

May 2, 2006

Contact – Nicholle Jackson

Workgroup Recommendations and Other Potential Control Measures
VOC Workgroup

VOC008 – PUBLIC OUTREACH REGARDING GASOLINE DISPENSING

DESCRIPTION

Improve rule effectiveness and compliance through public outreach, including but not limited to issues of "no topping off", and operations and maintenance of Stage II equipment.

IMPLEMENTATION

Address the following gasoline-dispensing issues:

- “No topping off” by attendants, including fleet vehicle refueling
- Improved operations and maintenance of Stage II vapor recovery equipment
- No gasoline-powered watercraft refueling at gas stations equipped with a vapor-balance type Stage II vapor recovery system unless the boat fuel filler neck is compatible with the fuel pump interface (see NA007)

This can be accomplished by: 1) developing and distributing educational and outreach material about Stage II vapor recovery requirements to gasoline station owners and operators, 2) developing and providing outreach and educational material to gasoline station owners and operators (both retail and private), and the public about how they can prevent the release of gasoline vapors when pumping gas, and 3) requiring station and fleet owners to post “No topping off” signs.

- Weights & Measures requirements for pump calibration testing at retail gas stations

According to the National Institute of Standards and Technology and the New Jersey Office of Weights & Measures, gasoline pumps are calibrated by pumping gasoline into a 5-gallon container with a gauge. There is a vapor recovery mechanism on the calibration container to keep vapors from escaping. A metal funnel is used to return test drafts to the storage tank after volumetric tests have been completed. A metal bucket is used to catch leaks, drain vapor recovery hoods, etc. A new system should be used for returning liquids back to storage tanks after pump calibration tests (to control the vapors that escape). This would be especially beneficial during ozone season.

EXAMPLES/SUCCESS STORIES

Public outreach initiatives at gas stations are underway in Texas, California, Pennsylvania, Delaware, and other states, including the following:

California:

- The Santa Barbara Air Pollution Control District has a “Don’t Top Off” campaign which includes an informative webpage, a video, and fact sheets.

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EPA Region 3, Delaware and Pennsylvania:

- In the summer of 2004, EPA Region 3, the Pennsylvania Department of Environmental Protection (PADEP), the Delaware Department of Natural Resources Environmental Control (DNREC), the City of Philadelphia, and the Air Quality Partnership, launched a compliance assistance initiative in Wilmington, Delaware and the five counties in the Philadelphia area, including Bucks, Montgomery, Chester, and Delaware counties. In addition to random compliance inspections, gas stations received compliance calendars and handbooks outlining their responsibilities under the Clean Air Act.

A variety of consumer outreach activities were also planned. During the week of June 28, a motorist survey was conducted at area gas stations. The surveys were designed to determine the habits of gas customers, as well as determining how effective the outreach was. Thousands of customers were surveyed and provided with educational material as well as "Don't Top Off" key chains. A "Don't Top Off" Brochure was developed and distributed. AAA Mid Atlantic distributed over 10,000 "Don't Top Off" brochures through its driving school. "Don't Top Off" ads were placed in all the major local newspapers. A "Don't Top Off" news conference was held at a gas station in Philadelphia during the week of July 4, 2004. The news conference was picked up and aired during the evening news of all the major networks within the area. A "Don't Top Off" website was developed and published on the front page of EPA's website during the summer of 2004.

Although New Jersey does not have self-serve gas stations, outreach of this nature will be beneficial to gas station attendants and owners, as well as fleet owners.

New York City:

- In March 2001, New York City launched a public awareness campaign to support gas stations with gas pump vapor controls. The campaign featured Petey Platypus, a cartoon character, who appeared on stickers displayed on gasoline pumps that have controls to recover gasoline vapors and prevent them from being released into the air.

The Small Business Assistance Program, administered by the New York State Environmental Facilities Corporation, distributed the Petey Platypus stickers to those New York City area gasoline stations that completed and submitted testing requirement reports to the New York State Department of Environmental Conservation. The stickers were displayed in station windows and on gas pumps. Radio advertising ran in the downstate area (New York City, and Rockland, Nassau, Suffolk, Westchester and Lower Orange Counties) during March to support the Petey Platypus sticker program.

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COST

Although the cost of all of the example projects outlined in this document are not known at this time, the “Don’t Top Off” project that was conducted in Pennsylvania and Delaware was supported by a \$30,000 EPA Community Assessment and Risk Reduction Initiative (CARRI) grant.

EMISSION REDUCTIONS

While not quantifiable in tons per day, emissions can be reduced by educating attendants to not top off tanks. According to the Santa Barbara Air Pollution Control District, spilling one ounce of gasoline produces the same volatile organic compound emissions as a car driving 56 miles.

New York State’s experience over one year shows how a large sector, 2,700 gas stations, can be moved from zero to 100 percent compliance on gas pump vapor control testing over four years. This is just one example of how an outreach campaign can be effective in increasing compliance.

The results of the “Don't Top Off” public surveys distributed in PA and DE indicated that: outreach efforts reached about 35-37% of the public. Of those people who took the survey and who heard the "Don't Top Off" message, about 50% changed their behavior. It was not possible to calculate emission reductions from the "Don't Top Off" public outreach campaign. However, emission reductions were estimated from the Gas station Stage II outreach campaign. Stage II compliance rates before the outreach were compared with compliance rates after the outreach. VOC emission reductions were estimated using the comparison of compliance rates with EPA's AP-42 factor, and gasoline usage in the area. The Stage II outreach effort resulted in the potential reduction of 100 tpy of VOC in Delaware and 632 tpy of VOC in the five Pennsylvania counties for a potential total emission reduction of 732 tpy of VOC.

COST EFFECTIVENESS

Not known at this time

SOURCE

1. *A Collaborative Report Presenting Air Quality Strategies for Further Consideration by the State of New Jersey*, Prepared by the Volatile Organic Compounds from Processes and Consumer Products Workgroup, October 31, 2005.
2. New York State Environmental Facilities Corporation. Press Release dated March 8, 2001. *Governor: Campaign Highlights Gasoline Vapor Protection*. http://www.nysefc.org/press_releases/vaporprotection.htm, accessed March 17, 2006

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3. *Managing Small Business Environmental Assistance Programs for Results: Report On Ten State Demonstration Projects (1999 –2001)*. United States Environmental Protection Agency, October 31, 2001.
4. *Don't Top off Your Gas Tank -- Save Money at the Gas Pump and Help Protect the Environment*, Business & Legal Reports, June 30, 2004. <http://enviro.blr.com/display.cfm/id/48985>, accessed March 22, 2006
5. Santa Barbara Air Pollution Control District. <http://www.sbcapcd.org/edu/dont-top-off.htm>, accessed March 17, 2006.
6. *Voluntary Air Toxic Reductions at Gas Stations in the Philadelphia Area*. <http://yosemite.epa.gov/oar/CommunityAssessment.nsf/015fa47174c82e3c85256ddb00510ac0!OpenForm&ParentUNID=17852ED31AC58EFA85256FFC00519306>, accessed March 22, 2006.

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