

Allen W. Hatheway (1937-)

Citation for Allen W. Hatheway and Tom B. Speight

2021 E.B. Burwell, Jr., Memorial Award

Citation by Richard J. Proctor

Preface: Richard Proctor could not be here today to present his citation in person, so he asked his colleague **Scott Burns** to step in. Richard and the awardees are honored to have Dr. Burns make this presentation.

The GSA Burwell Award Committee has the annual task of deciding the best paper within the last 5 years on advancing geologic principles or practice to environmental and engineering geology. Today's best is not a paper, but the best tome—all 1,084 pages! It's titled *Manufactured Gas Plant Remediation: A Case Study*, published in 2018 by Taylor & Francis of the UK (CRC Press). Here its authors show their systematic screening process to discover the many contaminated abandoned manufactured gas plant (MGP) and coal-tar sites. In the days before Thomas Edison's electric generators, every city had such plants and their indestructible toxic waste is today found in their site soils and often in the local groundwater. Their book is already a standard reference for city engineers and geologists to clean up these sites.

For those of you who do not know Dr. Allen Hatheway, he is a champion of engineering geology and is much more than an accomplished professional. His career includes being an esteemed teacher, a sought-after consultant, a career Army Reserve officer, and a prolific writer.

Let's start with his education and teaching. Allen got his early education in Santa Monica, California, and had also grown up on old family property near the town of Desert Hot Springs, at the base of the Little San Bernardino Mountains in the Mojave Desert. As a youngster he hiked the local canyons and collected pretty rocks. He had always dreamed of becoming a geologist and of someday mapping the geology of his desert home area.

Allen enrolled at UCLA in 1956 to pursue his dream. In his optical mineralogy class his lab partner was **Art Sylvester** who told Allen wonderful things about the University of Arizona. Alas, he was also told that the geology of his Mojave Desert home area had been mapped just three years previously in a master's thesis by a recent UCLA graduate named **Richard Proctor**. Darn! A disappointed Allen vowed that someday he'd like to meet this guy Proctor!

Allen enrolled at the University of Arizona in 1964, and earned his master's in 1966, and his Ph.D. in 1971 as the first geological engineering doctoral graduate. As he was also active in the U.S. Army, in 1980 Allen graduated from the prestigious Army War College in Carlisle, Pennsylvania.

In Allen's teaching career he was adjunct faculty at USC and Boston University. In 1981, on the reference of **George Kiersch**, Allen settled down with full professor's tenure at the Missouri School of Mines at Rolla (now Missouri University of Science and Technology). Many of his former students are indebted to Allen for his guidance on their graduate degrees, and Allen with his students in tow were a common sight at professional society meetings. After 19 years he took early retirement on the last day of 1999 to tend to his consulting practice. His colleague from California **J. David Rogers** assumed Allen's position at the university.

In 1969 Allen returned to California to gain experience in the geotechnical arena. And he finally met Richard and we became lifelong friends. He was fortunate to have worked for several respected geotechnical firms. In southern California they were Woodward-Clyde, **LeRoy Crandell**, and Fugro; in San Francisco, Shannon & Wilson; and in Boston, Haley & Aldrich (where he was Vice President and Chief Geologist). Allen became registered as a Geologist or Engineering Geologist and Civil Engineer or Geological Engineer in Arizona, California, Maine, Massachusetts and Missouri.

Especially after becoming an independent consultant, Allen had jobs in 20 states and ten foreign countries--as diverse as Singapore, Ecuador, Turkey, South Africa, and Norway.

With all this experience and his impressive teaching credentials, Allen was asked to be the 2000 GSA/AEG **Richard H. Jahns** Distinguished Lecturer. He accepted the offer with gusto, and gave a record 74 lectures at universities and societies meetings nationwide.

A personal incident occurred at the Stringfellow Acid Pits Superfund site near Riverside, CA. Because it was a major lawsuit, Allen was hired by a law firm to defend the State of California and he asked **Glenn Brown** and myself to join him. As we roamed the hills mapping the geology we came across a 6-foot rattlesnake. It had beautiful markings as if it had just molted. Someone mentioned that rattlesnake meat was served in some gourmet restaurants, so it must be good to eat. We thought about that, but rejected the idea of taking a rattlesnake home for our wives to cook! We then realized that the snake eats rodents that eat plants on contaminated soil. No more thoughts of cooking this potentially toxic snake.

As for working for law firms, Allen's resume lists 61 times he was an Expert Witness or provided litigation support. I can't think of any other geologist or engineer who has had more litigation work.

Allen is also a career soldier. On graduating UCLA in 1961, he also graduated the Army R.O.T.C. program. In the active Army he was commissioned 2nd Lieutenant in the Fourth Infantry Division and served as

one of the very last aerial observers. After two years active duty, he transferred to the Army Reserve and retired at 30 years service as a full Colonel. He taught many military classes and gave many lectures on how geology impacts military operations. However, in my mind, Colonel Hatheway is a hero for what he did in the 1980s. For five years Allen led teams annually into the demilitarized zone (DMZ) along the Korean border. His job there was to detect the hard-rock invasion tunnels excavated by North Korean soldiers, hundreds of meters below the mountainous terrain, and into South Korea. His teams discovered evidence of more than 50 invasion tunnels, of which several were dispatched with explosives. In recognition of this work, the Army presented Allen with the Meritorious Service Medal, the first of three he eventually received (see honors, below).

During the Cold War in Europe (1947-1991), it was NATO versus the threats from the Soviets and Warsaw Pact, which had amassed an armored force at the East German border. Allen was adviser on terrain analysis to the U.S. First Infantry Division at the strategic Fulda Gap, West Germany. Here was a nuclear defense line which stored Atomic Demolition Munitions (ADM), held ready for defense, if needed.

Allen Hatheway is possibly our profession's most prolific writer, with more than 300 published papers and several books. Some major works include:

This 2021 GSA Burwell Award book, which turns out to be Allen's second Burwell Award. His first was in 1981, with co-editor **Cole McClure**, entitled *Geology in the Siting of Nuclear Power Plants*, published by GSA. (Of the 53 years the Burwell Award has been given, on three occasions it has been given twice; to Allen Hatheway, **Robert Schuster**, and Richard Proctor.)

In 1988, Allen teamed up with **Robert F. Legget** (GSA President 1966) to produce *Geology and Engineering*, 3rd edition; this is a modernized edition of Legget's 1939 classic.

Cities of the World. Allen conceived and edited this series for AEG (Association of Environmental and Engineering Geologists), which to date has released 27 cities. Most of these papers appeared in the *AEG Bulletin*, as a one-time series, and was later published by AEG as a DVD.

Perspectives is a series of short essays based on Allen's *AEG Newsletter* commentary series on elements of professional practice. The series was assembled and edited in 2005 by **Robert Valentine and Julie Keaton** into a DVD ROM (436 pages), available from AEG, and received his first of two **Claire P. Holdredge** publication awards.

Profession Practice Guidelines, 1981, published by AEG. 1981 was a busy year for Allen; he just moved from Boston to Rolla Missouri to start teaching there, he won the Burwell Award, and was an officer in

AEG and the U.S. Army. He also was contemplating the offer by **Mavis Kent** of Portland, Oregon (first woman President of AEG) to assist her and Glenn Brown and myself in preparing a guidebook to advise younger professionals on getting started. Despite their busy schedules, both Allen and Mavis contributed several chapters in the Guidelines book, but left the final editing to Glenn and Richard. The handbook is popular and has been revised several times by other authors.

In 1991, Allen and co-author **Greg Hemen** prepared the Corps of Engineers *Technical Field Handbook; Geophysical Methods for Hazardous Waste Site Characterization*.

Bibliography of Engineering and Environmental Geology, is a labor of love, an ongoing compilation with more than 40,000 entries. Let's hope it will someday be published or become available online.

Allen wrote the Memorials of **Charles A. Baskerville, George A. Kiersch, Robert F. Legget, Lewis I. Rosenberg**, and wrote the Biography of **Charles B. Hunt**.

A few of Allen's honors include:

ASCE (American Society of Civil Engineers) Daniel Mead Prize 1975

GSA Chairman, Engineering Geology Division, 1980

AEG President, 1985, Honorary Member, 2002

GSA/AEG Jahns Distinguished Lecturer, 2000

AEG Claire P. Holdredge Award, 2009 and 2013

Geological Society of London, Fellow

Meritorious Service Medal, U.S. Army (North Korean Invasion Tunnel Detection), 1988

Meritorious Service Medal, U.S. Army, 1st Oak Leaf Cluster (New Madrid Earthquake Response Planning), 1989

Meritorious Service Medal, 2nd Oak Leaf Cluster (the Corps' Superfund environmental remediation plan), 1992

The co-author for the 2021 Burwell Memorial Award is **Tom B. Speight**. Tom is a Project Manager regulator with the Massachusetts Department of Environmental Protection. He previously was an environmental consultant for 15 years in Massachusetts and surrounding states. His consulting and regulating specialties are site assessment, remediation, wastewater, air emissions, and hazardous waste, including former manufactured gas plants (MGP), PCB sites, and Brownfields projects. He is a graduate of Saint Anselm College in Manchester, New Hampshire, and is a certified Hazardous Materials Manager. He enrolled for a graduate degree in engineering but his and his parents health prevented him from pursuing this.

Tom met Allen on a MGP remediation discussion group on LinkedIn, which was sponsored by **Russel Thomas**, a MGP expert in the UK (and

who graciously reviewed parts of the book). Tom related that he became interested in MGPs when they were discussed in a history class in college. The idea of a large, vital industry that worked for 150 years, then vanishing practically overnight was intriguing. And the technical aspects of assessing the damage and remediation work he found to be an enjoyable challenge.

Congratulations to Allen and Tom for writing such a valuable book!