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## CLEMENT MESA VAGE

### Education

MS, Civil Engineering, Massachusetts Institute of Technology (MIT), 1979; *Emphasis in Logistics of Bulk Material Transportation & Infrastructure Storage & Transfer*

MPA, University of Southern California, Los Angeles, 1977; *Emphasis in Permit Acquisition & Regulatory Agency Decision Prediction Techniques*

BS, Environmental Engineering, Purdue University, *Air and Water Pollution Control*, 1974 Lafayette, IN

### Professional Licenses

Registered Environmental Assessor, California (REA #00036)  
Registered Environmental Property Assessor (REPA #818710)  
DHS TSA TWIC and CFATS CV

### Professional Affiliations

API Standard 2350 Tank Overfill Protection and Other AST Committees  
DHS USCG CTAC Committee  
VA DEQ AST RAP Panel Member

### Professional Experience

Clem Mesavage is a qualified expert for liquid owners and the bulk liquid distribution terminal, bulk plant, and pipeline facility locations. He has completed Compliance, Conformance, and Consensus (“3-C”) Audits, Incident Forensics, and Standard Operating Procedure (SOP) benchmarking at hundreds of locations. He has over 40 years of experience in dry and liquid/gas bulk liquid security; variance and loss; environmental, health, safety, fire and explosion; construction, and product quality control matters associated with storage, handling, and transfer of hundreds of oil and chemical liquids transported by tank truck, rail tank car, pipeline, and marine tank barge and tank ship in 50 states and abroad. Recent service examples include being retained directly by the U.S. Department of Justice for the criminal case as DOJ’s expert witness in the Charleston, WV matter involving the loss of water to over 300,000 people and as a testifying expert witness in Puerto Rico on the cause of the largest tank farm fire and explosion in history (Caribbean Oil Company).

In addition, Clem’s career includes being a member of API Standard 2350, Tank Overfill Protection Committee and being a Special Term Expert (STE) to the Nation’s Infrastructure Protection Program for post 9/11 vulnerability prioritization of 643 marine terminal locations for the DOE and FBI. He routinely handles facility compliance and contractor service quality audits, due diligence site assessments, waste management services, contingency plan preparation, air, water, and waste permitting associated with military, PHMSA, EPA, OSHA, USCG, and State requirements as well as industry/customer specifications. He has also had contracts with military and private pipeline operators (SIC Codes 4612, 4613, 4619, and 9711) for pipeline segment

assessment, and with manufacturers, municipalities, port/airport authorities, and insurance companies. Note that his experience has included being International Technical and Regulatory Director of the International Liquid Terminals Association (ILTA) in Washington monitoring regulatory and legal proposals that can impact product transfers and storage.

### **Expert Witness Testimony (Depositions, Trial Courts, Hearings, Mediation)**

Served as a qualified expert witness to the oil, gas, and chemical industry, including infrastructure (over 100 cases), as well as to the U.S. Justice Department and insurance companies for matters involving regulation compliance. Participated in administrative hearings, submitted affidavits and declarations, participated in agency rulemaking, and litigation support services, including deposition and trial testimony experience.

Provided testimony regarding industry standards such as NFPA 30 & API 2610, product care, custody, and control practices in industry, to state regulation affecting storage/transfer, plus military specifications.

### **Audits, Manuals, and Reports**

Completed the following for Midstream oil/gas/chemical AST entities:

- >500 DOT/PHMSA/USCG/EPA “3-C” Audits, e.g. at pipeline and terminal locations.
- >500 EPA/OSHA EH&S AST facility risk assessments (RMP, PSM, HazOp)
- >300 OSHA safety plans (e.g., confined space, HazCom, LO-TO, etc.)
- >50 USCG Dock/Operation Manuals for bulk liquids & MARPOL dry and liquid wastes
- >50 Standard Operating Procedure (SOP) Manuals, e.g. Jet Fuel QA
- >300 NPDES permits (water pollution control) and Corp of Engineer dredging permits
- >50 SWPPP Plans (stormwater pollution)
- >250 Title V and other air permits (air pollution control)
- >25 DHS & MTSA Facility Security Plans (FSP) & SVAs
- >50 Phase I/II site assessments (including remediation compliance cost analyses)
- >50 PHMSA/DOT Operation Manuals (Pipeline O&M Manuals and SOPs)
- >25 API Std. 1595 Jet Fuel QA/QC O&M Manual Prep and Personnel Training
- >50 SARA Title 3 Form R and Tier 2 reports
- >10 ISO 14000 EMS systems for clients
- >500 SPCC and FRP plans (spill contingency)
- >100 USCG Operation Manuals

### **Process Plant and Toll Infrastructure Facilities**

Experience includes regulatory compliance auditor for DOD jet fuel facilities nationwide and providing services to the hundreds of industrial, commercial, and other clients.

### **Publications, Presentations, and Training**

Mr. Mesavage was author of numerous publications, research, and guidance (complete list available upon request). Also provides operator training presentations for agency rule

compliance, internal company conformance, and industry standard consensus (best management practices and continuous improvement strategies). Select publications include the following:

“Pre-Airfield Jet Fuel QA/QC O&M Manual Integrity Off the Tarmac,” 2012

“CERCLA Arranger Liability to Railroads and Lessors of Railroad Properties,” 2011

“Contractor Safety Management at Bulk Liquid Terminals,” 2009

“Vulnerability Assessment of 500 Marine Petroleum Terminals,” Homeland Security, 2005

“Vulnerability Assessment of 1,500 Petroleum Pipeline Terminals,” Homeland Security, 2005

“Model Hazard Communication Manual for Terminals,” 1988

“Model Safety Checklist for Design and Operation of Terminals,” 1985

MARPOL Ship/Waste Water Reception,” 1984

Co-author, “ILTA Law and Regulation Guide to Bulk Liquid Terminals,” 1983

“Model Spill Prevention, Control, & Countermeasure Plan,” 1982

“Model U.S. Coast Guard Operations Manual,” 1982

“Computer Application at Terminals,” 1982

“Scales, Meters, and Liquid Gauging,” 1982

“Application of Hazardous Waste Regulation to Terminal Operations,” 1982

“OSHA Emergency Action Plans,” 1981

“Terminal Personnel Training,” 1981

“Management Strategies for LNG Ship Conversion to LPG Gas Liquid Carriage,” 1979

Author of the “California Hazardous Pipeline Safety Act of 1979 for the California State Assembly (AB 2587, Elder)”

“Economics of City of LA Sewage Sludge Exportation to the Middle East as Ship Ballast,” 1977

“Air Rights Stock Trading in Indianapolis Air Basin,” 1974