



# Fiscal Year 2005 Special Project

## Air Aware II Gas Can Exchange Project

City of Albuquerque  
Environmental Health Department  
Air Quality Division  
October 2005



Alfredo R. Santistevan,  
Director



## Forward

This report is being provided to the United States Environmental Protection Agency's Region 6 representatives upon completion of the Air Aware II - Gas Can Exchange Project for fiscal year 2005. The report documents the planning and implementation, and describes the success and lessons learned of the project.

The Environmental Health Department, Air Quality Division (Division) applied for and received grant funding to conduct this project to engage the participation of the general public to raise the level of awareness regarding air quality. The target audience included the residential communities in Bernalillo, Sandoval and Valencia counties.

Division staff gratefully acknowledges the cooperation of the Environmental Health Department, Vehicle Pollution Management Division, and the voluntary efforts from home, garden, and landscaping businesses; automotive retail parts sales; and chainsaw and lawn mower sales and service businesses that volunteered to act as agents to collect vouchers and distribute gas cans to the public.

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## FY05 Special Project Air Aware II - Gas Can Exchange Project

### Goal

The goal of this year's Air Aware campaign was to raise the public's awareness of issues affecting ambient air quality and resource conservation. The Air Quality Division (Division) developed this program to capture the public's attention and enable them to act! Their participation in Air Aware II resulted in the reduction of air pollution and toxics that are emitted from the storage and transfer of fuel from portable fuel containers to small gas powered equipment such as lawn mowers, chainsaws, and edgers. The goals were ground-level ozone awareness and resource conservation. These goals were significantly optimized by the public's growing concern for increasing fuel costs and the decreasing availability of oil, especially due to the after effects of the 2005 hurricane season.

### Project Overview

The Gas Can Exchange project was modeled after the 2004 Air Aware I - Gas Cap Exchange Project. Division staff developed a voucher to exchange empty one to five gallon plastic, metal or composite gas can(s) for a California Air Resources Board approved portable fuel container. Participants were instructed to take their empty cans to the Vehicle Pollution Management Division (VPMD) Facility, Mondays through Fridays from 8:00 am to 5:00 pm, in order to receive their voucher. The project was initiated on April 12 and concluded on August 30, 2005. This expiration date was included on outreach materials and vouchers to indicate closure to the program.

The project was not restricted to any community member; regional residents were encouraged to participate. Staff limited the number of cans accepted to a maximum of five cans to allow as many participants as possible to share in the exchange process. VPMD screened the participants to validate that only *residents* received vouchers to prevent any unfair advantage to any business.

All gas cans that were collected from the public were either recycled for their value as scrap metal or disposed of as municipal solid waste at the City of Albuquerque's Cerro Colorado Municipal Solid Waste Landfill.

Division staff regulated the delivery of gas cans to Air Aware Partners and monitored voucher collection on an as-needed basis. Staff documented these exchanges using Microsoft Excel and Access databases to generate

reports to Division management and EPA Region 6 at the end of the project. AQD staff worked with local Pep Boys management staff, who were contracted to provide the gas cans and to schedule shipments of cans and deliveries in a timely manner.

## Project Implementation

Planning for the project was initiated early in the 2005 federal fiscal year for implementation during the following spring and summer. The project was designed to coincide with the height of the summer ground-level ozone season, starting April 12 (just before Earth Day) and ending on August 30.

### **The Gas Can**

We began with the selection process for a California Air Resource Board-CARB approved spill-proof spout and portable fuel container. We evaluated four CARB approved containers/spouts and chose Scepter's two gallon Eco-Fil container. This container's spout was found to meet the performance specification as set forth by CARB: Title 13, Motor Vehicles; Division 3, Chapter 9, Off Road Vehicles and Engines Pollution Control Devices; Article 6 Portable Fuel Containers and Spouts. Article A (an attachment to this report) is the letter from CARB documenting that Eco-Fil's spout meets the spill-proof criteria. Spill proof containers can be difficult to operate, especially for senior citizens. Scepter's container was selected for its ease in handling and detachable booklet in three languages (Spanish, English, and French) - key elements in the selection process.



Fig. 1 Scepter Eco-Fil #AB762S

### **The Voucher**

Division staff developed a carbonless 3-part voucher to document the public's participation and monitor the distribution of gas cans (see Article B Gas Can Voucher). The voucher provided information regarding the goal of the project, the list of Air Aware Partners where participants could redeem the voucher for a new gas can, and important contact information for questions and answers.

### **The Process**

The public was instructed to take their (empty) gas can to the Vehicle Pollution Management Division (VPMD) facility at 1500 Broadway NE to



Fig. 2 Vehicle Pollution Management

exchange for a voucher that could be redeemed at any of the 29 Air Aware Partners located in Albuquerque, Belen, and the Village of Los Lunas.

VPMD staff accepted the empty gas cans from the participants who signed their name as a formality to accept a voucher(s) and a set of four TireMinders® along with an Instructional Guide. A daily or weekly count of vouchers that were distributed was kept and provided to Division staff to monitor voucher and gas can distribution. The gas can contractor and Air Aware Partners were in close contact with coordination staff to maintain the supply of gas cans in the field. Staff also fielded questions and addressed complaints as appropriate.

Figures 3 and 4 show the storage bins that were located at VPMD to store recyclable and waste gas cans. The bins were supplied and emptied through a service contract with the City of Albuquerque's Solid Waste Management Department (SWMD). SWMD was also contracted for disposal services and facilitated metal recycling with the City's currently contracted metal recycling company - Albuquerque Car Crushers.



Fig. 3 Metal Gas Can Recycling Bin



Fig. 4 Gas Cans for Disposal

**Air Aware II Partners**

The Division enjoys strong support from the retail community in Albuquerque. Pep Boys and Carquest, past Air Aware I - Gas Cap Partners, enthusiastically agreed to participate in the 2005 Gas Can Exchange Project. Division staff also recruited retail representatives from the home improvement community, nurseries, lawn and garden retail businesses, lawn mower, chain saw, and all-terrain vehicles sales and service businesses. Gas cans are used or sold at these businesses making them a logical partner for public participation.

All Air Aware Partners were provided training/orientation materials and outreach posters prior to the project's implementation. Attached is the Orientation Letter (Article C) that was used in training for Air Aware Partners and city staff. Air Aware II Partners are listed below in Table 1.

<b>A.B.E.S. Saw &amp; Mower</b>	<b>Alameda Greenhouse</b>	<b>Albuquerque Power Equipment Inc.</b>
<b>Aragon's Lawn &amp; Wood Center</b>	<b>Carquest (6)</b>	<b>Frank's Supply</b>
<b>Home Depot (4)</b>	<b>Martin Saw &amp; Tool</b>	<b>Osuna Nursery &amp; Landscaping</b>
<b>Pep Boys (5)</b>	<b>Precision Sharpening Inc</b>	<b>Rehm's Nursery</b>
<b>Rose-dale Motorsports</b>		<b>Rowland's Nurseries (5)</b>

Table 1. Air Aware II Partners

**Community Outreach**

Air Aware II advertisements were developed by Division staff with assistance from a local public relations consultant. Internet hot-link, utility bill leaflet, newspaper advertisement, and poster (Figures 5 through 8 on pages 4 through 7) show the advertisements that were developed to inform the public.



Fig. 5 AA II Gas Can Exchange Internet Hot-link

Air Aware II posters and utility bill advertisements included translations in Spanish, to serve the large Spanish speaking population in Bernalillo county. Staff placed advertisements at all 29 Air Aware Partner facilities, libraries,

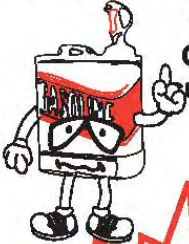


community centers, senior centers, multi-housing (apartments) units, and City and County offices. Figures 9 through 14 on page 8 show photographs taken of displayed posters at a few Air Aware Partner locations.

Utility bill leaflets were sent out during the month of April, timed for Earth Day attention. Posters were distributed two days prior to the April 12 kick-off. Local radio and internet advertisements were aired for 30 days starting April 18 and newspaper advertisements were placed on two dates: May 26, and June 1.


Overall, the utility bill leaflets and radio advertisements provided the most cost effective means of community outreach. Well placed/planned advertisements resulted in extraordinary participation that resulted in the program's initial supply of 1,500 gas cans being exhausted in less than four weeks.

**If your gas can can't, swap it for our can that can.**



Vented gas cans leak vapors that contain Volatile Organic Compounds-VOCs. VOCs react with other air pollutants in the sunlight to form ground-level ozone which pollutes our air.

Exchange your leaky old gas can for a **FREE** two gallon, non-vented, spill-proof gas can. Bring your **EMPTY** old, gas can to the Vehicle Pollution Management Division (VPMD) Headquarters at 1500 Broadway Blvd. NE for a voucher that can be redeemed at an Air Aware Partner near you. If you have any questions, call us at 764-1110.



**TireMinders® FREE to 1st 1000 customers!**

Environmental Health Department  
Air Quality & Vehicle Pollution Management

ALFREDO R. SANTISTEVAN, DIRECTOR

MARTIN J. CHÁVEZ, MAYOR

**¿No sirve su lata de gasolina? ¡Cámbiela por una nueva!**

De las latas de gasolina se escapan vapores que contienen hidrocarburos (HC). ¡Los HCs se combinan con otros contaminantes y el sol para formar ozono a nivel del suelo!

Cambie su lata de gasolina por una lata de gasolina nueva, de dos galones, a la cual no se escaparán vapores o gasolina.

**¡Es gratis!**

Lleve su lata de gas vieja y oxidada **vacío** a la Sede de la División de Administración de la Contaminación del Vehículo (VPMD), 1500 Broadway Blvd. NE, y le daremos un bono para una nueva lata de gas de plástico.

Si tiene preguntas, llame al 764-1110 para más información.




Notice to persons with disabilities: If you have a disability and require special assistance, please call [505] 768-2600 (voice). TTY users, please call the New Mexico Relay at 1-800-659-8331.

MARTIN J. CHÁVEZ, MAYOR

Fig. 6 AA II Utility Bill Flyer (front & back)

## If your gas can can't,

Vented gas cans leak vapors that contain

Volatile Organic Compounds–VOCs.

VOCs react with other air pollutants in the sunlight to form ground level ozone.



## Swap It for the can that can.

Exchange your leaky old gas can for a FREE two gallon, non-vented, spill proof gas can. Bring your EMPTY old, gas can to the **Vehicle Pollution Management Division (VPMD)** Headquarters at 1500 Broadway Blvd. NE for a voucher that can be redeemed at an Air Aware Partner near you. If you have any questions, call us at **764-1110**. A list of participating partners is available online at <http://www.cabq.gov/airquality/airaware2.htm>

Mayor  
Martin J. Chávez



Director  
Alfredo Santistevan



Fig. 7 AA II Gas Can Exchange Newspaper Advertisement

The project was initiated with support from Mayor Martin J. Chávez, Chief Administration Officer James Lewis, Environmental Health Department Director Alfredo R. Santistevan, and all four air quality program managers. Local media and the City of Albuquerque's GOV Channel-16 covered Mayor Chavez's press conference on April 12 to kickoff the Air Aware II project.

Staff was invited to discuss the project during live radio show broadcasts, on 710 KOB-AM Rowland's Garden Lore Program, 106.3 KAGM-FM Live-Talk Radio Show with Dianne Anderson, and as a guest speaker at Plants of the Southwest Nursery. Free press included written articles in the Albuquerque Journal, City of Albuquerque's Office of Neighborhood Coordination's "Neighborhood News," the Division's AirShed newsletter, television advertisements on GOV Channel-16, the University of New Mexico's Way-To-Go internet site <http://www.unm.edu/waytogo/>, and on the Duke City Fix web site <http://www.dukecityfix.com>.

# If your gas can can't,

Vented gas cans leak vapors that contain Volatile Organic Compounds-VOCs. VOCs react with other air pollutants in the sunlight to form ground-level ozone which pollutes our air.



## ¿No sirve su lata de gasolina?

De las latas de gasolina se escapan vapores que contienen hidrocarburos (HC). ¡Los HCs se combinan con otros contaminantes y el sol para formar ozono a nivel del suelo!

## swap it for our can that can.

Exchange your leaky old gas can for a **FREE** two gallon, non-vented, spill-proof gas can. Bring your **EMPTY** old, gas can to the Vehicle Pollution Management Division (VPMD) Headquarters at 1500 Broadway Blvd. NE for a voucher that can be redeemed at an Air Aware Partner near you. If you have any questions, call us at 764-1110.

## ¡Cámbiela por una nueva!

Cambie su lata de gasolina por una lata de gasolina nueva, de dos galones, a la cual no se escaparán vapores o gasolina. ¡Es gratis! Lleve su lata de gas vieja y oxidada **vacio** a la Sede de la División de Administración de la Contaminación del Vehículo (VPMD), 1500 Broadway Blvd. NE, y le daremos un bono para una nueva lata de gas de plástico. Si tiene preguntas, llame al 764-1110 para más información.



**Air Aware II - Gas Can Exchange Project runs from April 12 thru August 31**

Environmental Health Department  
Air Quality and Vehicle Pollution Management

Notes to persons with disabilities: If you have a disability and require special assistance, please call (505) 768-2600 (voice). TTY users, please call the New Mexico Relay at 1-800-652-6331.



MAYOR  
MARTIN J. CHAVEZ



DIRECTOR  
ALFREDO R. SANTISTEVAN

Fig. 8 AA II Poster

## Air Aware Partners



Fig. 9 Frank's Supply



Fig. 10 Home Depot - Eubank



Fig. 11 Albuquerque Power Equipment



Fig. 12 Rehm's Nursery



Fig. 13 Precision Sharpening



Fig. 14 Martin Saw & Tool

## TireMinders®

Staff included a purchase of 1,000 sets of TireMinders® in the Air Aware II grant to encourage the public's participation and to promote a better understanding between fuel economy and air quality. A set of four TireMinders® was given to each of the first 1,000 participants that brought in an old, empty, gas can for exchange.

TireMinders® are patented (U.S. Patent #6,525,655) valve stem covers that change color from green to red when a vehicle's tire pressure falls below a specific range. Staff purchased TireMinders® in three ranges; 26-29, 30-33, and 34-38 pounds per square inch (psi), to accommodate a variety of recommended tire pressures (passenger cars and light trucks). A contractual agreement was established with the licensed wholesale distributor, Pep Boys, for participants to exchange any set of TireMinders® for the appropriate psi range if we ran out of any size. The most popular size was 30-33 psi for most passenger cars and trucks.



Fig. 15 TireMinders®

Staff developed a TireMinders® Installation guide for educational purposes for distribution to each customer that received a set (see Article E). Proper tire pressure is integral to reduced air pollution emissions, improved fuel efficiency, and a safer ride. These tools, as well as timely vehicle maintenance have a direct effect on a vehicle's fuel economy and the amount of pollutants generated by a vehicle. This message is consistent with the Vehicle Fuel Economy tool on the Division's web site <http://www.cabq.gov/airquality/fueleconomy.html>.

## Results

Staff was surprised and pleased at the swift response from the community. The initial purchase of 1,500 gas cans and 1,000 sets of TireMinders®, along with a corresponding amount of vouchers (1,500) were quickly exhausted within the first three weeks of the project. Staff then requested and received approval from Air Quality Division management to purchase 1,000 additional cans/vouchers and 250 more sets of TireMinders®.

Warehousing and distribution of the spill proof cans was accomplished with the contractual assistance from the gas can and TireMinders® wholesale distributor, Pep Boys. Shipments were staggered over three months and were subsequently delivered to 27 of the 29 Air Aware Partners on an as needed basis.

Charts 1 and 2 below show the number of gas cans that were distributed and vouchers processed throughout the corporate and small business Air Aware Partner network. Discrepancies between the number of gas cans distributed and vouchers processed were not uniform due to losses of gas cans or vouchers at individual Air Aware Partners.

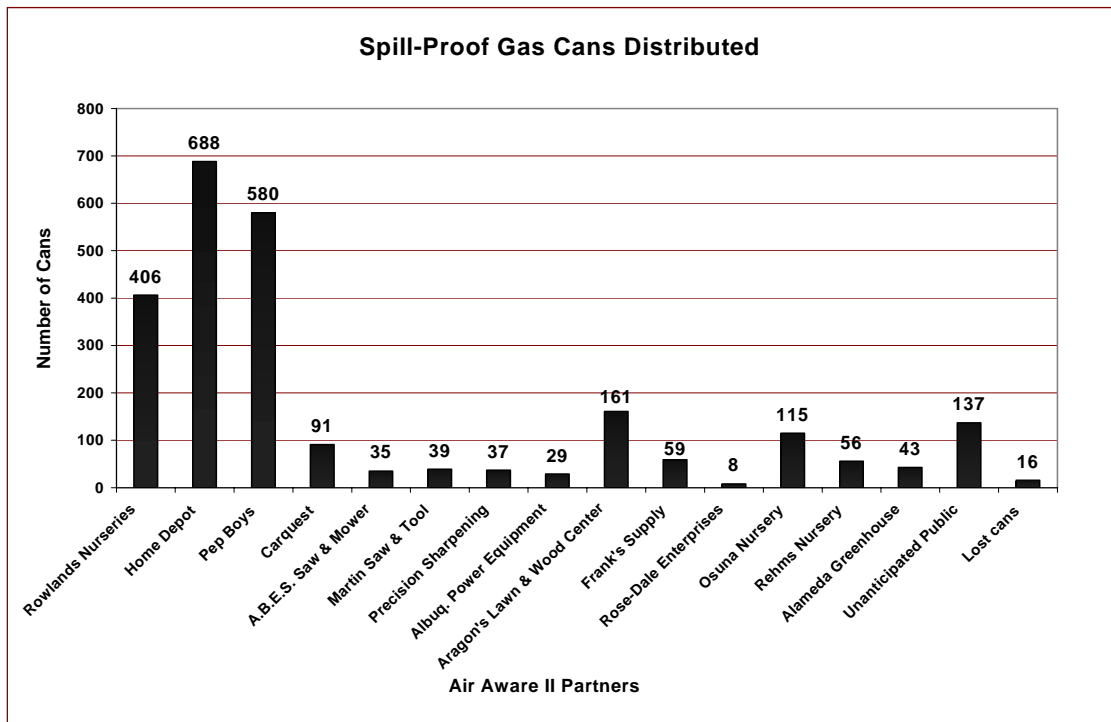


Chart 1 Gas Can Distribution

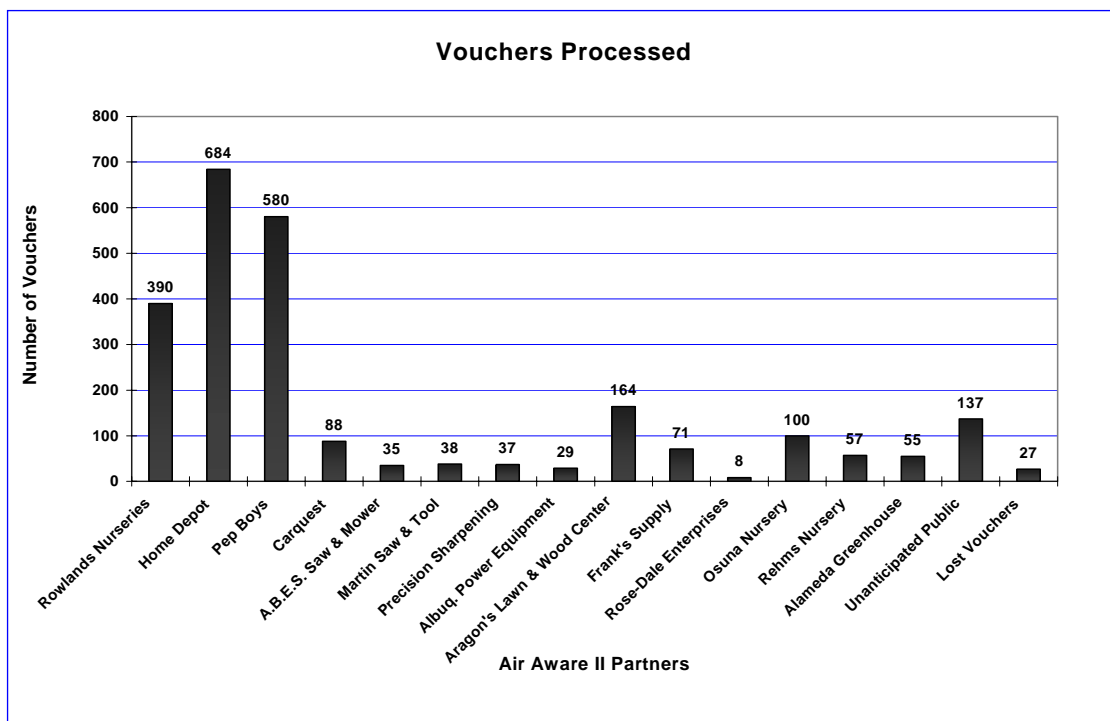


Chart 2 Vouchers Processed

The project exploded in May with a tremendous response from the community. Chart 3 below shows the time line for gas can distribution and vouchers that were collected. Shipments of more gas cans from the initial 1,500 purchase were scheduled to keep up with demand.

During the month of May, the additional purchase of 1,000 cans arrived (see Chart 3 below - May 16) and this supply met a moderate response that resulted in better distribution over the next three months. Demand decreased dramatically as seen on the time line (below) after July 18 when staff issued the last Gas Can Exchange Voucher. At that time, Division staff began taking names on a waiting list for potential unclaimed gas cans. Staff began recovering unclaimed gas cans for reallocation after August 30 when the Vouchers expired. Every opportunity was provided to the public to process their Voucher before the end date. The negative trend documents the reclamation process.

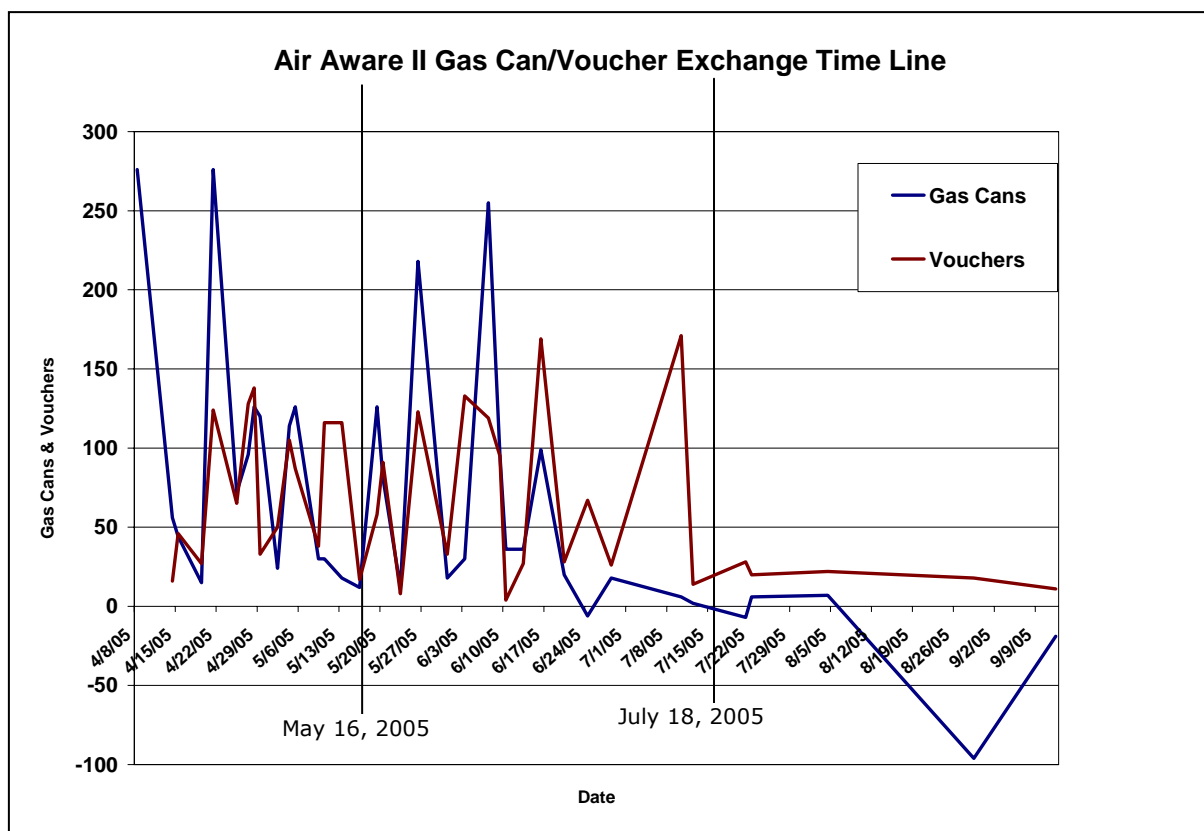


Chart 3 Gas Can/Voucher Exchange Timeline

Approximately 130 gas cans were delivered to voucher recipients that missed the deadline or those on the waiting list that wanted to recycle or discard their leaky can, but did not receive a voucher after July 18 and were willing to wait for a can that was not claimed. Staff assumes that unprocessed vouchers were lost or the participant changed their mind. Less than one percent (16 cans) of the total 2,500 gas cans purchased was lost. Staff attributes this to the large amount of personnel involved in processing the vouchers for exchange at individual Air Aware Partners.

## Disposal Details

The Gas Can Exchange project posed a potential complication with hazardous material/waste management. Outreach information stressed “empty containers” but staff anticipated the potential for fuel management issues to arise and developed a procedure in cooperation with the City of Albuquerque’s Household Hazardous Waste Collection Program. The attached Article D is a voucher that was designed for proper management and cost recuperation of any fuels that might have been brought to VPMD by a participant. Ultimately, gas cans containing fuels were not received at VPMD.

Only **empty** cans were accepted. Cans were segregated into two waste streams: one bin for recycling metals cans, and one bin for storing plastic or composite cans that were destined for disposal according to local, state and federal regulations. The photographs below (Figures 16 and 17) show the cans that were delivered to the metals recycler and a SWMD bin of cans that was delivered to the landfill for disposal. Approximately two tons of gas cans were recycled and land-filled during this project. The attached articles F and G are a “Certificate of Recycling” and a “Certificate of Disposal” as required by our grant proposal for proper management of all wastes.



Fig. 16 Gas Cans for Recycling



Fig. 17 Gas Cans for Disposal

## Projected VOC/ROG Emission Reductions

Staff researched air emissions reductions as documented by CARB on their web site. Portable gas cans are responsible for the release of volatile organic compounds (VOCs) or Reactive Organic Gases (ROGs) that contribute to smog or ground-level ozone. Leaking or old gas cans contribute to smog formation in several ways;

- ↑ The permeation of VOCs through plastic container walls,
- ↑ The action of filling and dispensing fuels into and out of the gas can,
- ↑ Spillage or over-filling,
- ↑ The release of VOCs through vent holes in plastic or metal containers, and
- ↑ Leaking or open gas can spouts.



Per CARB's Fact Sheet "New Regulations for Portable Gas Cans and Gas Can Spouts<sup>1</sup>, "portable gas cans account for approximately 87 tons per day (TPD) of smog-forming ROG/VOCs escaping into California's air." Division staff derived VOC/ROG emission reductions from the figures calculated on the Fact Sheet.

#### California Air Resources Board Calculations

87	Tons/Day	X	2,000	Lbs/Ton	=	174,000	Lbs/Day
174,000	Lbs/Day	X	365	Day/Yr	=	63,510,000	Lbs/Yr
63,510,000	Lbs/Yr	/	9,800,000	Cans	=	6.48	Lbs/[Can/Yr]
6.48	Lbs/[Can/Yr]	X	453.6	g/Lb	=	2,940	g/[Can/Yr]
2,940	g/[Can/Yr]	/	365	Day/Yr	≈	8.0	g/[Can/Day]

#### Albuquerque/Bernalillo County Calculations

8.0	g/[Can/Day]	X	2,500	Cans	=	20,000	g/Day
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If the California Standard Emission Estimate of 8.0 g/Can/Day is the initial value to estimate our potential emission reduction, then the difference between our final emission estimate is calculated below.

Note, under the new standard established by CARB, certified cans are required to meet a 0.4g/Gal/Day vapor permeation rate. The Scepter can we specified met the criteria. See Attachment E.

Calculations assume emission reductions were for a two gallon container that was exchanged in our program.

0.4	g/[Gal/Day]	X	2	Gal/Can	=	0.8	g/[Can/Day]
0.8	g/[Can/Day]	X	2,500	Cans	=	2,000	g/Day
20,000	g/Day	-	2,000	g/Day	=	18,000	g/Day
18,000	g/Day	/	453.6	g/Lb	=	39.7	Lb/Day
39.7	Lb/Day	X	365	Day/Yr	=	14,484	Lb/Yr

CARB compares their estimated emission reduction of 87 T/Day to the emissions from 1,000,000 cars per day. Thus, comparatively, our estimated ROG reduction would be approximately 230 cars per day or 83,950 cars per year. Consider also the potential ROG reduction of 14,484 Lbs/Yr (7.25 T/Yr) as comparable to the annual ROG emission from a gasoline station receiving and dispensing 1,115,000 gallons of gasoline per year equipped with a Stage I Vapor Recovery System (required in Bernalillo County, New Mexico).

<sup>1</sup> California Environmental Protection Agency, Air Resources Board, Fact Sheet, September 1999

## Projected Toxics Emission Reductions

Staff projected that approximately 14,484 pounds per year of ROG were potentially mitigated through the exchange of 2,500 CARB approved portable fuel containers. This project assumes consistent vapor releases from a variety of different gas cans in different sizes and made from different materials. Staff collected metal cans, plastic cans, five gallon jerry cans, "new" cans as well as some very old military type fuel cans; even a used one-gallon plastic milk jug was accepted as an even exchange for a CARB gas can. The older cans were vented and some were cracked.

Assumptions are made that 2,500 gas cans were exchanged and that the emissions were evenly distributed for all cans. We cannot evaluate emissions due to variables such as ambient air temperatures, humidity, or barometric pressures changes which may affect the potential reduction of VOC/ROG emissions. The Gas Can Exchange project was conducted during a moderately warm summer in 2005 in Bernalillo County at altitudes over 5,000 feet. Temperatures average from cool nights in the low 40s°F to hot summer days in the upper 90s°F. See National Weather Service climatology for the Albuquerque area [[http://www.srh.noaa.gov/abq/climate/march\\_abq.htm](http://www.srh.noaa.gov/abq/climate/march_abq.htm)].

Toxics Emissions (Volatile Hazardous Air Pollutants)	Chemical Abstract Service Number	Weight Percent	Emission Reduction Estimate, Lb/Yr
Benzene	71432	0.7	101.4
N-Hexane	110543	1.1	159.3
Toluene	108883	1.0	144.8
Hydrocarbons	Chemical Abstract Service Number	Weight Percent	Emission Reduction Estimate, Lb/Yr
N- Propane, Isobutane, N-Butane, Isopentane, N-Pentane	74986, 75285 106978, 78784 109660	78.6	11,384.4
Cis-Dimethyl Butane Trans-Dimethyl Butane	75932 79298	1.6	231.7
2-Methyl Pentane 3-Methyl Pentane	107835 96140	6.3	912.5
3,3-Dimethyl Pentane	562492	1.1	159.3
Methyl Cyclopentane	96377	1.2	173.8
Cis-2-Pentene	627203	0.6	86.9
3-Methyl Hexane	589344	0.7	101.4
Other Hydrocarbons (less than 0.5% individual weight percents)	--	7.1	1,028.4

Table 3. Projected Toxics Emission Reductions

## Lessons Learned

The voucher system has its limitations and provides for the opportunity for the system to be manipulated. During Air Aware II, two Air Aware Partner businesses processed 15 voucher duplicates that had already been previously exchanged for gas cans. In future projects that may use a voucher system, we would recommend using a two-copy carbonless form instead of a three-copy form to minimize duplication. Improved communication and additional training of the staff at all Air Aware Partners eventually eliminated this problem.

Division staff instituted controls to prevent running out of vouchers and cans by holding approximately 30 vouchers from the original distribution to make sure that enough cans would be available for citizens with a voucher. Staff also stored about 30 cans to deliver to participants who attempted an exchange only to find out that the nearest Air Aware Partner was temporarily out of stock.

The Division also experienced some issues with several Air Aware Partners. Initially, two Carquest franchises in Valencia County (Belen and Los Lunas) volunteered to participate, but when they didn't have any customers for the spill-proof cans, Division staff had to collect their cans and distribute them to the other partners. Additionally, during the first month of the project, a Home Depot filed their first 12 gas can vouchers with their corporate office. Staff subsequently eliminated them from participation because they could not restore the documentation.

## Success

The Air Aware II- Gas Can Exchange Project, since it followed so closely on the heels of the Air Aware I - Gas *Cap* Exchange Project, gained early momentum. The target audiences were similar - people who use **fuel** to power their tools and vehicles. The goals of each project were identical - "to raise the public's awareness of air quality." Our hope is to build on each projects' success so that the public will "value" air quality as a necessary resource for their community and their public health. Through the Air Aware II - Gas Can Exchange Project, people have gained a better understanding of the potential sources of air pollution and how they can participate in helping to minimize air pollutant emissions toward a goal of cleaner air.

Air Aware projects are important initiatives for the Air Quality Division. Bernalillo County's air shed currently remains at 91% of the 8-hour National Ambient Air Quality Standard for ground-level ozone. Air Aware I and II, and hopefully subsequent projects, will be part of beneficial life lessons learned and successes to be passed on to future generations in maintaining the standards.

## Article A

### Air Aware II Gas Can Voucher



Terry Tamminen  
Agency Secretary

## Air Resources Board

Alan C. Lloyd, Ph.D.  
Chairman

1001 I Street • P.O. Box 2815  
Sacramento, California 95812 • [www.arb.ca.gov](http://www.arb.ca.gov)



Arnold Schwarzenegger  
Governor

### MEMORANDUM

TO: James Ryden, Chief  
Enforcement Division

THRU: William Loscutoff, Chief  
Monitoring and Laboratory Division *WLL*  
Manjit Ahuja, Chief *Manj*  
Stationary Source Testing Branch

FROM: Dennis Goodenow, Manager *DME*  
Source Test Section

DATE: September 17, 2004

SUBJECT: PORTABLE FUEL CONTAINERS AND SPOUTS

As requested by Enforcement Division staff, Monitoring and Laboratory Division staff conducted an engineering evaluation of portable fuel container spouts to determine if the spouts meet the automatic closure pressure performance specification set forth in California Code of Regulations, Title 13, Motor Vehicles; Division 3, Air Resources Board (ARB), Chapter 9, Off Road Vehicles and Engines Pollution Control Devices; Article 6, Portable Fuel Containers and Spouts. The tests were conducted in accordance with ARB Test Method 511, Section 7(4) (pressure test).

Six Scepter spill-proof spouts (I.D. Nos. 04-1135 through 04-1140) were tested and found to meet the performance specification.

If you have questions on the results, please contact David Frisk at [dfrisk@arb.ca.gov](mailto:dfrisk@arb.ca.gov) or Roy Butz at [rbutz@arb.ca.gov](mailto:rbutz@arb.ca.gov).

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.*

California Environmental Protection Agency

Printed on Recycled Paper

## Article B

### Air Aware II Gas Can Voucher



No 1501

**GAS CAN EXCHANGE VOUCHER**



**I'm Taking Action  
For Cleaner Air!**

Ground-level ozone is the main component of SMOG. It can aggravate respiratory conditions like asthma, emphysema, and Chronic Obstructive Pulmonary Disease (COPD). By exchanging your old gas can for this voucher to receive a new two gallon spill-proof gas can, you are taking action to help reduce the release of volatile organic compounds (VOCs) into the air. VOCs contribute to the formation of ground-level ozone.

***Thank you for taking action to prevent air pollution!***

Redeem this voucher for a two (2) gallon spill-proof gas can at an Air Aware Partner (see below) nearest you.

- |                                |                             |                                     |
|--------------------------------|-----------------------------|-------------------------------------|
| A.B.E.S.<br>Saw & Mower        | Alameda<br>Greenhouse       | Albuquerque Power<br>Equipment Inc. |
| Aragon's<br>Lawn & Wood Center | Carquest                    | Frank's Supply                      |
| Home Depot                     | Martin<br>Saw & Tool        | Osuna<br>Nursery & Landscaping      |
| Pep Boys                       | Precision<br>Sharpening Inc | Rehm's Nursery                      |
| Rose-dale<br>Motorsports       |                             | Rowland's Nurseries                 |



Martin J. Chávez, Mayor

**Attention: Air Aware Partner -**  
The customer will exchange white & yellow copies of the voucher for a new 2 gallon gas can. The white copy will be picked up by AQD. The yellow copy is for your files.

City of Albuquerque  
Environmental Health Department  
Air Quality & Vehicle Pollution Management Divisions  
For more information contact Therese Martinez-Loner  
Phone: 768-1970 Email: [tloner@cabq.gov](mailto:tloner@cabq.gov)



Alfredo R. Santistevan  
Director

Original ~ White AQD      Yellow ~ Air Aware Partner      Pink ~ VPMD  
**Redeem This Voucher Before Expiration Date - August 30, 2005**

Notice to persons with disabilities: If you have a disability and require special assistance, please call [505] 768-2600 (voice). TTY users, please call the New Mexico Relay at 1-800-659-8331.



## Article C

### Air Aware II Orientation Letter



# CITY OF ALBUQUERQUE

*Environmental Health*

Alfredo R. Santistevan, Director



April 6, 2005

Dear Air Aware II Partner:

Thank you for your support of the 2005 Air Aware II - Gas Can Exchange project. The mission of the project is to increase the public's air quality awareness and to engage them in an activity that will minimize the generation of ground-level ozone or smog in Bernalillo County. Old leaky gas cans are a source of volatile organic compounds (VOCs). VOCs react with other air pollutants in the presence of sunlight to form ground-level ozone. With your help and their participation, we will exchange an empty leaky gas can for a new 2-gallon spill-proof California Air Resources Board (CARB) approved portable fuel container; gas can.

We are advertising the project via a press conference led by Mayor Martin J. Chávez in April 2005, accompanied by radio, cinema screen, internet, poster, and water bill advertisements. Copies of the posters will be provided to you for posting in high visibility areas. To participate in the project, members of the general public must first take an EMPTY gas can to the Vehicle Pollution Management Division (VPMD) Center at 1500 Broadway Blvd. to exchange for a 3-part voucher which in-turn they can exchange with an Air Aware Partner; you, for a free spill-proof CARB approved gas can.

Environmental Health  
Department

Air Quality Division

P.O. Box 1293

VPMD, the public participant will be given an original voucher set consisting of a white and yellow voucher to exchange for one free 2-gallon spill-proof CARB approved gas can. The original white vouchers will be collected by Air Quality Division staff; yellow vouchers are for your records, and the pink copies will be retained by VPMD for cross-reference. These copies are necessary documentations for project accountability.

Albuquerque

New Mexico 87103

As an Air Aware Partner, you will be given an initial supply of spill-proof CARB approved gas cans. This amount is dependent on your initial input regarding your storage space and estimated response of the public. As the project progresses, your supply will be replenished based on the number of vouchers that you proffer; one voucher per gas can. Thus, when you request a new supply of gas cans, the same number of vouchers will be collected, e.g. 10 gas cans for 10 vouchers. Vouchers that are collected must equal the cans distributed.

[www.cabq.gov](http://www.cabq.gov)

We are purchasing 1500 2-gallon spill-proof (Scepter) CARB approved gas cans. Only these cans will be exchanged in the project. The containers provided through the project must not be offered for sale. The project will continue until August 30, 2005 or when the supply has been exhausted. I will be in contact with all the Air Aware partners to maintain gas can supplies, pick up vouchers, keep you apprised on the progress of the project, and trouble shoot any problems that arise. Each Air Aware Partner can contact me at 768-1970 regarding their gas can supply or any questions that will come up.

All final copies and accounting will be included in a report to Management, EPA, and you.

Thank you for your support,

Therese Martinez-Loner  
Community Liaison  
Albuquerque Environmental Health Department  
Air Quality Division  
Education, Outreach & Technical Assistance Section

*Albuquerque - Making History 1706-2006*

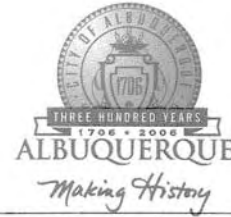
## Article D

### Hazardous Waste Management Voucher

# CITY OF ALBUQUERQUE

*Albuquerque Environmental Health Department*  
Alfredo R. Santistevan, Director

APRIL 12, 2005



HOUSEHOLD HAZARDOUS WASTE COLLECTION  
CENTER

OPERATED BY RINCHEM COMPANY, INC.

6133 EDITH BLVD NE

MONDAY – WEDNESDAY – FRIDAY

8:30 am - 4:30 pm

SATURDAY

8:00 am - 3:00 pm

Environmental Health Dept.  
Air Quality Division

P.O. Box 1293

Albuquerque

New Mexico 87103

[www.cabq.gov](http://www.cabq.gov)

DISPOSAL VOUCHER NO. 000003

UPON AUTHORIZED SIGNATURE BELOW OF VEHICLE POLLUTION  
MANAGEMENT DIVISION (VPMD) STAFF, THIS VOUCHER MAY BE  
USED BY CITY OF ALBUQUERQUE AND BERNALILLO COUNTY  
RESIDENTS FOR PROPER DISPOSAL OF HOUSEHOLD HAZARDOUS  
WASTE TO INCLUDE:

APPROXIMATELY \_\_\_\_\_ GALLON(S) OF LIQUID FUEL

LIQUID FUEL IS CONTAINED IN  METAL  
 PLASTIC  
 OTHER (\_\_\_\_\_)

SIZE OF CONTAINER IS APPROXIMATELY \_\_\_\_\_ GALLON(S)

\_\_\_\_\_  
PRINTED NAME OF VPMD STAFF

\_\_\_\_\_  
SIGNATURE OF VPMD STAFF

DO NOT ACCEPT THIS VOUCHER AFTER AUGUST 31, 2005  
DO NOT ACCEPT PHOTOCOPIES OF THIS VOUCHER

*Albuquerque - Making History 1706-2006*

# Article E

## TireMinders® Installation Guide



Martin J. Chávez, Mayor

# City of Albuquerque

## Environmental Health Department



Alfredo R. Santistevan, Director

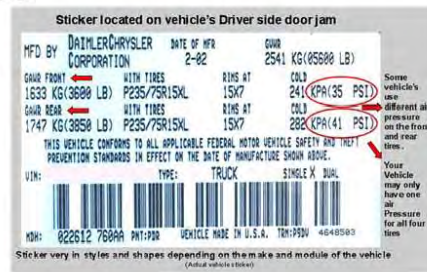
### TireMinders® Installation

#### How to install Tire Minders?

Remove your old valve cap and fill your tires to the recommended pressure, then install the Tire Minders.

#### Where can I find the tire pressure for my vehicle?

If the tires are original equipment, the correct tire pressure for your vehicle can be found on a printed decal on your door jam, fuel door or glove box. Also your owner's manual or a Pamphlet supplied in your owner's manual package. For replacement Tires, the correct inflation pressure will be provided by your tire retailer; if not, refer to the vehicle decal.



#### Why is proper tire pressure important?

Proper tire inflation pressure is essential to the safe and satisfactory operation of your vehicle.

Three primary areas are affected by improper tire pressure:

##### 1. Safety

- a. improperly inflated tires are dangerous and can cause accidents.
- b. under inflation increases tire flexing and can result in tire failure.
- c. over inflation reduces a tire's ability to cushion shock. Objects on the road and chuck holes can cause damage that may result in tire failure.
- d. Unequal tire pressures can cause steering problems. You could lose control of your vehicle.
- e. Always drive with each tire inflated to the recommended pressure.

##### 2. Economy

Improper inflation pressures can cause rapid tread wear resulting in a need for earlier tire replacement. Under inflation also increases tire rolling resistance and results in higher fuel consumption and increased fuel releases to the air. These fuel releases or Volatile Organic Compounds – VOCs react with other air pollutant to generate ground-level ozone.

##### 3. Ride Comfort and Vehicle Stability

- a. Proper tire inflation contributes to a comfortable ride. Over inflation produces a jarring and uncomfortable ride. Both under inflation and over inflation affect the stability of the

- vehicle and can produce a feeling of sluggish response or over-responsiveness.
- b. Unequal tire pressures can cause erratic and unpredictable steering response.

## Helpful Hints and Recommendations

The Tire Minder® is an active component operating in a very unfriendly environment. As such, some maintenance and monitoring is recommended. The following are some suggestions to extend the life of your Tire Minders® and ensure continued proper performance.

### Cautionary Notes:

- The Tire Minder® should attach smoothly and with little resistance. “Finger” tighten only - do not use tools. If the Tire Minder® is difficult to install, it usually means the threads on the wheels valve stem are damaged. Do not force the Tire Minder®! Have the valve stem replaced.
- Do not use under “off-road” conditions.
- Avoid spilling gasoline or other caustic liquids on any part of the Tire Minder®.
- Do not use with valve extenders (they leak and will cause a flat).
- If you find you are constantly 'topping up' one of the tires, we suggest covering the Tire Minder® with soapy water to check for leaks. This will tell you instantly if the Tire Minder® has been damaged and needs to be replaced or if you need to take the tire to a service center.
- Remove and inspect for damage every 2 or 3 months: Be sure that the black O-ring seal remains in the chamber of the Tire Minder® after removal. Check that no foreign objects have entered the chamber and that the clear acrylic top is in good condition. At this time, you should check the actual tire pressure with a proper gauge and top-up the air if necessary. It is quite normal for tires to lose one pound per month (permeation).
- Oil Changes/Service: We recommend removing all four Tire Minders® before you take your vehicle in for service. We have had a number of reports of owners mysteriously losing one or more, as well as missing O-rings (when the car is picked up) which results in flat tires.
- Replace as with any other actively working component of your car, replacement at some point is recommended. Given the extreme conditions under which the Tire Minder® operates (road salt, ice/snow, desert sand/heat, gravel roads, etc.), only you can decide when to replace all four units. As a general rule of thumb, you may consider replacing them at 48,000km or annually.

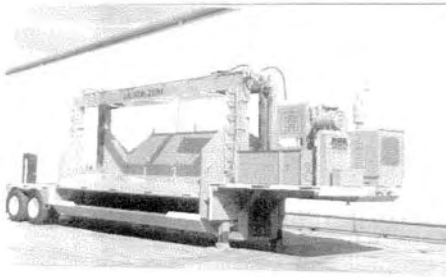
## Do you have the right TireMinders® for your vehicle?

TireMinders® will be distributed to participants of the Air Aware II – Gas Can Exchange Project as supplies allow. If the TireMinders® you receive are inappropriate (i.e. wrong pressure increment, see “**Where can I find the tire pressure for my vehicle?**” on page one) for the tires on your vehicle, visit the nearest Pep Boys to exchange your set for a set that is appropriate for the tires on your vehicle.

Disclaimer: This information has been drawn from the TireMinders® web site <http://www.minderresearch.com/tireminderhints.html> that is generally available to the public and is intended to solely assist the general public in installation of the product. The City of Albuquerque disclaims any warranty, expressed or implied, regarding the services of the products. Furthermore, the City of Albuquerque does not promote or endorse any product exclusively for the purpose of vehicular maintenance.

# Article F

## CERTIFICATE OF RECYCLING



# ALBUQUERQUE CAR CRUSHERS

VENCES TRUJILLO  
5711 BROADWAY SE  
ALBUQUERQUE, NEW MEXICO 87105

Telephone (505) 877-4615  
FAX (505) 873-2819

To: Therese Martinez-Loner  
Environmental Health Department  
Air Quality Division  
City of Albuquerque

From: Vences Trujillo  
Albuquerque Car Crushers

Re: Disposal of Portable Fuel Cans

Dear Therese Martinez-Loner:

Please consider this "Certificate of Recycling" for the 1980 lbs of Portable Fuel Cans". If we can be of any other service do not hesitate to contact us. Thank you in advance for your business.

Sincerely

Vences Trujillo  
Albuquerque Car Crushers



# Article G

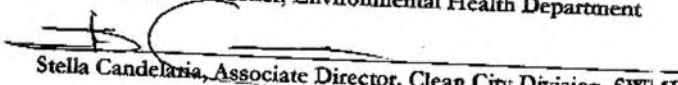
## CERTIFICATE OF DISPOSAL



**City of Albuquerque**  
Solid Waste Management Department  
Clean City Division  
*Inter-Office Memorandum*



To: **Therese Martinez-Loner, Environmental Health Department**

From:   
**Stella Candelaria, Associate Director, Clean City Division, SW11D**

Subject: **Certificate of Disposal**

This memo services as certification that during the Gas Exchange program from April 12, 2005 through August 30, 2005. 1,950 lbs of gas cans were transported and disposed of at the Cerro Colorado landfill.

cc: Clarence Lithgow, Director, Solid Waste Management Department  
file