NEW JERSEY CLEAN WATER COUNCIL
November 10, 2004 Meeting Highlights
NOTE: this was a joint meeting with the NEW JERSEY CLEAN AIR COUNCIL

Location:
NJ Environmental Infrastructure Trust, Building 6, Suite 201, 3131 Princeton Pike, Lawrenceville, NJ

Attendees:
from the Clean Air Council:
Mohammad Ferdows Ali, Jorge Berkowitz, Daniel Lefkowitz (representing James Blando), Michael Egenton, Kenneth Thoman, Macelino Iglesias, Joseph Constance, Gene Feyl, Stephen J. Papenbrg, Richard M. Lynch, Elease Evans, Irwin Zois and Sonia Evans.

from the Clean Water Council:
Pat Matarazzo, Dan VanAbs, Russ Furnari, Lou Mason Neely, Amy Goldsmith, Pamela Goodwin, Ferdows Ali, Ray Nichols, Ursula Montis.
Other Attendees:
Barbara Rich, Richard Kropp, Julia Barringer
Karen Nowicki, AEA
Jim Murphy, NJDEP, Bur. of Pre-treatment & Residuals
Anthony Pilawski, NJDEP, Bur. of Pre-treatment & Residuals
Flavian Stellerine, NJDEP, Div Water Quality, Bur. of Point Source Permitting
Ken Feldman, NJ AFL-CIO
LeeAnne Gerrad
Narinder Abuja, NJDEP, Div. of Water Quality

Highlights of the Joint Meeting

Michael Egenton, Chairman of the CAC, and Pamela Goodwin, Vice Chair of the CWC, convened the joint meeting at 10:00 a.m. CWC Chairman Pat Matarazzo arrived later.

Discussion Topic #1: How can air pollution control program help clean up the water?
Bill O'Sullivan, Director, Div. of Air Quality discussed the DEP's efforts to regulate the discharge of air pollutants which wind up being deposited on land and which then wind up in surface water bodies. Recently the Department's focus has been on mercury in recognition that most of mercury found in fish in NJ originated as an air pollutant.

a. Mercury (Hg) contamination: Mercury is a toxic heavy metal being released into the atmosphere from incinerators, iron & steel foundries and coal-fired power plants. Once released, it is subject to transport and deposition throughout the state, where it bioaccumulates in aquatic ecosystems, leading to serious health risks for humans and animals that eat mercury contaminated fish.

The largest source of Hg air emissions within NJ is from the six major iron & steel smelting facilities. The second largest source is from the ten coal-fired units at seven facilities. NJ is ahead of most states & the federal government is adopting air emissions standards for Hg.

Revised standards for Hg emissions were adopted in early Nov. 2004 and are scheduled to take effect 12/6/04. These rules provide for tighter limits on Municipal Solid Waste incinerators. In addition, they create, for the first time, limits on Hg emissions from Hospital/Medical/Infectious Waste Incinerators, Iron & Steel Smelters and Coal-fired Boilers. NJ is the first state in nation to adopt standards for smelters, & fourth state in the nation to adopt standards for emissions from coal burning power plants. The Federal government is obligated to publish Hg limits by March, 2005.

Bill also noted there has been talk of these types of rules substituting for TMDLs in other states & NJ. He suggested that the two councils might want to talk about that possibility. He introduced Sunila Agrawal, Section Chief, Bureau of Pre-Construction Permitting, who had managed the development of the new Mercury Emissions Rules.

Using a powerpoint presentation (copy attached), Ms. Agrawal discussed each of the three major types of regulated facilities in detail. She noted that the smelting operations involve the melting down of crushed automobiles, many of which contain mercury switches. For the past two decades, mercury switches have been installed in millions of cars to control hood and trunk lights. However, the car manufacturers have now developed switches that do not use mercury. Therefore, the department is hoping that mercury emissions from the smelters will be reduced through source separation, i.e., by having automobile junkyards remove the mercury switches before cars are crushed and shipped to the smelters. A bill pending in the legislature would require automakers to pay for the removal of those switches before the cars are destroyed. If this source separation process works, then the smelters will not have to install new equipment to meet these new emission standards.

Another source of mercury emissions, hospital incinerators, is becoming less of a problem as hospitals are shifting away from incineration of medical waste.

For Municipal Solid Waste Incinerators, studies at the five large facilities in NJ have shown that the efficiency with which they are able to remove Hg is correlated with the carbon feed rate. By increasing the rate at which carbon containing material is fed into the incinerator, they are able to effect the removal of over 95% of the Hg.

.

Following her presentation, she answered several questions:

Q1. Are there any differences in how the two types of Hg (elemental v. organic) are treated under the rules? Ans. No. The EPA Standards are for total Hg.

Q2. Regarding the long distance transport issue, is Ohio doing anything to regulate Hg emissions? Ans. Not at this time.

Q3. Are there differences in Hg emissions based on what type of coal is being burned? Ans. It is more difficult to remove Hg where sub-bituminous coal is burned, such as in Wisconsin & Utah, as compared to NJ & CT where bituminous coal is being burned, because the Hg is mostly ionic, it is easier to catch the Hg.

Q4. Has there been any evidence that where air emissions of Hg have decreased, there is then less Hg present in the fish? Ans. Yes. A study in Fla., involving new incinerators, has produced good data showing that when the amount of Hg in the air emissions decreased, as the result of new incinerators coming on-line, within just a few years, there was 50% reduction in the the amount of Hg found in fish. It seems that the bioavailability of Hg in the aquatic ecosystem

is related to the amount of Hg newly deposited onto the bottom sediments, not the amount that has been there for many years.

b. Mercury and Nitrogen Deposition: James Cosgrove, VP, Omni Consulting, was scheduled to speak on this topic, but was unable to attend the meeting. Therefore the topic was tabled to another time.

c. MTBE: Lou Neeley raised questions about the CAC's position on the use of MTBE as a gasoline additive. About a year ago, the CWC had expressed its concerns to the CAC on this subject. While recognizing that the addition of MTBE to gasoline reduces the production of certain primary air pollutants by automobile engines, when there are leaking underground storage tanks, the MTBE tends to travel further and faster than other pollutants found in gasoline. There are many potable water supply wells in NJ that have been contaminated by MTBE. It has also been found in some lakes in northern New Jersey.

Michael Egenton, Chrm. of the CAC, acknowledged that the CWC's concerns about MTBE as a significant groundwater contaminant had been brought to their attention over a year ago, and that the CAC had not acted. He noted that there were issues involved with the reasons that MTBE was originally added to gasoline; technical concerns over possible substitutes, litigation issues, and possible pending legislation, which had contributed to inaction by the CAC. At the current time, the CAC lacked sufficient information to render advice to the DEP Commissioner on the subject.

Jorge Berkowitz noted that ground water contamination by MTBE is due to leaking underground storage tanks. When tanks containing gasoline leak, they discharge several hazardous chemicals into the groundwater, including toluene and benzene. Therefore, the MTBE problem is, in part, a facet of the larger issue involving leaking underground storage tanks.

In acknowledging that the subject merits further consideration, Michael Egenton committed the CAC to gather additional information and to devote their attention to this subject at their December or January meeting. He also requested that the two DEP division directors present at the meeting, Bill O'Sullivan (Air Quality), and Narinder Ahuja (Water Quality) get together with Assistant Commissioner Samuel Wolfe and appropriate staff to review all available information on the extent of the water contamination problems and options to the use of MTBE as a gasoline additive to protect air quality. Narinder and Bill agreed to work on this issue together.

CWC members requested that the CAC notify them of when and where further CAC programs on the subject are held, so as to avoid the need for DEP staff to make two presentations on the same subject.

During the discussion on this subject by members of both councils, the desire to avoid simply shifting contamination between two vital substances (air and water) was noted. One option mentioned involves using ethanol as an additive. Also, it was noted that two states in the northeast, NY & CT, have banned the use of MTBE as a gasoline additive.

In response to a question that Lou Neely had asked during the September CWC meeting, Ray Nichols provided the following update on status of litigation cases regarding MTBE ground water contamination cases in NJ.:

At its February, 2004 meeting Shari Blecher, Esq. had given the CWC a presentation regarding lawsuits which she had filed on behalf of private well owners against Chevron, Gulf, Sunoco and Cumberland Farms over MTBE contamination in Berkeley Township, Ocean County. Those cases have all been settled.

She has also been following other cases involving private water utilities and public water suppliers from around the country. They have been combined and are being tried in a Federal Multi-District Litigation Court in NYC. This court will examine the issue under the Product Defect Theory. There are two "test plaintiffs" whose cases will go forth first: Suffolk Co., on Long Island, NY and a case from CA. Meanwhile the other cases are sidelined. The decisions regarding these two plaintiffs will not be binding on the other plaintiffs.

Based on a conversation with Kevin Kratina, a Bureau Chief in the Site Remediation Program, Ray learned that they are overseeing about 2900 cases involving underground storage tanks and groundwater contamination. The majority of these cases involve gasoline stations and a substantial number involve MTBE as a contaminant of concern.

In accordance with State and Federal regulations, since 1993, the owners/operators of most regulated underground storage tanks have had to have a system in place to detect leaks. Furthermore, since December 1998, these tank systems had to meet new construction standards or be upgraded with spill, overfill and be protected from corrosion. All owners/operators are supposed to check for leaks at least once a month, using one of the seven various approved methods for detecting leaks. However, until recently, DEP has not had the resources to ensure that all tank owners or operators are doing so. About a year ago, the legislature authorized that $2 million of the Corporate Business Taxes collected by the State shall be used by DEP to enforce the regulations regarding underground storage tanks. Therefore, Kevin anticipates that the Department will be better able to do more to ensure compliance with those regs. Initially, there will be more inspections to verify that owners are keeping records of monthly monitoring for leak detection.

When a leaking tank is discovered, the owner/operator is required to file a report with the Department within 120 days. If ground water is impacted, a receptor evaluation must be completed. As a first step, this necessitates sampling all existing potable wells within a 1,000 ft. radius of site. Site specific details then dictate the frequency and extent of continued monitoring.

Mitigation for contaminated wells can be a problem since the DEP clean-up standard and Safe Drinking Water Act Standard is 70 ppb, but MTBE can be tasted (according to EPA) at about 20-40 ppb. Detection limits are as low as 0.2 - 0.5 ppb.

Large Responsible Parties have been cooperative, installing public water supply lines to residents in places like Bayville (Berkeley Twp.) & Ringwood (Conoco-Phillips constructed water supply lines to residences where some samples showed as little as 0.2 ppb!)

For small Responsible Parties, without the financial resources of the large corporations, the Corporate Business Tax legislation set up a loan fund with up to $0.5M available for each site for clean-up & mitigation.

All regulated UST owner/operators are required to maintain financial responsibility as part of having active UST systems. This is another aspect of UST operational compliance being evaluated by state inspectors.

Discussion Topic #2: How can water pollution program help clean the air?

a. Odor Elimination: Pat Matarazzo discussed odor elimination from Sewage Treatment Plants as an example of how the operation of a water pollution prevention facility may generate air pollutants if it is not being operated as designed and what STP operators can do to eliminate odors from their plants. Modern STPs are designed to produce no odors when they are being operated at their design capacity. Given the lead times between design, construction and operation, if a plant is designed to provide for anticipated development, and that development does not materialize, then the wastewater flows through the treatment systems are less than the plant's are design capacity, and the resulting sludge will not be properly digested. Odors will result. With older treatment plants, the problem is more likely to be that the volume of waste water flows is greater than the design capacity and the biological systems do not have sufficient time to digest all of the waste before it is pushed through the system. In this situation, odors also result. When the sludge is put through anaerobic digesters, the resulting methane can be collected and burned as a fuel. Once the methane and other aromatic compounds are removed, the sludge is stable and gives off no odors. Pat sends the dried sludge from his facility in Verona by truck to Pennsylvania, where a Christmas tree farmer applies it to his land as fertilizer. That state considers such land applications of sewage sludge "beneficial re-use". He noted that New Jersey's regulations preclude such uses in this state.

b. Land Use Planning:

Jorge Berkowitz noted that the Big Map was conceived of as a tool to protect water resources, not air quality. By preventing sprawl and water pollution, implementation of the Big Map would have a negative effect on air pollution control, since it encourages more development in those parts of the state where air pollution problems are worst.

NJ anticipates the need to absorb about one million people over the next 10 years. We can assume that most of them will be moving into existing urban and suburban areas, where they will be putting significant stress on existing infrastructure. From a water perspective, that means demands on wastewater treatment and water supply facilities. It will also add stress to the existing roadways. From an air quality perspective, the additional traffic volume will result in inefficient traffic movements. This will exacerbate the existing documented problems with air quality in urban & suburban areas.

The CAC is encouraging mass transit to reduce air pollution. The CAC has also looked at health issues associated with air quality in cities, e.g. asthma. They have a member who represents the Dept. of Health & Human Services, Jim Blando. It was suggested that the CWC add a health official to its membership.

Pat Matarazzo and Dan Van Abs noted that several years ago (probably around 1997), the NJDEP Office of Environmental Planning and the NJCWC held a workshop to identify the costs of nonpoint source pollution control, covering agricultural, septic system and urban sources. The estimate costs went well above $4 billion.

Dan Van Abs observed that some of the existing cities are already experiencing growth. For example, Carteret is adding thousands of units right now. They anticipate this development will exacerbate the existing problems with the cities that still have combined sewer overflows (CSOs). Every time it rains, each gallon of additional sewage in the pipe becomes another gallon of raw sewage in the river when the old pipe overflows.

Several speakers noted the need for improved coordination of land use policies at all levels of government to achieve the goal of increased safe, walkable communities. There seems to be inconsistencies between DOT, DEP & DCA in their policies regarding open space. One example noted is in South Brunswick, where there is a major highway, Route 522, separating a residential area from a park. Consequently, the residents need to get into their cars to drive to the park in order to take a walk.

Several speakers noted how the impacts of the state's reliance property taxes creates many interlocking issues. For example, when school districts eliminate courtesy busing, it results in more air pollution as individual parents then drive their kids to school. They also noted that this is a very expensive state in which to live: the average cost of a house in NJ is now $350,000.

Barbara Rich noted that the Delaware River Basin Commission had just completed a 30-year water resources plan for the basin that incorporated land use planning. While it does not cover the entire state, she suggested that it contains ideas that may be useful throughout the state.

Dan Van Abs discussed his review of the most recent census data for NJ. He discovered that New Jersey's projected population growth rates are dependent upon our nation's immigration policies. Between 1990 and 2000, the growth in the state's population was due to immigration from foreign countries. If that input were removed, NJ would have seen a net decrease in population, due to loss of population to other states. Therefore, if there is a shift in national immigration policies, NJ could see a shift from population growth to population loss.

Other speakers commented upon a variety of related issues, including:
Is acid rain resulting in sulfate, AlSO4 & SO2, deposition?
Atmospheric deposition of PCBs and shifting DEP's approach to coping with droughts and water supply from reactive to pro-active.

Announcement:
THE NEXT MEETING WILL BE ON DECEMBER 14, 2004, BEGINNING AT 10:00.