July 23, 2012

Inspector General Arthur Elkins
Office of Inspector General
Environmental Protection Agency
Ariel Rios Federal Building
1200 Pennsylvania Ave., NW; Room 3122
Washington, DC 20460

Dear General Elkins:

I am writing on behalf of Public Employees for Environmental Responsibility (PEER), a national non-profit, non-partisan public interest organization concerned with honest and open government. PEER represents thousands of local, state and federal government employees nationwide working on environmental issues. I am a former Environmental protection Agency attorney and scientists who heads the PEER New England chapter, located outside of Boston, Massachusetts.

PEER is asking that your office investigate the failure of the Commonwealth of Massachusetts to comply with the federal Clean Water Act's National Pollutant Discharge Elimination System (NPDES) permit program in its decision to do broadcast aerial spraying of pesticides for mosquito control. The specific facts are set forth below.

Legal Backdrop

Until recently, the aerial application of pesticides was not considered to require a NPDES permit under the federal Clean Water Act. The events leading to that decision began in November of 2006, when EPA issued a final rule clarifying two specific circumstances in which a Clean Water Act NPDES permit is not required to apply pesticides to or around water. The two circumstances were: 1) the application of pesticides directly to water to control pests; and 2) the application of pesticides to control pests that are present near water, where some pesticides will unavoidably be deposited in the water. The rule became effective on January 26, 2007.

On January 19, 2007, EPA received petitions for review of the rule from both environmental and industry groups. The resulting case, National Cotton Council, et al, v. EPA, was assigned to the Sixth Circuit Court of Appeals. On January 7, 2009 the Sixth Circuit Court of Appeals held that the final rule was *not* a reasonable interpretation of the CWA and vacated the rule. The court held that CWA permits are required for all pesticide applications that leave a residue in water when such applications are made in, near, or over waters of the U.S.

On April 9, 2009, the Department of Justice (DOJ) chose not to seek rehearing in the case, and instead filed a motion to stay issuance of the Court's mandate for two years to give EPA time to develop a NPDES general permit for pesticide applications. The Sixth Circuit granted the stay on June 8, 2009.

On June 2, 2010, EPA announced the public availability of a draft National Pollutant Discharge Elimination System (NPDES) permit for point source discharges from the application of pesticides to waters of the United States called the Pesticides General Permit (PGP). Ultimately, the court determined that NPDES permits would be required after October 31, 2011. Therefore, Massachusetts has needed to comply with the PGP since October 31, 2011.

Factual Backdrop

Massachusetts has the unfortunate distinction of having the second largest number of reported human cases of eastern equine encephalitis (EEE) in the country. EEE is a rare but deadly mosquito-borne virus. While EEE used to occur approximately once every 13 years or so, it is now becoming more and more frequent. Table 1 shows the number of human cases of EEE in Massachusetts, as well as the number of deaths.

Table 1: Human Cases and Deaths of EEE Contracted in Massachusetts[1]

Year(s)	# Human Cases contracted in MA	# of Deaths
1938-39	35	25
1955-56	16	9
1970	1	0
1973-75	5	4
1982-84	9	3
1990	3	1
1992	1	0
1995	1	1
1997	1	0
2000	1	0
2001	1	0
2004	4	2
2005	4	2
2006	5	2
2008	1	0
2010	1	0
2011	2	1

Massachusetts has responded to this threat during the worst years by aerially spraying pesticides. In 1955, 1956, and 1957, the Commonwealth sprayed DDT. In 1973, 1974, and 1975, and again in 1990, they sprayed Malathion. In 2006 and 2010, they sprayed Anvil. In 2010, 284,562 acres were sprayed.

[1] Note that these numbers were obtained from a number of sources, including the state, the CDC, and media reports. Two of the major sources are: http://www.mass.gov/eohhs/docs/dph/cdc/arbovirus/eee-provider-update.pdf and http://www.cdc.gov/easternequineencephalitis/resources/eee_humancases.pdf

In 2012, the Commonwealth proposes to aerially spray 389,594 acres with Anvil, starting on the evening of July 20, 2012. Anvil, the pesticide to be applied in 2012, is a combination of two ingredients, sumithrin (10%) and piperonyl butoxide (PBO) (10%). Sumithrin is a synthetic pyrethroid, and piperonyl butoxide is a synergist which is classified by EPA as a possible human carcinogen. The spraying took place on the evenings of July 20th, 21st, and 22nd.

Case Specifics

In June of 2012, The Massachusetts Department of Public Health (DPH) released a "Report of Eastern Equine Encephalitis Expert Panel." See http://www.mass.gov/eohhs/docs/dph/cdc/arbovirus/eee-expert-panel-report.pdf. This Report concluded:

> The panel was unanimous in its opinion that it was not possible to prevent every case of human illness caused by EEE virus. There was also unanimity that aerial applications of mosquito adulticide can be one effective tool employed to reduce, but not eliminate, risk of human EEE virus infections, but that aerial spray interventions should not be used in the absence of human risk indicators. There was also agreement that personal prevention practices such as repellant use, decreased outdoor activity during peak mosquito hours, and clothing to reduce skin exposure are effective and should form the basis of all risk reduction efforts…Consideration of the need for aerial adulticiding intervention, perhaps in focal areas, should occur before risk levels become critical …

The DPH held several webinars with environmental groups, including PEER, to discuss the Report. PEER and others expressed concerns regarding the lack of scientific data that shows that the aerial spraying actually decreases risk in humans. During these webinars, DPH explained that the trigger for consideration of aerial spraying was now lowered to finding EEE in any one mammal-biting mosquito.

On July 9, 2012, DPH detected EEE in mammal-biting mosquitoes in Easton. See http://www.mass.gov/eohhs/gov/newsroom/press-releases/dph/first-eee-positive-mosquitos.html. The press release stated:

> With these findings, DPH officials are raising the threat of mosquito-borne illness in the towns of Easton, Raynham, and Taunton from "moderate" to "high", which will prompt immediate discussions with other state agencies and local officials about necessary and appropriate mosquito control activities in those towns. State officials are recommending that the communities designated as "high" risk curtail evening events for the remainder of the summer.

Therefore, the Commonwealth knew on July 9, 2012, that it would be considering aerial spraying. However, instead of complying with the terms of EPA's permit, the Commonwealth has hemmed and hawed until the situation became so dire, in their minds, that they could get away with declaring an emergency and avoiding the permit requirements.

On July 17, 2012, the Commonwealth declared a pest emergency. According to George Papadopoulos of EPA Region 1, although the Commonwealth does have to comply with NPDES, declaration of a pest emergency would allow the state to submit the necessary paperwork within 30 days *after* the application of pesticides. A "Declared Pest Emergency Situation" is defined in the PGP as:

> an event defined by a public declaration by a federal agency, state, or local government of a pest problem determined to require control through application of a pesticide ***beginning less than ten days after identification of the need for pest control.*** This public declaration may be based on: (1) Significant risk to human health; (2) Significant economic loss; or (3) Significant risk to: (i) Endangered species, (ii) Threatened species, (iii) Beneficial organisms, or (iv) The environment (emphasis added).

The proposed aerial application of pesticides, likely the largest area in the history of the Commonwealth, is scheduled to start 11 days after the trigger for aerial application was met. The Commonwealth has known for months, and longer than a year, that a NPDES permit was necessary for this aerial application of pesticides. They have also known about the need to spray for more than ten days. Therefore, it does not appear that the emergency permit is applicable in this case. Furthermore, had the Commonwealth complied with NPDES, they would have had to: justify the type of pesticide used; explained efforts to minimize the discharge of pesticides to waters of the United States, including the evaluation of alternatives to aerial spraying; divulged scientific data that explains the basis for the scope of the proposed aerial spraying; and prepared a Pesticide Discharge Management Plan (PMDP).

Given the toxicity of the pesticide to non-target insects and humans, PEER is extremely concerned that the Commonwealth is spraying almost 400,000 acres of the state without complying with NPDES requirements.

In addition, PEER believes that EPA Region 1 is complicit in this evasion of the law.

It is extremely likely that aerial application will be needed again, and PEER urges the Office of the Inspector General to investigate this matter as expeditiously as possible. Please do not hesitate to contact me if you have any questions.

Sincerely,

Kyla Bennett, Director
New England PEER