

# Conservation Committee Report

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## The Conservation Pledge

I give my pledge as an American to save and faithfully defend from waste, the natural resources of my country; the soil, the water, the air, the minerals, the plant life and the wildlife.

This is my Pledge!

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## Governor Corbett says Public Water Supply Testing Finds No Risk to Public from Radioactivity Found in Rainwater

Experts monitoring water and air supplies after Japanese nuclear event

Governor Tom Corbett said weekend testing of public drinking water found no elevated levels of radioactivity.

On Friday, concentrations of Iodine-131, likely originating from the events at Japan's damaged nuclear plants, were found in rainwater samples collected from Pennsylvania's nuclear power plant facilities.

The numbers reported in the rainwater samples in Pennsylvania range from 40-100 picocuries per liter (pCi/L). Although these are levels above the background levels historically reported in these areas, they are still about 25 times below the level that would be of concern. The federal drinking water standard for Iodine-131 is three pCi/L.

As a result of the findings, Corbett immediately ordered the Department of Environmental Protection's Bureau of Water Quality,

Radiation Protection and Laboratories to test the drinking water from six regions in the state.

Samples were taken from facilities in Norristown, East Stroudsburg, Harrisburg, Williamsport, Greenville and Pittsburgh. After repeated testing throughout the weekend, results showed normal levels of radioactivity and no Iodine-131 above the federal limit. In fact, no Iodine-131 was detected in the drinking water samples.

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## New Robot System to Test 10,000 Chemicals for Toxicity

Several federal agencies have unveiled a new high-speed robot screening system that will test 10,000 different chemicals for potential toxicity. The

system marks the beginning of a new phase of an ongoing collaboration, referred to as Tox21, that is working to protect people's health by improving

how chemicals are tested in this country.

The robot system, which is located at the National Institutes of Health, is currently testing thousands of chemicals. (continued on page 2)

## No Risk to Public from Radioactivity Found in Rainwater (continued)

“We have been proactive and conducted immediate drinking water tests to provide hard facts, assuring the public that the water they drink is safe,” Corbett said.

On Friday, rainwater samples were taken in Harrisburg, where levels were 41 pCi/L and at nuclear power plants at TMI and Limerick, where levels were 90 to 100 pCi/L.

Corbett emphasized that the drinking water is safe and there is no cause for health concerns.

State officials will continue to carefully monitor the situation, Corbett said, and will keep the public informed.

“Rainwater is not typically directly consumed,” Corbett said. “However, people might get alarmed by making what would be an inappropriate connection from rainwater to drinking water. By testing the drinking water, we can assure people that the water is safe.”

Rainwater is diluted by water in reservoirs and rivers or filters through the ground - and it is treated before reaching consumers as drinking water - it would not be expected to be a concern in public water systems.

While the radioactive element is believed to have originated from Japan’s damaged Fukushima Daiichi nuclear power plant, it is not considered to be a health risk in Pennsylvania or anywhere

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## New Robot System to Test 10,000 Chemicals for Toxicity (continued)

Health Chemical Genomics Center (NCGC), was purchased as part of the Tox21 collaboration established in 2008 between the U.S. Environmental Protection Agency (EPA), the National Institute of Environmental Health Sciences National Toxicology Program, and NCGC, with the addition of the U.S. Food and

Drug Administration (FDA) in 2010. Tox21 merges existing resources – research, funding and testing tools – to develop ways to more effectively predict how chemicals will affect human health and the environment.

“Understanding the molecular basis of hazard is fundamental to

the protection of people’s health and the environment,” said Dr. Paul Anastas, assistant administrator of EPA’s Office of Research and Development, “Tox21 allows us to obtain deeper understanding and more powerful insights, faster than ever before.”

The 10,000 chemicals the robot system will screen include chemicals found in industrial and consumer products, food additives and drugs. Testing results will provide information useful for evaluating if these chemicals have the potential to disrupt human body processes enough to lead to adverse health effects.

“Tox21 has used robots to screen chemicals since 2008, but this new robot system is dedicated to screening a much larger compound library,” said NHGRI Director Eric Green, M.D., Ph.D. The director of the NCGC at NHGRI, Christopher Austin, M.D., added “The Tox21 collaboration will transform our

understanding of toxicology with the ability to test in a day what would take one year for a person to do by hand.”

“The addition of this new robot system will allow the National Toxicology Program to advance its mission of testing chemicals

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## New Robot System to Test 10,000 Chemicals for Toxicity (continued)

smarter, better, and faster,” said Linda Birnbaum, Ph.D., NIEHS and NTP director. “We will be able to more quickly provide information about potentially dangerous substances to health and regulatory decision makers, and others, so they can make informed decisions to protect public health.”

Tox21 has already screened more than 2,500 chemicals for potential toxicity using robots and other innovative chemical

screening technologies. The Tox21 chemical screening technologies were used to screen the different types of oil spill dispersants for potential endocrine activity during the BP oil spill in the Gulf of Mexico last year.

“This partnership builds upon FDA’s commitment to developing new methods to evaluate the toxicity of the substances we regulate,” said Dr. Janet Woodcock, director of FDA’s Center for Drug Evaluation and Re-

search.

EPA contributes to Tox21 through the ToxCast program and by providing chemicals and additional fast, automated tests. ToxCast currently includes 500 chemical screening tests that are assessing more than 1,000 chemicals.

Video of the Tox21 robot is available at <http://www.genome.gov/27543670>.

## Aircraft to help re-vegetate Appalachian Trail portion of Palmerton Zinc Superfund Site

The U. S. Environmental Protection Agency in cooperation with the National Park Service, will oversee use of an aircraft to plant grass and other vegetation on a 500-acre section of the Palmerton Zinc Superfund site in Pennsylvania along the Appala-

chian Trail at the top of Blue Mountain.

This project is part of an ongoing action to repair environmental damage that was caused by emissions from zinc smelting operations in the Borough of

Palmerton. Due to the steep and remote location, a modified crop dusting aircraft will be used to distribute a specific mixture of seed, lime and fertilizer on the property owned by the National Park Service and Pennsylvania State Game Land. Weather-permitting, work is scheduled to

begin the week of March 14 and should take five to six weeks to complete.

“The re-vegetation of Blue Mountain marks another step forward in a lengthy clean-up process and helps restore a beautiful portion of Appalachian Trail with native grasses, plants

and shrubs so that it blends in naturally with the Pennsylvania countryside,” said EPA’s Mid-Atlantic Regional Administrator Shawn M. Garvin.

“This step has been a long time coming and we are delighted to have this remediation work getting underway,” said Pamela Un-

derhill, Park Manager for the Appalachian National Scenic Trail.

During the planting, the public will see aircraft originating from the nearby Slatington, Pa. airport flying low over the top of Blue

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## Aircraft to help re-vegetate Appalachian Trail portion of Palmerton Zinc Superfund Site (continued)

Mountain. This aerial reseeded technique was previously used to restore other sections of the mountain west and east of the Lehigh River. The mixture of seed used during this restoration is designed to foster the growth of warm season grasses, shrubs and trees native to the area.

The restoration work is being paid for by CBS Inc., formerly Viacom International, the party potentially responsible for the

contamination. More information on the Palmerton site can be found on EPA’s website at: <http://www.epa.gov/reg3hwmd/super/sites/PAD002395887/index.htm>.

Source: U. S. Environmental Protection Agency



## Carbon Capture and Storage Initiative Aims to Bring Technologies to Market Faster

### Led by NETL, National Laboratories, Universities, Industry Begin Research

The Office of Fossil Energy’s National Energy Technology Laboratory (NETL) has begun research under the Carbon Capture Simulation Initiative

(CCSI), partnering with other national laboratories, universities, and industry to develop state-of-the-art computational modeling and simulation tools to accelerate commercialization of carbon capture and storage (CCS) technologies.

CCSI is one of three areas of research under the Carbon Capture and Storage Simulation Initiative announced late last year by Energy Secretary Steven Chu. The others involve developing validation data and experimental work, and developing methodol-

ogy and simulation tools to assess risk. Work in all three areas will be aided by a new Simulation-Based Engineering User Center that NETL is creating in a separate but related effort.

CCSI will utilize a software infrastructure to accelerate the development and deployment cycle

for bringing new, cost-effective CCS technologies to market in several important ways:

- Promising concepts will be more quickly identified through rapid computational screening of devices and processes.
- The time and expense to design and troubleshoot

- new devices and processes will be reduced through science-based optimal designs.
- The technical risk in taking technology from laboratory-scale to commercial-scale will be more accurately quantified.

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## Carbon Capture and Storage Initiative Aims to Bring Technologies to Market Faster

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- Deployment costs will be quantified more quickly by replacing some of the physical operational tests with virtual power plant simulations.

CCS is a key component in national efforts to curb climate change. The process involves capturing carbon dioxide (CO<sub>2</sub>) from large point sources, such as power plants and industrial facilities, and storing it in ways that prevent the greenhouse gas

from entering the atmosphere. The U.S. Department of Energy (DOE) has initiated a number of programs to promote CCS, including the Carbon Capture and Storage Simulation Initiative and the CCSI.

While the ultimate goal of the CCSI is to deliver a set of tools that can simulate scale-up of a broad suite of new carbon capture technologies, from laboratory to commercial scale, the

first 5 years of the project will focus on developing capabilities applicable to oxy-combustion and post-combustion capture by solid sorbents and advanced solvents. Among possible carbon capture technologies, these are expected to have the most immediate impact on U.S. pulverized coal power plants, which currently generate nearly half of the nation's electricity and are expected to emit 95 percent of U.S.

coal-based CO<sub>2</sub> emissions between 2010 and 2030.

The CCSI is led by NETL and leverages the core strengths of DOE's national laboratories in modeling and simulation. The project brings together the best capabilities at NETL, Los Alamos National Laboratory, Lawrence Berkeley National Labora-

tory, Lawrence Livermore National Laboratory, and Pacific Northwest National Laboratory.

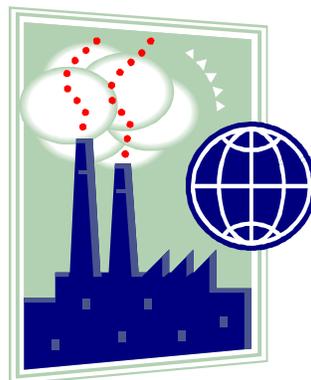
The CCSI's industrial partners represent the power generation industry and power equipment manufacturers. The initial industrial partners are ADA Environmental Solutions, Alstom Power, Ameren, Babcock Power, Bab-

cock & Wilcox, Chevron, EPRI, Eastman, Fluor, General Electric, Ramgen Power Systems, and Southern Company.

The CCSI's academic participants—Carnegie Mellon University, the University of Pittsburgh, Virginia Tech, Penn State University, Princeton University, and West Virginia University—

bring unparalleled expertise in multiphase flow reactors, combustion, process synthesis and optimization, planning and scheduling, and process control techniques for energy processes.

Source: U.S. Department of Energy



## No Risk to Public from Radioactivity Found in Rainwater (continued)

else in the country.

Similar testing in other states, including California, Massachusetts and Washington, has shown comparable levels of Iodine-131 in rainwater samples.

“We do not expect the levels to increase and, in fact, the levels we see now should go down rather quickly over the next three months,” Corbett said.

“DEP has an extensive network of radiation monitoring points at the nuclear plants and elsewhere,

and we will continue to monitor water supplies to ensure there is no risk of contamination to the public,” Corbett added.

Any Iodine-131 concentrations detected in rainwater samples are significantly higher than might be detected in a surface body of water, such as a lake or a pond.

Air quality is also being examined and test results are expected later this week. As soon as results are available, Corbett said, they will be made public.

DEP will continue to work with Pennsylvania’s public water suppliers to enhance their monitoring and treatment operations as necessary. Residents whose drinking water originates from groundwater, and obtained from wells or springs, should not be affected.

DEP’s Bureau of Radiation Protection is in regular contact with the Nuclear Regulatory Commission and Environmental Protection Agency, while the Department of Health is in contact with

Centers for Disease Control and Prevention, and other states tracking Japan-related issues.

Pennsylvania residents should not take potassium iodide (KI) pills, Corbett advised. The pills are to be taken only during a specific emergency and only at the recommendation of public health officials or the governor.

“Taking KI now is unnecessary under the circumstances and

could cause harmful side effects,” said Corbett. “Although usually harmless, it can present a danger to people with allergies to iodine or shellfish, or those who have thyroid problems.”

Additionally, the elevated levels of radioactivity found in the rainwater on Friday were still well below levels that could pose any harm to pets or livestock.

“Ironically, today marks the 32nd anniversary of the accident at Three Mile Island nuclear power plant,”

Source: PA DEP

## New Robot System to Test 10,000 Chemicals for Toxicity (continued)

More information on the Tox21 collaboration:

<http://epa.gov/ncct/Tox21/>

More information on ToxCast:

<http://epa.gov/ncct/toxcast/>

More information on NTP:

<http://www.ntp.niehs.nih.gov>

More information on NCGC:

<http://www.ncgc.nih.gov>

More information on FDA:

<http://www.fda.gov>

Source: U.S. Environmental Protection Agency

