





## The 2023 Lahaina Wildfire: UST Imageries, Impacts, and Insights Two Years Later

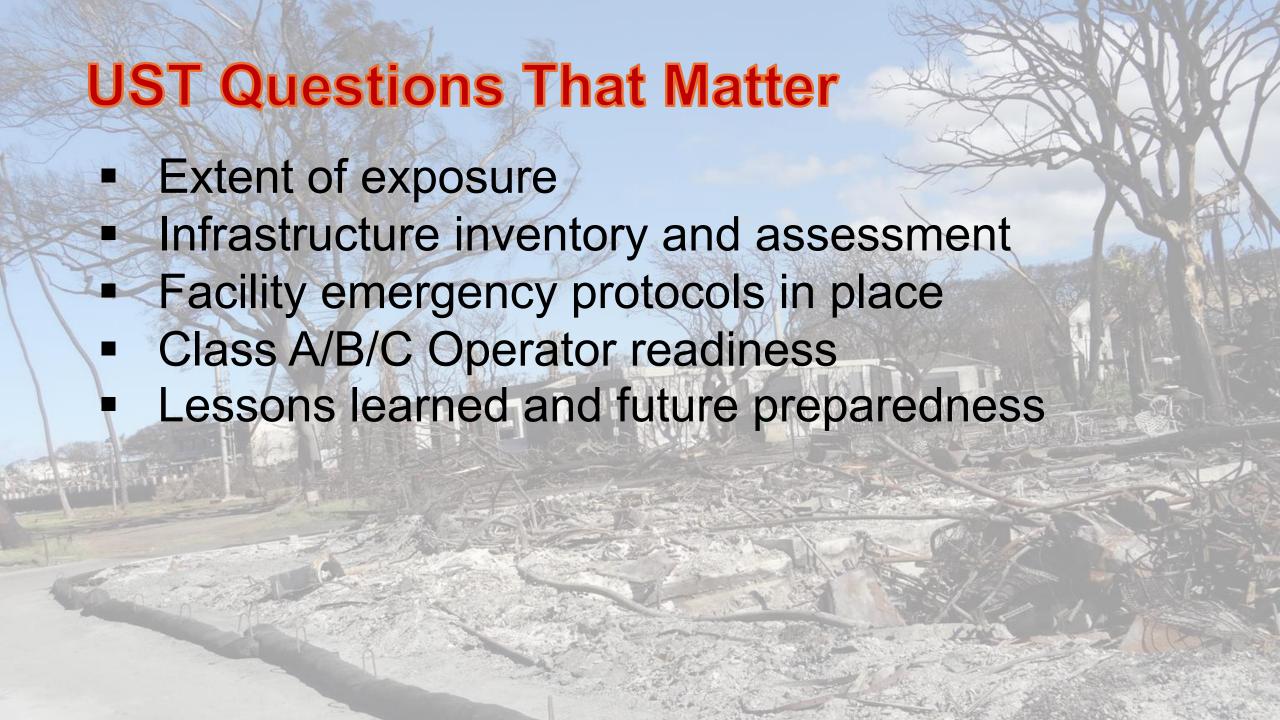
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Hawaii Department of Health

## Delimiting Scope Due to Ongoing Litigation

- "The silent slides"
- Origin and timeline of the wildfire
- Identifying potential involved parties
- On-going overall emergency response and rebuilding challenges
- Wildfire mitigation efforts
  - Government, NGOs and other private entities and the community



The Lahaina Town: How much do we really know?

Banyan Tree Park



The Lahaina Town: How much do we really know?

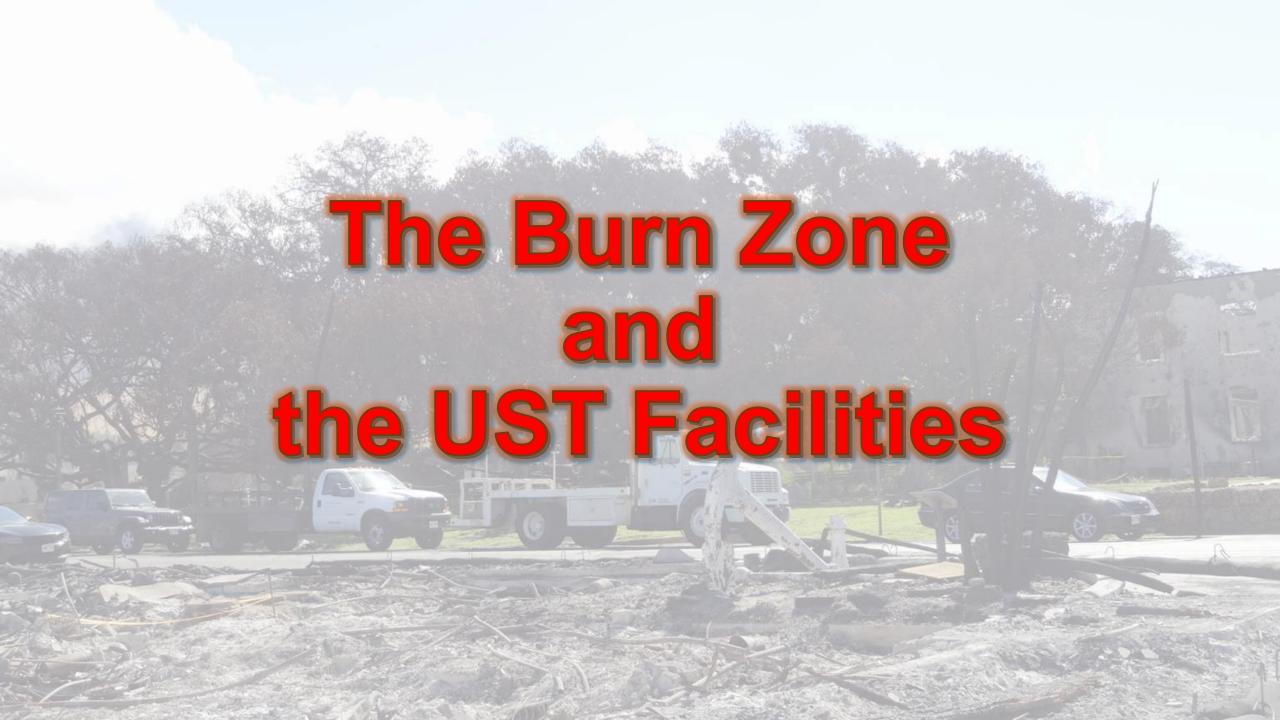
- Banyan Tree Park
- It is one of the driest places in Hawaii





#### The Aftermath of the Wildfire

- Death toll: 102
- Damaged structures: 2,200+
- Damages: \$5.5 Billion
- Burned land area: 2,170 acres
- Displacements: 1,200+ families
- Other unquantifiable effects
  - Emotional, psychological and physical health

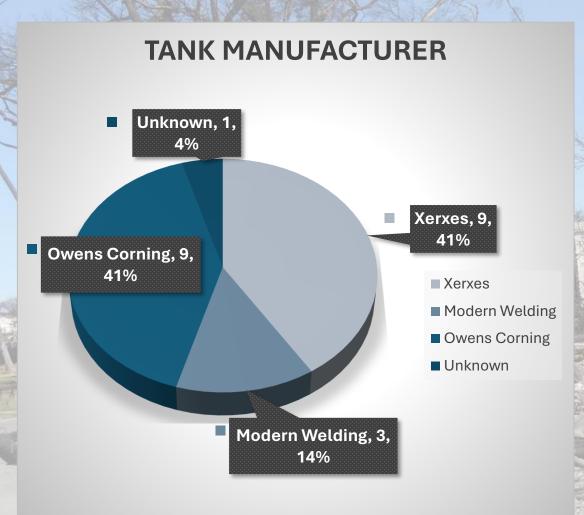


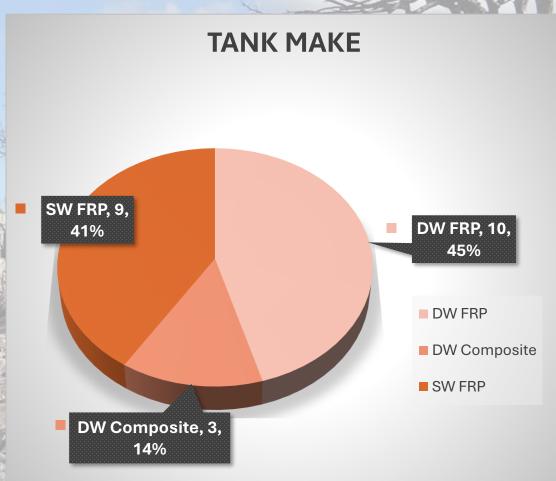


Eight (8) locations Six (6) gas stations One (1) harbor One (1) telecommunication site 22 regulated tanks

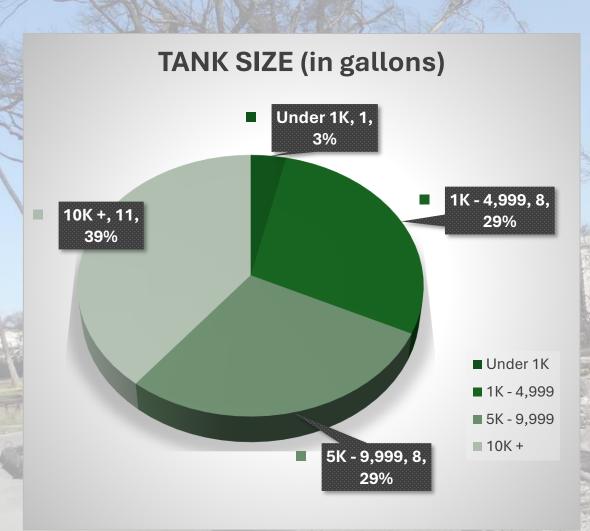


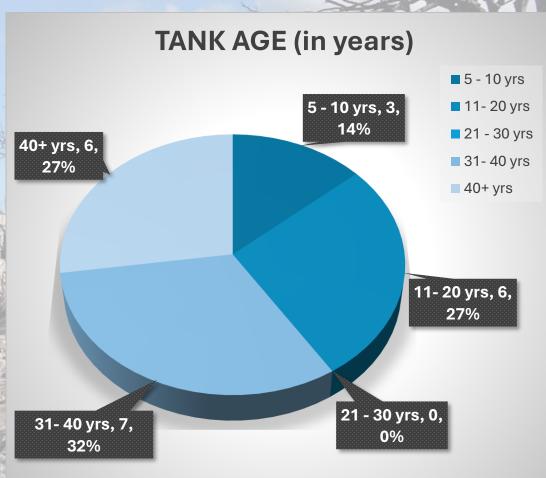
## **UST Infrastructure Inventory**



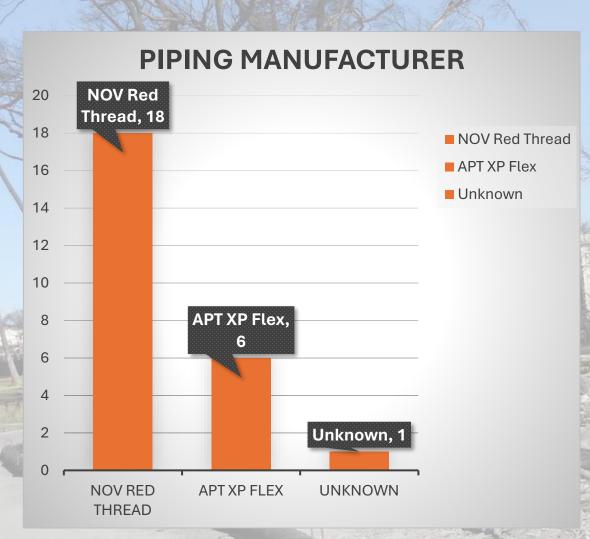


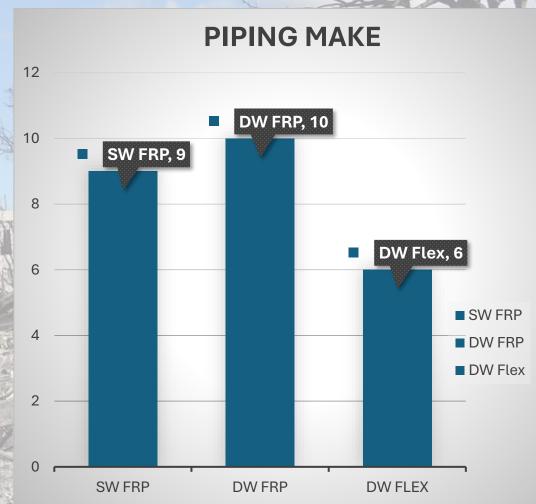
## **UST Infrastructure Inventory**





## Piping Infrastructure Inventory





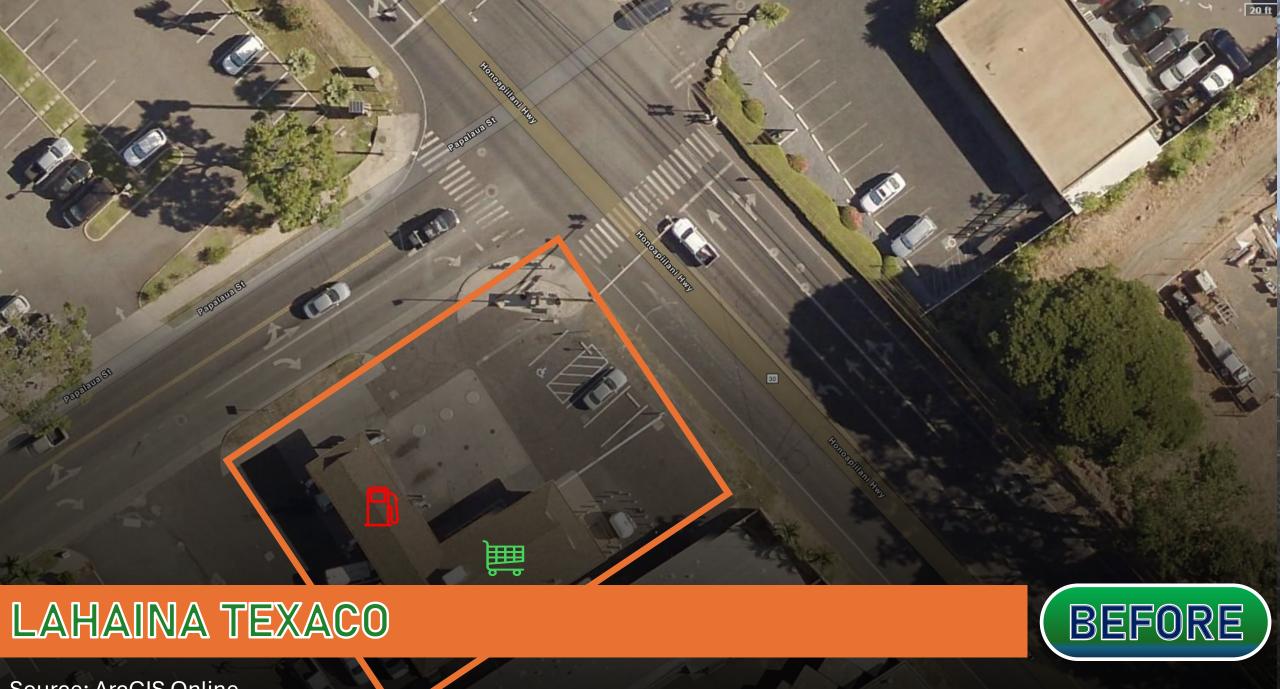
# UST Infrastructure Impacts: What's still unfolding!

- Thermal Damage to Tanks
  - Compromise tank integrity
  - Older or unprotected systems
- Compromised Piping Systems
  - Underground piping
  - Aboveground component e.g. dispenser, fill ports, vent lines
- Environmental Hazards
  - Leak petroleum into soil and groundwater
  - Long-term remediation efforts

## UST Infrastructure Impacts: Here's what we know!

## Observable Surface-Level Impacts: "Before" and "After"

- Tank Pads
- Dispenser Island/s
- C-Stores
- Nearby buildings and/or other notable structures







## LAHAINALUNA SHELL & 76 ED'S UNION

BEFORE





AIM LAHAINA

BEFORE



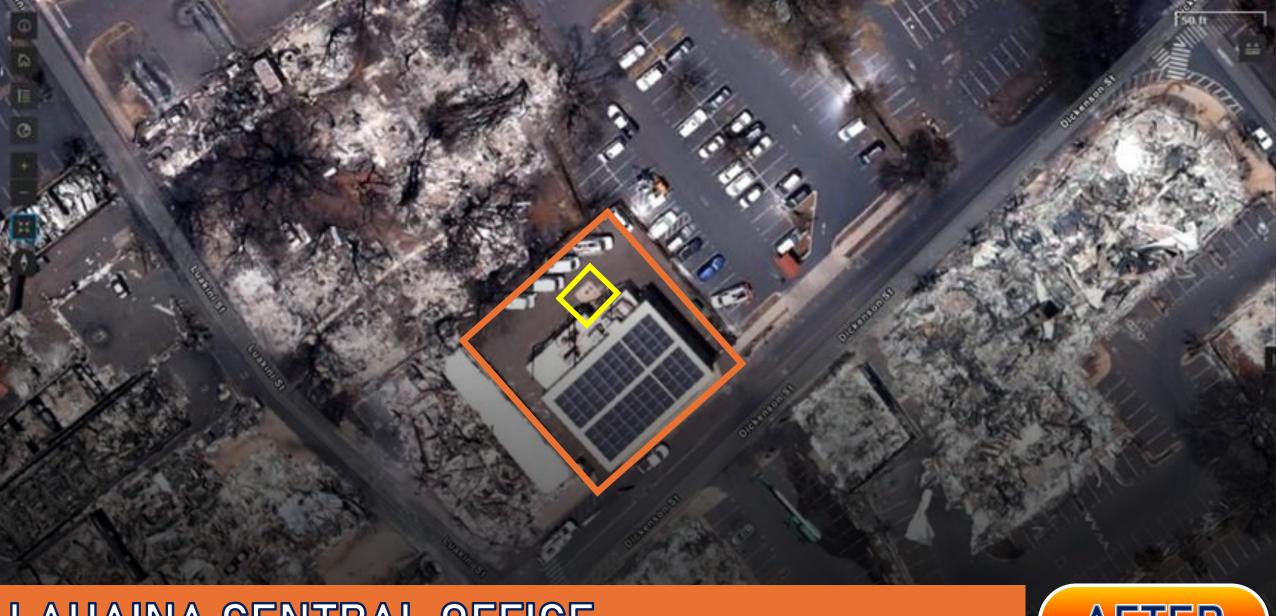
AIM LAHAINA

AFTER



## LAHAINA CENTRAL OFFICE

BEFORE



## LAHAINA CENTRAL OFFICE

AFTER



PACIFIC WEST FUELS, INC.

BEFORE



## Equipment-Specific Impacts Spill Prevention Equipment





#### **Overfill Prevention Equipment & Drop Tube**





### Dispenser Islands & Dispenser Systems





### Dispenser Islands & Dispenser Systems





## ATG/Annular Sensor/Vapor Recovery Ports





### ATG/Annular Sensor/Vapor Recovery Ports





## Equipment-Specific Impacts

### **Containment Sumps**





## Equipment-Specific Impacts

#### **Convenient Stores**







### **Key Point #1:** Real-Time Field Awareness

- Initial awareness and communication gaps
- On-site visibility and remote observation of unmanned sites
- Under estimating risk and "alarm fatigue"

# **Key Point #2:** Preparedness Through Workforce Training Assets

- Staff training and certification
  - Materials e.g., pamphlets
  - Red-Yellow-Green" checklist
  - Class A/B/C Operator training
- Considerations when crafting and implementing SOPs
  - Executed annually, consistently, and relentlessly
  - Enhancements vs. Streamlining



# **Key Point #3:** Post-Incident Site Visits and Inspections

Owner/Operator

HI DOH



T1A - 3K PREVIOUS: ≈55 inches CURRENT: ≈55 inches

\*PREVIOUS reading taken few days after the fire

\*CURRENT reading obtained during DOH-led site visit on 11/1/2023

T1B - 3K PREVIOUS: ≈42 & 1/4 inches CURRENT: ≈41 & 1/4 inches

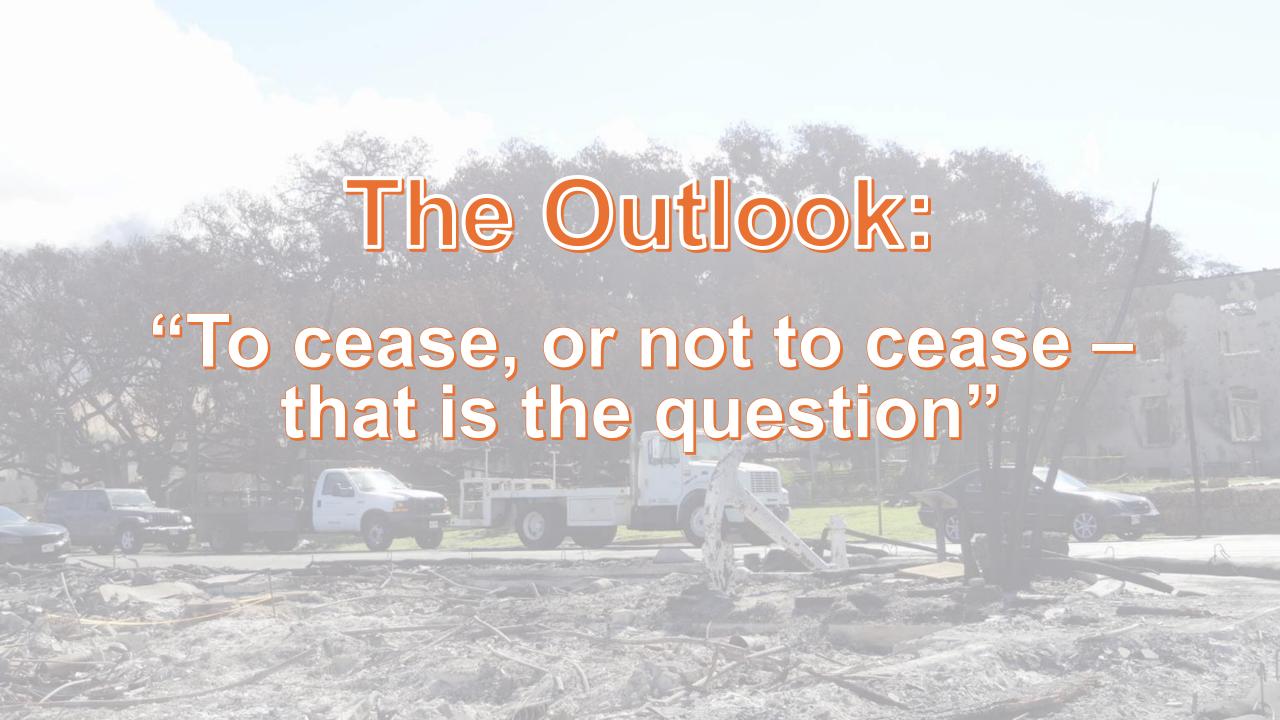
> \*The discrepancy may stem from differences in access port locations used for measurement \* Pass TTT





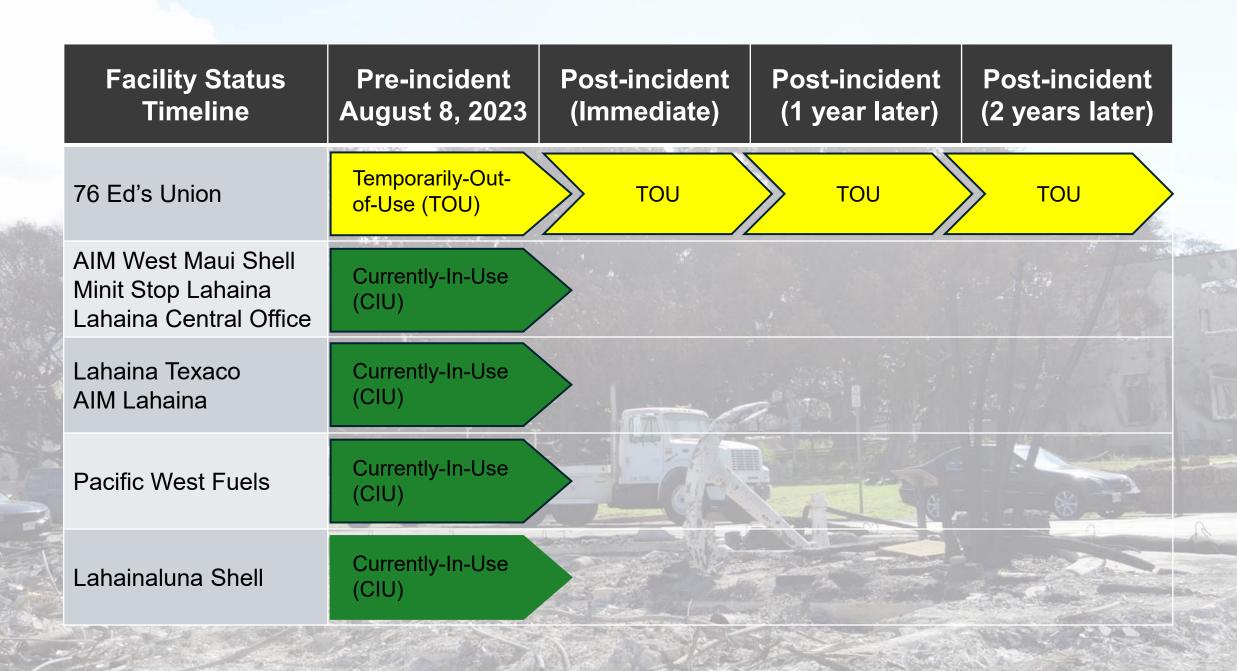


- Tank emptying protocols and priority
- Inventory accuracy & monitoring
- Safe fuel transport
- Fuel quality testing and repurposing
- Environmental safeguards





- Operationally undisrupted
- Under exploration
- Operations resumed or service restored
- Ceased operations



Facility Status Timeline	Pre-incident August 8, 2023	Post-incident (Immediate)	Post-incident (1 year later)	Post-incident (2 years later)
76 Ed's Union	Temporarily-Out- of-Use (TOU)	TOU	TOU	тои
AIM West Maui Shell Minit Stop Lahaina Lahaina Central Office	Currently-In-Use (CIU)	CIU	CIU	CIU
Lahaina Texaco AIM Lahaina	Currently-In-Use (CIU)	TOU	TOU	тои
Pacific West Fuels	Currently-In-Use (CIU)	тои	CIU	CIU
Lahainaluna Shell	Currently-In-Use (CIU)	TOU	тои	Permanently-Out- of-Use (POU)



**VOCs: None detect** 





COPCs: Below Tier 1 levels













