



# Liquefied Natural Gas Research and Development Public Meeting and Forum

## Working Group #4 – LNG Operation & Maintenance

November 15, 2022



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

PHMSA: Your Safety is Our Mission



# Good Afternoon & Welcome!

- **PHMSA Leader:** Chau Tran, LNG Engineer
- **Industry Co-Leader:** Paul Nielson, Cheniere LNG O&M Services, Manager-Regulatory Compliance
- **Industry Co-Leader:** Daniel Wu, Sempra Infrastructure, Senior Engineer-Regulatory
- Thank you for choosing this Working Group
- We have an important charge for you:
  - Listening/Learning
  - Assist in developing PHMSA's future research agenda
- All presentations posted and available after the forum.



# Working Group Objective

Learn about technical challenges, known research investment and success to date within the Working Group subject matter and to identify non-duplicative/complementary technical gaps for future PHMSA research funding.



# Agenda at a Glance



# Agenda at a Glance – Day 1

Time	Agenda Item	Role
1:00 PM	<b>Introduction to Working Group</b>	Working Group Leadership
	<b>Facility Challenges &amp; Research Funding Organization Presentations</b>	Various Presenters
	<b>Question and Answer Session</b>	All
	<b>Research Gap Brainstorming Introduction</b>	PHMSA Support Contractor
	<b>Research Gap Brainstorming Session</b>	All
	<b>Break*</b>	
	<b>Research GAP Review/Consolidation</b>	All
4:00 PM	<b>Day 1 Closeout/Adjourn</b>	Working Group Leadership

\*Break taken as needed.



# Agenda at a Glance – Day 2

Time	Agenda Item	Role
10:00 AM	<b>Review of Consolidated Research Gaps</b>	Working Group Leadership
	<b>Research Gap Prioritization Introduction</b>	PHMSA Support Contractor
	<b>Research Gap Prioritization Round 1 &amp; 2</b>	All
12:00 PM	<b>Lunch</b>	
	<b>Research Gap Roadmapping*</b>	All
4:00 PM	<b>Day 2 Closeout/Adjourn</b>	Working Group Leadership

**NOTE:** Remember to use the MS Teams meeting link for Day 2 – See provided agenda

**NOTE:** A summary report containing the roadmapped gaps will be posted 1 week after the forum.

\*Afternoon break taken as needed.



# PHMSA Funded Research

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# Working Group #4 Relevant R&D (\$1.6M)

Prj #	Project ID and Title	Status	Contractor	Funding
1. <a href="#">731</a>	693JK31810006, Consistency Review of Methodologies for Quantitative Risk Assessment	Closed	Gas Technology Institute	\$858,587
2. <a href="#">732</a>	693JK31810007, Performance Gap Comparison of Process Safety Management Consensus Standards and Regulatory Requirements for LNG Facilities	Closed	Gas Technology Institute	\$295,529
3. <a href="#">948</a>	693JK32110005POTA, Liquefied Natural Gas Tanks Without Bottom Fill	Active to 6/14/2023	Blue Engineering and Consulting Company	\$331,760
4. <a href="#">949</a>	693JK32110006POTA, Developing Periodic External/Internal Inspection Requirements to Assess Low Temperature and Cryogenic Storage Tanks	Active to 3/14/2023	PEMY Consulting	\$165,000

Research Project Pages found via: <https://primis.phmsa.dot.gov/matrix/>





# Research Knowledge Transfer

- Project results utilized for:
  - Policy and rulemaking development
  - Revision of consensus standards such as with the National Fire Protection Association



# PHMSA Compliance Review



# Siting and Design Compliance

- Subpart B - Siting
  - Issued 25 letters of determination under MOU with FERC
  - Assist state partners with 3 LNG projects
- Subparts C and E - Design and Equipment
  - Completed 1 design compliance review
  - Closing out 3 compliance review
  - Reviewing 8 projects under construction



# Thank You!

## Program Contacts

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