

Area Source Work Group Meeting Summary October 11, 2005

The Area Source Work Group met for the second time on October 11, 2005 from 1:30 – 4:00 PM at NOACA's offices.

The Work Group reviewed the 2002 Ohio EPA Emissions Inventory as it related to Marine Vessels. Information had been provided by USEPA Region 5, which revealed the process by which USEPA estimated commercial shipping air emissions. The Work Group learned that detailed emissions inventories for nine ports (including Cleveland) were composed using 1996 data. These nine ports represented different types of ports (e.g., Atlantic, Great Lakes). Each port in the country was designated as one of these typical port types. The emissions for each port were then determined by scaling the appropriate "typical" port's emissions based on activity. For example, if a port had half the activity of the "typical" port, it had half the emissions. The national total of ports' emissions was calculated as the sum of the emissions at each port. The emissions at the largest 150 ports in the nation were determined by multiplying the national total port emissions by the percentage of national port traffic at each port. The 1996 numbers were adjusted to reflect activity in later years. Vessel age and internationally negotiated NOx standards were among the factors included in these calculations.

Therefore, although a detailed emissions inventory was developed for Cleveland, the results of this inventory did **not** exactly match the National Emissions Inventory (NEI) data for that port. The Cleveland data may have been aggregated with data from other ports and adjusted to reflect changes in engine standards and age with time in addition to increased activity at ports.

The Lake Carriers' Association noted that the Great Lakes ships (lakers), which make up 900 port calls in Cleveland (vs. the 100 "salties" or international ships) have basic railroad train engines installed (EMD 645's) and can burn only #2 diesel fuel. These engines are **not** Category 3 engines.

The Work Group concluded that the emissions data reported for marine vessels was high in comparison to other sources. Further study will be performed by the Cleveland-Cuyahoga County Port Authority, the Lake Carriers' Association, and USEPA.

Staff reported on the Port of Ashtabula, which has significant shipping traffic but little opportunity for improvements to loading equipment. The loading equipment does not include forklifts, but instead uses equipment that deposits cargo directly into rail cars.

The Cleveland-Cuyahoga County Port Authority, however, reported retrofitting 26 diesel forklifts with particulate matter filters manufactured by Caterpillar. The Port also intends to investigate retrofitting its four diesel cranes.

The Work Group noted that the emissions associated with jet aircraft were probably correct in that jet fuel burns more efficiently than other fuels. However, there are 26 airfields of various sizes in the Northeast Ohio nonattainment area. Of those, only 2 were accounted for in the 2002

emissions inventory provided by Ohio EPA. The remaining 24 small airfields and their aircraft were not included.

Staff noted that there were significant numbers of take-offs and landings at the other 24 airfields. However, many of the smaller aircraft burn AvGas, which is 100-octane gasoline approved by the Federal Aviation Administration. It was unlikely that such aircraft could burn the alternative summertime fuel (low-RVP 7.8 psi) that would be recommended for cars by the Mobile Source Work Group.

The Work Group determined that there might be some benefit to adopting the Florida approach of establishing a fine for dumping gasoline on the ground at an airfield. Because a 2-ounce sample must be taken from the tank before each flight, some pilots may be spilling it onto the ground after examining it for water. Gasoline collection containers would have to be provided.

At Cleveland-Hopkins Airport, a very large number of ground support vehicles were reported. Some of those run on gasoline and some on diesel. There could be as many as 300 that are municipally owned that would make possible candidates for substitution with electric vehicles, if a funding source such as CMAQ dollars were identified.

The topic of idling reductions at the large airports was also discussed. Anti-idling practices appeared to have some benefit for ground support vehicles. Further study was needed on whether jets were actually using the “single-engine taxi” that was the recommended practice.

The railroad grade separation projects in NOACA’s TIP are being quantified for emissions reduction purposes by staff.

The Work Group requested that Ohio EPA provide the breakdown for “non-road” sources of air pollution, including recreational boats and jet skis. Information was provided on “Clean Marina” programs fostered by the State of Ohio to encourage good fueling practices.

A conflict in information appeared during the discussion of whether “Stage II Vapor Recovery Nozzles” were required on gasoline pumps at marinas. Further investigation is needed. If none are currently required, adding such controls would create an air pollution benefit.

As to fuels, it was reported that Michigan will require recreational boats and jet skis to use the alternative summertime gasoline (for Detroit, low-RVP 7.0 psi gasoline) that cars will use, beginning in the summer of 2006. The Work Group asked for data regarding an alternative gasoline for boats in the Northeast Ohio nonattainment area.

The Work Group considered the various reports on trees and their biogenic contribution to VOC emissions. It was reported that planting more trees often reduces ozone formation in urban areas by reducing the total heat of the city. Ozone formation in rural areas was increased.

Staff agreed to provide a list of the species of trees that foster ozone reduction rather than ozone formation, to see whether a benefit could be obtained by planting certain varieties of trees as part of municipal landscaping.

The Work Group learned that the Ohio EPA has already begun a rulemaking to require new gas cans to conform to standards set by the California Air Resources Board (CARB), beginning in 2007. Questions were raised as to cost and as to consumer education. However, it was agreed that the gas cans would create an air pollution benefit once a large number of old cans were retired.

The Work Group selected November 1, 2005, as its next meeting date.