

Todd Thalhamer, P.E.

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**Current /Past
Positions****CalRecycle, Senior Waste Management Engineer, Subject Matter Expert for Waste Fires, Subsurface Elevated Temperatures (SET) Events in Landfills and Related Landfill Gas (LFG) Control and Emission, Clean Closures of Disposal Sites, and Marine and Wildfire Debris 1992 to Present**

Evaluated SET Events, gas migration, and emissions at solid waste landfills for CalRecycle. Reviewed landfill gas data, odors, and emission causes, NSPS/NESHAP reports, and landfill temperature data, and slope stability. Performed civil and environmental engineering duties for state and federal-funded private property debris removal in California for Wildfires and acted as area commander, incident commander, and operations section chief for other wildfire-related emergency response projects. Project engineer on various abandoned vessels and marine debris removals. Provided technical support for local government on clean closures of disposal sites, landfill post-closure, gas migration, site mitigation, LFG issues, environmental sampling, cleanup levels, health and safety plans, action levels, removal actions, smoldering events, tire fires, and illegal waste issues. Review slope stability reports, sampling plans, LFG migrations, control plans, and landfill performance data.

Hammer Consulting Services, Subject Matter Expert for Waste Fires, Subsurface Elevated Temperatures in Landfills and Related Landfill Gas Emissions, President 2006 to Present

Provided emergency response, engineering, and practical training to waste fires outside California. Privately consulted on waste fires and subsurface elevated temperature events in Austria, Canada, Mexico, Panama, Sint Maarten, and the United States. Prepared cover designs and sampling plans. Reviewed gas control data and landfill performance data. Evaluated landfill gas control and emissions related to temperature events. See the project list for details.

World Bank, Independent Consultant 2020 to 2018

Provided technical assessment and analysis on multiple landfill fires at the Pond and IRMA Landfill for the World Bank and the Government of Sint Maarten.

Hart Crowser, Senior Associate Level Environmental Regulatory Specialist 2017

Provided guidance and technical assistance for the Washington State Department of Ecology's Pasco Landfill Fire Project.

El Dorado Hills Fire District, Retired Lieutenant 1998 to 2017

Acted as a fire officer for the El Dorado Hills Fire Department. Supervised fire crews during responses and worked as a hazardous material specialist.

US Environmental Protection Agency, Region IX, Interagency Personnel Assignment 2008 to 2012

Provided technical assessment and analysis for Region IX landfill fires and gas control systems.

Key Experience

Designed and implemented California's Structural Wildfire Ash and Debris Removal Program for Private Property Debris Removal (PPDR) for the California Governor's Office of Emergency Services (Cal OES) and Federal Emergency Management Agency (FEMA) funded disaster work. Planned, designed, and implemented debris removal methodology, waste characterization, sampling strategies, asbestos surveys, worker and community safety plans, and outreach, recycling, and disposal options for residential and commercial wastes destroyed by wildfires. Performed duties as the Area Commander and Operations Section Chief for the Camp and Woolsey Incidents, implemented a disaster plan that removed over 12,000 destroyed structures, and reviewed over 100,000 soil confirmation samples to ensure the sites met established cleanup goals.

Performed engineering duties for state and federal-funded disaster operations, including developing scopes of work for emergency/temporary bridge crossings, sampling strategies, traffic mitigation plans, soil backfill projects, hazmat responses, commercial waste removal, and site characterizations. Designed structural assessment protocols for damaged and destroyed residential and commercial structures for CalRecycle and Cal-OES. Performed residential bridge safety inspections after fires.

Performed duties as the Incident Commander/Operations Chief/Disaster Matter Expert for multiple FEMA and Cal OES funded debris operations in El Dorado, Butte, Calaveras, Lake (4x), Mono, Nevada, San Bruno, Ventura, and Yuba Counties. Coordinated the removal of over 3,0000 residential structures and other debris; directly supervised a debris incident command team that consisted of multiple state and county agencies, contractors, waste haulers, environmental consultants, and health and safety consultants. Worked with both FEMA and local government representatives during the responses.

Acted as a liaison to local government, schools, and community members at public meetings for the multiple PPDR projects listed below.

Responded and directed suppression efforts at the Vancouver Landfill in British Columbia. Developed a training program for Delta Fire and landfill personnel to integrate resources.

Responded to a significant (Type 4) landfill fire in Panama City, Panama, at the request of the US Embassy and the Presidential Office of Panama. Developed a suppression plan that extinguished the landfill fire and reduced smoke emissions impacting the City of Panama.

Established California's first multi-agency disaster incident management team. May 2011.

Performed duties as the operations chief at the San Bruno Pipeline Explosion in San Bruno, California. Coordinated the removal of 35 residential structures and other debris; directly supervised a debris incident command team that consisted of multiple state and county agencies, contractors, waste haulers, environmental consultants, and health and safety consultants. September 2010.

Performed duties as the operations chief at the first Cal OES private property debris project. Coordinated the removal of residential structures from a significant wildland fire in South Lake Tahoe, CA. Developed a multi-agency debris incident management team and project specifications and scope of work to remove 256 structures burned by a wildfire. July 2007.

Acted as the project engineer for the CIWMB's Special Waste Division at the Tracy Tire Fire Remediation Project. Supervised and directed the remediation of the 7 million burned tires. 1999 to 2006.

Acted as the Heavy Equipment Branch Leader for private firefighting and heavy equipment resources at the Fresno Debris Fire Incident in January-February 2003. Directly supervised two construction/removal companies and a private industrial firefighting company. January 2003.

Performed duties as the incident commander for the Tracy Tire Fire Suppression Project. Directed a team of firefighters, equipment operators, and safety professionals in extinguishing the longest-burning tire fire in the United States in December 2000

Assist the US Environmental Protection Agency's Emergency Response Team in Guam during a tire fire of 1,000,000 tires. Provided suppression guidance and remedial options to the government of Guam in January 1999.

Developed and implemented best management practices for removing abandoned vessels and marine debris from the waters of California. Lead operation for CalRecycle in abandoned vessels and marine projects.

Education	Cal Poly Humboldt B.S. Environmental Resources Engineering with a concentration in Hazardous Waste Management.	1986-1992
Licenses	Professional Civil Engineer for the State of California, No. C055197 Professional Engineer in Civil Engineering for the State of Washington, No. 24011030	1996 to Present 2024 to Present

Publications

1. *Progression of Elevated Temperatures in Municipal Solid Waste Landfills*, ASCE Journal of Geotechnical and Geoenvironmental Engineering, 2017, Contributing Author

2. *Spatial and temporal characteristics of elevated temperatures in municipal solid waste landfills*, Journal of Waste Management, November 2016, Contributing Author
 3. *Aluminum Waste Reaction Indicators in MSW Landfill*, ASCE Journal of Geotechnical and Geoenvironmental Engineering, March 2012, Contributing Author
 4. *Detection of Aluminum Waste Reactions and Waste Fires*, ASCE Journal of Hazardous, Toxic and Radioactive Waste, October 2011, Contributing Author
 5. *Guidance for Conducting Emergency Debris, Waste and Hazardous Material Removal Actions Pursuant to a State or Local Emergency Proclamation*, California Environmental Protection Agency, October 2011, Contributing Author
 6. *A New Way to Manage Structural Fire Debris from a Catastrophic Wildfire ("The Angora Protocols")*, 11th International Fire and Material Conference, San Francisco, USA, 2009, Author
 7. *Landfill Fires: Their Magnitude, Characteristics, and Mitigation*, US Fire Administration, May 2002, Technical Advisor
 8. *Tracy Tire Fire Site Assessment of Tire-Derived Pyrolytic Oil-Affected Soil and Groundwater*, White Paper, California Integrated Waste Management Board, June 2007, Co-Author
 9. *Landfill Fire Guidance Document*, White Paper, California Integrated Waste Management Board, April 2001, Author
 10. *Burning Rings of Fire, I and II*, California State Fire Marshal Office, 1999 and 2004 Technical Committee
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Presentations Survivor Public Meetings for PPDR

Held multiple survivor meetings after a wildfire disaster from 2007 to 2018 to explain, educate, and provide hope on the next steps in private property debris removal options and programs.

Other Presentation

2023 to 2020 Instructor for Hazardous Waste Operations and Emergency Response, according to OSHA standard 29 CFR Part 1910.120

2019/2018 Operations Debris Removal Training for Cal OES, Sacramento, California

2018 California Industrial Hygiene Council, San Diego, California

2018 Landfill Fire Training – Vancouver Landfill, British Columbia, Canada

2017 Landfill Fire Training - Iowa City Landfill, Iowa

2017 Landfill Fire Training - The Short Story- Idaho EHA & Idaho SWA Annual Education Conference

2015 Landfill Fire Control Detection, Evaluation, and Suppression Training, APWA Iowa Chapter, Des Moines

2014 Landfill Fire Control Workshop and Training Burn, Comox Valley Regional District and Fire Authorities

2014 Landfill Fire Control Workshop, Solid Waste Association of North America, British Columbia.

2012 - Keynote Address "Taking Command in a Disaster," at the Solid Waste Association of North America Northern Lights Chapter Conference: The Cleanup: Disasters and the Aftermath of Waste

2012 Landfill Fires: Detection, Evaluation, and Suppression Training, Missouri Dept. of Natural Resources

2012 Solid Waste Association of North America Northern Lights Chapter Conference: The Cleanup: Disasters and the Aftermath of Waste, Keynote Address," Taking Command in a Disaster,"

2012 US EPA OSC Conference, Waste Fires, Investigation, Evaluation and Response

2012-2008 Detection, Evaluation, and Suppression of Waste Fires. Multiple courses are offered nationwide (Pennsylvania, Illinois, Indiana, and Missouri). An advanced short course exploring waste fires' engineering, health, and environmental impacts.

2011 Rubber Manufacturers Association Conference on Waste Tire Fires, Colorado

2011 US EPA OSC Conference, Waste Fires, Investigation, Evaluation and Response

2010 Continuing Challenge Hazmat Workshop Waste Fire, Investigation, Evaluation, and Response

2010 US EPA OSC Conference, Waste Fires, Investigation, Evaluation and Response

2008 International Tire Conference, Tire pile fires and regulations

2008 Landfill Fire Workshop, British Columbia, Canada

2006 Landfill Fire Training, Ohio EPA

2002-05 Radiation Emergencies for 1st Responders, Awareness Course, Various Fire Departments

2002 US EPA Emergency On-Scene Coordinator Conference Speaker: "Tire Fire Lessons, History and Case Study"

2001 Continuing Challenge Hazmat Workshop Speaker and Instructor: "Heavy Equipment Operations And Associated Safety Issues"

2000 California Environmental Health Association Symposium Speaker: "Waste Tire Fire in Guam and California"

1999 US EPA Emergency On-Scene Coordinator Conference Speaker: "Nightmare on 38th Street, Site History and Perspective of the Discovered Radioactive Source"

1999 Continuing Challenge Hazmat Workshop Speaker and Instructor: "Everything You Wanted to Know About Radiation"

1998 Landfill Gas Assessment Symposium Speaker: "LF Gas Monitoring and Subsurface Fires"

1997 CAL EPA Enforcement Symposium Speaker: "Environmental Crimes Case Study"

Certifications	<p>Cal/OSHA Hazardous Materials Incident Response Operations</p> <p>FEMA National Incident Management System 100, 200, 300, 400, 700, and 800</p> <p>Supervisors of Hazardous Waste Workers</p> <p>Various Radiation Safety Courses</p> <p>US EPA Introduction to Hazard Categorization and Field Screen Training</p> <p>Basic Forest Firefighter Training Course 1988, Basic Fire Engine Operations</p> <p>Completed the 40-Hour Hazardous Material Incident Response Course {29 CFR 1910.120} at the California Specialized Training Institute</p> <p>Cal OSHA Confined Space Rescue "Awareness" (Cal OSHA Title 8, Section 5156 thru 5158)</p> <p>First Responder, EDH Fire Department, CPR, and American Red Cross First Aid</p> <p>California Fire Service Training and Education System (CFSTES) Fire Command 1A, 1C</p> <p>Various Firefighter certificates</p> <p>Williams Hazard Industrial Firefighting Course</p>
Productions	<p>MythBusters - Provided environmental compliance, safety, and fire consulting for two 2013/14 episodes. IMDb - Do Try This at Home? (2014) - Painting with Explosives/Bifurcated Boat (2013).</p>
Regulations	<p>Working knowledge of solid waste and hazardous waste regulations through the Resource Conservation and Recovery Act (RCRA), Clean Air Act (CAA), and the Clean Water Act (CWA). Working knowledge of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) on how to clean up uncontrolled or abandoned hazardous-waste sites and accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Working knowledge of California and Federal Occupational Safety and Health Administration (OSHA) regulations for work safety for both the construction and fire industries.</p>
Standards	<p>Working knowledge and expertise in EPA's new source performance standards (NSPS) related to landfill gas and subsurface landfill fires. Working knowledge of the American Society of Testing and Materials (ASTM) for soil, waste, tire, and air. Also familiar with industrial hygiene, environmental, and occupational health and safety guidelines, methodologies, protocols, and best practices through the American Conference of Industrial Hygienists (ACGIH) and National Institute for Occupational Safety and Health (NIOSH).</p>
Awards	<p>2018 Ventura County Board of Supervisors Resolution – Honoring Todd Thalhamer, CalRecycle, for His Service to the County of Ventura and Its Residents Following the Thomas Fire, June 2018</p> <p>2017 California Conference of Directors of Environmental Health (CCDEH) – "Recognition and Appreciation of Over Ten Years of Creative and Effective Disaster Response"</p> <p>2017 El Dorado County, District One and Three Supervisors Recognition for 19 years of Volunteer Firefighter</p> <p>2015 Professional Achievement Award, Professional Engineers in California Government</p> <p>2014 Continuing Challenge Hazardous Materials Emergency Response Workshop –Responder of the Year Award</p> <p>2014 United States Coast Guard Public Service Commendation Award – Oakland Estuary Cleanup Project</p> <p>2007 Sierra Business Council 2020 Vision Award – Leadership in Protecting the Environment</p> <p>2008, 2005, and 2003, 2002- El Dorado Hills Fire Volunteer of the Year</p> <p>2003 California Legislature Assembly Resolution, Members Resolution No. 126, recognized for his outstanding efforts in containing the Archie Crippen Debris Fire in Fresno County</p> <p>2002 City of Sonoma Proclamation for exceptional project engineering</p> <p>1995 Resolution of the Board of Supervisors, County of Humboldt and Yurok Tribal Council, recognized for remarkable flexibility, creativity, competence, and pragmatism in implementing the cleanup of the Weitchpec Dump.</p>

Expert Witness and Legal Consulting Services

Civil Cases

SPSG Partners, Plaintiffs vs CalRecycle, Defendants. Case 34-2021-00304455. Provided expert testimony for CalRecycle on trucking delays at landfills during disaster operations.

Macomber, Plaintiffs vs. BVPOA et al., Defendants. Arkansas Case 04CV-18-3332. Waste fire expert for Plaintiffs, Bailey & Oliver Law Firm.

State of Missouri, Plaintiffs vs. Republic Services, Defendants. Case 13SL-CC01088-1. Waste fire expert for the Plaintiffs, State of Missouri.

State of Missouri, Plaintiffs vs. Republic Services, Defendants. Case 4:15-cv-01506. Waste fire expert for the Plaintiffs, State of Missouri.

Buck, Plaintiffs vs. Republic Services, Defendants. Case 4:13-cv-00801-TCM. Waste fire expert.

John Michael Abicht, et al., Plaintiffs vs. Republic Services of Ohio, Defendants. Case 1539085. Waste fire expert for the Plaintiffs, Weitz, and Luxenberg.

State of Texas, Plaintiffs vs. Zumwalt, Defendants. Helotes Debris Fire. Waste fire expert for the State of Texas, Office of the Attorney General of Texas, and the Department of Environmental Quality.

State of California, Plaintiffs vs. Crippen, Defendants. GOH Debris Fire. Waste fire expert for the State of California, Office of the Attorney General and CalRecycle.

State of Idaho, Dept. of Environmental Quality Enforcement Case. Waste fire expert for the State of Idaho, Office of the Attorney General.

Administrative Cases

ECO-VISTA, LLC Class I Landfill vs. City of Tonitown, Arkansas Pollution Control and Ecology Commission Hearing. Provided expert testimony on fire prevention, pre-incident plans, alternative daily cover, emergency response, and communication plan for the City of Tonitown.

US EPA Cases

USEPA and DOJ vs. Republic, Forward Landfill, Waste fire expert for the US EPA and Department of Justice, Sacramento Office.

USEPA and DOJ vs. Waste Management, Waimanalo Gulch Landfill, Waste fire expert for the US EPA and Department of Justice, San Francisco Office.

USEPA and DOJ vs. County of Maui, Central Maui Landfill, Waste fire expert for the US EPA and Department of Justice, San Francisco Office.

Depositions:

California Governor's Office of Emergency Services vs. Southern Edison Company. Case No. 21STCV40737, Pending

Steven Larson vs. California Governor's Office of Emergency Services. Case No. 34-2020-00290271, August 15, 2024

ECO-VISTA, LLC Class I Landfill vs. City of Tonitown, Permit No. 0290-S1-R4, Arkansas Pollution Control and Ecology Commission. Docket No. 23-013-P, December 4, 2023.

SPSG Partners vs CalRecycle. Case 34-2021-00304455, October 5, 2023

Macomber vs. BVPOA et al. Case 04CV-18-3332, December 7, 2021

State of Missouri vs. Republic Services. Case 4:15-cv-01506, October 23, 2015

State of Missouri vs. Republic Services. Case 13SL-CC01088-1, September 3, 2013

Buck vs. Republic. Case 4:13-cv-00801-TCM, September 3, 2013

Albicht vs. Republic, Case 1539085, November 8, 2012

Admiral Insurance Company vs. Crippen, July 2, 2004

FEMA Funded PPDR Projects (Acted as Area Commander, Incident Commander, Operations Section Chief or Debris Matter Expert)

- 2018-2020 Paradise Incident, Butte County, +11,000 residential and commercial structures
- 2018-2019 Woolsey Incident, Los Angeles and Ventura Counties, +900 residential and commercial structures
- 2017-2018 Thomas Incident, Ventura County, +800 residential and commercial structures
- 2017 Sonoma Incident, Sonoma County, matter expert for temporary bridges, confirmation sampling, and backfill projects
- 2017 Wind Incident, Butte, Nevada, Yuba County, +250 residential structures
- 2015 Valley and Butte Incidents, Lake and Calaveras Counties, +2000 residential and commercial structures

CAL OES Funded PPDR Projects (Acted as Operations Section Chief or Debris Matter Expert)

- All listed projects above
- 2017 Gooseneck Incident, Lake County, Marine debris, sunk vessels, shoreline debris from the Sulfur Fire

- 2017 Detwiler Incident, Mariposa County, +150 residential and commercial structures
- 2017 Helena Incident, Trinity County, +50 residential structures
- 2016 Clayton Incident, Lake County, +200 residential and commercial structures
- 2015 Rocky, Jerusalem, and Valley Commercial Incidents, Lake County, +250 residential and commercial structures
- 2015 Round Incident, Mono County, +30 residential structures
- 2014 Boles Incident, City of Weed, Siskiyou County, +100 residential and commercial structures
- 2010 San Bruno Incident, San Mateo County, +35 residential structures
- 2007 Angora Incident, El Dorado County, +250 residential structures

Waste Fire Projects (Evaluations, Investigations, Publications, Presentation)

- 2025-2023 Chiquita Canyon Landfill Smoldering Event, California. Client: Cal-EPA, CalRecycle. Technical Lead.
- 2023-2024 Middle Point Landfill SET Events, Tennessee. Client: City of Murfreesboro.
- 2023 Glenmore Landfill, Kelowna, British Columbia, Canada. Client: City of Kelowna. Provided fire suppression guidance and oversight, and acted as the Operations Chief for the fires at the landfill during the wildland fire disaster.
- 2023 DTG Anderson Landfill Fire, Washington. Client: Owner. Provided fire investigation and suppression consulting.
- 2023-2022 Caton Landfill Fire, Washington. Client: Owner. Provided fire investigation and suppression consulting.
- 2023-2022 Cataula Inert Debris Fire, Georgia. Client: Owner. Provided fire suppression services and training for the incident.
- 2022-2020 - Stump Dump Fire, Bella Vista, Arkansas. Client: Bailey & Oliver Law Firm. Provided expert opinion on the incident.
- 2020-2018 Sint Maarten Landfill Fire. Client: World Bank. Provided technical services for future emergency response.
- 2018 Vancouver Landfill Fire, British Columbia, Canada. Provided emergency response services and incident command support to suppress the subsurface fires
- 2018 to 2012 Bridgeton Landfill Smoldering/Oxidation Event, St Louis Area, Missouri. Client: Missouri Department of Natural Resources. Provided an evaluation and review of a reported subsurface oxidation event. [Hammer Consulting Services]
- 2017 Pasco Landfill Fire. Client: Washington State Department of Ecology. Provided an evaluation and a report on the reported smoldering event.
- 2017 Iowa Landfill. Provided emergency response consultant to contain a smoldering event.
- 2015 WCA Landfill, Texas. Provided emergency response consultation.
- 2015 Black Oak Landfill, Missouri. Provided consultation on a possible subsurface smoldering event for MDNR.
- 2014 Lake County Wood Debris Fire, Emergency Response to implement a fire suppression plan and fire break, Lake County Solid Waste District, Montana.
- 2014 Iqaluit Dump Fire, Iqaluit, Canada. Provided initial consultation on suppression options, foam usage, health and safety issues, and air emissions related to smoldering solid waste and associated dioxin release.
- 2014 Pasco Sanitary Landfill, Washington. Provided initial consultation to the responsible party and the State of Washington on the impacts and issues with fire suppression at landfills.
- 2014 George Town Landfill Fire, Cayman Islands. Press inquiry (Cayman Free Press=) on the toxicity and hazards of landfill fires.
- 2014 Harrelson Materials Management, Louisiana. Press inquiry on subsurface smoldering events and impacts on the community.
- 2013 Cerro Patacon Landfill Fire, Panama. Client: Government of Panama. Provided emergency response, technical oversight, and firefighting services for the Panamanian Waste Officials during a landfill fire.
- 2012 Calgary Metals Fire, Canada. Client: Owner. Provided emergency response, technical oversight, and suppression guidance.
- 2012 Contributing Author *Aluminum Waste Reaction Indicators in MSW Landfill*, ASCE Journal of Geotechnical and Geoenvironmental Engineering.
- 2012 to 2009 Forward Landfill Fire and Gas Issue. Client: US EPA, Region IX. Provided technical review, comments, and legal support for the landfill fire and gas control issue.
- 2012 to 2007 Waimanalo Gulch Landfill Heating Event, Hawaii. Client: US EPA, Region IX. Provided technical review and comment on the heating event along with the liner.
- 2012 to 2007 Central Maui Landfill Fire and Heating Event, Hawaii. Client: US EPA, Region IX. Provided technical review and comments on the fire and heating event.
- 2012 to 2010 Azusa Tire Monofil Fire, California. Client: CalRecycle. Provided a review of the fire and evaluation of future expansion plans.
- 2010 Instructor for Waste Fires, Investigation, Evaluation and Response, US EPA, Florida

- 2010 Instructor for the Continuing Challenge Hazmat Workshop - Waste Fires, Sac, California
- 2010 Contributing Author of "Aluminum Waste Reaction Indicators in MSW Landfill" ASCE Journal of Geotechnical and Geoenvironmental Engineering, October 2010
- 2009 Philippines Landfill Fire Discussions, Technical Assistance, World Bank
- 2009 Instructor for Waste Fires, Investigation, Evaluation and Response, US EPA, Florida
- 2009 Instructor for Waste Fire Course, Short Course on Detection, Evaluation, and Suppression, Client: Paid Training, Indianapolis, Indiana
- 2009 Instructor for Waste Fire Course, Short Course on Detection, Evaluation, and Suppression, Client: Paid Training, Chicago, Illinois
- 2009 to 2007 - Kailua-Kona Landfill Fire Suppression Project, Hawaii. Client US EPA, Region IX. Provided technical review and comments on the suppression plan.
- 2008 Instructor for Waste Fire Course, Short Course on Detection, Evaluation, and Suppression, Client: Paid Training, Hershey, PA
- 2008 Instructor for Landfill Fire Seminars, B.C., Canada
- 2008 Instructor for International Tire Conference, San Diego, California 2008 - Instructor/Presenter
- 2008 Instructor/Presenter for International Tire Conference. Client: Cal/EPA, CIWMB. Presented information on tire storage, tire regulations, and tire fire response.
- 2008 to 2007 Lawson Illegal Disposal Site Subsurface Debris Fire, Torres Martinez Reservation, California. Client: Cal/EPA, CIWMB, and US EPA, Region IX. Provided technical review and comments on the operation and site investigation.
- 2008 to 2006 - Countywide Landfill Fire Issue, Ohio. Client: Ohio EPA. Discussions concerning landfill fire issues, review of infrared surveys, landfill operations, including gas tuning logs, data trend analysis, and site recommendations.
- 2007 City of Kingston Landfill Fire, Jamaica. Client: Solid Waste Authority for Jamaica. Provided technical assistance to a landfill fire.
- 2007 Helotes Debris Fire, San Antonio, Texas. Client: City of Helotes and Bexar County Commissioners Court. Provided technical review of the incident. Also presented a previous debris fire and discussed site issues and risks associated with fire suppression.
- 2006 Landfill Fires Guidance Document Final, CIWMB
- 2006 Candlestick Point Subsurface Fire, San Francisco, California. Client: Cal-EPA, CIWMB. Performed duties as the incident commander for the suppression project. The project included representatives from San Francisco Fire Department, US EPA, Region IX, California Department of Parks and Rec, and San Francisco Health Department
- 2006 Minimize Landfill Fire and Losses, Audio Conference, Client: Solid Waste Report, Speaker, Washington D.C.
- 2003 to 2006 Tracy Tire Fire Remediation Project, San Joaquin County, California. Client: Cal-EPA, CIWMB. Supervised and directed the remediation of a tire fire site in which 7.5 million tires burned. The project included excavating and transporting 387,000 tons of hazardous waste and contaminated soils.
- 2006 Landfill fire, Australia, Pollution Response Agency. Client: Australia Pollution Response Agency and US EPA Region IX. Provided technical assistance with the landfill fire.
- 2004 Chalan Pago Kajiya Hardfill Facility Fire, Guam. Client: Guam EPA. Provided technical and suppression guidance on the debris fire.
- 2003 Yulupa Elementary Playground Tire Chip Fire Removal, Santa Rosa, California. Client: Cal-EPA, CIWMB, and Bennett Valley Union School District. Supervised and directed the removal of burnt tire chips from a playground. Also collected samples and coordinated responsible agencies for the district.
- 2003 Crippen (GOH - Fresno Debris) Debris Fire, Fresno, California. Client: Cal-EPA, CIWMB. Acted as Heavy Equipment Branch Leader for the suppression project. Supervised both municipal and private firefighters during the suppression efforts. Also acted as a technical lead to the City of Fresno, County of Fresno, and US EPA, Region IX.
- 2003 - Woodlake Sanitary Landfill, Loretto, Minnesota. Client: Foth & Van Dyke and Assoc., Inc. and the State of Minnesota. Provide an evaluation of a rapid oxidation subsurface event at the landfill. [Hammer Consulting Services]
- 2003 Idaho Tire Recovery Pile Evaluation, Lincoln County, Idaho. Client: State of Idaho, Office of the Attorney General. Provided an assessment of several tire piles and evaluated the fire hazards and environmental impact of a potential tire fire. Prepared an assessment report as a technical expert for tire fires.
- 2002 Cogen Dump Los Angeles County Subsurface Fire, Closed Facility, California. Client: US EPA Region IX - Richard Martyn, OSC. Provide a review of LFG data and provided technical support to determine if a subsurface fire was present.
- 2002 Greenhill Road Illegal Landfill/Debris Fire, Johnston, Rhode Island. Client: US EPA, Region I. Consulted and analyzed site data from the subsurface fire. Provided recommendations for monitoring probes, suppression techniques, and health and safety procedures and protocols. [Hammer Consulting, private venture]
- 2002 Superior Greentree Landfill Fire, Kersey, Pennsylvania. Client: Superior Greentree Landfill, LLC. Consulted and analyzed site data concerning a rapid oxidation subsurface event. [Hammer Consulting Services]

- 2002 - Instructor/Presenter for Tire Fire Response, US EPA On-Scene Coordinator (OSC) Readiness Conference, Tampa, Florida. Client: US EPA.
- 2002 Naco Landfill Fire, Naco, Mexico. Client: US EPA, Region IX, Emergency Response. Provided technical guidance on the suppression project to US EPA.
- 2001 Developed a Response to Landfill Fire Guidance Document, Internal Document. Client: Cal-EPA, CIWMB.
- 2001/2000 Hunter's Point Landfill, US Navy, San Francisco, California. Client: Cal-EPA, CIWMB, and US EPA, Region IX. Provided technical review of a subsurface fire suppression plan and site recommendations.
- 2001 Shredded Tire Facility in Ohlsdorf, Austria. Client: Strauss Investor Services, Inc., and Austria Environmental Protection. Provided observations and recommendations on the smoldering rubber waste pile. [Hammer Consulting Services]
- 2000 Tracy Tire Fire Suppression Project, San Joaquin County, California. Client: Cal-EPA, CIWMB. Acted as Incident Commander for the suppression project. Supervised and directed the suppression of the longest-burning tire fire in United States history.
- 2000 Instructor/Presenter for Environmental Suppression Workshop, Sacramento County, California. Client: Various Fire Departments and Regulatory Agencies.
- 2000 Andersen Air Force Base Landfill Cap Evaluation, Guam, USA. Client: US Air Force. Performed a site investigation and evaluation of a suspected landfill fire. [Hammer Consulting, private venture]
- 1999 Illegal Green Waste Pile, Guam USA. Client: Guam, EPA, and state fire department. Consulted and recommended suppression options for the fire.
- 1999 Cajon Illegal Landfill Fire, San Bernardino County, California. Client: San Bernardino County Fire (State-funded project through CIWMB). Provided consultant oversight for air monitoring and sampling. Also recommended a suppression/remediation plan for the site.
- 1998-1999 Hawaiian Island Landfill Fires, Hawaii. Client: State of Hawaii Public Works. Provided general training via the Internet on subsurface fires and suppression options.
- 1998 Ordot Tire and Landfill Fire, Guam, USA. Client: US EPA Region IX, Emergency Response. Performed site investigation and evaluation on the concurrent tire and landfill fire. Provided suppression options and recommendations to the incident commander. Confirmed the presence of a subsurface fire and developed a suppression plan.
- 1998 Tracy Tire Fire, San Joaquin County, California. Client Cal-EPA, CIWMB. Acted as a state responder to the tire fire and provided suppression options and recommendations to the incident commander.
- 1997 Westley Tire Fire, Stanislaus County, California. Client Cal-EPA, CIWMB. Acted as a state responder to the tire fire and provided suppression options and recommendations to the unified command.
- 1997 Lone Pine Landfill Fire, Inyo County, California. Client: County of Inyo, Department of Environmental Health Services (State-funded project through CIWMB). Performed a site investigation and evaluation of a subsurface fire. Consulted and recommended suppression options for the fire.
- 1996 Panoche Tire Fire, Fresno County, California. Client: Cal-EPA, CIWMB. Acted as site responder and engineer to the tire fire and subsequent remediation project. Also assisted US EPA Region IX, Emergency Response, in recommending fire suppression options.
- 1996 Simi Valley Landfill Subsurface Oxidation Event, Ventura County, California. Client: Cal-EPA, CIWMB. Reviewed and commented on the facility's actions to reduce the oxidation event.
- 1995 San Marcos Landfill, Underground Landfill Fire, San Diego, California Client: Cal-EPA, CIWMB. A joint preliminary investigation was conducted to determine if an underground fire was present. Provided recommendations for the incident.
- 1995 Chateau Fresno Sanitary Landfill Fire, Fresno County, California. Client Cal-EPA, CIWMB. Reviewed and commented on a work plan for phase I of a landfill fire investigation
- 1994 Gillespie Landfill Fire, San Diego County, California. Client: County of San Diego Public Works Department. Provided regulatory oversight for the suppression and air monitoring plan.
- 1993 City of Sunnyvale Landfill Fire, Santa Clara County, California. Cal-EPA, CIWMB. Performed a site visit and provided technical oversight.
- 1993 Calexico Landfill Fire, Imperial County, California. Client: Cal-EPA, CIWMB. Reviewed and concurred with a consultant's report concerning successfully suppressing a landfill fire. The determination was made based on carbon monoxide results.
- 1993 Kepco Pinedale Landfill Fire, Fresno County, California. Client: Cal-EPA, CIWMB. Provided comments to the Remedial Action Plan, reviewed LF gas data, and prepared a site investigation report for the landfill fire.
- 1992 Coyote Canyon Landfill, Orange County, California. Client: Cal-EPA, CIWMB. Reviewed the "Evaluation of Mitigation Methods for Elevated Subsurface Temperatures and Fires" report and observed the injection of liquid nitrogen to control the multiple landfill fires.

- 1992 Berry Street Mall Landfill Fire, Sacramento County, California. Client: Cal-EPA, CIWMB. Acted as a site engineer and provided government oversight for the subsurface landfill fire and suppression project.