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LANSCE Module 1 Capacitor Room Failure

ALDPS – AOT Division
When things go right



Toni Taylor

October 8, 2020

To achieve Simultaneous Excellence, a strong safety culture is required...



How we do our work is as important as what we do

The *how* is defined by our *behaviors*

- **Collaborative Problem Solving**
 - Demonstrate initiative and willingness to work with others and be inclusive
- **Continuous Learning**
 - Proactively develop, adapt and transform oneself and shares lessons learned; apply feedback and lessons learned.
- **Shared Outcome**
 - Demonstrate a shared purpose within the Lab. Respect others and maintain a positive/responsive attitude. Encourages and supports security and safety.
- **Trustworthy**
 - Communicate openly, honestly, and with integrity. Demonstrates follow through.
- **Commitment**
 - Stay motivated, focused and dedicated to a position or plan of action.

**SAFE CONDUCT
of RESEARCH
PRINCIPLES**

Excellence in Nuclear Security
Excellence in Mission Focused Science, Technology, and Engineering
Excellence in Mission Operations
Excellence in Community Relations

- 1 Everyone is personally responsible for ensuring safe operations.
- 2 Leaders value the safety legacy they create in their discipline.
- 3 Staff raise safety concerns because trust permeates the organization.
- 4 Cutting-edge science requires cutting-edge safety.
- 5 A questioning attitude is cultivated.
- 6 Learning never stops.
- 7 Hazards are identified and evaluated for every task, every time.
- 8 A healthy respect is maintained for what can go wrong.

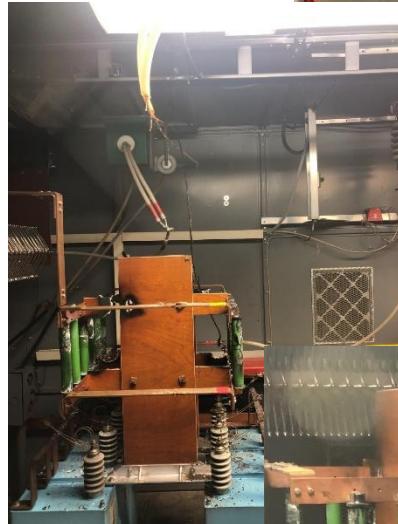
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These principles help us all have a shared understanding of the need to plan, execute, and evaluate critically. They reinforce the need to:

- Stop when unsure
- Protect yourself
- Be your co-worker's keeper

Summary of Event



- At ~3:30 am on Sunday, high-voltage line in capacitor room overheated to the extent that **the poly insulating material caught fire** and dripped melted insulation onto equipment below.
- **LAFD responded** and, per pre-incident planning, **waited for AOT personnel** to respond to the area.
- **AOT personnel, safed equipment** and **waited with LAFD for fire to “burn out”**.
- **Using an IWD**, AOT personnel **safely re-entered the area after conducting hazards analysis and engaging SMEs** re: controls for combustion products and COVID-19 hazards.
- Recovery action took several days with **a focus on getting it right**
- Beam re-start **decisions were made with impacted organizations and considering AOT-RFE personnel**

Beam was restored at reduced capacity yesterday and full capacity four days post event; if necessary, repairs will occur in November

Response and Recovery Actions



The diagram features a central title 'SAFE CONDUCT of RESEARCH PRINCIPLES' above a list of eight numbered principles. To the left of the principles are four circular images showing laboratory and industrial settings. Above the principles is a graphic of three overlapping circles: orange (Excellence in Nuclear Security), red (Excellence in Mission-Focused Science, Technology, and Engineering), and green (Excellence in Community Relations).

SAFE CONDUCT of RESEARCH PRINCIPLES

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- **SMEs and RLMs were engaged**
- **Safety of personnel, understanding what occurred to prevent recurrence were priorities**
- **Hazards analysis and controls verification were executed prior to re-entry**
- **Extent of condition for other cap banks evaluated prior to re-start**
- **Designated stop times were identified,**
- **Not unanticipated failure**
- **Pre-incident planning paid off – LAFD waited for AOT personnel**

Backup