

Clement Mesavage, Jr., REA



Title

Senior Consultant, Midstream Segment Manager, and Qualified Expert Witness

Education

MS, Civil Engineering, Massachusetts Institute of Technology (**M.I.T.**), Cambridge, MA; Emphasis in Contingency Logistics in Bulk Material Transportation & Infrastructure

MPA, University of Southern CA (**USC**), Los Angeles, CA; Emphasis in Permit Acquisition & Agency Project Decision Prediction Techniques

BS, Environmental Engineering **Purdue** University, W. Lafayette, IN. Air/water pollution control.

Professional Registrations

REA, California (#00036)
DHS TSA TWIC and CFATS CVI

Professional Associations

API 2350 Tank Overfill Protection & DHS USCG CTAC Security Committee
VA DEQ AST RAP Panel Member
Who's Who in China – HazOp
Volunteer - Centerville, VA Fire Dept.

Languages

English

Experience Summary

Consultant, and Qualified Expert Witness for bulk liquid terminal, bulk plant, and pipeline related projects. He has 40 years of experience in dry and liquid bulk tank security, variance and loss, environmental, health, safety, fire and explosion, and liquid quality control matters associated with product storage, handling, and transfer practices at over 1,000 transportation infrastructure related facilities (tank truck, rail tank car, pipeline, and marine tank barge and tank ship) in 50 states and abroad that handle hundreds of petroleum, petrochemical, and other bulk liquids (SIC Codes 4226 and 5171). Services have included expert witness testimony, DHS CFATS/SVA/MTSA facility prioritization, SOP manual preparation, incident investigation, facility compliance/contractor service quality audits, due diligence site assessments, waste management services, contingency plan preparation, air, water, and waste permitting services associated with military, DOT, 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. In addition, Clem's career had included being a Special Term Expert (STE) to the National Infrastructure Protection Program/Plan at Argonne National Lab advising on the prioritization of military/industry tank farm assets; work encompassed 1,500 locations and their associated transport mode infrastructure/routes; STE reports were written and utilized by SHS and DOE.

Related Projects

- Served as a qualified expert witness to the oil and chemical industry and its AST tank infrastructure (over 80 cases), plus the U.S. Justice Department and insurance companies for matters involving regulation compliance with 29 CFR 1910.119, 40 CFR 68, 40 CFR 110-112 (SPCC/OPA) plus 40 CFR 312 (due diligence), 49 CFR 172-199 (DOT/PHMSA), 29 CFR 1910.119/40 CFR 68 (PSM/RMP), 40 CFR 52, 60, 61, 68, 79 and 80 (Air/RMP), and 122-126 (NPDES/SWPPP), 33 CFR 154-158 (USCG), 40 CFR 300-302 (CERCLA), 40 CFR 355-370 (SARA/EPCRA), 29 CFR 1910 thru 1910.1000 (OSHA TLVs), 40 CFR 403 (CWA/POTW), 40 CFR 260-280 (RCRA), and 40 CFR 761 (TSCA). 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 specs.

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- Completed the following for **Midstream oil/chemical AST entities** (equal or greater than #'s):
 - 500 safety and environmental AST facility risk assessments (RMP, PSM, HazOp)
 - 300 OSHA safety plans (e.g., confined space, HazCom, LO-TO, etc.)
 - 50 Standard Operating Procedure (SOP) Manuals, e.g. Jet Fuel QA
 - 500 EH&S, DOT/PHMSA/USCG Audits, e.g. at interstate pipeline facilities.
 - 25 DHS & MTSA Facility Security Plans (FSP) & SVAs
 - PHMSA/DOT Operation Manuals (marine vessel & pipeline O&M Manuals and SOPs)
 - 500 SPCC and FRP plans (spill contingency)
 - 125 Phase I/II site assessments (remediation/compliance cost analyses)
 - 100 NPDES permits (water pollution control)
 - 50 SWPPP Plans (stormwater pollution),
 - 50 SARA Title 3 Form R and Tier 2 reports
 - 50 Title V permit requests (air pollution control)
 - 7 ISO 14000 EMS systems for clients.
- **Prior to Antea Group**, Mr. Mesavage was the Sole Member Proprietor of Midstream Farm, LLC, for 4 years, Senior Professional for Earth Tech for 2 years, President of Think Tank Resources, Inc. for 13 years, National Director of Technical and Regulatory Services of the Independent Liquid Terminals Association (ILTA) for 8 years, West Coast Manager of Environmental Affairs for GATX Terminals Corp (GATX) for 3 years, Environmental Systems Engineer for Bechtel for 2 years, and a Bulk Liquid Terminal Consultant for the balance of his career. In addition to pipelines and terminals, also has extensive spill contingency experience with power plant and telecommunication facilities.
- **Tank farm and pipeline projects** have included being regulatory compliance auditor of DLA/DFSC Navy and Air Force jet fuel facilities nationwide and providing services to the following industrial/commercial/other clients: Allied Terminals, Ameropan, Amoco Oil, Apex Oil, Arcadian, Archer Daniels Midland, Argonne National Lab, Arizona Public Service, BASF, Baytank, BP, Bethlehem Shipyards, Brooklyn Union, Buckeye Pipeline, Cabot Corp., California State Assembly, CALTEX, Carbon Steel, Center Oil, Champlin, Charter Terminal, Charter-Triad LLC, Chevron USA, Citgo, Citicorp, Clark Oil, Colonial Pipeline, Corco, County of Los Angeles, Croda Inc., Croda Storage, Crowley, Crown Centrap Petroleum, Cummins Terminal, Defense Fuel Supply Center (DFSC/DESC)/Defense Logistics Agency, Delaware Terminal, Delta Commodities, Demaco Corp., Diamond Oil, Dubai, U.A.E., Dominion Generation, Dynamac, E D & F Man, EOTT Energy, Enron Oil/Gas, Fleet Supplies, Florida Power & Light, Foster Wheeler, Galveston Terminals, Gantrade, GATX Terminals, Gaylord Chemical, General Chemical, Grace Chemical, Gulf Interstate, Gulf States, Halliburton NUS, Houston Fuel Oil, ICI Americas, Kinder Morgan, ILTA, Independent Liquid Manufacturers Association (ILMA), IMTT, Interstate Energy Co., International Oil, ITAPCO, IWRN, Lemm Corp., Liquid Transfer, Louis Dreyfus Energy Corp., Lubripac, MacMillon Oil Marketwest Hydrocarbon, Marathon Petroleum, Marlex Petroleum, Media General Cable, MEIOCO, M.I.T., Mobil Oil, Montank, Motiva, Nelson Energy, New Haven Terminal, Noco, Norfolk and Southern Railroad, Norfolk Oil Transit, Norfolk Naval Station, Northville, NuStar, Odfjell, 0-3 Limited, Oiltanking, Optimal Quality Grains/DuPont, PanOcean, Pennsylvania Power & Light, PEPCO, PetroChina, PetroUnited, Perimeter Oil, Petroleum Fuel and Terminal, Pipeline Tech, Pirelli Tire, Platzer Shipyard, PM Ag Products, Port City Terminal, Port of Port Royal, PPG, Praxair, Ramsey Scarlett, Port of Long

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Beach, Port of Los Angeles, R. M. Walsdorf, Rollins, Roscom, San Diego Naval Base, SC Fuels, Seachem, SICPA, SOHIO/BP South Coast Terminals, Southern California Edison, Santa Fe Pacific Pipelines, Sprague Energy, SPX, ST Services, Star/Texaco, Statia, Steuart Petroleum, Stratus, Sunoco Logistics, Systems Logistic Trucking, Summit Midstream, Terquimca, Tesoro, 3M, Tidewater Barge, Tidewater, Todd Shipyards, Union Pacific RR, Unitank, United Elastic, U.S. Air Force, U.S. Justice Department, Union Pacific RR, U.S. Navy, Valleytank, Verizon Wireless, W.A.S. Terminals, Westway Terminals, Whitaker Oil, Witco, Witco Chemical, Wolf Lake, & Zapata Haynie, Transmontaigne, & White Pass Alaska.

Expert Witness Testimony (Deposition, Trial Court, Hearing, Mediation)

- Participated in administrative hearings, submitted affidavits and declarations, has participated in agency rulemaking, and has been retained for litigation support services including deposition and trial testimony experience. Career experience (not limited in years) includes the following (legal cases or other matters): (**a.h.** = admin. hearing; **e.r.** = expert report; **d.** = deposition; **t.t.** = trial testimony; **r.d.** = rulemaking development; **c.l.** = committee liaison); **f.q.d.** = fact question development; **p.i.** = pending involvement; **s.i.** = site investigation; **a.** = affidavit):
 1. Marlex Petroleum & Federal EPA (e.r.) (San Francisco)
 2. Fletcher v. Utah Power and Light (e.r.) (Salt Lake City)
 3. Graybill and Unocal (e.r. d.). (San Diego)
 4. Halliburton NUS Environmental. v. Roy F. Weston Services (e.r. d., t.t.) (Philadelphia)
 5. Petroport and N.Y.C. Fire Department (e.r.) (N.Y.C.)
 6. Amoco and City of Fairfax, VA (a.h.) (Fairfax)
 7. Petroleum Fuel & Terminal and Chicago Sanitation District (a.h.) (Chicago)
 8. County of L.A. and Federal EPA (r.d. a.h.) (Los Angeles)
 9. GATX and Port of Los Angeles (a.h.) (Los Angeles)
 10. SOHIO and Port of Long Beach (r.d. a.h.) (Long Beach)
 11. Clark Refining & Marketing and Illinois EPA (a.h.) (Rockford)
 12. Clark Refining & Marketing and Missouri DNR (s.i.) (Rockford)
 13. Pacific Molasses and State of Alabama (a.h.) (Montgomery)
 14. Pacific Molasses and Federal EPA (s.i.) (Houston)
 15. California State Assembly and Pipeline Operators (r.d. c.l., a.h.) (Sacramento)
 16. ST Services and State of Texas (a.h.) (Austin)
 17. City of Boston and Federal EPA (c.l.) (Boston)
 18. Agency Rulemaking and Congressional Lawmaking (r.d. & c.l.) (Washington)
 19. PPG Industries and Clorox (s.i. e.r.) (Louisville)
 20. United Elastic and Chevron (e.r.) (Richmond)
 21. Ameropan Oil and Commonwealth Edison (e.r. a.h.) (Chicago)
 22. Sun Pipe Line v. Toxic Tort Party (f.q.d.) (Corpus Christi)
 23. U.S. v. Koch (f.q.d. for d.) (Tulsa & Houston)
 24. U.S. v. Texaco Pipeline (e.r.) (Houston)
 25. Pittston Company & Ultramar America, Ltd (Tankport) v. Allianz Insurance, Hartford Insurance, London Insurers, Wausau & American Marine Underwriters (e.r. d) (Newark)

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26. Stan Trans. v. Norman Trainer (e.r.) (Galveston)
27. Stan Trans v. Loughridge (p.i.) (Texas City)
28. Galveston Terminal, Hollywood Marine, & SeaRiver Maritime v. J. Young (s.i.) (Houston)
29. Shell Oil Products v. Lloyds of London and Deverin (p.i.) (Newark)
30. White Pass Alaska v. Harbor Transportation Canada (e.r.) (Anchorage)
31. Posey v. Chaparral (p.i.) (Phoenix)
32. Witco Chemical v. OSHA (e.r.) (Pittsburgh)
33. International Matex v. Archer Daniels Midland (p.i.) (New Orleans)
34. Vopak/Paktank & Yasuda Fire & Marine Insurance v. M/V Stolt Kikyo et al (e.r.) (Houston)
35. Chester County Airport Authority v. AE&C, Inc. (e.r.) (Philadelphia)
36. U.S. EPA & Texas v. ARCO, Ashland, GATX, & El Paso et al (e.r., d.) (Houston)
37. Dow Chemical v. Odfjell Shipping (p.i.) (Freeport)
38. Dupont Optimum Quality Grains v. Westway Trading (e.r. d.) (Sioux City)
39. Global Solutions & Am. Guarantee & Liability v. NASDI & Greenwich Insurance (e.r.) (Century City)
40. Crowley Maritime v. Beacon Insurance and Chicago Insurance (e.r. d, a.) (Seattle)
41. ExxonMobil v. Proposition 65 Coalition (p.i.) (Los Angeles)
42. Amerada Hess v. El Paso Pipe Line Company (p.i.) (Corpus Christi)
43. Baltimore Gas & Electric & Pinkerton Securities v. Injured Party (p.i.) (Baltimore)
44. Kinder Morgan v. Injured Party (p.i.) (Carteret, NJ)
45. Motiva (Texaco) v. U.S. Justice/EPA (p.i.) (Delaware City)
46. Hong King Int'l Airport v. Shiuwing Steel (p.i.) (Hong Kong)
47. Injured Party v. Denver Area Facility (p.i.) (Denver)
48. CSX Railroad Company Employees v. Lemm Services (f.q.d.) (Charleston, SC)
49. Ship Agent/Vessel Party v. Shell Oil (p.i.) (New Orleans)
50. Radtke v. Rohm & Hass Company (p.i.) (Chicago)
51. Crown Central Petroleum v. Robson (e.r.) (d.) (Indianapolis)
52. Pipeline Technology v. ICOM Pipeline (p.i.) (Baton Rouge)
53. Systems Logistics Trucking v Southern Counties Oil Co. (e.r.) (Los Angeles)
54. International Oil & SL Transport v. Plaintiff Federated Insurance Company (e.r.) (West Virginia)
55. Titan Tire v. Pirelli Tire, et al (Des Moines) (e.r.)
56. U.S. Justice Dept. v. Sunoco (p.i.) (Philadelphia, PA)
57. Genetech v. Rice (p.i.) (San Francisco)
58. Richmond Redevelopment Agency v. Ashland Oil & Petromark (e.r.) (San Francisco)
59. Customer v. Birch Oil (e.r.) (Baltimore)
60. Citgo v. State of New Hampshire (e.r.) (San Francisco)
61. Delta Terminals v. Various Contractors (p.i.) (Cleveland)
62. Shell Oil v. Bulk Services (p.i.) (Savannah)
63. Benzene Pipeline Operator v. Neighborhood (Baton Rouge)
64. Sharon Lee Brate etc. v TEPPCO et al (Todhunter, OH) (p.i.)
65. Chem Marine v. Marine Shipper (Charleston, SC) (p.i.)
66. Missouri & No. Arkansas R.R. v. Facility Operator (Kansas City) (p.i.)
67. Marathon Petroleum Co., LLC v. Various Parties (West Virginia) (e.r.)
68. Air Products and Chemicals v. Odfjell Terminals and Seachem (Houston) (Houston) (e.r.)
69. Kinder Morgan v. Lewis & Barker (Mississippi) (e.r.)

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70. Colour Quest Ltd, et. al. v. Hertfordshire Oil, Chevron, TAV Engineering, & Total Downstream UK et. al (London, UK) (e.r.)
71. Apex Oil/FP&T vs. State of Maryland (Baltimore, e.r)
72. Ogden Aviation vs. Private Party (New York) (p.i.)
73. Tesoro vs. HeliAir (Kihue, HI) (p.i.)
74. ExxonMobil vs. GATX, Pacific Atlantic, & State of NJ (e.r., d.)
75. BP vs. Caribbean Oil et al. (p.i.)
76. Vantassel v. Warex Terminals (NY), (p.i.)
77. Exxon Mobil v. Nicoletti Oil Co. (CA) (e.r.)
78. ARCO Midcon, Magellan, & Wil-Tel v. Henke and Kluner (MO) (e.r)
79. Westway Terminals v. Piping Contractor (OH) (p.i.)
80. EPCO/TEPPCO, Veolia, & O&M Construction v. Pace/Decker/Powell & Mathis (AR) (e.r., d.)
81. Paramount Petroleum v. GEM Mobile Treatment Services (CA) (e.r.)
82. Niemi Oil Co. v. ExxonMobil Corp (OR) (e.r)
83. PetroChina v. Artic Tundra Operator (Mongolia)(e.r.)
84. City of Los Angeles v. Crimson Pipeline Company (Los Angeles) (e.r.)
85. Enbridge Pipeline v. AIG (Detroit) (p.i.)

- Author of the California Hazardous Pipeline Safety Act of 1979 under consulting contract with the California State Assembly (AB 2587, Elder).
- "Vulnerability Assessment of 500 Marine Petroleum Terminals," Homeland Security, 2005.
- "Vulnerability Assessment of 1,500 Petroleum Pipeline Terminals," Homeland Security, 2005.
- "Contractor Safety Management at Bulk Liquid Terminals", ILTA, 2009.
- "CERCLA Arranger Liability to Railroads and Lessors of Railroad Properties" 2011
- "Pre-Airfield Jet Fuel QA/QC O&M Manual Integrity Off the Tarmac" 2012
- "ILTA Law and Regulation Guide to Bulk Liquid Terminals" (co-author, 1983), and author of "OSHA Emergency Action Plans" (1981), "Terminal Personnel Training" (1981), "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), "MARPOL Ship/Waste Water Reception" (1984), "Model Safety Checklist for Design and Operation of Terminals" (1985), and "Model Hazard Communication Manual for Terminals" (1988).
- Wrote/copyrighted in 1994 the model EPA/USCG FRP OPA spill response plan for the tank farms. The Plan has been utilized nationwide.
- Numerous other publications including "Air Rights Stock Trading in Indianapolis Air Basin", "Management Strategies for LNG Ship Conversion to Other Liquefied Gas Liquid Carriage", and "Economics of City of LA Sewage Sludge Exportation to the Middle East as Ship Ballast."
- Gives training presentations for OSHA Confined Space Entry, HazCom, EAPs, and all state and federal environmental rules with emphasis on agency regulation Compliance, internal company Conformance, and industry standard Consensus to best management practices, continuous improvement, and management operating structure.
- 2012 Company-Wide Employee TEAMWORK Award (Antea Group USA).