

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)
)
VAPOR RECOVERY RULES:)
AMENDMENTS TO 35 ILL. ADM.)
CODE PARTS 201, 218, AND 219)

R13-18
(Rulemaking - Air)

RECEIVED
CLERK'S OFFICE
MAY 28 2013
STATE OF ILLINOIS
Pollution Control Board

NOTICE OF FILING

TO: John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601

Thomas Davis, Bureau Chief
Environmental Bureau
Office of the Attorney General
500 South Second Street
Springfield, Illinois 62706

 ORIGINAL

Richard R. McGill, Jr.
Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601

Mitchell Cohen, General Counsel
Office of Legal Services
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

PLEASE TAKE NOTICE that I have today filed with the Office of the Pollution Control Board the TESTIMONY OF DARWIN BURKHART and TESTIMONY OF CHUCK GEBHARDT of the Illinois Environmental Protection Agency, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: 
Kent E. Mohr Jr.
Assistant Counsel
Division of Legal Counsel

DATED: May 24, 2013

1021 N. Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217) 782-5544
(217) 782-9143 (TDD)

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TESTIMONY OF DARWIN BURKHART

Good afternoon, my name is Darwin Burkhart and I am Manager of the Clean Air Programs in the Bureau of Air at the Illinois Environmental Protection Agency (Illinois EPA). Part of my duties is overseeing the Stage I and Stage II Gasoline Vapor Recovery program, as well as the proposed rulemaking and the Technical Support Document that we are here to present today. Other Illinois EPA staff with me today are Chuck Gebhardt, Mike Rogers, Jerry Clark, and Ross Cooper. These gentlemen contributed various portions and levels of expertise to the Technical Support Document and will be able to help answer any specific questions that the Board or audience may have.

At the first hearing on May 8, 2013 in Springfield, Illinois EPA staff responded to many of the Illinois Pollution Control Board (Board) pre-filed staff questions and agreed to respond in writing to the more technical questions regarding the modeling inputs and results. In addition, the Board requested copies of draft forms regarding the notice that gasoline facilities will provide the Illinois EPA prior to decommissioning, along with the form that includes the decommissioning checklist. These draft forms are attached as Exhibits 1 and 2 to this testimony. Mr. Chuck Gebhardt will address the remainder of the Board staff questions that we agreed to respond in writing. This concludes my testimony.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

**Notice of Intent to
Decommission Stage II Vapor Recovery Equipment**

This form shall be used to notify the Illinois EPA of the intent to decommission Stage II vapor recovery equipment and shall be completed and submitted to the Illinois EPA at least 10 days prior to commencing Stage II decommissioning. For a complete description of all the decommissioning requirements and procedures, see 35 Ill. Adm. Code 218.586 and the Petroleum Equipment Institute's (PEI) "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites" (PEI/RP300-09) Section 14.6.

Proposed Date of Decommissioning _____
(m/dd/yyyy)

Gasoline Dispensing Facility Information

Facility Name: _____

Facility Address: _____
(Street) (City) (Zip Code)

Owner Name: _____

Owner Address: _____
(Street) (City, State) (Zip Code)

Operator Name: _____

Operator Address: _____
(Street) (City, State) (Zip Code)

Owner/Operator Contact: _____ Phone: (____) _____ Email: _____

IEPA Facility ID# _____ Office of the State Fire Marshal Facility ID# _____

Decommissioning Contractor Information

Piping Contractor: _____
(company name)

Office of the State Fire Marshal license number: _____

Illinois Department of Agriculture registration number: _____

Dispenser Contractor: _____
(company name)

Office of the State Fire Marshal license number: _____

Illinois Department of Agriculture registration number: _____

Testing Contractor: _____
(company name)

Office of the State Fire Marshal license number: _____

Type of Stage II Vapor Recovery System _____ Vacuum-assist _____ Balance

Certification of Information Accuracy

The undersigned hereby certifies that the statements contained herein are true, accurate, and complete to the best of my knowledge, information, and belief. By affixing his/her signature hereto the undersigned further certifies that he/she is authorized to execute this form.

Signature of Owner or Operator

Date

Printed Name: _____

Title: _____

Company: _____

The Illinois EPA is authorized to require, and you shall disclose, the information requested on this form pursuant to 35 Ill. Adm. Code 218.586. This information shall be provided using this form. Failure to disclose the requisite information may result in the incomplete submittal of this form, failure to comply with 35 Ill. Adm. Code 218.586, and/or penalties being imposed as provided for in the Illinois Environmental Protection Act, 415 ILCS 5/42-45. Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h)).

Illinois Environmental Protection Agency

Date Received:

**ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
Stage II Decommissioning Checklist**

This form shall be used to document the procedures used to decommission Stage II vapor recovery equipment and shall be completed and submitted to the Illinois EPA within 30 days after the completion of decommissioning. For a complete description of all the decommissioning requirements and procedures, see 35 Ill. Adm. Code 218.586 and the Petroleum Equipment Institute's (PEI) "Recommended Practices for Installation and Testing of Vapor-Recovery Systems at Vehicle-Fueling Sites" (PEI/RP300-09) Section 14.6.

Gasoline Dispensing Facility Information

Facility Name: _____		
Facility Address: _____		
(Street)	(City)	(Zip Code)
Owner Name: _____		
Owner Address: _____		
(Street)	(City, State)	(Zip Code)
Operator Name: _____		
Operator Address: _____		
(Street)	(City, State)	(Zip Code)
Owner/Operator Contact: _____ Phone: (____) _____ Email: _____		
IEPA Facility ID# _____ Office of the State Fire Marshal Facility ID# _____		
Date of Decommissioning Stage II Equipment _____		
(m/dd/yyyy)		

PEI/RP 300 – 09 Reference	Decommissioning Activity	Completed?
14.6.1	Initiate safety procedures	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.2	Relieve pressure in the tank ullage	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.3	Drain liquid-collection points	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.4 & 14.6.5	Disconnect all vapor pumping or processing units	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.4	Disconnect all electrical components of the Stage II system so that no electrical hazards are created	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.4	Reprogram the dispenser electronics to reflect that Stage II vapor recovery is no longer in service	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.6	Securely seal off the below-grade vapor piping at a height below the level of the base of the dispenser	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.7	Securely seal off the below-grade vapor piping at the tank end if it is easily accessible	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.8	Securely seal the vapor piping inside the dispenser cabinet	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.9	Replace the Stage II hanging hardware with conventional hanging hardware	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.10	Install appropriate pressure/vacuum vent valve(s)	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.11	Remove any Stage II instructions from the dispenser cabinet	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.12	Conduct and pass the pressure decay test and tie-tank test; attach test results	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.13	Verify that the visible components of the storage system are left in a condition that will reliably prevent the release of any vapors or liquids from any component of the storage system	<input type="checkbox"/> Yes <input type="checkbox"/> NA
14.6.13	Restore the facility to operating status	<input type="checkbox"/> Yes <input type="checkbox"/> NA

Notes

Empty rectangular box for notes.

Certifications of Contractors

Piping Contractor: _____
 (Company name)

Address: _____
 Street City/State Zip Code

Phone: (____) _____

Office of the State Fire Marshal license number: _____

Illinois Department of Agriculture registration number: _____

The undersigned hereby certifies that the statements contained herein are true, accurate and complete, and certifies that the decommissioning procedures performed by the above-specified company were in accordance with 35 Ill. Adm. Code 218.586 and PEI/RP 300-09, Section 14.6. By affixing his/her signature hereto the undersigned further certifies that he/she is authorized to execute this form.

Signature of Lead Contractor or Technician _____ Date _____

Name: _____ Title: _____

Dispenser Contractor: _____
 (Company name)

Address: _____
 Street City/State Zip Code

Phone: (____) _____

Office of the State Fire Marshal license number: _____

Illinois Department of Agriculture registration number: _____

Certified by Dispenser Manufacturer to work on its dispensers? Yes No Comment: _____

The undersigned hereby certifies that the statements contained herein are true, accurate and complete, and certifies that the decommissioning procedures performed by the above-specified company were in accordance with 35 Ill. Adm. Code 218.586 and PEI/RP 300-09, Section 14.6. By affixing his/her signature hereto the undersigned further certifies that he/she is authorized to execute this form.

Signature of Lead Contractor or Technician _____ Date _____

Name: _____ Title: _____

Testing Contractor: _____
 (Company name)

Address: _____
 Street City/State Zip Code

Phone: (____) _____

Office of the State Fire Marshal license number: _____

The undersigned hereby certifies that the statements contained herein are true, accurate and complete, and certifies that the decommissioning procedures performed by the above-specified company were in accordance with 35 Ill. Adm. Code 218.586 and PEI/RP 300-09, Section 14.6. By affixing his/her signature hereto the undersigned further certifies that he/she is authorized to execute this form.

Signature of Lead Contractor or Technician _____ Date _____

Name: _____ Title: _____

Certification of Station Owner or Operator

The undersigned hereby certifies that the statements contained herein are true, accurate, and complete to the best of my knowledge, information, and belief. By affixing his/her signature hereto the undersigned further certifies that he/she is authorized to execute this form.

Signature of Owner or Operator

Date

Name: _____

Title: _____

Company: _____

The Illinois EPA is authorized to require, and you shall disclose, the information requested on this form pursuant to 35 Ill. Adm. Code 218.586. This information shall be provided using this form. Failure to disclose the requisite information may result in the incomplete submittal of this form, failure to comply with 35 Ill. Adm. Code 218.586, and/or penalties being imposed as provided for in the Illinois Environmental Protection Act, 415 ILCS 5/42-45. Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

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TESTIMONY OF CHUCK GEBHARDT

Good afternoon, my name is Chuck Gebhardt and I am Manager of the Technical Services Section in the Bureau of Air at the Illinois Environmental Protection Agency (Illinois EPA). Part of my duties is modeling mobile source emissions using the United States Environmental Protection Agency's (U.S. EPA) Motor Vehicle Emissions Simulator (MOVES) model. My testimony consists of responses to Illinois Pollution Control Board (Board) staff questions from the May 8, 2013 hearing where I agreed to respond in writing.

Board Staff Questions from First Hearing, Technical Support Document Section, and Responses

2. Please spell out the following acronyms appearing in the table entitled "Key Input Data for the MOVES Model" on page 7 of the TSD: HPMSV; VMT; IM; and OBD. Also, please explain what these terms mean in the context of the MOVES model.

RESPONSE:

"HPMSV" is not an acronym with respect to MOVES. We believe that the board is referring to "HPMS" which refers to Federal Highway Performance Monitoring System. U.S. EPA's MOVES model requires that Vehicle Miles Traveled, or VMT, data is distributed according to vehicle class as defined in the HPMS information. The MOVES model uses the VMT and type of vehicles in the "HPMSvTypeYear" table with other information to estimate emissions.

3. Please describe the function of the parameters in the model that are listed as key input data in the table on page 7 of the TSD.

RESPONSE:

“HPMSvTypeYear” is a table imported into the MOVES model describing the annual Vehicle Miles Traveled in the Chicago nonattainment area. U.S. EPA expects model users to provide local VMT data to accurately represent the miles traveled in the area being modeled. Annual VMT is distributed by the vehicle source types described in the Federal Highway Performance Monitoring System. VMT for previous years is obtained from the Illinois Department of Transportation while VMT for future years is estimated by growing the current year’s VMT at an annual rate of 1.5%.

“monthVMTFraction” is a MOVES table with imported data showing how the annual VMT is distributed monthly.

“dayVMTFraction” is a MOVES table with imported data showing how the annual VMT is distributed daily.

“hourVMTFraction” is a MOVES table with imported data showing how the annual VMT is distributed hourly.

“zoneMonthHour” is a MOVES table with imported data providing average meteorological data including hourly temperatures and relative humidity. Data used in

this analysis was obtained from the National Weather Service at O'Hare International Airport.

“fuelSupply” is a MOVES table with imported data providing information about what type of fuels are used in the Chicago nonattainment area.

“fuelFormulation” is a MOVES table with imported data defining attributes about the fuel used in the Chicago nonattainment area.

“IMCoverage” is a MOVES table with imported data about the Chicago nonattainment area emissions testing program. While the testing program is described, it should be noted that an emissions testing program does not affect refueling emissions.

4. Attachment B to the TSD contains the MOVES input and output files in “MySQL format” on a compact disc. To make this information more readily understandable, please provide, if feasible, a written summary of the input and output files (not simply pages of numbers) that would give ranges and averages for the key input data parameters listed on page 7 of the TSD, as well as output values other than those graphed in Figure 1 of the TSD.

RESPONSE:

The compact disc includes the input files required to run MOVES and the output files in the format that complies with U.S. EPA State Implementation Plan revision requirements. Providing a summary of the input data is not really feasible, but the response to question number five is a summary of the output data that is relevant to refueling emissions.

5. Please provide numerical values for the points graphed in Figure 1 of the TSD. Also, please quantify the emission reduction benefits in terms of tons per day (tpd) of volatile organic compounds (VOC) for each year graphed beginning in 2014.

RESPONSE: See table directly below.

Chicago Nonattainment Area Refueling Emissions Analysis Using MOVES			
Year	Refueling Emissions (Tons / day VOC)		
	ORVR Only	ORVR + Stage II with IEE	Emissions Gain/Loss With Stage II
2007	14.52	4.39	10.13
2008	12.15	4.20	7.95
2009	11.66	4.42	7.23
2010	9.45	4.27	5.18
2011	8.12	4.31	3.81
2012	5.98	4.08	1.90
2013	4.92	4.08	0.84
2014	4.00	4.07	-0.07
2015	3.23	4.04	-0.81
2016	2.57	3.98	-1.41
2017	2.08	3.94	-1.85
2018	1.85	3.93	-2.08
2019	1.54	3.89	-2.35
2020	1.31	3.84	-2.54

6. The TSD refers to the “January 2014 cross-over point.” TSD at 9. Please clarify whether the points graphed in Figure 1 correspond to January 1st of each year on the horizontal axis.

RESPONSE:

The points on the graph do not represent any specific date because MOVES estimates VOC emissions for an average weekday in a selected month. The Illinois EPA modeled July since it is generally considered the peak of the ozone season.

7. Please explain the trends in the Figure 1 graph as to what is occurring and why. For example:

b. Why does the ORVR + Stage II line show a very gradual decrease over time rather than an increase due to the incompatibility issue affecting more vehicles over time?

RESPONSE:

The Illinois EPA believes refueling emissions decrease because newer vehicles with better gas mileage are replacing older vehicles with poor mileage. The benefits in improving gas mileage exceed the emissions due to incompatibility.

c. The TSD states that “[a]fter this [cross-over] point, the difference between the two lines represents the reduction in refueling emissions if Stage II is decommissioned. This difference is 0.7 tpd in 2014 if Stage II is decommissioned increasing to 2.54 tpd in 2020 when an estimated 96% of the vehicle fleet will be ORVR equipped.” TSD at 8. As the cross-over point appears to be in 2014, at which point the difference would be zero, when specifically is the 0.7 tpd difference expected?

RESPONSE:

Upon review of the data, 0.7 tpd for July 2014 is a typo and should read 0.07 tpd.

I apologize for the error.

This concludes my testimony.

STATE OF ILLINOIS)
)
COUNTY OF SANGAMON) SS

RECEIVED
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MAY 28 2013
STATE OF ILLINOIS
Pollution Control Board

CERTIFICATE OF SERVICE

I, the undersigned, an attorney, state that I have served the attached TESTIMONY OF DARWIN BURKHART and TESTIMONY OF CHUCK GEBHARDT of the Illinois Environmental Protection Agency upon the following persons,

John Therriault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601

Thomas Davis, Bureau Chief
Environmental Bureau
Office of the Attorney General
500 South Second Street
Springfield, Illinois 62706

Richard R. McGill, Jr.
Hearing Officer
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph, Suite 11-500
Chicago, Illinois 60601

Mitchell Cohen, General Counsel
Office of Legal Services
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

by mailing a true copy thereof in an envelope duly addressed bearing proper first class postage and deposited in the United States mail at Springfield, Illinois on May 24, 2013.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: 
Kent E. Mohr Jr.
Assistant Counsel
Division of Legal Counsel

DATED: May 24, 2013

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