

Ignoring Science & Diplomacy

Op-Ed By Richard Izzo

In the latest assault upon the environment, not to mention our country's role as a world leader, the current administration backed out of the 2015 Paris Climate Accord on June 1st. Whether one believes that anthropogenic climate change is real, as does the overwhelming consensus of scientists from around the globe, or if (like our current President and his EPA Chief) one is in the camp of climate deniers, this much is certain: within the space of a few short days, the United States has shifted its position on the world stage from that of a global leader in environmental responsibility towards isolationism - turning it's back on both science and diplomacy in favor of supposed economic equity.

The Paris Climate Accord or Agreement is a historic pact made on December 12, 2015 by representatives from 195 nations voluntarily cooperating to combat anthropogenic climate change. The participating countries are working to develop and adopt green energy sources and reduce fossil fuel emissions, thereby limiting the rise of global temperatures while also coordinating efforts to cope with the impact of unavoidable climate change. It was never touted as a panacea to cure global warming, but rather a step in the right direction taken collectively by responsible nations



around the world to combat climate change. The central objective of the Accord is: "Holding the increase in global average temperature to well below 2 degrees C above pre-industrial levels..."

While it is noted that limiting the rise in temperature to only 2 degrees C has been discussed as a global goal for many years, scientists believe that this rise in temperature will still have significant effects, but much less so as compared to the alternative of no action. In fact, the Paris Accord actually goes further to state that it will pursue efforts to keep the temperature increase to below 1.5 degrees C, but it is uncertain that the efforts contemplated to date will actually be able to achieve either goal.

The Accord acknowledges this uncertainty and relies, in part, upon the continued development of emerging clean energy technologies to reach the established

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Protecting Indoor Air Quality in Brooklyn

By Jason Cooper

CA RICH recently completed remedial action including the installation of engineering controls (ECs) and indoor air testing as part of building renovation activities for a multi-story residential apartment building in Brooklyn, New York. The ECs include the application of an epoxy vapor barrier to the surface of the basement concrete floor and installation of a Sub-Slab Depressurization (SSD) system.

The successful remediation was performed in cooperation with The New York City Department of Housing Preservation and Development (NYCDHPD) in re-



sponse to a Phase I Environmental Site Assessment (ESA) that identified Recognized Environmental Conditions (RECs) related to the historical use of an adjoining property as a dry cleaner. A subsequent Phase II investigation revealed dry-

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Basement floor with epoxy coating

cleaning related vapors including perchloroethylene (PCE) and trichloroethylene (TCE) beneath and within the building at levels above the applicable New York State Department of Health (NYSDOH) mitigation levels.

The building renovations involved keeping the pre-existing slab in place, and as such, the main challenge faced in implementing the remedial action was the need to retrofit the ECs into the existing building slab.

To that end, CA RICH determined that single-point vacuum pits would be used to preserve the integrity of the existing slab, as opposed to conventional methods involving more disruptive trenching and installation of lateral piping under the slab. A pilot test revealed the need for the installation of six vapor pits throughout the basement along with two rooftop mounted SSD fans to ensure a sufficient 'reach' or radius of vacuum/flow would be induced beneath the basement slab.

In addition, Radonaway™ fans (which provide relatively higher air flow as compared to other SSD fan models) were used to cost-effectively vent sub-slab vapor. Finally, an epoxy sealant was applied over the entire pre-existing basement slab to seal any existing cracks or penetrations.

After the installation of the epoxy vapor barrier and SSD system were completed, indoor air samples were collected during the heating season to gauge the effectiveness of the engineering controls. The indoor air testing was performed with the SSD system active for approximately one-week. Four air samples were collected throughout the basement over a 24-hour period using laboratory-calibrated Summa canisters and analyzed for the Environmental Protection Agency (EPA) TO-15 list of Volatile Organic Compounds (VOCs).

Results of the interior air quality testing confirmed that the epoxy vapor barrier and SSD system were functioning properly. Because no PCE or TCE was detected in indoor air, no additional remedial measures were deemed necessary.

A Closure Report documenting the remedial measures was submitted and approved by the City shortly thereafter. Additional sampling at the site is planned for the next heating season (i.e. November or December 2017) to evaluate any occurrence of sub-slab vapor and/or indoor air quality impacts with the system off. Pending anticipated results of that planned sampling event, deactivation of the SSD fans and conversion to a passive SSD system would be the next step.

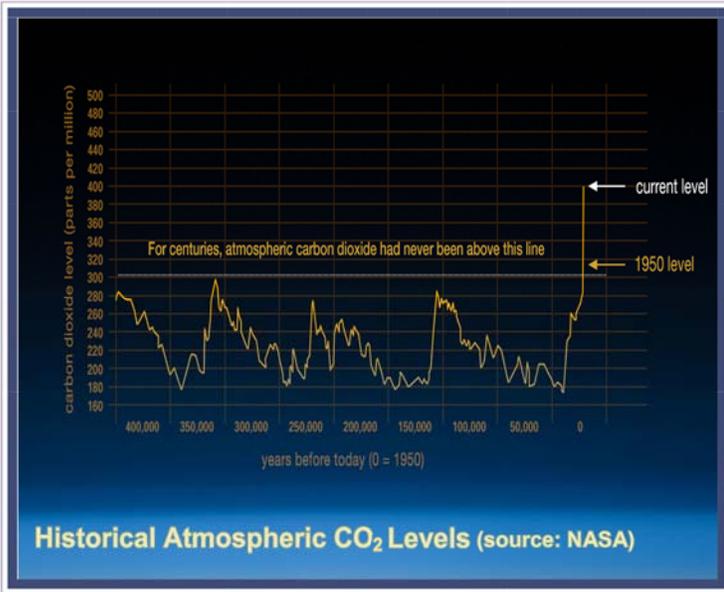
The planned operation of the SSD system includes continuous operation of the fans with monitoring of the system vacuum by the on-site building superintendent. Monitoring of the system is done by means of a visual spot check on the vacuum monitoring gauges that CA RICH installed along the basement walls. CA RICH will be alerted should vacuum levels drop below preset limits.

SSD systems and epoxy vapor barriers are proven effective mechanisms to limit sub-slab soil vapor from intruding into the lowest level of a building. A typical SSD fan can be expected to operate maintenance-free for 5 to 15 years. Normal wear and tear on the epoxy vapor barrier may necessitate periodic inspection and re-application, depending on the degree of basement usage and traffic.



Indoor air testing with SSD vacuum pit in background

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goals, thus allowing the members of the Accord the opportunity to be at the forefront of developing the technologies, a role in which the U.S. was poised to participate, if not lead, when the Accord was created back in 2015.

In addition to curtailing fossil fuel emissions and developing green technology, the Paris Accord includes contributions of \$100B/year till 2025 by the worlds developed countries to aid developing countries in switching from fossil fuels to greener energy sources. It is noted that to date, the U.S. has contributed around \$1B, with a pledge to contribute \$3B by 2020.

Each of the participating countries (which now include all except Syria, Nicaragua and the U.S.) sets their own contribution goals (both in action and capital investment) and because the Accord is not a treaty or law, all of the contributions are voluntary and can be amended by the individual country at any time, thus eliminating the need for “negotiating a better deal” . The Accord was designed to work by means of individual responsibility and peer pressure. Contributions are not binding and there is no mechanism of force for a recalcitrant member. The only binding stipulation is that each participating country allows the tracking of its progress by the other Accord members.

As part of the Paris Accord, the U.S. (under President Obama) pledged to cut greenhouse gas emissions 26 to 28 percent below 2005 levels by the year 2025. Withdrawal from the Accord will allow our country’s current administration to continue its dismantling of our domestic climate policies including the Clean Power Plan, designed to greatly reduce power plant emissions, as well as the recently rolled-back regulations

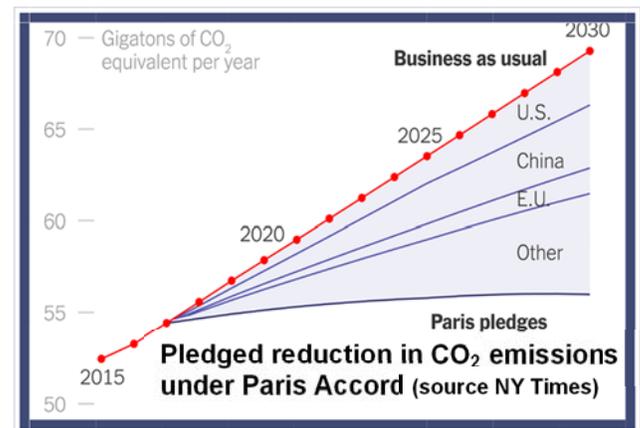
on methane leaks (never mind the waste effluent dumping) for domestic fossil fuel development. Under the Trump Administration’s policies, it is projected that emission reduction could be as little as half of the previously projected targets.

“...the U.S. is moving further and further behind as a world leader in environmentally responsible policy.”

Will this misguided environmental policy fueled by President Trump’s campaign promise to 70,000 coal miners help our economy and “make America great again”? Opinions vary. Some say compliance with the responsible energy policies of the previous administration will have a chilling effect on our manufacturing and fossil fuel industries.

Others believe that by turning our back on the Paris Accord and clinging to fossil fuel as our main source of energy, we will be left behind in the global competition for development of jobs and cutting-edge technology within the emerging clean energy field, supplanted by countries such as Germany and China.

One thing is certain: with each passing day, the U.S. is moving further and further behind as a world leader in environmentally responsible policy. Some consolation for those of us apoplectic over our Federal government’s actions is the continued adherence to responsible environmental policy at the State and local level. States like New York and California are leading the way with programs to reduce power plant and vehicle emissions. On the local level, since June 1st, more than 246 mayors from across the country have pledged their continued support of the Agreement. In addition, the private sector here at home continues to move away from coal and oil, gradually shifting toward cleaner, plentiful natural gas and alternative renewable energy sources.



This Op-Ed does not necessarily represent the views of CA RICH

What's new at CA RICH

CA RICH is proud to announce that the Firm's geologists including Charles Rich, Richard Izzo, Victoria Whelan, Jason Cooper and Thomas Brown are already or will become Licensed Professional Geologists in New York State under Article 145 of the State Education Law.

Project Scientist, Jessica Proscia recently completed remedial action and received New York State Department of Environmental Conservation (NYSDEC) Closure on two separate petroleum spills in Westchester County and Manhattan. Project Manager, Mike Yager and Vice President, Rich Izzo have completed the reporting requirements to move a NYSDEC Class 2 Site in Islandia, NY and a NYSDEC Voluntary Cleanup Program (VCP) Site in Mount Vernon, NY from Remediation into less costly Site Monitoring.

Senior Project Manager, Jason Cooper recently completed remedial action and received a Notice of Satisfaction from the New York City Department of Environmental Protection (NYCDEP) for the installation of a Sub Slab Depressurization (SSD) system and epoxy slab sealant at an apartment complex in Brooklyn, NY (article included herein).

CA RICH would like to welcome Intern, Nick Manzione to the Firm. Nick is a Senior at the SUNY College of Environmental Science and Forestry in Syracuse.

*For more information about CA RICH or the **ENVIRONMENTAL BULLETIN**, please call (516) 576-8844 or write to:*

CA RICH CONSULTANTS, INC.,
17 Dupont Street, Plainview, NY 11803
e-mail: Info@carichinc.com

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