22	Fri 8/9/24	$0.00	$0.00
3	OSHE Roles and Authorities	44%	Thu 2/23/23	Wed 1/8/25	$799,190.27	$2,608,128.14
4	Capital Improvements	33%	Mon 10/3/22	Tue 3/31/26	$1,351,000.00	$26,339,630.00
5	Achieving and Sustaining Safety Excellence	85%	Mon 4/3/23	Wed 9/25/24	$0.00	$36,789.44
6	SMS Improvements	39%	Fri 5/12/23	Fri 12/19/25	$144,000.00	$1,405,333.25

Status Date: 5/29/2024

NIST Fatality Investigation Corrective Action Plan, 65% Complete

NIST

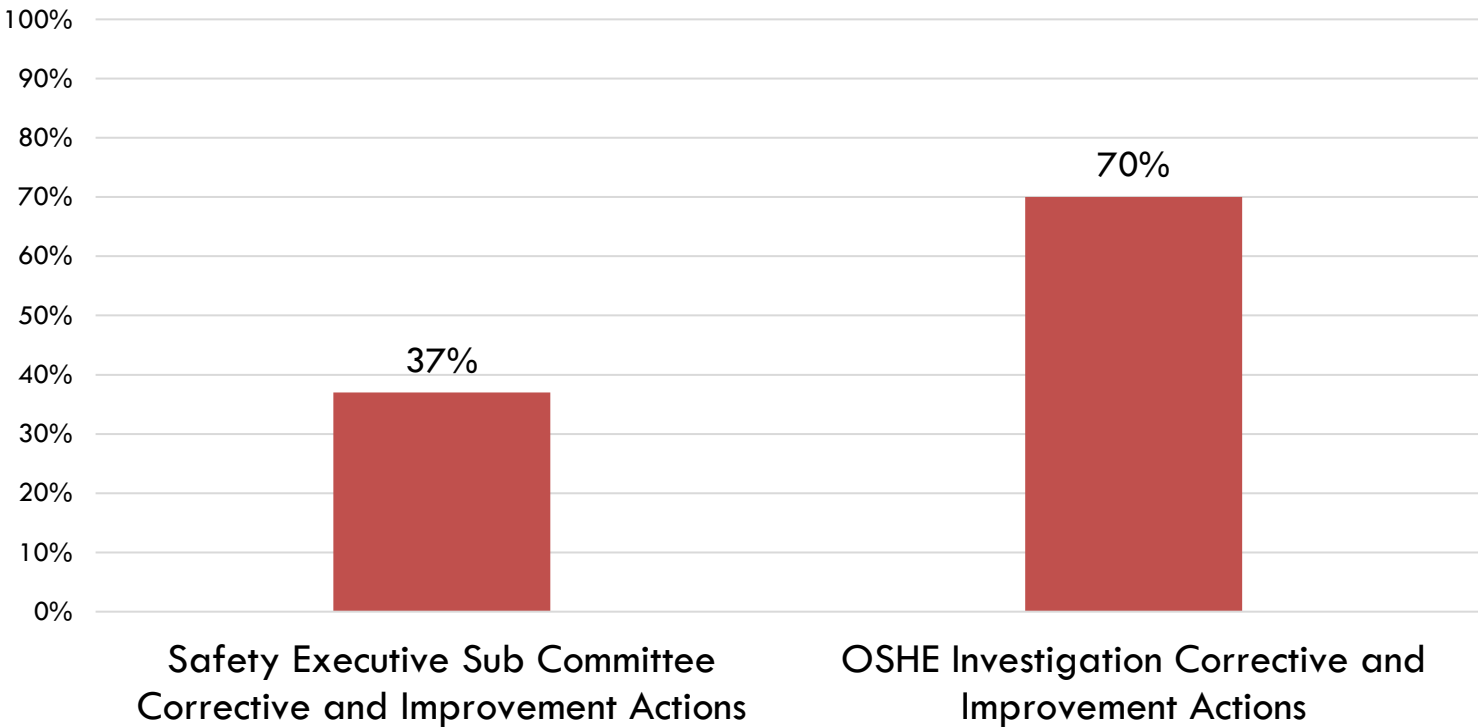ACTUAL START DATE | PLANNED END DATE
FRI 10/3/22 — **THU 9/11/25**

% COMPLETE BY PROJECT TIMELINE

47%

65% Completion of 41 items
- **45% completion of 15 ES items**
- **76% completion of 26 CA items**

Category Name	% Complete	Start	Finish
Safety Executive Sub Committee Corrective and Improvement Actions	37%	Tue 1/10/23	Thu 9/11/25
OSHE Investigation Corrective and Improvement Actions	70%	Mon 4/3/23	Tue 3/11/25

Status Date: 5/29/2024

Safety Dashboard is LIVE

- Focused on actions needed by staff and managers

- Current dashboard covers incident investigations, corrective actions and training data

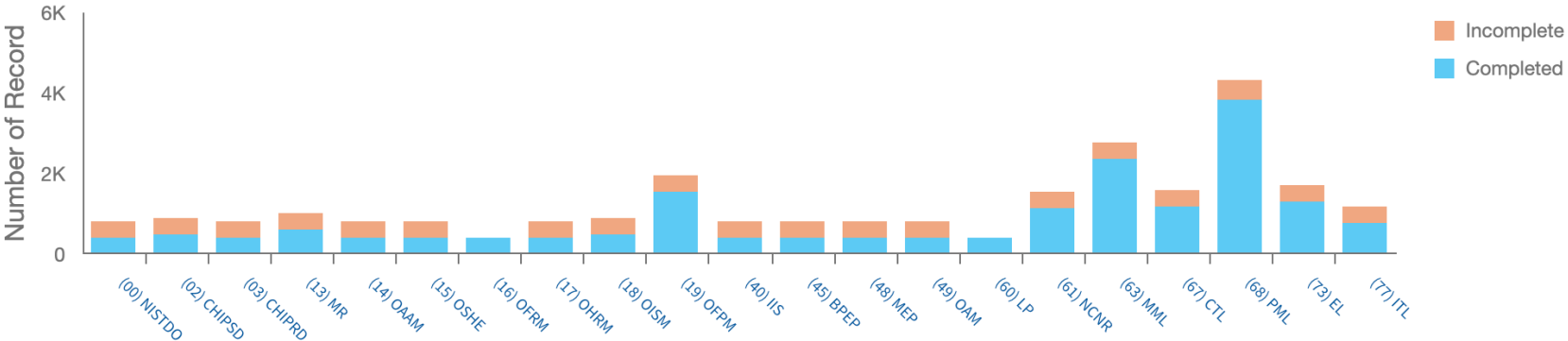- Workplace inspection data will be added with revision of that application (underway)
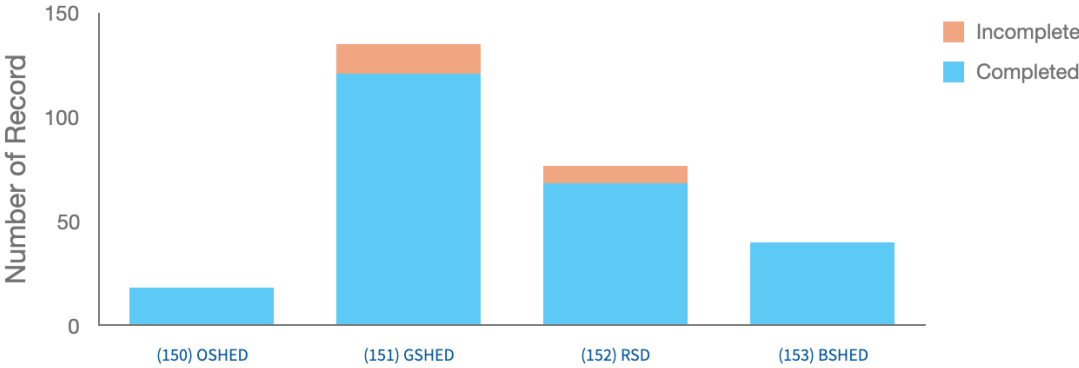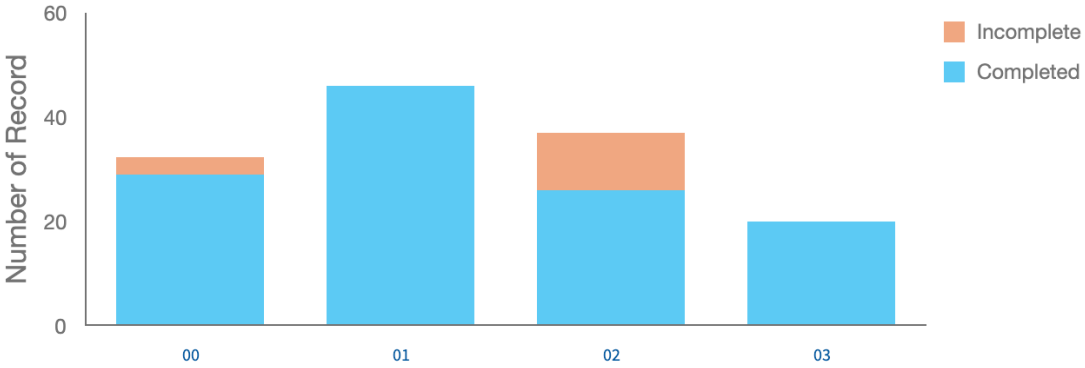
Executive Safety Committee Performance Goals for 2024

NIST

Performance Indicators	Measure	End of FY23	FY24 Goal
General Safety Training + Safety Rules of Behavior	% complete	90% (94% today)	**100%**
Assigned Specific NIST Safety Program Training	% complete	Not tracked FY23 (89% today)	**100%**
Hazard Reviews initiated, renewed or updated	Not tracked	Future leading indicator to be tracked with new HR app	
Near Miss Reporting	% of total reports	30% (49/166)	**60%**
Incident Severity: PSIF cases per total cases	#/total (%)	22/166 (14%)	**Observe, no target**
Time to report incident in IRIS, target 2 days	% within required days	12 d	**100% within 2 d**
Time to complete investigation, target 20 days	% within required days	50 d	**95% within 20 days**
Incident corrective actions, overdue	# overdue/total (%)	31/129 (24%)	**Target 0; ≤5% min**
Workplace inspections performed	% of total rooms	45% (3736/8234)	**100%**
Open deficiencies from previous FY's (Note: open deficiencies are ≤3% of total)	Total # open # serious	1733 (706 today) 188 (96 today)	**(Follow up needed)** **Close 100% of Serious**
Imminent danger deficiencies	# open	4 open	**0 open**
Deficiencies per inspection	Ratio	0.70 (3y-increase)	**Observe, no target**
Observations conducted by managers	Per OU policy	Not tracked at NIST level	**OUs to track/report**
Safety Communication Click rate	%	64%, steady	**Maintain or improve**
Safety Website traffic: Uses, % YoY increase	Number	14,410; up 50%	**Maintain or improve**

Reported Incidents and other events (Data from June 2024)

Type	Cases	Affected Staff	OSHA Recordable Cases
Injury	24	24	7
Illness	20	23	20
Near Miss	33	0	
Property Damage	10		
Contamination by Radioactivity	0	0	0
Spill / Release	7		
Exposure	3	1	0
Other	7	0	0
Total Cases FYTD	**103**		

Of 24 Injury Cases, 7 were Recordable, 6 of those were DART cases
Of 20 Recordable Illnesses, 8 were DART COVID-19 cases, 12 STS hearing loss cases

On track for pre-COVID number of events per year (range:150-175)

Near miss reporting, 33/103 (32%, low)

Unusual number of hearing loss cases

Key Actions Underway:

- Weekly Summary to NIST Leadership with focus on PSIF, late investigations
- Campaign to increase near miss reporting
- OSHE Hearing Program manager investigating increase in hearing cases

Events with the Potential for Serious Injury or Fatality

Case ID	Title	Type	Key Corrective Actions
24-IG-0067	Chunks of Concrete Fall into Underground Vault While Staff Member is Exiting Manhole	Near Miss	Under investigation; engineering assessment underway
24-IG-0001	Fluorine Gas Release While Disconnecting Cylinder	Spill / Release	Under Investigation; process change planned
23-IG-0084	Unsafe Activity on Roof Due to Lack of Fall Hazard Mitigation	Near Miss	Onboarding improvements planned to ensure adequate training on roof access policy which requires JHA and approval prior to working (Completed for individual)
23-IB-0022	Underground Power Line Struck and Damaged by Construction Equipment	Property Damage	Re-buried line to proper depth; ensure oversight and inspection of contractor installed utilities (In progress)
23-IC-0002	Over-pressurization of Bulk Nitrogen Storage Tank	Near Miss	Procedure change for fills; pressure limits posted for contractors; institute monthly testing of safety valves, valve stems, and shut offs; training on how to conduct the testing (Completed)
23-IG-0072	Fire in Lab During Testing of In-House Built Oven	Property Damage	Process improvement for in-house instrument testing commissioning; assess failure modes as part of the hazard review process (Completed)
23-IG-0058	Employee Hurt in Fall on Stairs While Carrying Fire Hoses	Injury	Procedure change for carrying items, training on use of handrails and reasonable carry limits (Completed)

Questions, Suggestions?