



MEMORANDUM

Date: December 10, 2007

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator 

Re: **Stage II Vapor Recovery**

Enclosed please find information related to Stage II Vapor Recovery. This item is on the Board's agenda of December 11, 2007, pursuant to direction from the Board on November 6. I will ask that this item be continued to December 18, 2007 to allow further comment and review.

Further, the recommendation of staff is to establish a stakeholder group to more fully evaluate the most cost-effective and efficient method of controlling air pollution emissions from gas stations. The stakeholder group would be guided and led by Pima County Department of Environmental Quality staff, with regular meetings beginning in January 2008. A full and final report to the Board would be due from the stakeholder group in December of 2008. This would allow a full year of review and discussion of the proposal, which is of significant importance to the environment, as well as the affected business community.

CHH/jj

Attachment

c: John Bernal, Deputy County Administrator - Public Works
Lori Godoshian, Clerk of the Board
Ursula Kramer, Environmental Quality Director



MEMORANDUM

Pima County Department of Environmental Quality

DATE: December 7, 2007

TO: C. H. Huckelberry
County Administrator

FROM: Ursula Kramer *UK*
Director

RE: Stage II Vapor Recovery

At its November 6 meeting, the Board of Supervisors directed the Pima County Department of Environmental Quality (PDEQ) to gather additional information regarding Stage II vapor recovery systems and possible adoption of such systems in Pima County and to report back to the Board at its December 11 meeting.

Background

Stage II Vapor Recovery Systems capture refueling vapors from vehicles at gas stations. These vapors contain various compounds, including volatile organic compounds (VOCs) that contribute to ground level ozone formation, and hazardous air pollutants such as benzene, a known human carcinogen. Stage II systems return these vapors to the gas station's underground tank instead of allowing them to escape into the atmosphere. A detailed background document regarding Stage II and associated facts was prepared by PDEQ on October 26, 2007 and is attached (Attachment 1).

Recent Activities

In response to Board direction, PDEQ and the Pima County Health Department (PCHD) held two information gathering sessions. Invitations to the meeting were sent to potentially affected and interested parties, including gas stations owners and industry representatives, the City of Tucson, the Arizona Department of Weights and Measures, EPA and health representatives. A press release was issued to invite the general public. The press release generated a newspaper article and a segment on the local news, and the meeting notice was prominently posted on the PDEQ web site. A total of 48 people attended the sessions and 18 written comments were received at the meetings. In addition, nine email comments were received. The comments received generally fall into two categories: 1) the general public states support for healthy air and for Stage II and 2) the industry, while expressing support for healthy air, is concerned about the financial impact of installing and maintaining Stage II and that on-board refueling vapor recovery (ORVR) will make Stage II redundant in the future. A detailed summary of the public meeting and a copy of comments received are attached (Attachment 2).

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In addition to the information gathering sessions, PDEQ and the PCHD have reviewed additional information and have discussed Stage II with other agencies and interested parties, including the Arizona Department of Weights and Measures, Maricopa County officials, ADEQ officials, EPA, the Northeast States for Coordinated Air Use Management, California Air Resources Board, Western States Petroleum Association and the Arizona Petroleum Marketers Association.

Key Points

The issues surrounding the control of volatile organic compounds and benzene and the implementation and operation of Stage II vapor recovery systems is extremely complex.

- On-board refueling vapor recovery (ORVR) (see attachment 1 for more information) is a federal requirement for most new vehicles.
- ORVR and Stage II perform the same function of capturing refueling vapors.
- The timeframe for widespread use of ORVR is not clearly defined, but could range from 2013 to 2020. Current estimates indicate that approximately 50% of our Pima County fleet is ORVR equipped and that 60% of gallons dispensed in Pima County are to ORVR equipped vehicles.
- There remain incompatibility issues with the type of Stage II systems allowed in Arizona and ORVR systems. Such incompatibility can result in increased emissions if some Stage II systems are used with ORVR equipped vehicles.
- California clean air agencies have conducted extensive studies on Stage II and ORVR compatibility issues and have found several technologies which appear to resolve the problems, but it is not certain these technologies would work in Pima County. In addition, California has adopted additional requirements to ensure greater Stage II effectiveness and minimize gas station emissions.
- Refueling of vehicles is estimated by PAG to be responsible for approximately 1.5% of all VOC emissions in Pima County by 2010.
- The U.S. Environmental Protection Agency (EPA) is issuing a Mobile Source Air Toxics Rule (MSAT). EPA states that the final standards under the rule will significantly lower emissions of benzene and the other air toxics in three ways: (1) by lowering benzene content in gasoline; (2) by reducing exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees); and (3) by reducing emissions that evaporate from, and permeate through, portable fuel containers. A fact sheet on MSAT is attached (Attachment 3).
- The EPA is in the process of developing guidance allowing removal of the Stage II requirements when "widespread use" of ORVR can be demonstrated throughout an area's motor vehicle fleet.
- There may be other effective gasoline station controls available to work in conjunction with or instead of Stage II, including in-station diagnostic systems and tank management systems.
- Over 90% of Pima County gas stations are independently owned. The owners who have contacted us during the information gathering sessions have stated that implementation of Stage II will pose a financial burden.

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- Health information regarding benzene and ozone indicate that both pose public health hazards.
- It will take three years after adoption of Stage II resolution before Stage II is fully installed throughout the affected area (12 months for rulemaking by the Department of Weights and Measures plus two years for installation of Stage II systems at gas stations).
- The Board's jurisdiction is for unincorporated areas of Pima County only.
- The effectiveness of Stage II systems is strongly dependent on inspections and appropriate maintenance. In accordance with State Statute the Department of Weights and Measures is responsible for any such inspections. They have indicated to us their current concern about lack of sufficient staff for such inspections. They have also indicated that the effectiveness of Stage II may be as low as 40% - 50% without annual inspections.

Recommendations

The Board establish a stakeholder group to fully evaluate the most efficient and cost-effective methods for controlling benzene and VOC emissions from gasoline stations. Such a stakeholder group should include representatives from:

- Incorporated jurisdictions within Pima County.
- Pima County Department of Environmental Quality
- Pima County Department of Health
- Pima Association of Governments
- University of Arizona
- U.S. Environmental Protection Agency
- Arizona Department of Environmental Quality
- Arizona Department of Weights and Measures
- Western States Petroleum Association
- Arizona Petroleum Marketers Association
- California Air Resources Board
- Citizen representative(s)

This group should meet regularly over the next year beginning in January 2008 and report recommendations to the Board in December 2008.

UK/vb

Attachments

cc: John Bernal, Deputy County Administrator for PW



Board of Supervisors Memorandum

October 26, 2007

Resolution Regarding Stage II Vapor Recovery

Background

The refueling of vehicles at gasoline stations releases gasoline vapors to the air. Those vapors contain a variety of compounds that pose health concerns, including volatile organic compounds (VOCs) and hazardous air pollutants. VOCs contribute to ozone formation and one of them, benzene, is a known human carcinogen. Several controls have been developed to capture refueling vapors and protect public health. The two primary methods are Stage II Vapor Recovery (Stage II) and onboard refueling vapor recovery systems (ORVR).

Stage II Vapor Recovery is an emissions control technique that captures refueling vapors from a gas station's dispensing nozzles and returns them to the gas station's underground storage tank. The two most common types of Stage II are the vapor balance and the vacuum assist systems. The vapor balance uses a corrugated boot over the nozzle spout and is designed to capture displaced vapor from the vehicle fuel tank by using a vapor recovery return line to the station's underground storage tank. The vacuum assist Stage II is sometimes "bootless" and a vacuum (by a pump) is used during refueling to pull the gases back to the underground storage tank through a series of holes in the nozzle spout. If properly operated and maintained, Stage II has the potential to reduce the amount of dangerous gasoline fumes being released into the air we breathe. Vapors returned to the underground storage tank are controlled by the Stage I process during filling of the underground storage tanks by tanker trucks. Some issues associated with Stage II after installation are system integrity, maintenance, and compliance issues. There is no standard for in-use level of efficiency and it varies from state to state.

ORVR involves creating a mechanical or liquid seal around the dispensing nozzle, redirecting the vapors away from the fuel tank fill pipe, and forcing the vapor stream to pass through a canister in the vehicle filled with activated carbon. The vapors are then adsorbed onto the carbon for temporary storage. Upon engine restart, air is pulled through the canister to purge the vapors from the carbon and route them to the engine, where they are combusted. Approved ORVR systems are certified to be 95 percent efficient in capturing VOC emissions from refueling gasoline powered motor vehicles. Most vehicles manufactured since 2001 contain ORVR systems.

Previous Efforts to Implement Stage II - Efforts to implement Stage II Vapor Recovery Systems in Pima County were initiated in 1996 by Pima Association of Governments (PAG) and Pima County Department of Environmental Quality. The agencies received input from the petroleum industry to determine the costs associated with Stage II and other issues of concern. Three public meetings were held to discuss Stage II Vapor Recovery in February 1997 and written comments were accepted at both agencies until March of 1997. In addition, the implementation of Stage II Vapor Recovery was discussed at a series of PAG and PDEQ committee meetings that were open to the public. In March of 1998, the Pima County Board of Supervisors voted to approve the implementation of Stage II Vapor Recovery in Pima County, pending approval of local jurisdictions. In April of 1998, the City of

Tucson Mayor and Council voted against the implementation of Stage II Vapor Recovery.

Health Effects

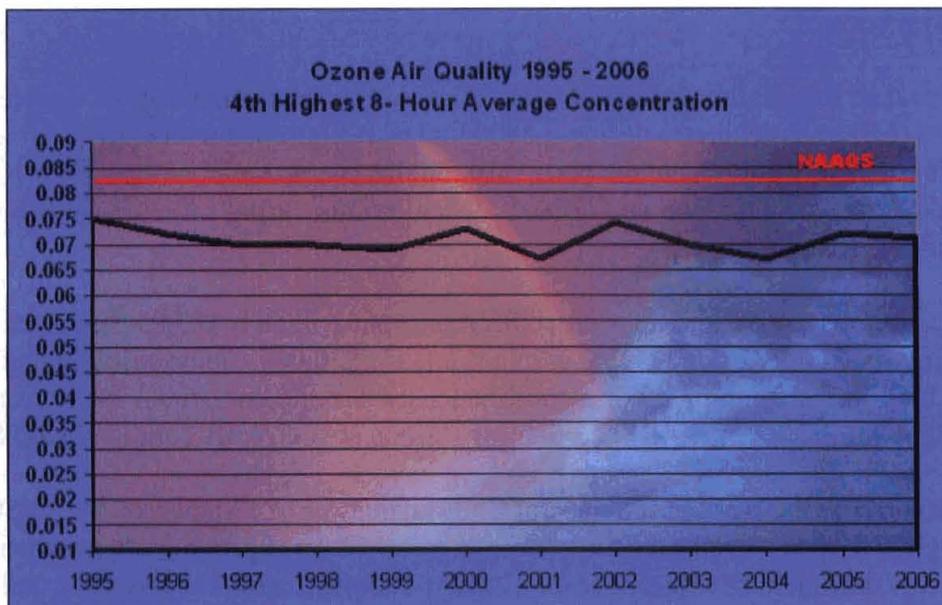
Exposure and Health Effects of Benzene - Benzene is a colorless liquid used in a variety of ways including as a constituent in motor fuels and as a solvent. Benzene is also used in the manufacture of detergents, explosives, pharmaceuticals, and dyestuffs. Benzene in an airborne gaseous form is found in emissions from burning coal and oil, motor vehicle exhaust, and evaporation from gasoline service stations and in industrial solvents. These sources contribute to elevated levels of benzene in the ambient air, which may subsequently be breathed by the public. In addition, tobacco smoke contains benzene and accounts for nearly half the national exposure to benzene.

Health effects of benzene exposure vary depending on length of exposure and the concentration of benzene. Acute (short-term) inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene. EPA has classified benzene as a Group A, human carcinogen.

Health Effects of Ozone - Ozone is an invisible gas that occurs naturally in the upper atmosphere (ozone layer) and filters out the sun's harmful ultraviolet radiation. Human-caused ozone pollution is also found at ground-level when a chemical reaction occurs between two precursors: VOCs and oxides of nitrogen (NOx) in the presence of sunlight. The U.S. Environmental Protection Agency has created health standards to protect the public from six common air pollutants found in our country, including ground-level ozone. Breathing ozone can trigger a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. The EPA has recently proposed changes to the ground level ozone health standard which, if implemented as proposed, will likely put our community into non-attainment of the federal ozone standard.

Ozone Trends

Pima County has regularly been within ten percent of the current 8-hour maximum average for the ozone national ambient air quality standards (NAAQS) for the past ten years. The highest concentrations have stayed between 0.067 and 0.075 ppm between 1995 and the present (see chart).



Data from Air Quality Summary Report for Pima County; prepared by Pima County Department of Environmental Quality

New Proposed Ozone Federal Standard

The EPA has proposed a new ozone federal standard which could potentially put Pima County into nonattainment status for the Ozone NAAQS. Currently the proposal is still in the public comment period but the standard may be revised to be between 0.070 and 0.075 ppm. This revised standard will increase public health protection and prevent environmental damage from ground-level ozone.

If Pima County is designated a nonattainment area, a burden will be placed on the entire community. Potential impacts include higher regulatory costs for industry and possibly a loss of incoming businesses that would choose not to locate in an ozone nonattainment area. Also, costs to prepare and comply with a state implementation plan could be as much as \$500,000 per year for five years, based on earlier PAG and PDEQ analyses.

The revised NAAQS are proposed to be effective in June of 2008 and the county will most likely be placed in a category of attainment or moderate nonattainment in 2010. EPA does not require Stage II for moderate nonattainment areas. However, Arizona Revised Statutes § 41-2132 requires that in moderate ozone nonattainment areas Stage II must be installed.

ORVR versus Stage II

In theory, the choice of one system type versus the other is emissions neutral. In practice, there are a number of factors that affect the efficiency of each system type, including implementation costs, cost benefits, environmental effectiveness, etc.

ORVR is more cost effective than Stage II (\$6 - \$8 per vehicle at manufacturing plant) and lessens the

burden on emissions control.

ORVR is now a standard installation required by the Clean Air Act on the majority of vehicles. Since 2001, new vehicles (cars and pickup trucks up to 6000 lbs) were equipped with ORVR. Since 2006, new pickup trucks and heavy duty vehicles (6001 – 10,000 lbs) were equipped with ORVR. ORVR has a 95% - 98% average efficiency in capturing VOC emissions during refueling as compared to 95% or less with Stage II.

Costs of retrofitting pumps to assist/comply with ORVR are approximately \$8,000 per dispenser. The cost to install the required underground piping is approximately \$20,000. Some gasoline stations may already have the underground piping. For a four dispenser site the cost could range from about \$30,000 to \$60,000. All Pima County-owned fueling stations are currently equipped with Stage II.

A recent report prepared by the Northeast States for Coordinated Air Use Management (NESCAUM) in an analysis of ORVR widespread use states that, "...most Stage II programs will reach a point where the continually diminishing emissions benefit will no longer justify the cost of installing new systems or maintaining existing ones. In fact, there is an eventual emissions disbenefit associated with continuing to employ many of the Stage II systems. CAA § 202(a)(6) authorizes the EPA Administrator to waive the Stage II requirements for areas classified as serious, severe, or extreme when the Administrator determines that ORVR systems are in "widespread use" throughout the motor vehicle fleet..."

Once a vehicle is equipped with ORVR, there is no additional benefit for having Stage II. However, projections for vehicle turnover estimate that it may be 2020 before Pima County has nearly full penetration of vehicles equipped with ORVR. In addition, vehicles from Mexico will not include ORVR technology.

Health and Environmental Benefits

Significant public health benefits will be realized by the control of gasoline vapors from refueling. Stage II and ORVR are both currently available methods for achieving such controls. There are points both for and against each of those technologies as outlined above.

Sustainability

Pima County is committed to creating and maintaining a sustainable community that promotes individual well-being and opportunity, sound resource conservation and stewardship, and a strong and diverse economy for all of its residents. The breadth and scope of this commitment is reflected in Resolution No. 2007-84, which the Board of Supervisors unanimously adopted on May 1, 2007. One of the key elements to this commitment is the implementation of programs and activities designed to enhance the well-being, quality-of-life, and opportunities available to residents, including the continued implementation of programs in the areas of health, safety, education, job assistance, affordable housing and neighborhood reinvestment. Reduction of toxic air pollutants from gasoline refueling will clearly enhance the well-being and health of our community.

Resolution Regarding Stage II

Pursuant to Arizona Revised Statutes § 49-2132, a county located outside a non-attainment area may adopt a resolution to be submitted to the Arizona Department of Weights and Measures to require the installation and operation of Stage II throughout its jurisdiction. A resolution adopted by a Board of Supervisors requiring Stage II must be reviewed and approved by the Arizona Department of Environmental Quality (ADEQ) prior to submittal to Weights and Measures. Gasoline service stations are required to have Stage II systems in place twenty-four months after the Department of Weights and Measures receives a resolution from a County that has been approved by ADEQ.

The attached resolution adopting Stage II is provided for consideration by the Board of Supervisors. If adopted, the resolution must be sent to ADEQ for approval and to the Department of Weights and Measures for implementation.

Recommendation

It is recommended the Board of Supervisors:

- accept this report on Stage II Vapor Recovery;
- direct the Department of Environmental Quality (DEQ) to conduct public meetings to discuss and gather additional information regarding Stage II implementation in Pima County;
- direct the Department of Health to consider the beneficial health effects associated with Stage II and provides their recommendation regarding implementation of Stage II Vapor Recovery;
- direct DEQ to work with the Arizona Department of Environmental Quality and the Department of Weights and Measures to identify any implementation issues;
- ask the County Attorney's Office to report on jurisdictional applicability;
- direct DEQ to provide information regarding the benefits of Stage II to the other jurisdictions in Pima County and encourage them to support implementation of Stage II throughout Pima County;
- direct DEQ to return to the Board at its regularly scheduled December 11 meeting with the results of the public meetings and any additional information developed during this period for consideration of adopting the implementation resolution for Stage II Vapor Recovery.

Stage II Vapor Recovery Public Participation

In order to receive input from the public and from specific interested parties regarding Stage II Vapor Recovery, PDEQ organized two information gathering sessions in early December. The meetings were held in two different parts of town in the late afternoon and early evening to allow for attendance both during working hours and after work. The Tuesday, December 4th meeting was held at the Pima County Natural Resources Parks & Recreation Building at 3500 W. River Road from 4:00 p.m. to 6:30 p.m. The second meeting was held on Wednesday, December 5th at the Eckstrom-Columbus Pima County Public Library branch at 4350 E. 22nd Street from 4:00 p.m. to 6:30 p.m.

Stations were set up in the room with information on Stage II Vapor Recovery, On Board Vapor Recovery System, health information related to gasoline fumes and ground-level ozone, and information on toxics found in gasoline. A station was also set up with PDEQ staff to answer questions and collect written comments from the attendees.

A news release was developed and sent out to the media (attached). The release generated at least one newspaper article in the Tucson Citizen and two news segments on KOLD TV 13. PDEQ does not subscribe to a media tracking service, so it is possible that the release was picked up on other TV and radio stations. A meeting notice (attached) was placed on the PDEQ website (1,200 requests/day) and provided to the following interested parties:

American Lung Association – Bonnie Light, Executive Director
U of A College of Public Health – Dr. Mary Kay O'Rourke
PC Environmental Quality Advisory Committee Mailing List
PC Board of Health Mailing List
Ron (R.C). Lewis, Director, General Services, City of Tucson
Andrew Quigley, City of Tucson, Environmental Services
ADEQ List of Underground Storage Tank Owners (115)
Terry Nordbrock – Families Against Cancer & Toxics
U.S. Environmental Protection Agency – Wienke Tax
Health Department – Lisa Hulette, Dennis Douglas
Steve Farley - House of Representatives District 28
Joy Herr-Cardillo – AZ Center for Law in the Public Interest
Sandy Bahr – Sierra Club
Tucson Clean and Beautiful email list (1,500 people)
Southern Arizona School Nurses Training (25)
Andrea Martincic – Arizona Petroleum Marketers Association
Duane Yantorno, Department of Weights and Measures
Western States Petroleum Association

Forty-eight people attended the information gathering sessions and a total of 24 written comments were received during the meetings or via email. Those comments have been transcribed and are attached. The original comment cards and emails are available for review at the PDEQ office at 150 W. Congress Street.



DEPARTMENT OF ENVIRONMENTAL QUALITY
150 W. Congress Street
Tucson, Arizona 85701-1317
(520) 740-3340
FAX (520) 882-7709

NEWS RELEASE

For Immediate Release

Contact: Beth Gorman
office (520) 740-3343
cell phone (520) 603-0358

Stage II Vapor Recovery Information Gathering Sessions

Tucson, Arizona (November 29, 2007) – Pima County Department of Environmental Quality is hosting two information gathering sessions regarding the possibility of requiring Stage II Vapor Recovery at gas stations in Pima County.

Stage II Vapor Recovery systems capture gasoline vapors that would otherwise be vented into the air during vehicle refueling at gas stations. Gasoline vapors contain volatile organic compounds such as benzene and formaldehyde which are precursors to ground-level ozone and are harmful to human health. Stage II Vapor Recovery reduces air pollution and exposure to gasoline vapors by returning the vapors back into the gas station's underground storage tank during the refueling process. The Phoenix area has had Stage II Vapor Recovery at their gas stations for over 10 years to reduce emissions that contribute to ground-level ozone air pollution.

Interested parties are encouraged to attend one of the two meetings being held and provide information and comments to help the Pima County Board of Supervisors make an informed decision regarding Stage II Vapor Recovery. Comments from the public will be compiled and presented to the Board of Supervisors for their consideration.

Tuesday, December 4th 4:00 – 6:30 p.m.
Pima County Natural Resources Parks & Recreation Building
3500 W. River Road (between Orange Grove and Shannon)
1st Floor Meeting Room

Wednesday, December 5th 4:00 – 6:30 p.m.
Pima County Public Library
Eckstrom-Columbus Branch Library
4350 E. 22nd Street
Large Meeting Room

For more information, call Pima County Environmental Quality at 520.740.3340 or email beth.gorman@deq.pima.gov.

Visit our website at: www.deq.pima.gov



Information Gathering Session

You are invited to provide comments and/or information on the possibility of requiring Stage II Vapor Recovery systems at gasoline stations in Pima County. Stage II systems capture gasoline vapors that would otherwise be vented into the air during individual vehicle refueling at gas stations. Stage II Vapor Recovery reduces air pollution and exposure to gasoline vapors.

Please attend one of the two meetings being held to solicit input from interested individuals to help the Pima County Board of Supervisors make an informed decision regarding Stage II Vapor Recovery.

Tuesday, December 4th 4:00 – 6:30 p.m.
Pima County Natural Resources Parks & Recreation
3500 W. River Road (between Orange Grove and Shannon)
1st Floor Meeting Room

Wednesday, December 5th 4:00 – 6:30 p.m.
Pima County Public Library
Eckstrom-Columbus Branch Library
4350 E. 22nd Street
Large Meeting Room

For more information, call Pima County Environmental Quality at 520.740.3340 or email beth.gorman@deq.pima.gov

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Mark Shillinger
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: Phx/Tsn
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: We feel the cost per station (min. \$80,000) is not justified when we are not exceeding air pollution limits and the fact that most vehicles now have on board vapor recovery, which effectively replaces the benefit of Stage II.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Gordon A. Grimsey-C.O.T.
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: City of Tucson
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: I would like to see vapor recovery put in place. But want to see what rules will be put on testing, servicing and inspections before it gets passed into law.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Genevieve Greene Farley
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: City of Tucson
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: I think this is important to have the nozzles on the gas things. My friend has Leukemia from this. I'm glad we're doing something about it.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Amelia Farley
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: It is important to stop toxic gases from being let into the air because it is important to prevent cancer, pollution, asthma, etc.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Steve Farley
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments: This legislation is vital to the health of all Tucsonans. Pass this now before our air gets dirty and the EPA makes us do it anyway. Any yes, Benzane is toxic. This is an easy solution which is already working in Maricopa County. Why don't we deserve this?

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Troy Little
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: Pima
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: I believe that Stage II is unnecessary based upon past pollution levels and the extreme cost burden on the retail establishment. Eight or 10 yrs ago the City of Tucson elected not to mandate for the above reasons. Since that time on-board canisters have been mandated by the Federal Gov. thereby already addressing the issue. Much too much cost for the benefit (if any).

Stage II Vapor Recovery Information Gathering Session
Comment Card
 Questions/Concerns/Information Requested

Name: Andrea Martincic (AZ Petroleum Marketers Assoc)
 Address:
 City: Phoenix
 State: AZ
 Zip:
 Jurisdiction: Statewide Assoc.
 Phone:
 Email Address:

Yes No

Are you affiliated with a gas station?

Yes No

If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No

If yes, does the station have the underground piping for Stage II?



Please add me to the Mailing List.

Comments:

93% of all retail in AZ is independently owned-not owned by major oil. APMA is concerned with the cost of implementing Stage II in Pima County. APMA estimated a conservative cost for Tucson retail stations alone to be \$24 million. 80% of the Stage II systems is below surface at a cost of about \$80,000 per station. Above ground dispenser equipment averages \$8,000. Additional concerns include additional expense to cover maintenance, compliance expenses/fees from state or county agencies.

APMA would like to see PDEQ's data which would show what pollutants they need to reduce and whether Stage II is the proper remedy. With ORVR technology, cleaner gasoline formulations, ULSD, and the higher use of oxygenates like ethanol perhaps there is not a need for Stage II at this time. It is our understanding that the City of Tucson did not choose to implement Stage II over 10 years ago. Why look at Stage II now when many states are removing their Stage II requirements.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Steven Kimbriel
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: City of Tucson
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: I'm a Petroleum Contractor & Equipment Distributor
[see comments later in document]

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Gina Grey-WSPA
Address:
City: Scottsdale
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: Oppose adoption of Stage II requirement
-Per reasons provided in 12/4 meeting

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Charlotte Holst Reilley
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: I try whenever possible to not bring my children to the gas station. When unavoidable, I keep the windows closed and tell them not to breathe in the smell! I would love to see our city make some conscious decisions and join the movement towards a greener country. We are all affected by this.

Stage II Vapor Recovery Information Gathering Session

Comment Card

Questions/Concerns/Information Requested

Name: T. Matthew Swanson
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: Ward 1
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments: I am a 3rd generation Tucsonan who plans on staying in Tucson to teach. I am in favor very strongly of Stage II recovery nozzles. It is such a small cost of installation compared to the massive benefit of removing so many VOCs in the community.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Mary S Barsoum
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments: I think that this new stage vapor recovery will not be cost effective to many gas station owners who cannot afford to stay in business as is since the cost to impact this is over \$60,000. If Pima County will pay for this cost then it is ok. If Pima County in act one price of gas for every gas station that will make it please prove to me that vapor recovery systems will clean the air 100% and will stop people from getting sick with cancer and the air will be cleaner. Please call me at 520-331-9328.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Pete Blamey
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: More info is needed. How successful is Stage One? How does Stage I compare with Stage II? Does the cost per station to upgrade \$50,000 to \$100,000 justified? When 50% of the cars in Pima County have vapor recovery and this figure will continue to rise, has a grandfather clause been considered? Independent owners would have a problem with coming up with the funding.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: David F. Galligan
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: Pima
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments: ****Advise of Board Meeting****

Concerned that at present time Green Valley, Marana, Benson does not use ethanol in gasoline, during winter months.
Car emissions are not mandated throughout the county.
Very high cost to implement.
In addition Federal hearings taking place on temperature correction at service station perhaps.

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Mike Ingham
Address:
City: Oakland
State: CA
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No

Are you affiliated with a gas station?

Yes No

If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No

If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments:

Stage II Vapor Recovery Information Gathering Session

Comment Card

Questions/Concerns/Information Requested

Name: Joe Martinez
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction:
Phone:
Email Address:

Yes No Are you affiliated with a gas station?

Yes No If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No If yes, does the station have the underground piping for Stage II?

 Please add me to the Mailing List.

Comments: Can we find out if Stage II actually works-How many people are going to be out of work when all the "Little Guys" have to close because we can't afford this? We need a lot more info before it can be presented. This is a huge decision that should not be taken lightly. It will affect a lot of people.

Does the public know that they will pay a Lot More for their fuel? This Stage II will close a lot of stations & those that survive will be able to raise their prices without competition. I don't believe that it will make a lot of difference because most cars already have on-board Stage II (ORVR).

Does anybody have info if this made any difference in Maricopa County or California? The cost & loss of business will be huge. We will not survive it!

Stage II Vapor Recovery Information Gathering Session
Comment Card
Questions/Concerns/Information Requested

Name: Thomas Cooley
Address:
City: Tucson
State: AZ
Zip:
Jurisdiction: Pima
Phone:
Email Address:

Yes No

Are you affiliated with a gas station?

Yes No

If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No

If yes, does the station have the underground piping for Stage II?



Please add me to the Mailing List.

Comments:

Stage II Vapor Recovery Information Gathering Session

Comment Card

Questions/Concerns/Information Requested

Name: Bob Mahlstedt

Address:

City: Tucson

State: AZ

Zip:

Jurisdiction: Pima

Phone:

Email Address:

Yes No

Are you affiliated with a gas station?

Yes No

If yes, does the station have Stage II Vapor Recovery with nozzles and plumbing?

Yes No

If yes, does the station have the underground piping for Stage II?

Please add me to the Mailing List.

Comments:

I am attaching comments. (please see next page)

Stage II Vapor Recovery Informational Meeting.

Good Afternoon.

I am Bob Mahlstede. I am President of Loma Catalina Company, and the operator of 18 gasoline Stations and c-stores in the Tucson Metro Area. Our company will dispense in excess of 27 million gallons of gasoline this year.

My experience and qualifications to talk to the subject include roles with a major oil company as a distribution terminal supervisor, and a fuel and lubricants engineer. For ten years I also owned and operated a construction and maintenance company involved in gasoline pipeline terminal maintenance and construction, and retail gasoline station maintenance and construction. In this capacity I oversaw the maintenance of vapor recovery systems at the pipeline terminals in both Tucson and Phoenix. Our company also installed and maintained numerous Stage II systems including balance type and vacuum type systems.

The installation of Stage II vapor recovery will cost my current company in excess of \$500,000 initially. This estimate is based on the installation of a basic balance type system and my understanding that many of our stations already have vapor return piping from the dispensers to the underground storage tanks. Installation of the more efficient vacuum assisted systems, and or installation of new or replacement vapor return piping could easily increase this amount by 4 times.

The average amount of retail fuel dispensed per facility in Tucson is 960,000 gallons annually. Many of the facilities at the lower end of the volume scale simply will not be able to justify the \$25,000 to \$125,000 expense for installation of Phase II systems.

Equally if not more important is the issue of the necessity for the expense in the context of the goals, the ability of Phase II technology to manage those goals and the federal Clean Air Act requirement for Onboard Refueling Vapor Recovery. (ORVR).

The primary goal of Stage II systems is the control and capture of gasoline vapor during the vehicle refueling process. The Stage II technology in use, Balance systems, and Vacuum assist systems, depend on a pressure differential between the underground storage tank and the vehicle gas tank. The Balance system relies equally on expected differences in vehicle tank temperature and the vapor forming tendency of the gasoline at that temperature versus the temperature and pressure in underground storage tank, and the removal of gasoline from the UST which in concept reduces pressure, and filling the vehicle tank which increases pressure. The pressure differentials in a Balance system are very small. It is easy to calculate that any small leak in the system such as regularly would occur between the nozzle boot and the vehicle spout would allow an equalization of pressure and defeat the system. In addition return line resistance at a common distance of 80 feet from dispenser to tank would further reduce the differential. I submit that these systems are simply not worth the trouble or expense to install or

maintain in the context of recovering vapor. Vacuum assist systems are arguably more dependable in recovering vapor, however the cost is several times as great.

A secondary goal of the system is to capture otherwise lost hydrocarbon for recycling into inventories. While a noble attempt was made by terminal operators in Phoenix and elsewhere in the 80's and 90's to reclaim the vapor into liquid gasoline using chiller condensation systems, or absorption systems, these systems proved so costly to install and maintain, that the dominant control system is today a catalytic burning unit. There is no useful hydrocarbon recovery. Vapor is today transported to the Phoenix and Tucson terminals only to be burned.

You have all probably seen this report by NESCAUM regarding the requirement for, and expected future reliance on Onboard Refueling Vapor Recovery Systems. I have a few copies if you have not. These systems have been required since 1998 on certain new vehicles and all light duty gasoline powered vehicles since 2006. These systems recover the retail buyer's hydrocarbons when fuelling and store them safely until they can be used to fuel the engine. These systems truly meet both goals of the Stage II; eliminating hydrocarbon emissions and recovering the vapor for use by the rightful owner. These systems do not require an investment by the retailer, and will not lead to an increase in fuel prices at the pump. The NESCAUM report describes how, as the fleet of current vehicles is replaced, Stage II systems will become obsolete. Their prediction is that in areas where Stage II has not been implemented, this process of obsolescence will occur far more quickly than the cost of Stage II installations can be justified.

Stage II is serious not needed in Pima County.

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Fieldon Cooley
Email:

Comments: Thank you so much for taking time to talk to me. Some of the points I would like to make are: most of the service stations are owned by independents, many are owned by immigrants that have their whole family working at the stations to make a living. The cost of upgrading the dispensers and running vapor lines could exceed \$20,000 per dispenser, plus being out of business for a month (think of you being out of work for a month and having your bills to pay also). The onboard canisters and already mandated and installing a system that will be obsolete in 5-7 years doesn't make good business sense. If we have to install Stage II the cost will be passed on to the consumer with higher gas prices. Look at Phoenix, they used to have cheaper gas than Tucson but with all the regulations they now have higher priced gas. We are third generation petroleum contractor and have been in business for over 50 years. I have had over eighty employees at one time, exposed to more gas and vapors than most people in a lifetime, and have never known anyone having cancer or related illnesses or read anything saying that living next to a gas station is hazardous.

In closing, I would like to say that I am as a contractor, station owner and a customer that I am against the regulation of Stage II. Thank you for your time.

Tom Cooley

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Jean-Paul Bierny
Email:

Comments: This is a message in strong support of Stage II Vapor Recovery at all gas pumps in Pima County.

We must make every effort to curtail release of gas vapors at the gas pumps, in order to decrease the risk of cancer and air pollution that would cause a brown cloud over our beautiful valley.

Thank you for you attention.

Sincerely,

Jean-Paul Bierny, MD

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Chris Tanz
Email:

Comments: I understand that you're considering requiring Stage II Vapor Recovery on all gas pumps in Pima County.

Please do it!
Protect our atmosphere. Protect our health.

Thank you.

Chris Tanz
Pima County

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Ken Wilson

Email:

Comments: Please be advised that the undersigned residents in Tucson (Pima) AZ do support the proposal by Pima County, AZ to require Stage II Vapor Recovery on all gasoline pumps in Pima County.
Kenneth L Wilson & Loretta W Wilson

Tucson, AZ

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Kendrick Wilson
Email:

Comments: Dear Ms. Gorman,

I am writing you because I am very interested in the issue of Stage II Vapor Recovery but will be out of town for both public meetings so I will be unable to attend. I hope my comments can still be considered.

I am delighted to see Pima County's Department of Environmental Quality looking into requiring Stage II Vapor Recovery on all gas pumps in the County. I have a family history of cancer-my mother herself is a cancer survivor-and the high number of carcinogens in gasoline vapors is of great concern to me. Without this regulatory requirement, there are very few places I can pump gas in Tucson (indeed, anywhere in Pima County) where Stage II Vapor Recovery is in place. I would very much like not to be exposed to the carcinogenic fumes that are released when I pump gasoline into my car but so far I have only been able to find one gas station that has Stage II Vapor Recovery, which is Costco.

The environmental effects of gasoline vapors are also very important. In southern Arizona, we boast 360 days of sunshine per year, yet the very sunshine we advertise is what combines with volatile organic compounds (VOCs)-including those that are released when gasoline is pumped-to create low-level ozone pollution. If we value our priceless views of our mountains and want to avoid living under a brown cloud like they have in Phoenix, reasonable measures like Stage II Vapor Recovery must be taken before it's too late. The abundance of sunshine in southern Arizona makes us one of the most appropriate locations for using Stage II Vapor Recovery in the country.

There will be costs associated with this requirement-just as there are costs with ALL public health and safety requirements. Indeed, requirements imposed by the health department mandating sanitary conditions at restaurants have compliance costs as well. But those requirements, just like Stage II Vapor Recovery has not caused gas stations in California or Phoenix to cease to be profitable. There are no shortages of gas stations in either area. If we have the

opportunity to take this reasonable step to reduce people's exposure to cancer-causing fumes and to slow the progress of a brown cloud over our valley, we would be incredibly short-sighted not to take it.

Thank you for hearing my comments on this important issue.

Kendrick Wilson

Tucson, AZ

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Bill Tegethoff
Email:

Comments: While it has never been my style to voice my opinion publicly, it seemed propitious to do so here concerning the possibility of the DEQ requiring Stage II Vapor Recovery in Pima County.

I have been involved in the petroleum equipment business since 1981. Since then, there have been numerous attempts to clean up the air we breath through mandated use of vapor recovery equipment in service stations and terminals around the US.

In very simplistic terms, Stage I vapor recovery is to recover gasoline vapors that are generated when product is transferred between tank trucks and service station storage tanks. Stage II vapor recovery is to recover vapors that would normally escape when refueling vehicles between the vehicle and the nozzle.

In practice, simplicity has nothing to do with reality where vapor recovery is concerned. Regulation drives vapor recovery technology. Vapor recovery technology and resulting effectiveness has never been market driven, it has always been driven by well intentioned yet required implementation.

Just as everything in life changes, so has the regulation of gasoline vapor emissions, the equipment designed to do so and the vehicles we drive. As you know, California has been the leader where gasoline vapor recovery is concerned. The California Air Resource Board (CARB) became the preeminent testing and certifying agency for vapor recovery equipment in the US long ago.

The original Stage II vapor recovery nozzles were big, heavy, unwieldy and required two hoses instead of one. Those nozzles worked passively to collect vapor that would escape between the nozzle and car fill pipe when refueling vehicles. Characterized by their big clunky bellows that were necessary to create a sealed vapor path for collection, the nozzles were hard to use and something less than reliable or durable. The bellows wore or tore with use and consequently these nozzles required daily inspection, just as all Stage II equipment does today.

A marked driven option to these big hard to use vapor recovery systems was all the rage in our industry not long ago. An active, vacuum pump driven vapor recovery system would replace the passive "balance" system with smaller, lighter, easier to use nozzles that did not require the bellows to collect gasoline vapors. The vacuum created by the pumps would capture the emissions that would have escaped during refueling. These systems, like the original balance systems were tested and certified by CARB.

Ironically, these active or vac-assisted systems of vapor caused an additional unforeseen problem where overall collection efficiency was concerned. Not only did these systems vacuum the vapor, they also brought back free air to the gasoline storage tanks which pressurized the tanks and pushed vapor emissions out the vent stacks at service stations resulting a big reduction in collection rates.

Throw in EPA mandated carbon canisters mounted on all new vehicles sold in the US and now we have pumps collecting only free air when refueling vehicles because the vapors are retained "onboard" the vehicles resulting in even more vapor growth/pressure in the storage systems. That vapor had to go somewhere and it went out the vent stack, again resulting in more, not less emissions.

Now what? CARB was faced with the very real probability that the systems they tested and certified were actually contributing to more emissions than recovery. CARB announced that there would be new more stringent vapor recovery requirements, longer testing periods, total vapor recovery system tightness requirements, tank pressure management mandates and automated VR system monitoring to assure that the collection efficiencies increased rather than decreased. These collective requirements are commonly referred to as Enhanced Vapor Recovery (EVR) and In Station Diagnostics (ISD) and have cost both the industry and the motoring public countless dollars.

Like all folks, I have to wear my personal hat as well as my commercial hat in life. I want to do the right thing for the environment and I also benefit from more stringent regulatory requirements where service stations are concerned. The verbiage the EPA used in the Clean Air Act loosely describes a time when the vehicle fleet in the US will be substantially equipped with onboard canisters as a time when Stage II vapor recovery will no longer be necessary. The vehicle fleet is largely there today.

Other states and counties are also grappling with the decision to require or dismantle Stage II vapor recovery requirements.

I suspect that the federal funding component for states and counties comes to play here as well. The big question for me is what would we gain if Pima County required Stage II vapor recovery? It would certainly be a boon on business for me, but would there be an appreciable improvement in our air quality? I find myself in a rather precarious position where this topic is concerned. If I appear to be a proponent for stricter regulation I may alienate my clientele. Conversely, should I be indifferent, I may be contributing to a stance that is not concerned about our immediate surroundings. Either way, the cost and associated benefit of requiring Stage II vapor recovery in Pima County really doesn't make much sense to me given my experience through the years.

I would appreciate your keeping this correspondence confidential for obvious reasons. [Permission was granted from Mr. Tegethoff to release email.] Should you want to discuss vapor recovery from a historical, mechanical, design or efficiency perspective don't hesitate to contact me. Hope this helps in some way and thanks for your time.

Sincerely,

Bill Tegethoff
President
ANS Distributing

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Kerry Borboa
Email:

Comments: Beth-It was a pleasure meeting you on Wednesday, December 5, 2007 at the Eckstrom-Columbus Branch Library. I do have concerns regarding the Stage II Vapor Recovery.

First of all, vapors recovered do not magically turn back into gasoline to be sold. The vapors that are recovered in the tanks are then put back into the delivery truck and taken to the loading rack to be disposed of (burned).

The minimum cost will be between \$60,000 and \$80,000 just to start the underground procedures. The cost for the dispenser conversions will be about \$8,000. This does not take into account the cost for the loss of business or for the cost to get the lost business back. Nor does it take into account that once you pull permits and break concrete, the station has to be brought up to current codes. The stations owned by small, independent, business owners will surely suffer greatly or be put out of business. The majority of the stations in Pima County are owned and operated by independent dealers, and not major oil companies. We have stations that are practically out of business due to the I-10 construction –what more can the City, County, and State do to finally put them out of business?

Who is going to be in charge of testing and compliance of the systems? Will there be additional taxes incurred to pay for the additional employees needed by the State or County to enforce this? Where will the money come from?

What benefit has Maricopa County seen since they have been on the Stage II systems? Will the benefit (if any) outweigh the cost?

Cars are currently being manufactured that have the ORVR systems. There are studies that show there are major problems

with cars with the ORVR systems using Stage 2 Vapor Recovery dispensers. The dealers are going to have to spend a lot of money to change over to the system and then in a few short years, have to remove the systems so that the ORVR cars can get fuel.

If we are worried about the emissions, why not require oxygenated fuel year round? If this movement is not about the emissions, but more about health issues, additional information is needed BEFORE such an expensive undertaking is put into place. Many dealers have been in the fuel business for 30+ years with no health issues what-so-ever. Most of us have been fueling cars for years and years with no health issues. Blaming gasoline vapors for causing Leukemia in a couple of kids is reckless and dangerous.

Please make sure the entire Pima County Board of Supervisors are completely informed and educated so that if and when this is voted on, the Pima County Board of Supervisors can make a decision based on the actual facts and not based on emotions.

Kerry Lynn Borboa
Retail Branded Programs Manager

Stage II Vapor Recovery Information Gathering Session
Questions/Concerns/Information Requested
Online Comments

Name: Steve Kimbriel
Email:

Comments: Dear Ursula,
I talked with you at the open house on River Rd.
There are somethings that are misrepresented about ORVR and the facts are easy to find on the Internet.

1. The EPA mandated that 40% of ALL passenger cars have ORVR on them for 1998, that 80% of ALL passenger vehicles have ORVR on them in 1999, that 100% of ALL passenger vehicles have ORVR on them in 2000. Concerning Light Trucks, 40% of ALL model year 2001 have ORVR, 80% of ALL model year 2002, 100% of ALL model year 2003 Light trucks that are 6,000 lbs and under. Light Trucks that are 6,000 lbs. to 8,500 lbs are 40% to have ORVR in model year 2004, 80% in model year 2005 & 100 % in model year 2006.
Your presentation leads people to believe that ORVR won't be fully implicated until 2006 which is correct but you don't say that the vast majority of vehicles (passenger cars) have had ORVR since 1999.
2. You should read the Feb. 14th,2007 H.B. 2334 where Rep.Steve Farley tries to get Stage II vapor recovery enacted.
It is full of untrue information.
 - a. It costs more than \$1,000.00 to install Stage II on underground tanks.
 - b. There is absolutely no way a owner can recover \$ 8,000.00 - \$ 12,000.00 a month in vapor recovery. If this were true, you would see everybody voluntarily installing Stage II. In addition, with the increase number of ORVR in the system each year, less vapors are returned to the underground storage tanks because they are being absorbed by the vehicle.
 - c. There is no study that can be found that shows a correlation between childhood leukemia and living near a gas station. Occupational health studies show no increase of cancer for people who work at gas stations and people who don't. All Maricopa County had a study in the last 10 years around a tank farm and found no increase in leukemia in the surrounding neighborhoods.
 - d. The average cost for Stage II installations in Maricopa County is about \$ 80,000.00 per station.

e. The Major Oil Companies owned most of the stations in Maricopa County when stage II vapor recovery was installed. This isn't the case today. 93 % of the stations are owned by small business and individuals. There are many stations owned by immigrants such as Pakitanis, Indians,etc. They have brought there families over and the whole family works in the business. There is just not a lot of profit in the gasoline retail business. This is obvious from the fact that more and more immigrants can afford to buy the stations.

3. CARB - on Feb. 15th of 2007 at a conference gave this information.

a. Only ONE EVR (enhanced vapor recovery) Phase II system is certified by them which is the Healy EVR Phase II System. Maricopa County does not have any of these systems. California is going beyond the normal stage II vapor recovery to try to have 100% efficiency which is more than just Stage II, it includes Stage I certification, Vacuum on tanks,ISD (in station diagnostic) which can cost up an additional \$28,500. to upgrade the existing stage II to the ISD only.

b.CARB - says that the implementation of ORVR is the same as what I just gave you from the EPA.

c. CARB - says that California will have ORVR Vehicle Penetration as follows: 40% in 2006, 55% in 2008, 70% in 2011, 80% in 2013. 90% in 2018.

Believe that nothing is being accomplished until then. When in fact in California 90% of the vehicles will have ORVR in 2018.

d. CARB - says that it could not eliminate ORVR until 2020 but will probably keep it to capture additional vapors. You must remember that CARB is instituting the EVR which we don't have in Arizona. So if California could eliminate the Stage II in 2020 (a state with extreme air quality problems) then Pima County which is in the attainment classification, certainly would not have to even consider installing Stage II.

4. The State of Tennessee proposed rules for Stage II vapor recovery in new counties but decided not to implement the rules. Dr. Wayne Davis, University of Tennessee, indicated that Stage II was not a significant strategy and would become even less significant as more and more vehicles are purchased that have ORVR.

5. In the study that I gave you, 5 states say they can eliminate Stage II in 2013 without having any effect on the emissions.

If states that already have Stage II can eliminate them in 6 years, why would Pima County which has no Stage II want to put it in????

Everything points to eliminating Stage II, yet some people want to have it installed. I asked Rep. Steve Farley if he has any studies like the NESCAUM study I gave you. He said he did not because Arizona is different. I suppose it is since we are in the attainment area.

This Stage II is in my opinion just feel good politics at the expense of people who don't have alot of money and the motoring public.

Pima County should have a Professional study done by a firm who can present the facts. You should not rely on people who make up information to advance their agenda.

Thanks,
Steve Kimbriel
T-Pec, Inc.

Dec. 6, 2007

Pima County Department of Environmental Quality
150 W. Congress, first floor
Tucson, Ariz. 85701

To Whom it May Concern:

The Sierra Club Rincon Group's Executive Committee voted unanimously on Nov. 29 to support the department's proposal to require retail petroleum service stations in the county to install Stage II Vapor Recovery Systems to protect human health. The Rincon Group is based in Tucson and represents nearly 4,000 Sierra Club members in Southern Arizona, most of them Pima County residents.

Pima Association of Governments and Pima DEQ proposed this in 1997-1998 and the Pima County Board of Supervisors approved it then, only to have the city of Tucson reject it in 1998. In the subsequent decade, ozone pollution, the stated reason for taking this measure, has remained a problem and probably worsened. The federal government is considering lowering the amount of ozone pollution allowed in the air we breathe as scientific studies continue to show that its deleterious effects on people with asthma and other respiratory diseases are so severe as to merit a lower standard. If it acts as suggested, Pima County air is so tainted that Stage II Vapor Recovery would be required.

If this pollutant has a detrimental impact on human health, we should not wait for its levels in the air to get so high as to exceed an admittedly arbitrary standard – or for the standard to be lowered. We should be proactive and protective of human health. Many humans, especially the very young and very old, are more sensitive than others and we should act to protect these people.

Even more serious to the Rincon Group and many health experts, the chemical vapors that escape from retail petroleum fueling nozzles are extremely dangerous before reacting with sunlight to form ozone pollution, and are breathed in directly by people filling their tanks. The worst of several highly toxic volatile substances that waft from petroleum products is benzene, known to be a potent human carcinogen. It is especially troublesome for children and has a tendency to cause leukemia in this age group.

The addition of Stage II Vapor Recovery collars to fueling pump nozzles, and the tubing to carry the vapors they capture back into storage tanks costs station owners and operators money. But we cannot put a price on human health and safety. Over the longer term, the sale of petroleum products is extremely lucrative and station owners and operators will recoup the cost of this wise protective measure.

While many newer automobiles have on-board systems to capture these dangerous vapors, the county cannot in good conscience wait several years to a couple of decades for the vehicle fleet to be mostly safe while motorists, service station workers, nearby residents, asthmatics, and others with respiratory conditions suffer.

We strongly support the proposed requirement of Stage II Vapor Recovery Systems in Pima County and urge the Board of Supervisors to approve this proposal when it comes before the board for a final action.

Sincerely,

Linda Rothchild
Vice Chair
Sierra Club Rincon Group

cc Members, Pima County Board of Supervisors
Pima County Administrator Chuck Huckelberry

Control of Hazardous Air Pollutants from Mobile Sources: Final Rule to Reduce Mobile Source Air Toxics

The U.S. Environmental Protection Agency (EPA) is issuing a final rule to reduce hazardous air pollutants from mobile sources. Hazardous air pollutants, also known as air toxics, include benzene and other hydrocarbons such as 1,3-butadiene, formaldehyde, acetaldehyde, acrolein, and naphthalene. Air toxics emitted by motor vehicles and other moving sources (called “mobile source air toxics,” or MSATs) contribute significantly to the nationwide risk from breathing outdoor air toxics. The final standards will significantly lower emissions of benzene and the other air toxics in three ways: (1) by lowering benzene content in gasoline; (2) by reducing exhaust emissions from passenger vehicles operated at cold temperatures (under 75 degrees); and (3) by reducing emissions that evaporate from, and permeate through, portable fuel containers.

Background

Section 202(1) of the Clean Air Act requires EPA to set standards to control hazardous air pollutants from motor vehicles, motor vehicle fuels, or both. EPA published a rule under this authority in March 2001 that established toxics emissions performance standards for gasoline refiners and committed to additional rulemaking to evaluate the need for and feasibility of additional controls. This final rule fulfills that commitment from the 2001 rule.

In addition, EPA is adopting emission standards for portable fuel containers (such as gas cans) under the consumer products authority of the Clean Air Act (section 183(e)).

Reason to Reduce Mobile Source Air Toxics

MSATs are known or suspected to cause cancer or other serious health or environmental effects. Benzene is of particular concern because it is a known carcinogen and most of the nation's benzene emissions come from mobile sources. People who live or work near major roads, or spend a large amount of time in vehicles, are likely to have higher exposures and higher risks. People living in homes with attached garages are also likely to be exposed to benzene levels that are higher than average.

Many MSATs are part of a larger category of mobile source emissions known as volatile organic compounds (VOC), which contribute to the formation of ozone and possibly particulate matter (PM). Ozone and PM can contribute to serious public health problems, including premature mortality, aggravation of respiratory and cardiovascular diseases, damage to lung tissues and structures, altered respiratory defense mechanisms, and chronic bronchitis.

Fuel Program

EPA is requiring that, beginning in 2011, refiners must meet an annual average gasoline benzene content standard of 0.62 percent by volume (vol%) on all their gasoline, both reformulated and conventional, nationwide. The national benzene content of gasoline today is about 1.0 vol%. (Gasoline sold in California will not be covered because California has already implemented more stringent standards similar to those EPA is establishing.)

The regulations include a nationwide averaging, banking, and trading program. In addition to the 0.62 vol% standard, refiners must also meet a maximum average benzene standard of 1.3 vol% beginning on July 1, 2012. A refinery's or importer's actual annual average gasoline benzene levels may not exceed this maximum average standard. The Agency expects that gasoline in all areas of the country will have lower benzene levels than they do now, and there will be less geographic variability in gasoline benzene levels. Areas where benzene levels are currently highest, such as Alaska and the Northwest, will experience the most significant reductions. EPA is providing special compliance flexibility for approved small refiners or any refiner facing extreme unforeseen circumstances.

Vehicle Program

EPA is adopting new standards to reduce non-methane hydrocarbon (NMHC) exhaust emissions from new gasoline-fueled passenger vehicles. NMHCs include many mobile source air toxics, such as benzene. Recent research indicates that the current test procedures often do not result in robust control of NMHCs at colder temperatures below 75 degrees. Therefore, we are requiring that passenger vehicles meet new NMHC exhaust emissions standards at colder

temperatures. As shown in Table 1, each manufacturer's vehicles will be subject to a sales-weighted fleet average NMHC level of 0.3 grams/mile for lighter vehicles weighing 6,000 pounds (lbs) or less. Vehicles above 6,000 lbs (which include trucks up to 8,500 lbs and passenger vehicles up to 10,000 lbs) must meet a sales-weighted fleet average NMHC level of 0.5 grams/mile. The standards phase in between 2010 and 2013 for the lighter vehicles, and between 2012 and 2015 for the heavier vehicles. A credit program and other provisions provide flexibility to manufacturers, especially during the phase-in periods.

Table 1 - Cold Temperature NMHC Standard and Phase-In Schedule

Vehicle Weight Class (GVWR) ^A	NMHC Emission Level (grams/mile)	Phase-In Schedule ^B (percent)					
		2010	2011	2012	2013	2014	2015
≤ 6000 lbs	0.3	25	50	75	100		
> 6000 lbs to 8500 lbs plus passenger vehicles up to 10,000 lbs	0.5			25	50	75	100

^AGross Vehicle Weight Rating

^BPercent of each manufacturer's fleet, by model year, that must comply with the standard.

Along with the vehicle exhaust standards, we are also adopting more stringent evaporative emission standards for new passenger vehicles. The new standards are equivalent to California's standards and codify the approach that manufacturers are already taking for 50-state evaporative systems. We are implementing the evaporative emission standards in 2009 for lighter vehicles and in 2010 for the heavier vehicles.

Portable Fuel Container Program

EPA is establishing standards that will limit hydrocarbon emissions that evaporate from or permeate through portable fuel containers such as gas cans. Gas cans are consumer products used to refuel a wide variety of gasoline-powered equipment, including lawn and garden equipment, recreational equipment, and passenger vehicles that have run out of gas. The new requirements also apply to diesel and kerosene containers. Starting with containers manufactured in 2009, the standard limits evaporation and permeation emissions from these containers to 0.3 grams of hydrocarbons per gallon per day. We are also adopting test procedures and a certification and compliance program in order to ensure that containers meet the emission standard over a range of in-use conditions.

EPA has worked closely with major container manufacturers and it is expected that the new cans will be built with a simple and inexpensive permeation barrier and new spouts that close automatically.

Program Benefits

The new fuel benzene standard and hydrocarbon standards for vehicles and gas cans will together reduce total emissions of mobile source air toxics by 330,000 tons in 2030, including 61,000 tons of benzene. As a result of this rule, new passenger vehicles will emit 45 percent less benzene, gas cans will emit 78 percent less benzene, and gasoline will have 38 percent less benzene overall. Our analyses show that this rule provides the biggest benefit to individuals from areas experiencing the highest levels of risk. That includes areas such as the Pacific Northwest, where fuel benzene levels are currently among the highest in the country, and cold temperature vehicle emissions are high as well.

In addition, the hydrocarbon reductions from the vehicle and gas can standards will reduce volatile organic compound (VOC) emissions (which are precursors to ozone and can be precursors to PM_{2.5}) by over 1 million tons in 2030. The vehicle standards will reduce direct PM_{2.5} emissions by 19,000 tons in 2030 and may also reduce secondary formation of PM_{2.5}. Once the regulation is fully implemented, the Agency estimates these PM reductions will result in the avoidance of nearly 900 premature deaths annually.

We estimate that most of the benefits of this final rule will come from the reduced direct PM_{2.5} emissions of the vehicle standards, estimated to be about \$6 billion in 2030. Some additional benefits will come from reductions in mobile source air toxics and VOCs, although we have not been able to monetize these benefits.

Estimated Costs per Program

The additional cost of producing gasoline to comply with the new benzene standard is expected to average \$0.0027 per gallon. This per-gallon cost would result from an average of \$14 million in capital investment in each refinery that adds equipment to reduce gasoline benzene levels.

We estimate that the annual net social costs of this rule will be approximately \$400 million in 2030 (expressed in 2003 dollars). These net social costs include the value of gasoline savings from the new fuel container standards, which is estimated to be worth \$92 million in 2030.

We estimate that the additional cost to manufacturers will be less than \$1 per vehicle. The costs will be associated with vehicle research and development and recalibration, as well as facilities upgrades to handle additional development testing under cold conditions. We are not anticipating additional costs for the new vehicle evaporative emissions standard since manufacturers will likely continue to produce 50-state evaporative systems that meet California's standards.

The average additional cost of producing portable fuel containers that comply with the new standards will be less than \$2 per can. The reduced evaporation from containers will result in gasoline savings over the life of the container that will more than offset the increased cost for the container.

For More Information

You can access documents on this rulemaking on EPA's Office of Transportation and Air Quality Web site at:

www.epa.gov/otaq/toxics.htm

For further information, please contact the Assessment and Standards Division at:

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