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Mari Kay Scott
Executive Director
Global Environmental Compliance & Sustainability

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Dear Ms. Scott:

Few executives get the opportunity to change the way the industry does its business. GM's CEO Mary Barra did just that, determined to make positive changes even at the risk of overturning long-established policies. Now is the ideal time for you to do the same, and change the company's environmental objectives for its plants.

Barra fired engineers and lawyers and replaced three vice presidents, all to send a clear message to employees that the company's culture and policies must change. Soon, many will have forgotten what she did to change the company's culture. Once gone, she will be remembered and judged for aggressively pursuing the development of electric and self-driving vehicles, and for accelerating business opportunities in China and other expanding countries over European countries with mature, stable markets. Her decisions, however, were bold, and are examples for members of her team. Take note that her new policies are being copied by the other industry members. You too could establish new environmental goals that others would be compelled to follow.

Currently, the company's environmental goals are for plants not to landfill, to use only reusable energy and to seek sustainability of the planet. Why? Reducing waste in the manufacturing of products has been a main objective since the first nail, wagon wheel and horseshoes were made. To make a big deal about a GM plant's reducing waste implies the company's plants are wasteful. Saving energy, using the least costly energy source and ensuring an adequate supply has always been pursued by all manufacturers. Grand statements of sustainability and the use of the term footprint in GM's current goals are so abstract to be almost meaningless to most; and it is laughable for a company to eliminate over 80% of its manufacturing plants and then brag about the remaining plants' having greatly reduced their energy needs. The company never mentions the reduction of hundreds of thousand employees and the affect it has on families and their communities.

The current environmental programs may be of some financial and PR benefit but they do little or nothing for the average person. Surely, they will be severely tested over time as tax laws, energy technologies, economic conditions and geopolitical changes take place, causing current programs to be modified or dropped. What is proposed as GM's new environmental policy and project objectives should withstand questioning, be appropriate in the face of foreseen problems and be applied as long as the company is in business. The company's environmental projects must provide a meaningful, recognizable benefit to its employees, their families, and the community at all locations around the world. Projects must serve humanity.

Making America a better place for everyone is the right objective. Some of Wall Street's largest financial firms are now demanding that this concept be implemented in the programs of companies wanting

funds. The disparity between the rich and the poor, management and the assembly-line worker, and local government revenues compared to company profits are behind this change of culture on Wall Street. The firms know from experience that their demands will serve companies well.

GM has done many good things over the years for its communities and with great results. Yet for some unknown reason, when the engine plant in Flint discovered that the river water was corroding engine parts and was forced to quickly covert back to Detroit's safe water supply, the company made no known attempt to have their employees and their families do the same. Had GM offered to pay the few million dollars for the city of Flint to return to Detroit water, the world press would have publicized the company's humanitarianism. Now, compare this possible press coverage to the engine plant's *New York Times* press release, bragging that it sends no waste to a landfill—where most raw materials came from. On page B4 of the December 22, 2017 paper the headline read, "Carmakers Are Turning Their Old Scraps Into New Parts," with a picture of an employee's hand in a bin of aluminum shavings. To the reader, it suggests this practice of collecting metal waste is new at GM. But any experienced engineer—and most people—know all companies collect metal waste.

Nine years earlier, on September 6, 2008, The *Detroit Free Press* published a similar story titled, "GM to Recycle Waste Metal". My November 1, 2008 response to the newspaper with a copy to GM is enclosed for your review.

The recent *New York Times* article has the company claiming it converted 227 miles of oil absorbing boom into Volt vehicle air deflectors. I hope this is not true, and that another unnamed company stripped the oil from the boom, and through some complex process surely unknown to GM, converted a portion of the boom into suitable material for Volt vehicle air deflectors they then sold to GM. Fictitious environmental accomplishments do not enhance the company's reputation. In the same *New York Times* article, it was reported that the Ford Rough plants sent no waste to a landfill. These plants are a small part of the River Rough Complex with steel making, glass making, and other heavy manufacturing operations that bury tons of materials back into the land where they came from.

By bragging "what great environmentalists we are," both companies deliberately ignore the terrible environmental problems in their surrounding communities. The Ford plant down river area and the Flint area were declared by Governor John Engler in 1990 as the two most seriously polluted places in the state.
How does reducing waste to a landfill address the real health problems from the company's plants? Reducing the generation of waste is worthwhile, but not landfilling when landfill sites are under strict regulatory control doesn't make much sense. To be sure, landfilling was thought to be a bad thing when the company was involved with so many superfund sites; but with landfilling now strictly controlled, the idea requires reconsideration, as do the following:

The Global River Environmental Education Network (GREEN) Program

The company's Global River Environmental Education Network (GREEN) program, which I initiated, requires expansion to produce more meaningful results.

Teaching students how to take basic water quality samples from their local waterway, and exchange their findings with students in other parts of the world, sounds great. But after 30 years and hundreds of Flint students having completed this program, not one student insisted that their parents—whose tap water looked, tasted and smelled bad—have it tested.

Were students not told that any citizen can get a free water test kit from their local county Health Department with instructions how to take a home water faucet sample? Samples can be mailed to the Michigan Department of Natural Resources for analysis at a cost of about $16.00. Most states have similar programs for home water quality testing. As a new policy, future GREEN classes should be told about any of GM's past wastewater discharges to the river and what was done to improve the river's water quality. Hopefully, future students will become activists!

By teaching all students how the regulatory process works and how it imposes controls on the industry, the company would be doing things beyond any legal requirements, and would greatly enhance its reputation and credibility. *Then* you will want to tell the world, "Look what my company is doing!"

Rapid Transportation Systems

The shift to electric and self-driving vehicles of all types should lead to development of advanced rapid transportation systems. To my surprise, I learned Justice Steyn was appointed vice president to head the Urban Mobility program, meaning the company is well on its way. The company having traffic planning experts with real life experiences should be of great value to China, India, Africa and other countries in need of building new cities leading to increased vehicle sales. Today, large older urban cities are having increased traffic problems, requiring some sort of rapid transportation to reduce the number of vehicles on the road. City planning with passenger safety as a top priority could lead to the greatest reduction in injuries and deaths since the requirements for seat belts and air bags. It would be a humanitarian act with lasting impact and repeated praise.

Supplier-Company Relationships

Regarding supplier/company relationships the company has many written policies. Is there a policy describing how GM would deal with a supplier causing people and the environment harm? A case in point: A Chinese steel making plant in Vietnam is reported to discharge toxic wastewater to a lake that provides the community with their main food source, squid. The squid has died off, leaving the local residents no choice but to eat the remaining poisonous fish. Many villagers have become sick, and some have died. Would the company want to be discovered buying their steel just because of a lower cost? Maybe this problem has been addressed but there needs to be reappraisal with the lack of clean water becoming a world crisis.

In-plant Employee Working Conditions

The last and most important environmental issue is in-plant employee working conditions. Why? Because OSHA employee exposure standards for pollutants are many times higher than ambient air quality standards. The standards are based on exposing a healthy 18-year-old in a clean room injected with one pollutant, say CO, while he rides a bike into order to produce stress on the body. These are conditions never experienced by an assembly worker. Studies have never been conducted with middle-aged or over- or under- weight people or smokers or drinkers, or people exposed to severe pollutants in air far from clean-room quality. Later in life, health problems can arise from past exposure in the industry.

During my career, the UAW and the hygiene department worked together on problems, but at times, ignored them if there wasn't any easy solution at a reasonable cost. Today, after not reading or hearing

one word about the company's efforts in protecting its employees from harm—which I think is a mistake—I think it's reasonable to ask, "What is the company doing?" My hope is that the situation has changed significantly in the last 45 years, and that there is a person completely dedicated in finding in-plant areas needing improvement… and spending more effort than putting a hand in a bin of chips. In-plant working conditions deserve at least the same resources to reduce harm as reducing waste to a landfill.

And with that, my best arguments for a change in environmental goals and my proposal for a new policy have been made. By staying the course, you may feel safe and comfortable until retirement, but you won't change the way industry selects environmental projects. Later in life, you will not brag about plants' not landfilling and using renewable energy, something every company will eventually be doing to some degree. You are in a position to do something outside of the norm, to create for yourself a legacy of having done good for humanity.

A suggestion: The company's future business lies in countries with greatly expanding economies i.e.: China, India, Africa, etc. All are facing deteriorating environmental quality in their major cities caused by the same pollution sources this country and GM had to address, study in great detail and to which they had to apply solutions. Company representatives dealing with these governments should be armed with our knowledge gained from GM's past research that might aid any country establishing its environmental policies. The fellow for this task is Dr. George Wolff, GM's most experienced scientist who conducted most of the studies. He has an outstanding reputation and continues to do research. Below is his contact information:

Dr. George Wolff
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Farmington Hills, MI 48331
(248) 553-9824

In conclusion, I would remind you that it is in an executive's job description to question old policies and propose new policies for management to consider. I wish you the best in this endeavor.

Nicholas C. Kachman
Assistant Director of Plant Environment, retired (1957-1993)