DAVID GOSSMAN

CHIEF INVESTIGATOR – GOSSMAN FORENSICS
PRESIDENT – GOSSMAN CONSULTING, INC
PRESIDENT – CHEMRIGHT LABORATORIES, INC.
OWNER – HIDDEN BLUFFS FARM
SOLE PROPRIETOR – TREEFARMPRODUCTS.COM

David Gossman has a B.S. and M.S. in Interdisciplinary Physical Science, is a Fellow of the American Institute of Chemists (FAIC) and is a Certified Fire and Explosion Investigator (CFEI). He is President, Gossman Consulting, Inc., President, ChemRight Laboratories, Inc., Chief Investigator, Gossman Forensics (a division of ChemRight Laboratories, Inc.), Owner, Hidden Bluffs Farm and Sole Proprietor, TreeFarmProducts.com. He has been Manager, Cement Kiln Services for Safety-Kleen Corp.; Manager, Business Development for McKesson Envirosystems; and Technical Director for Systech Corp. He has, over the last thirty-five years, developed a large number of the commercially available systems for utilizing hazardous waste as fuel in cement kilns. Over the last sixteen years he has provided expert witness and investigation services in matters of fires, explosions, chemical releases, personal injury, enforcement actions and similar issues related to litigation support. Prior to entering the hazardous waste management field in 1980, he held a non-teaching faculty position at the Michigan State University Heavy Ion Laboratory where he worked as an instrumentation engineer. He is currently serving on the American Institute of Chemists Editorial Review Board. He is on various committees for ASTM International including: Air Quality; Waste Management; Molecular Spectroscopy and Separation Science; Occupational Health and Safety; and Environmental Assessment, Risk Management and Corrective Action. Over the years David Gossman has been involved in the process of developing, reviewing and approving numerous ASTM standards. He is also a member of the American Chemical Society, the American Association for the Advancement of Science, Member of the International Society of Environmental Forensics, the National Fire Protection Association, the National Association of Fire Investigators (Certified Fire and Explosion Investigator), and an Associate Member of the American Bar Association (ABA)-Section of Environment, Energy & Resources and Section of Tort Trial & Insurance Practice.

Work History

1988 - Present	President/Owner Gossman Consulting, Inc.
2015 - Present	Chief Investigator, Gossman Forensics
2004 - Present	President and QA/QC Manager, ChemRight Laboratories, Inc.
1995 - Present	Owner/Manager of a farm in Iowa and TreeFarmProducts.com
2000 - 2005	Managing Partner, ERAtech Group LLC
1987 - 1988	Manager, Cement Kiln Services for Safety-Kleen Corporation
1985 - 1987	Manager, Business Development for McKesson Envirosystems
1980 - 1985	Technical Director for Systech Corporation
1978 - 1979	Graduate Assistant
1977 - 1978	Faculty Member, Heavy Ion Laboratory
1975 - 1977	Heavy Ion Laboratory Technician

Experience (selected)

- Assisted in obtaining patents for client on conversion of medical waste into industrial fuel.
- Assisted client in specifying new GC systems for PCB determinations.
- Lead the successful effort to permit a new cement plant in the city of Chicago – the first new cement plant permitted in a major city in decades.
- Taught class in Dubai on Occupational Safety and Health for high risk industries.
- Taught class in Shanghai, China on HAZOPs.
- Set up and trained operating personnel at hazardous waste laboratories around the world.
- Wrote and supervised testing at numerous industrial plants for dioxin emissions.
- Assisted in the development of a dynamic model for predicting metal emission rates from a cement plant as a tool for developing operating modes designed to reduce mercury emissions.
- Performed comprehensive audits of contractor operated laboratories testing hazardous waste.
- Assisted in the preparation of an ISO 9000 (British Standard 5750) certification application for a laboratory in the United Kingdom.
- Provided expert witness service on case of chemical explosion in drum.
- Provided expert witness testimony on industrial burn accident.
- Performed a detailed QA/QC review of dioxin emission data from industrial plants.
- Developed sample preparation methods for homogenizing non-homogeneous samples prior to analysis.
- In 1980, set up one of the first laboratories complete with methods development for metals, ion chromatography, PCBs, volatile/semivolatile organics, etc.
- Developed laboratory testing methods to screen hazardous waste for selected pesticides.
- Developed and wrote a comprehensive laboratory operations manual for use at multiple testing laboratories.
- Performed comprehensive laboratory based study, including field sampling, at industrial plants throughout the country.
- Developed a comprehensive laboratory and operations training program for an industrial plant.
- Designed hazardous waste regulations for potential use in a developing country.
- Performed a company-wide environmental compliance audit including management strategies for more effective compliance.
- Provided an expert witness report on the cause of a railcar explosion.
- Provided an expert witness report on the cause of an explosion in the vapor head space at a hazardous waste fuel storage facility.
- Prepared a Waste Analysis Plan for an oil/solvent recycling facility in Chilé.
- Performed a detailed QA/QC review of mercury emission data used by EPA to develop/justify MACT controls on cement kilns.
- Assisted in the review and preparation of client comments on the EPA draft *Dioxin Assessment*.
- Designed and set up a new GC/MSD system for testing organic hazardous waste.
- Provided expert witness testimony during legislative hearing in Texas regarding bills on hazardous waste management and facility permitting.

- Developed laboratory operating procedure that allows for the determination of sub-ppm levels of mercury in Hazardous Waste Fuel (HWF) in less than two hours using EPA SW-846 methodology.
- Designed and set up a new laboratory for HWF testing in Tennessee. This was the first HWF laboratory designed specifically to comprehensively test solid HWF prior to acceptance and was the first to use x-ray fluorescence spectroscopy to determine metals.
- Co-directed a series of courses on Solvent Recycling and Reuse taught in the United States and Europe.
- Performed a study to determine the viability of proposed EPA stack testing methodology for HCl emissions. Results indicate that ammonium chloride and other chloride salts produce false positives using the methodology.
- Performed comprehensive laboratory based study, including field sampling, of cement kiln dust and cement clinker stored and generated at cement plants throughout the country.
- Developed a comprehensive community information program and implementation plan for a client cement manufacturer considering the use of hazardous waste fuel.
- Provided expert witness services on occupational exposure to toxic metals incident.
- Co-developed the first quantitative model for evaluating relative health and safety risk from compounds found in organic hazardous waste. This model has been copyrighted by Systech Corp.
- Developed a complete operations and safety manual for use at RCRA permitted hazardous waste facilities.
- Developed complete safety manuals for a number of industrial laboratories.
- Developed and published the first analytical methodology to utilize ion chromatography to determine F, Cl, Br, S, and P in organic hazardous waste.
- Developed and published the first analytical methodology specifically designed to determine PCBs in hazardous waste. The method was eventually expanded to utilize computerized, graphics based pattern recognition.

Professional Affiliations

- American Chemical Society.
- Air and Waste Management Association.
- American Association for the Advancement of Science.
- Fellow-American Institute of Chemists (Certified Chemist).
- Various committees for ASTM International including: Air Quality; Waste Management; Molecular Spectroscopy and Separation Science; and Occupational Health and Safety; and Environmental Assessment, Risk Management and Corrective Action.
- International Society of Environmental Forensics.
- National Fire Protection Association.
- National Association of Fire Investigators.

Publications (selected)

Authored

- "Safe Alternatives." Prepared for International Cement Review, July 2013.
- "Alternatives to ACI." Prepared for International Cement Review, May 2011.

- "HAZOP - Pros and Cons." Prepared for GCI Tech Notes, March 2009.
- "Alternate Fuels and Economic Downturns." Prepared for World Cement Magazine, March 2009.
- "Protocol for Health and Safety Review of Volatile and Semi volatile Data." Prepared for GCI Tech Notes, July 2008.
- "The "Best" Referenced Methods for Organic Hazardous Waste Analysis – Update." Prepared for GCI Tech Notes, June, 2003.
- "SARA 313 (TRI) Reporting Requirements for Dioxins (PCDD/PCDFs)." Prepared for GCI Tech Notes, September, 2003.
- "The Use of a Comprehensive Facility Operations Review and HAZOP Study to Limit Liabilities and Risks in the Operation of Hazardous Waste Fuel Facilities." Prepared for the Hazardous Waste Combustors Specialty Conference, St. Louis, MO, 2002.
- "Factors Influencing Emission Levels of PCDD/PCDFs from Cement Kilns." Prepared for the Hazardous Waste Combustors Specialty Conference, Kansas City, MO, 2001.
- "Restricting Highly Toxic Wastes at Hazardous Waste Fuel Facilities." Prepared for GCI Tech Notes, March, 1999.
- "Data Quality Objectives at Resource and Recovery Act Treatment, Storage and Disposal Facilities (DQOs at RCRA TSDFs)." Prepared for the Hazardous Waste Combustors Specialty Conference, Dallas, TX, September 22-24, 1999.
- "Guide For Performing a Trace Metals Mass Balance on a Combustion Device." Prepared for GCI Tech Notes, October, 1998.
- "A Review of the Usefulness of Various ASTM and SW-846 Methods Which May Be Used by the Thermal Treatment Industry." Prepared for the A&WMA Conference, March 27-30, 1995.
- "Typical Metal Concentrations in RCRA Waste Burned in Cement Kilns." Prepared for the Incineration Conference in Knoxville, TN, 1993.
- "A Method for the Rapid Semi-Quantitative Identification of Hazardous Organic Constituents in Liquid Organic Hazardous Waste Streams." Prepared for the A&WMA International Specialty Conference on Waste Combustion in Boilers and Industrial Furnaces March, 1993.
- "Petroleum and Petrochemical Waste Reuse in Cement Kilns." Published in *Environmental Progress* (vol. 11, No. 1) February, 1992.
- "A Quantitative System For The Assessment Of Initial Organizational Needs In Transdisciplinary Research." Prepared for the Faculty of the College of Natural Science, Michigan State University, June 1979.

Co-Authored

- "Polychlorinated Dibenzo(p)dioxin and Furan (PCDD/F) Congener Profiles in Cement Kiln Emissions and Impacts." Science of the Total Environment 419 (2012) 37-43. doi: http://dx.doi.org/10.1016/j.scitotenv.2011.12.062
- "Evaluating the Consequences of Mercury Emissions from a Point Source." Prepared for the A&WMA Conference, Chicago, IL, August 20-23, 2001.
- "Development and Design of Hazardous Waste Fuel Blending Facilities in Developing Countries." Prepared for the Hazardous Waste Combustors Specialty Conference, Dallas, TX, September 22-24, 1999.

- "Practical Quality Assurance/Quality Control in the Commercial Thermal Treatment Facility Laboratory." Prepared for the Boiler and Industrial Furnace Conference, April 14-16, 1998.
- "Community Relations via The World Wide Web." Prepared for the Boiler and Industrial Furnace Conference, April 14-16, 1998.
- "The Design of A Custom Database System for Storing and Accessing Point Source Emission Test Data and Associated Process Conditions." Prepared for the A&WMA International Specialty Conference on Waste Combustion in Boilers and Industrial Furnaces April, 1997.
- "A Comparison of Normal and Worst Case Cement Plant Emissions." Prepared for the A&WMA International Specialty Conference on Waste Combustion in Boilers and Industrial Furnaces, March, 1996.
- "The Effect of Process Differences on System Removal Efficiencies (SREs) and the Fate of Metals in Cement Kilns." Prepared for the A&WMA Conference, March 27-30, 1995.
- "Dioxin Health Assessment Document Review and Comment, (EPA/600/BP-92/001a,b&c)." Prepared for GCI Tech Notes, March, 1995.
- "Magnetic Field Measurements in the MSU 500 MeV Superconducting Cyclotron." IEEE Transactions on Nuclear Science (Volume:26, Issue: 2), April, 1979, pg. 2111-2113.