

Update on the MAG 2013 State Implementation Plan Revision for the Removal of Stage II Vapor Recovery Controls

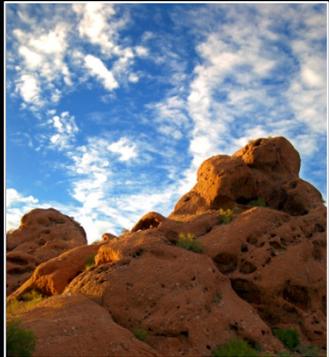


MAG Air Quality Technical Advisory Committee
August 22, 2013

ENVIRONMENTAL PROGRAMS

Background

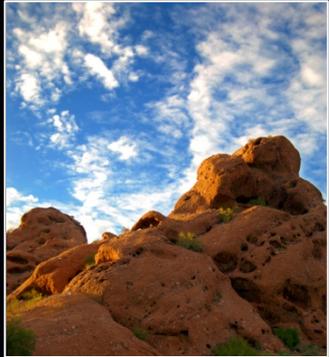
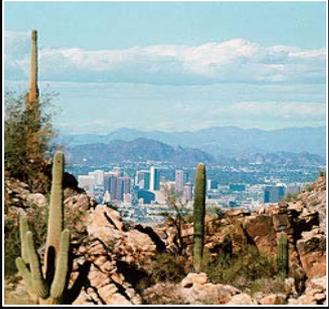
- On May 16, 2012, EPA published a final rule indicating that Onboard Refueling Vapor Recovery (ORVR) on passenger vehicles was in widespread use
- States may now evaluate the removal of Stage II controls at gasoline dispensing stations since ORVR and Stage II vapor recovery are redundant control systems
- EPA guidance on removing Stage II from a State Implementation Plan (SIP) released August 7, 2012
- The Arizona Department of Weights and Measures has been coordinating with the Arizona Department of Environmental Quality and MAG on the implications of removing Stage II controls



ENVIRONMENTAL PROGRAMS

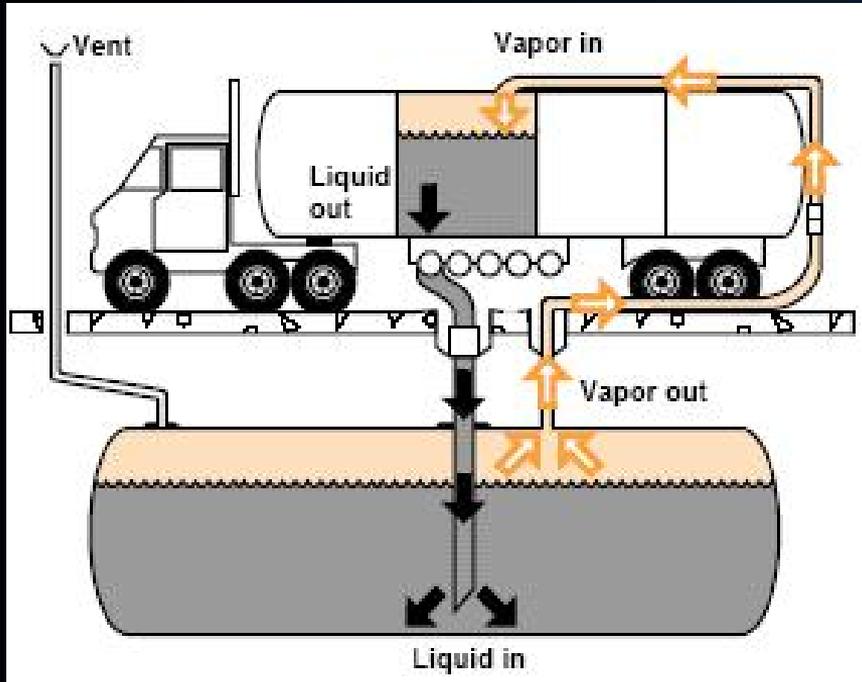
History

- **Section 182(b)(3) of the Clean Air Act requires gasoline dispensing facilities located in ozone nonattainment areas classified as Serious and above to implement Stage II controls**
- **The State of Arizona passed legislation in 1992 that mandated the implementation of Stage II controls in ozone nonattainment areas classified as Moderate and above**
- **The Arizona Department of Weights and Measures first adopted Stage II rules in August 1993 and were initially approved into the Arizona State Implementation Plan by EPA in 1994**
- **Clean Air Act Section 202(a)(6) gives EPA authority to waive Stage II requirements once ORVR systems are in widespread use**

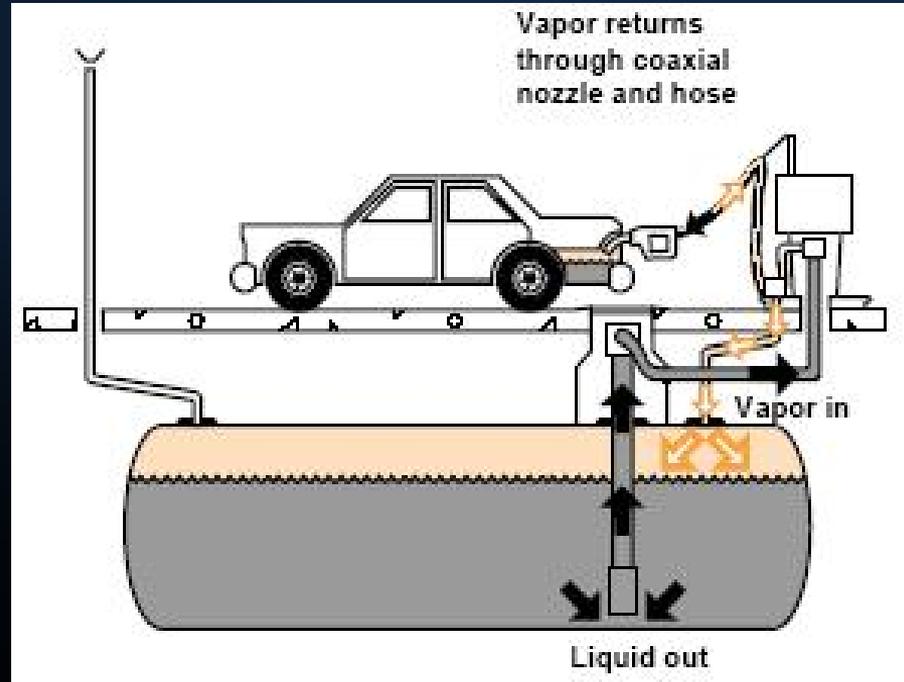


Stage I and Stage II Controls

Stage I

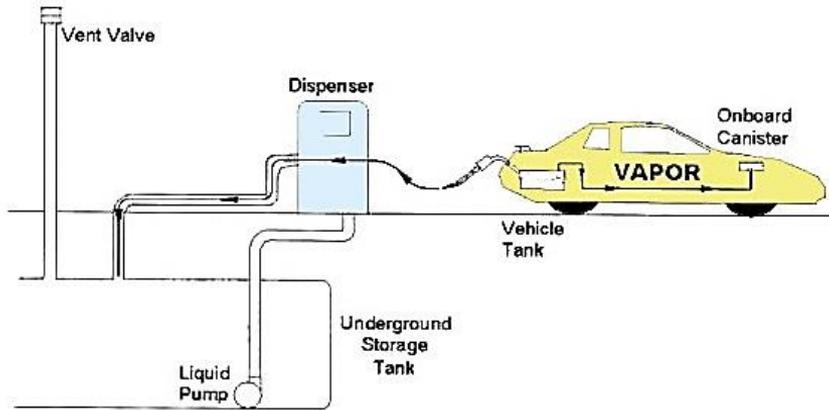


Stage II

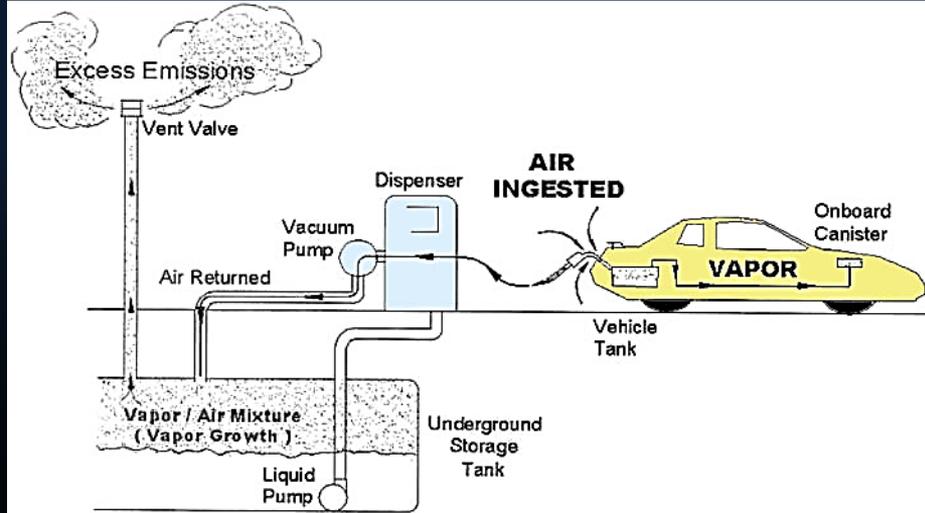


Onboard Refueling Vapor Recovery (ORVR)

ORVR

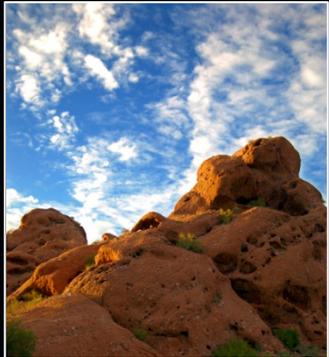
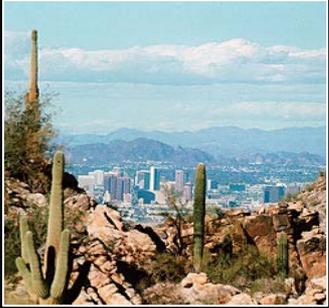


ORVR Incompatibility Issues



EPA Requirements for Removal of Stage II Controls from the SIP

ENVIRONMENTAL
PROGRAMS



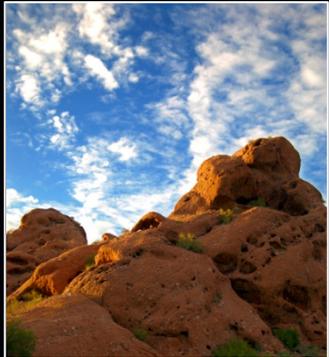
- Submitted SIP revision must meet the requirements of Clean Air Act Section 110(I)
 - Demonstrate that the SIP revision will not:
 - Interfere with attainment of the National Ambient Air Quality Standards
 - Interfere with reasonable further progress
 - Violate any other applicable Clean Air Act requirement
- EPA recommended options for a 110(I) demonstration:
 - A planned removal of Stage II controls that does not increase emissions
 - If planned removal increases emissions, offsets for the increase are required



ENVIRONMENTAL
PROGRAMS

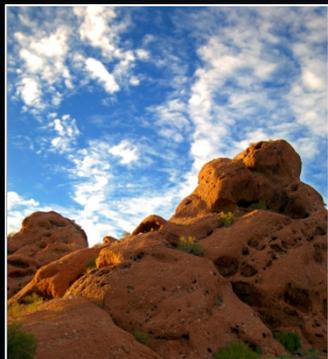
Overview of MAG 2013 SIP Revision to Remove Stage II Controls

- Beginning in 2018, Stage II controls no longer provide areawide emission reductions
- Removal of Stage II controls is proposed for new stations beginning in 2014 and for all stations beginning in 2016
- Excess emissions from the closure of a point source facility (Penn Racquet Sports) are used as offsets in 2014-2017
- Total mobile source emissions still decline each year after 2013 despite removal of Stage II controls
- Statute and rule revisions removing requirements to implement Stage II controls are anticipated to be submitted to EPA in 2014 and 2015
- The revision is effective upon approval by EPA



Areawide Emission Reduction Benefits of Stage II Controls

ENVIRONMENTAL
PROGRAMS

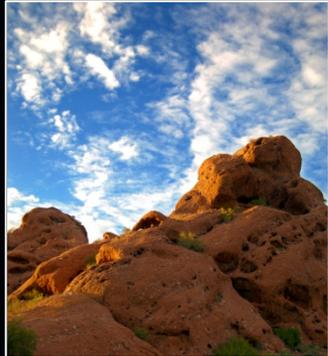


Year	ORVR Pop. %	ORVR VMT %	ORVR Gas %	Compatibility Factor*	Increment (EPA eq. 1)	VOC Emission Reductions from Stage II (kg/day)
2013	75.3%	83.4%	81.0%	0.0629	0.0695	1,041
2014	78.7%	86.3%	84.0%	0.0653	0.0484	725
2015	81.8%	88.8%	86.5%	0.0672	0.0308	462
2016	84.5%	90.9%	88.6%	0.0688	0.0160	238
2017	86.8%	92.5%	90.3%	0.0702	0.0040	60
2018	88.8%	93.9%	91.9%	0.0714	-0.0073	-108
2019	90.5%	95.0%	93.2%	0.0724	-0.0164	-244
2020	92.0%	95.9%	94.3%	0.0733	-0.0242	-359

**Larger values of this factor denote increased incompatibility between ORVR and Stage II systems*

ENVIRONMENTAL
PROGRAMS

Emission Offsets

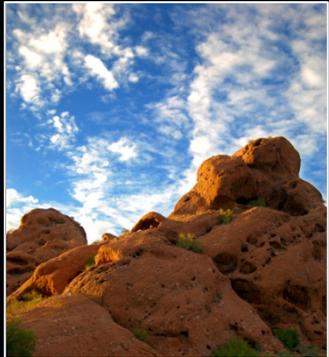


Year	Stage II Emission Reduction Benefits (kg/day)	Offset Needed to Replace Loss of Stage II Emission Reduction Benefits (kg/day)	Offset Provided by the Closure of Penn Racquet Sports Facility (kg/day)
2014*	725	23	349
2015*	462	15	349
2016	238	238	349
2017	60	60	349

**New gasoline stations only. Stage II emission reduction benefits from new stations is calculated by multiplying the percentage of new gasoline stations (3.17%) by total Stage II emission reduction benefits in each year.*

Mobile Source Emission Trends With and Without Stage II Controls

ENVIRONMENTAL
PROGRAMS

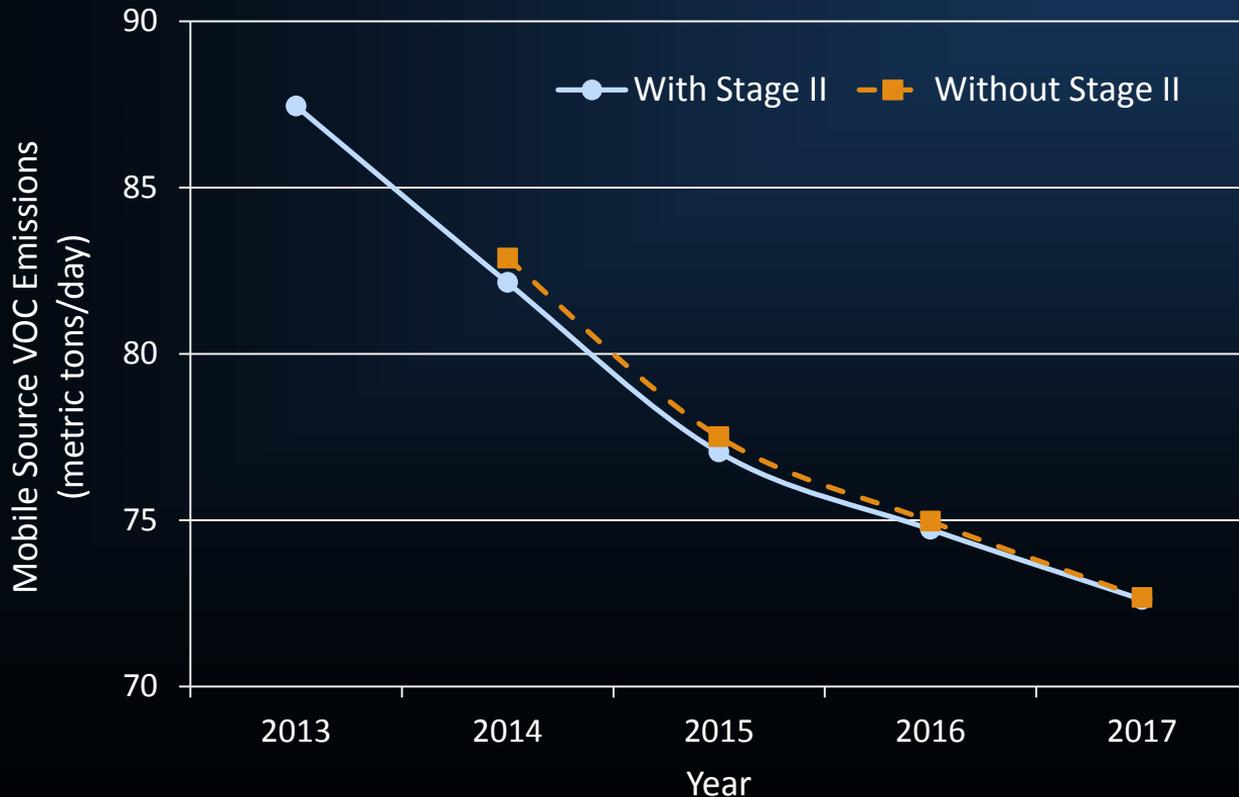


Year	Nonroad Emissions Without Stage II	Onroad Emissions Without Stage II	Emission Reductions from Stage II	Total Mobile Source Emissions	
				Without Stage II	With Stage II
2013	26.29	62.20	1.04	NA	87.45
2014	24.76	58.11	0.73	82.87	82.14
2015	23.49	54.01	0.46	77.50	77.04
2016	22.43	52.53	0.24	74.96	74.72
2017	21.63	51.04	0.06	72.67	72.61

Emissions in metric/tons per day

Mobile Source Emission Trends With and Without Stage II Controls

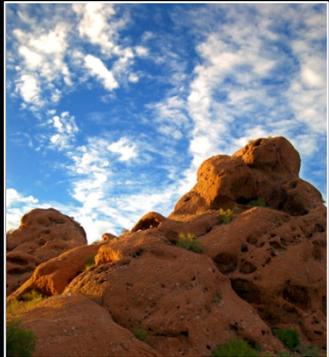
ENVIRONMENTAL
PROGRAMS



ENVIRONMENTAL
PROGRAMS

Tentative Schedule

- **September 10, 2013 – Draft revision available for public review**
- **October 10, 2013 – Public hearing**
- **October 24, 2013 – MAG Air Quality Technical Advisory Committee recommendation**
- **November 6, 2013 – MAG Management Committee recommendation**
- **December 4, 2013 – MAG Regional Council adoption**
- **December 6, 2013 – MAG submission of revision to ADEQ and EPA**





**MARICOPA
ASSOCIATION of
GOVERNMENTS**



**For more information
Contact:
Matt Poppen
(602) 254-6300**

mpoppen@azmag.gov