It was my distinct honor to know Bill Agnew for over 60 years. He was a mentor, boss, friend, ally, confidant, and much more. He was honest and down to earth, and strongly believed in always seeking the truth, in an even-handed and understated way. He was an excellent researcher and manager at the General Motors Research Laboratories (GMR) for 37 years. After retirement, he followed his passion for the education of children in science, technology, engineering, and mathematics (STEM) skills, with worldwide impact.

WILLIAM GEORGE AGNEW passed at age 94 on May 31, 2020, in East Lansing, Michigan. He was born January 12, 1926, to Dupre and Marion Agnew in Oak Park, Illinois. During World War II he was an undergraduate student in mechanical engineering at Purdue University. His education was interrupted when he was drafted into the Army and sent to Fort Belvoir, Maryland. The Army quickly learned that he was very smart and transferred him to Los Alamos, where he worked from 1944 to 1946 as a private and then as a civilian on the Manhattan Project. This was his introduction to combustion, which he further researched on returning to Purdue and during his career at General Motors.

At Los Alamos, he worked on development of the ignition system to activate the plutonium in the “Fat Boy” bomb.
that leveled Nagasaki on August 9, 1945, leading to the end of the war. He carried out many ignition test explosions on a mountainside, and subsequently concluded that they contributed to his hearing loss later in life. He often spoke and wrote about his experience at Los Alamos, at times with a heavy heart over the two-edged sword that was the atomic bomb—the good it did in bringing about the end of World War II, and the bad it did by killing so many people.

(He was also part of a two-vehicle team sent from Los Alamos to Hanford in Washington state to bring back the plutonium that was to be used in the Nagasaki bomb. One of the vehicles had an accident on a mountain road in Utah, and Bill’s vehicle finished the delivery.)

Upon leaving Los Alamos, he received a letter of commendation signed by Robert Oppenheimer. He returned to Purdue, where he completed his bachelor’s, master of science, and PhD degrees in mechanical engineering.

He joined the GMR Fuels and Lubricants (F&L) Department in 1952. His fundamental combustion studies using a laboratory burner and mass spectroscopy demonstrated preflame reactions both in the burner and in an engine cylinder, and showed how tetraethyl lead affected combustion. He also identified some of the chemicals responsible for diesel odor.

Bill was part of the F&L team doing the initial investigations to reduce vehicle emissions and develop the catalytic converter/unleaded gasoline combination to meet the then strict 1975 exhaust emissions standards. He headed the F&L Department and then the Emissions Research Department before becoming a technical director, where his responsibilities and interests expanded.

When he was my department head in March 1970, I met with him to tell him I was very interested in an offer I had received to join GM’s newly established automotive emissions control activity. Bill asked me to “wait a month.” When I asked why, he just repeated, “wait a month.” Trusting in Bill, I spent an anxious month wondering what was going on. At the end of the period, he told me that I was being promoted to assistant department head. My trust in Bill had been rewarded. I
declined the other job offer and went on to a successful career at GMR.

Bill was recognized as a Society of Automotive Engineers (SAE) fellow, emeritus member, and volunteer for over 60 years, remaining active with SAE during his retirement. He was a steadfast supporter of the SAE Foundation and SAE’s STEM education programs.

Upon retiring, he devoted himself to improving STEM education in primary and secondary schools. He was the “father” of SAE’s A World in Motion Program (AWIM), which to date has exposed about 5 million children around the globe to the wonders of STEM subjects by involving them in hands-on projects to demonstrate various physical and mathematical principles. One of the key components contributing to AWIM’s success was the placement of an active SAE member in the classroom with the teacher. This relieved the teacher’s concerns about unfamiliar material and added credibility to the material being taught. In 2003 Bill was honored with the creation of the Bill Agnew Award for Outstanding AWIM Volunteers, which celebrates his legacy by recognizing some of the most dedicated AWIM volunteers.

Bill also developed and introduced two important components of the SAE Unmanned Intelligent Ground Vehicle Competition for college engineering students: the design report and the GPS-following requirement. Teams from all over the world have participated in this annual event, which Bill helped organize and run for many years at Oakland University, near his home. In 2012 the annual Dr. William Agnew Design Excellence Award was established and presented to Design Challenge winners.

In addition, Bill received numerous SAE awards: the Medal of Honor, Excellence in Engineering Award, Ableson Award for Visionary Leadership, and Arnold W. Siegel Humanitarian Award.

On the homefront, Bill’s wife was a horse enthusiast and they built a stable at their home. For years Bill dutifully shoveled out the horse stalls. It probably gave him time to think, which he did lots of.
He was preceded in death by his wife, Norma Jean (née Light), in 2005. They are survived by sons Brian (Libba), Dan (Gavonna), and Dalen (Ann Marie), daughter Patti Ann, seven grandchildren, and two great-grandchildren. After Norma passed, Bill sold their home and moved back to New Mexico, attracted by his longstanding love of its scenery. He enjoyed several years there before returning to Michigan and a retirement community in East Lansing, where he spent his remaining years.

Bill was a treasure to many, and I certainly will never forget him.