

# The South Phoenix Industry Challenge Good Neighbor Partnership

## 2005-2008: Final Project Report

### *Executive Summary*

The Industry Challenge/Good Neighbor Partnership (IC/GN) is a voluntary partnership between U.S. EPA Region 9, Maricopa County Air Quality Department (MCAQD), community leaders, and industries located in South Phoenix, Arizona. The IC/GN was launched in March 2005 and concluded July 2008. The IC/GN goals are to reduce routine air emissions of priority pollutants by 20 percent between 2002 and 2007, adjusted to production, and to reduce the number and severity of accidental releases.

From 2005-2008, participating companies collectively reduced toxic air emissions by over 85,000 pounds, electricity use by 60 million kWh, hazardous waste by 373,000 pounds, and water use by 827,000 gallons, adjusted to production. That means they avoided generating this much pollution and conserved this many resources, compared to what they would have emitted or consumed had they not joined the partnership and made positive improvements at their manufacturing facilities.

The following nine companies achieved the air emission reduction results for 15 high priority, high toxicity chemicals, as well as energy, hazardous waste and water reduction goals:

- **Super Radiator Coils** - 2610 S. 21st., Phoenix, AZ 85034
- **Schuff Steel Company** - 420 S. 19th Ave, Phoenix, AZ 85009
- **ON Semiconductor** - 5005 east McDowell Road, Phoenix, AZ 85008
- **UCSC LTD Co.** - 3010 W. Lincoln St., Phoenix, AZ 85009
- **Earl's Fiberglass, Inc.** - 128 W. Maricopa Freeway, 85003
- **MarLam Industries** - 834 E. Hammond Lane, Phoenix, AZ 85034
- **Able Engineering and Component Services** - 2920 E. Chambers St., Phoenix, AZ 85040
- **National Gypsum Company** - 1414 E. Hadley St., Phoenix, AZ 85034
- **ChemResearch Co., Inc.** - 1130 W. Hilton Ave, Phoenix, AZ 85007

To help these companies reach their goals, EPA and MCAQD provided Environmental Management Systems (EMS) training and technical and data collection assistance.

Also as part of the IC/GN, EPA performed six free, non-regulatory safety audits of participating South Phoenix companies to improve their site safety and prevent accidental releases; the six companies were:

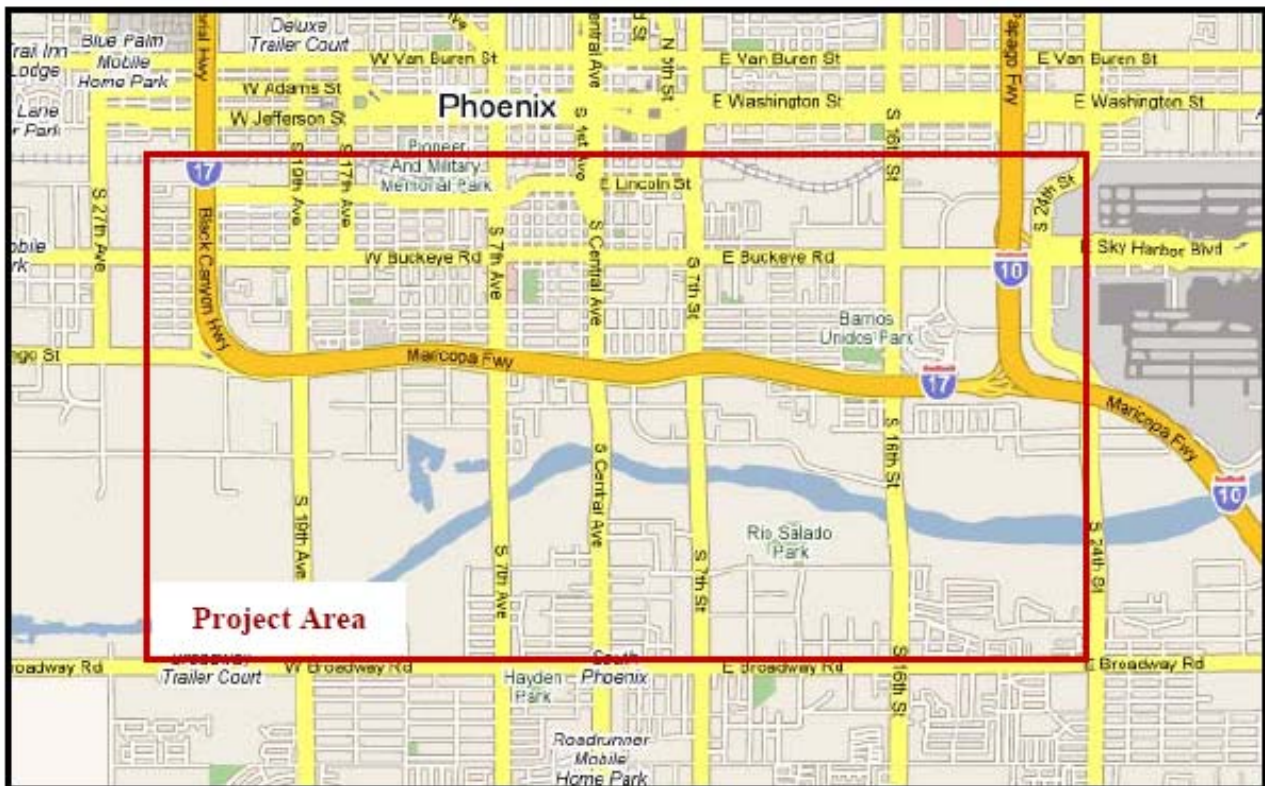
- **Tessengerlo Kerley, Inc.** - 2248 W Lower Buckeye Rd, Phoenix, AZ 85009
- **Schuff Steel Company** - 420 S. 19th Ave, Phoenix, AZ 85009
- **Praxair Distribution Inc.** – 1021 N. 22<sup>nd</sup> Ave, Phoenix, AZ 85009
- **GQ Enterprises, Inc. dba Poolman** – 3242 S. Central St., Phoenix, AZ 85040
- **Chem Research Co., Inc.** - 1130 W. Hilton Ave, Phoenix, AZ 85007
- **Flex Foam, a Division of Western Bonded Products** – 2016 W. Filmore, Phoenix, AZ 85009

The IC/GN annual reports, company profiles, and other information are available at: <http://www.phoenixindustrychallenge.com/>

## **How the South Phoenix IC/GN Started**

In 2002, U.S. EPA Region 9 awarded funds to the Arizona Department of Environmental Quality (ADEQ) to develop a multi-media toxics reduction (MMTR) project, bringing together community representatives, environmental experts, and state and local officials. The project goal was to develop cost effective actions to reduce toxic pollution in targeted areas of South Phoenix and to protect the health of community members.

In June 2003, ADEQ formed a citizen advisory committee, the South Phoenix Community Action Council (CAC) to identify environmental issues of concern in their communities. A group comprised of EPA, ADEQ, Arizona Department of Health Services, Maricopa County Environmental Services Department, and the City of Phoenix, provided the CAC with an environmental profile of the South Phoenix area. The CAC then identified the geographic area for the project (see Figure 1) and determined the highest priorities for reducing toxic pollution.



**Figure 1. Project Area - Multimedia Toxics Reduction Project (MMTRP) and IC/GN**

While a long-term plan was being developed to more systematically address permanent reductions of toxic emissions in the South Phoenix area\*, the CAC expressed a desire to initiate more immediate efforts that would result in “early reductions” of toxic emissions. To address this community request, EPA proposed a voluntary pollution reduction “challenge” program to immediately engage industry leaders in voluntarily reducing emissions beyond what is required by permit or regulations. EPA also proposed that the challenge could include voluntary efforts by facilities to improve site safety that would help prevent future accidental releases of chemicals similar to what had occurred several times in the South Phoenix area in the past. By 2004, these proposals developed into the South Phoenix IC/GN Partnership.

## ***Establishing the South Phoenix IC/GN***

*"The members of the Industry Challenge/Good Neighbor Partnership are committed to reducing emissions of hazardous air pollutants and decreasing accidental releases in the South Phoenix community. We will accomplish this by fostering communication and an exchange of ideas and technology between the community, industry and government."*

- IC/GN Partnership Mission Statement

Between July 2003 and January 2005, community members, businesses, and government officials held a series of six meetings to design and launch the IC/GN Partnership. The meetings were held in various locations in South Phoenix, primarily at the South Mountain Community Center on Alta Vista Road with 25-40 people attending each meeting. Through that process, attendees developed its mission statement and established the following goals:

- Reduce routine air emissions of priority pollutants by 20% 2002-2007, adjusted to production.
- Reduce the number and severity of accidental releases.

Three committees were formed with the following charges:

### 1. The Emissions Reduction Committee

- Select a list of priority chemicals for reduction.
- Set a cumulative reduction goal for the partnership.
- Design and initiate technical assistance to assist in meeting the goals.
- Track and report progress.

### 2. Accident Prevention Committee

- Select list of priority chemicals.
- Select accident prevention goals.
- Design and initiate technical assistance to assist in meeting the goals.

### 3. The Outreach Committee

- Recruit new companies into the project.
- Establish a website and develop website content.
- Organize project kick-off/press event.
- Write and disseminate press releases.

Co-chairpersons organized ran the committee meetings, managed the email communications, and made sure that their committee tasks were completed satisfactorily.

## ***Kicking-Off the South Phoenix IC/GN Partnership***

On March 8, 2005, the IC/GN Partnership was officially launched with a kick-off Press Event at the Goodrich Aircraft Interior Parts facility in Phoenix.



**Figure 2. IC/GN Partnership Kick-Off Event at Goodrich Aircraft Interior Parts, Phoenix, March 8, 2005.** (l. to r.) Maricopa County Supervisor Mary Rose Wilcox, former Arizona State Representative Leah- Landrum Taylor, EPA Region IX Regional Administrator Wayne Natri and Lyn Smith from Earl's Fiberglass (kneeling)

The IC/GN Partnership Agreement was signed by 21 companies:

- **Able Engineering and Component Services**
- **Arizona Public Service**
- **ChemResearch Co., Inc.**
- **Clean Harbors**
- **Earl's Fiberglass**
- **Flex Foam, a Division of Western Bonded Products**
- **Goodrich Aircraft Interior Products**
- **FlipChip Technologies**
- **National Gypsum Company**
- **ON Semiconductor**
- **Pool Chem**
- **Poolman 2000 Inc.**
- **Phoenix Brick**
- **Rinker Materials**
- **Sanmina-SCI Corporation – Phoenix Division**
- **Schuff Steel Company**
- **Southwest Gas**

- **Super Radiator Coils**
- **Tessengerlo Kerley, Inc.**
- **UCSC LTD Co.**
- **Western States Petroleum**

On March 8, 2005 the Arizona Republic newspaper published an article and an editorial on the Partnership (see Attachments 1A and 1B).

In response to criticism of the Partnership by citizens interviewed in the March 8 article, former Maricopa County Air Quality Department Director Bob Kard wrote an Opinion that the AZ Republic published on March 25, 2008 (see Attachment 1C).

### ***IC/GN Partnership Technical Assistance Activities 2005-2008***

**Environmental Management System Training:** To help companies improve their environmental performance, EPA and MCAQD sponsored a series of Environmental Management Series workshops in 2006, with help from ADEQ staff. Five, 4-hour workshops were conducted over an 8 month period. Attendance was initially high with 18 companies attending the first workshop, but tapered off over time with seven companies completing the entire series. The EMS series was designed to help the companies build an EMS one component at a time. At each workshop, EMS topics were introduced (e.g. getting top management support, identifying aspects and impacts, setting goals and objectives, etc.), and homework was assigned (identify your company's environmental aspects and impacts). At the beginning of each workshop, the participants shared their experiences implementing the EMS homework assignment from the previous workshop. In this way, the companies built an EMS step-by-step as a group, sharing lessons learned and providing each other with valuable advice and support. The seven companies that completed the training developed a complete EMS for their company. The workshops were conducted by EPA's contractor Tetra Tech, EM Inc who also provided on-site technical assistance, as well as assistance via multiple conference calls between workshops.

**Site Safety Audits:** EPA Emergency Planning and Preparedness Program provided five companies with free, non-regulatory site safety audits in December 2005 and June 2006:

- **Tessengerlo Kerley, Inc.**
- **Schuff Steel Co.**
- **Praxair Distribution Inc.**
- **GQ Enterprises, Inc., dba Poolman**
- **Chem Research Inc.**
- **Flex Foam, a Division of Western Bonded Products**

Reports were provided to each company outlining specific changes for improving site safety and prevent accidental releases.

**Safety Training:** On May 15 and 16, 2006, EPA and The Phoenix Fire Department cosponsored "Anhydrous Ammonia Refrigeration Safety Seminar" with trainers from the International Institute of Ammonia Refrigeration for 26 Phoenix businesses.

**Data Collection Site Visits and Technical Assistance:** In May of 2006, 2007 and 2008, staff from EPA, MCAQD and EPA's contractor Tetra Tech, EM Inc. visited 8-12 IC/GN Partnership companies that were reducing their air emissions, hazardous waste generation, energy use and water use (emissions reduction companies) to help them collect, analyze, and normalize their environmental data. Many conference calls were also held with companies to assist them during the spring reporting period.

## ***Achieving and Reporting Results***

**Annual Reporting Forms:** The IC/GN partners developed annual reporting forms to facilitate data collection. A sample form is available on the IC/GN Partnership website: <http://www.phoenixindustrychallenge.com/>

**Results:** Results from each year were collected and published on the IC/GN partnership website in the summers of 2006, 2007 and 2008 for reporting years 2005, 2006 and 2007. The results for the 3-year project are summarized below:

**Figure 3. Pollution Avoided/Resources Conserved 2005-2008**

<b>Air Emissions:</b>	85,318 lbs.
<b>Hazardous waste/Hazardous Materials generation:</b>	373,716 lbs.
<b>Electricity:</b>	86,458,041 kWh
<b>Water:</b>	827,268 gallons

**Normalizing Data for Production:** All data were adjusted to production so that a company's numeric reductions/increases are reported relative to how much their manufacturing activity changed. The following example illustrates how reduction data was reported:

- Company X produced 1000 lbs. of pollution last year.
- This year, the company manufactures twice as much product as last year and without changes would be expected to generate twice as much pollution this year - 2,000 lbs.
- If however, the company produced only 1,200 lbs. of pollution this year due to process efficiency improvements, they would have avoided 800 pounds of pollution, adjusted to production, even though their actual emissions went up by 200 lbs.

Another way of stating that these reductions are "adjusted to production" is they are "emissions avoided because positive process efficiency changes were made at the manufacturing facility." The goal of the IC/GN Partnership was to reduce emissions relative to what they would have been had the partnership not been established. The reductions reflect the positive environmental benefits resulting from the IC/GN Partnership. None of the reductions were mandated by law or regulation and all were achieved because the companies chose to make changes to save money and/or benefit the environment and the South Phoenix community.

### **Putting the Reduction Data in Perspective:**

#### Air Emissions avoided

The reduction of 85,318 pounds (42.6 tons) of hazardous air pollutants is 7% of the 605 tons of point source and fugitive air emissions of hazardous air pollutants from all large companies in Maricopa County reporting air emissions to the Toxics Reduction Inventory (TRI) in 2006 (source: <http://www.epa.gov/triexplorer/>).

The reduction is the same as the annual amount of HAPs emitted by a medium-to-large semiconductor, printed circuit board mfg. or plastics mfg, company (source: [www.epa.gov/air/data](http://www.epa.gov/air/data)).

Air emissions data was summarized for each of the 3 years of the IC/GN. Figure 4 summarizes the data for 2007:



## IC/GN Year 3: 2007 Air Emission Reductions [lbs/year] Many Companies Contributing to Reach 94% of Cumulative Goal

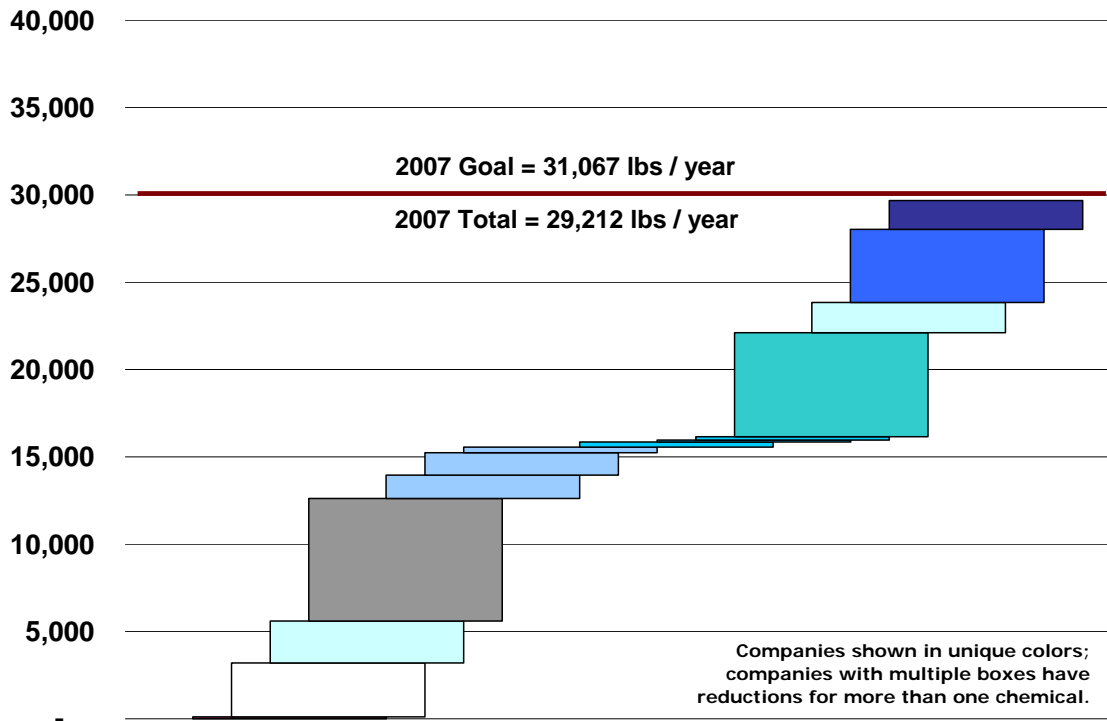


Figure 4. 2007 IC/GN Partnership Air Emission Reductions

### Hazardous Waste/Hazardous Materials Avoided

The reduction of 373,716 pounds (187 tons) of hazardous waste is 3.4% of the 5,454 tons of hazardous waste generated by all large quantity hazardous waste generators in Phoenix reporting hazardous waste generation to the RCRA Biennial Reporting System (BRS) in 2005 (source: <http://www.epa.gov/epaoswer/hazwaste/data/br05/state05.pdf>)

### Electricity Conserved

The electricity conserved was the equivalent of 66,861 metric tons of CO<sub>2</sub>, the same as the annual greenhouse gas emissions from 12,246 passenger vehicles or from the annual electricity used by 8,856 homes. (Equivalencies derived from the EPA calculator available at: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>.)

### Water conserved

The reduction of 827,268 gallons of water is the equivalent amount used by 10 households annually (source: <http://www.oikos.com/esb/42/wateruse.html>).

## Conclusion

The South Phoenix IC/GN Partnership was a success. It achieved real environmental benefits. The technical training and on-site assistance provided to companies helped them improve their operations, reduce emissions, conserve resources and prevent releases. The IC/GN Partnership forged a new relationship between regulatory agencies and companies that was one of mutual assistance in achieving environmental goals and community health protection in a cooperative, non-regulatory manner.

### Pollution Avoided/Resources Conserved 2005-2008 (adjusted to production):

Air Emissions:	85,318 lbs.
Hazardous waste/Hazardous Materials generation:	373,716 lbs.
Electricity:	86,458,041 kWh
Water:	827,268 gallons

For the benefit of others who may wish to repeat this partnership approach, several “lessons learned” are discussed in Attachment 2.

On July 23, 2008 the partnership concluded with a recognition ceremony at the Maricopa County Supervisors’ auditorium in downtown Phoenix; six of the IC/GN companies attended. The companies were recognized by EPA, MCAQD and the Maricopa County Supervisors and awarded a plaque reading, “South Phoenix Industry Challenge Good Neighbor Partnership 2005-2008, COMPANY NAME, In Recognition of your Pollution Reduction Achievements.”



**Figure 4. South Phoenix IC/GN Recognition Ceremony, July 23, 2008.** Chairman Andy Kunasek, Maricopa County Board of Supervisors, presents a plaque to Bob Atkinson and Ajay Shah of ON Semiconductor.



# **Attachment I – IC/GN Press Coverage**

## **Attachment IA – AZ Republic March 11, 2005 Article**

### **17 firms sign pact to slash emissions**

**Mary Jo Pitzl**

The Arizona Republic

Mar. 11, 2005 12:00 AM

Hoping to slow the growth of air pollution, 17 south Phoenix companies are pledging to cut their emissions of hazardous pollutants by 20 percent in the next two years.

But the leader of a citizens group working to reduce toxic pollution says the move could undermine its efforts to crack down on pollution.

The turf battle over cleaning up what is widely regarded as the most pollution-prone spot in the Valley is unprecedented, with federal, state and local governments as well as a citizens panel vying to make a difference.

The efforts could have consequences far beyond the swath of city south of downtown: Air pollution travels. With the prevailing wind movement from west to east, cleanup work would affect air quality in east Phoenix, Tempe and other areas.

A voluntary program unveiled this week is the first to promise tangible results. It's part of an Environmental Protection Agency effort to create cleaner environments by challenging businesses to go above and beyond existing regulations.

So far, 17 companies have pledged to cut their collective air emissions 20 percent by 2007. Two others are likely to sign soon. The emissions cuts will be calculated on those companies' combined pollution reports from 2002. There are no penalties if the companies fall short of the goal.

"It's through your efforts that the life and livelihood of all south Phoenix residents will prosper," Wayne Natri, the EPA's regional administrator, said at a ceremony this week marking the start of the South Phoenix Industry Challenge/Good Neighbor Partnership.

The program is designed to curb emissions as well as provide safety training to companies that handle hazardous chemicals, such as chlorine, ammonia and nitric acid.

Natri said the program grew out of a desire to take "early action," mindful that the state is working with a citizens group on longer-term solutions to south Phoenix's toxic releases.

The area has a history of toxic releases. A 2000 Central Garden warehouse fire and the 1992 Quality Printed Circuits fire blanketed the industrial and residential neighborhoods with waves of toxic chemicals.

Steve Owens, director of the Arizona Department of Environmental Quality, called the program a "corollary" to what his agency is doing in conjunction with a citizens panel.

That work will focus on long-term solutions such as seeking legislative approval so the agency can levy fines and developing a state regulation for hazardous air pollutants.

But Greta Rogers, chairwoman of that citizens panel, said the EPA's effort undermines her group's work.

"They're subverting what we did," said Rogers, referring to the citizen recommendations for the South Phoenix Toxics Reduction Project.

The group's key recommendation was that the state seek voluntary emissions cuts, beginning with 11 businesses that the group researched.

Five of those businesses signed up for the federally sponsored volunteer program, and a sixth should sign soon.

But Rogers said she fears the voluntary program will undercut what she believes is a need for enforcement to ensure pollution reductions actually happen.

"I don't recommend the hard hammer on the head as the first way of reaching compliance, but . . . really that has to be used," she said. "Just like people (who) drive too fast and run red lights."

The voluntary program won't necessarily cut the absolute amount of emissions.

Companies' pollution output will be "normalized," meaning the amount of emissions will be pegged to production.

As long as the amount of emissions produced per unit declines, a company will be given credit even if overall emissions increase due to more production, said Kate Graf, an engineer with the Maricopa County Air Quality Department.

That would allow companies such as Goodrich Aircraft Interior Products, the first company to sign up for the partnership, to post the 52 percent increase in emissions that it saw in 2003 without violating the terms of the agreement.

"We don't want to shut down business, we want to improve performance," said HYTE Johnson, the firm's senior manager for environment, health and safety.

The company's higher releases in 2003 came from increased production.

Graf said the companies are still held to absolute emissions caps through their existing air-quality permits.

But some companies that signed up for the partnership said they can come in far below the ceiling set by their permits.

Goodrich's Johnson said the company, which manufactures aircraft-evacuation slides at its south Phoenix plant, is testing an acetone-based glue, which would reduce the need for toluene and methyl ethyl ketone, two chemicals which can affect the nervous system and irritate the respiratory system, respectively.

Lee Benson, president of Able Engineering and Component Services, said he signed up because "it's the right thing to do."

His company, which does aircraft repair, will turn to other companies in the partnership for ideas on how to cut toxic emissions.

The firm, near 32nd Street and Broadway Road, also has a stake in providing as healthy an environment as possible for its 110 employees, he said

# Attachment IB – AZ Republic March 11, 2008

## Editorial

### Strategy can clear air over S. Phoenix

AZ Republic Editorial - Pollution woes can be fixed

Take a look in the skies over south Phoenix.

What you see is pollution.

The air over south Phoenix has been described as the center of the Valley's toxic universe.

But this week, hope is in the air.

Optimism. Cooperation. Commitment. Partnership. Neighbors. Those are good words. Promising words. Clean words. But still, just words.

The welcome, hopeful commitment: to reduce hazardous air pollution emissions in south Phoenix by 20 percent over the next two years. To cut down on those dangerous chemical leaks, accidents and emergencies, including fires, that have blackened the skies and sickened residents in years past.

The strategy: bringing together industries, governmental regulators and interested community members in a regular collaborative partnership to achieve healthier skies.

The effort, established through a federal Environmental Protection Administration grant, flips the regulatory procedure on its head.

It's called the Phoenix Industry Challenge and Good Neighbor Partnership.

It's about talking, training, mentoring; about regulators working with those businesses that have been among the primary polluters in the area; and it's about working with those companies to switch to less toxic substances.

It's about companies mentoring other industries on ways to reduce emissions.

It's about residents regularly meeting with their industrial neighbors. And being trained in "odor detection" so they can monitor pollution in their own neighborhoods.

It's also about Maricopa County government ramping up its air pollution department to meet these critical goals. Last year, the county board voted to pull air quality functions out of the environmental services department, away from other public health agencies into a separate entity, able to focus on air quality issues.

The effort has been years in the planning and development stage but was formally launched Tuesday with a formal signing ceremony at the Goodrich Aircraft Interior Products plant in south Phoenix. Goodrich is one of more than 40 companies that signed the pollution reduction pledge.

The effort comes at a critical juncture in local history. With south Phoenix adding new residents every week, pollution issues are as real as an asthma attack. Several studies have identified south Phoenix as a focus of asthma sufferers in the Valley. A national study suggests Latinos are at greater risk from lead poisoning and pollution. Environmental concerns in south Phoenix have been a central issue for state Rep. Leah Landrum and county Supervisor Mary Rose Wilcox. Both have supported this initiative, which is voluntary but speaks with promise and hope for a cleaner, better future.

# Attachment IC – AZ Republic March 25, 2005 Opinion Article by Bob Kard, MCAQD Director

## Industry Challenge/Good Neighbor not a 'turf war'

Opinions Bob Kard, Director, Maricopa County Air Quality Department

Regarding the March 11 article "17 firms sign pact to slash emissions"

I was pleased *The Arizona Republic* covered the launch of the Industry Challenge/Good Neighbor (IC/GN) Partnership in south Phoenix. Yet I was surprised by the portrayal of the IC/GN Partnership as a "turf battle" going on among federal agencies, citizens, and state and local government in south Phoenix. This is simply not the case. The IC/GN Partnership is just that, a partnership. Industry, the federal Environmental Protection Agency and Maricopa County Air Quality Department are working together in support of the partnership.

The article failed to highlight the fact that a local citizen group made a key recommendation to seek voluntary emission reductions from industry in south Phoenix and that has become one of the goals of the Industry Challenge/Good Neighbor Partnership. The partnership clearly supports the community's efforts by working toward the same goal of reduced emissions. The Industry Challenge/ Good Neighbor Partnership is a voluntary effort to achieve emission reductions and safety improvements in a neighborhood in which industry and community live side by side.

It is unfortunate that *The Arizona Republic* chose a misleading negative approach to this story. Rather than celebrate the positive aspects of the IC/GN Partnership - industry, government regulators and citizens coming together to make a difference in the community - the article depicted a "turf battle" that "won't necessarily cut the absolute amount of emissions."

In the way of history, on March 8, the Industry Challenge/Good Neighbor Partnership was launched at Goodrich Aircraft Interior Products in south Phoenix. This event was the culmination of many months of efforts to gain a mutual understanding of each other's goals and to develop trust among what may be viewed as unlikely partners.

The partnership is designed to reduce air-pollutant emissions, prevent accidental releases of chemicals and benefit the community through the building of collaborative relationships one partner at a time in south Phoenix.

The Environmental Protection Agency has provided funding for training and workshops and, to date 17 "Industry Partners" have taken the unprecedented step of signing a voluntary agreement to reduce air pollution and accidental releases. Industry partners with excellent environmental records will be encouraged to share their best practices, procedures and experiences with others to promote improvements for all of industry.

On my second day as the director of Maricopa County's Air Quality Department, I had the pleasure of witnessing these companies voluntarily signing an agreement to improve the air quality beyond what we, as regulators, can require.

I would like to congratulate our 17 industry partners who became "charter members" of the partnership. Their willingness to make the air easier to breathe and our lives safer is a model of good business behavior and corporate responsibility. I, too, signed the agreement because it gives me great pride to know that Maricopa County has been a part of the development of this partnership and we support it wholeheartedly.

That said, I challenge others to do the right thing by joining and supporting the Industry Challenge/Good Neighbor Partnership.

**Bob Kard is director of the Maricopa County Air Quality Department.**

# Attachment ID – AZ Republic August 5, 2006 Article

## 6 companies reduce emissions as part of Industry Challenge

Partnership with EPA and county designed to cut down pollution

### Michael Clancy

Six south Phoenix companies have reduced air-pollution emissions by more than 9 tons a year after they joined other companies in a voluntary partnership with the Environmental Protection Agency and Maricopa County.

The 22 companies taking part in the Industry Challenge/Good Neighbor Partnership that reduced emissions were Earl's Fiberglass, ON Semiconductor, Sanmina-SCI, Schuff Steel Co., Super Radiator Coils and UCSC Inc.

The partnership began in March 2005 and runs through spring 2008. Members hope to reduce routine air emissions of priority pollutants 20 percent by next year and reduce the number and severity of accidental releases. The companies decided they could meet a goal of more than 30 percent.

Maricopa County Air Quality Department Director Bob Kard lauded the accomplishment, saying, "This incredible partnership achieved this goal without any new regulations."

But environmental advocate Steve Brittle of Don't Waste Arizona said that while he applauds any reductions in emissions, other members of the partnership actually increased emissions.

Additional charter members ChemResearch, National Gypsum, Phoenix Brick Yard, Rinker Materials and Western States Petroleum Association have also set air-emission-reduction goals and are working to meet those.

Partnership Chairman Trace Terrin of the county Air Quality Department said the effort is especially crucial in south Phoenix, where industrial areas sit side by side with residential developments.

A fire in 2000 at the Central Garden warehouse and another in 1992 at Quality Printed Circuits both resulted in toxic chemicals covering the area. He said the companies have worked with each other and with EPA officials to determine how to cut emissions, plan environmental systems and otherwise reduce the use of dangerous chemicals.

He said the reductions were accomplished for "high priority, high toxicity chemicals like formaldehyde, sulfuric acid, perchloroethylene and xylene." "This year's results are great news," said Steve Thorne, Environmental Health and Safety Engineer at Sanmina-SCI and the partnership's co-chairman.

Thorne said his company has taken a stand on pollution and was able to persuade others to get on board for several reasons: good public relations, the health of employees and neighbors, even a reduction in costs.

"As we started meeting, the other companies started seeing the benefits," he said. "Eleven companies achieved some sort of reduction in pollutants, while others focused on accident prevention and environmental planning."

Jeff Scott, the EPA's Waste Management Division director for the Pacific Southwest region, said the reductions will help public health. He pointed out that south Phoenix has a high rate of childhood asthma.

Emission reductions are tracked and reported annually. The Industry Challenge/Good Neighbor Partnership companies will continue efforts to reduce emissions in 2006 and 2007 and report results to the public.

# Attachment IE – Imperial Valley News July 24, 2008 Article

## Industry Challenge Reduces Pollution in South Phoenix

Phoenix, Arizona - Industry members of the South Phoenix Industry Challenge/Good Neighbor Partnership have reduced over 29,000 pounds of air pollution, adjusted to production this year and over 85,000 pounds of air pollution, adjusted to production over the past three years.

The South Phoenix Industry Challenge/Good Neighbor Partnership is a voluntary partnership between industries operating in the South Phoenix area, community leaders and government agencies. The partnership, launched in March 2005 boasts twenty-one companies as charter members.

“South Phoenix, like many communities throughout the country, has health problems that can be linked to environmental pollution.” said Colleen McKaughan, associate director of the Air Division for the Pacific Southwest region. “Partnering with industry to reduce pollution, while supporting this community's industrial base, is a win-win for people, business and the environment.”

The Industry Challenge/Good Neighbor Partnership has two main goals: to reduce routine air emissions of priority pollutants and reduce the number and severity of accidental releases.

“No longer will south Phoenix be known as a heavy polluter and we are grateful to the South Phoenix companies who stepped forward to clean up the air,” explains Maricopa County Supervisor Mary Rose Wilcox. “Through a coordinated effort of partners we were able to keep 29,000 pounds of air pollution from escaping into the air we breathe.”

Seven companies contributed to the 2007 air emission reductions: Chem Research, Inc., Marlam Industries, Earl's Fiberglass, ON Semiconductor, Schuff Steel Company, Super Radiator Coils and UCSC, Inc., and National Gypsum. Able Engineering, the eighth company being recognized, made significant hazardous waste and water reductions. Other partnership member companies are working to prevent accidental fires and releases involving chemicals by improving their site safety procedures and equipment.

Emission reductions were tracked and reported annually through the end of the year. The results are being presented today at the Maricopa County Board of Supervisors meeting. The partnership companies also reduced 60 million kWh of electricity, 373,000 pounds of hazardous waste, and 827,000 gallons of water, adjusted to production.

# Attachment II

## Lessons Learned for Future Partnerships

Enforcement programs can get too busy with enforcement cases to conduct adequate follow-up:

EPA provided on-site audits to six companies during 2005 and 2006. The audit reports were sent to the companies in 2006 with recommendations for specific improvements, but there was no follow-up to assess and report what improvements the companies made in response to the audit findings. The reason was that the government agency personnel who conducted the audits were too busy taking enforcement against other, higher priority facilities throughout EPA Region IX. As a result, there are no details of what improvements were made at each audited IC/GN facility. However, we do know from data logs at the National Response Center that during 2005-2008 there were no accidental releases reported by the six companies audited, or the other two accident prevention facilities originally signed onto the partnership.

Companies leave the partnership for many reasons:

For the emissions reduction facilities, five companies dropped out of the partnership. Such attrition is not unusual and resulted from facility closure, other environmental priorities taking precedence, change of facility ownership, inability to normalize data accurately, loss of interest/perceived benefit.

Community members have very limited time available, and may not want to speak publicly in favor of the project, but their participation is very helpful: Participation by community residents in the partnership was low throughout, but still meaningful. Attendance at early meetings by community members really helped initially to get environmentally proactive companies to join. The companies that didn't join expressed reservations at exposing themselves to the community and press and very likely would not have joined a partnership like this under any circumstances. Some community members expressed dissatisfaction with the IC/GN partnership in the press but nearly all community members involved privately expressed their support for its goals and activities.

Despite the few companies that take full advantage of it, a large investment in technical assistance is essential: A series of five Environmental Management Systems (EMS) workshops was conducted in 2006. The workshops were of very high quality and were designed to help each company build an EMS step-by-step, so they were of direct benefit to each facility. Nevertheless, attendance dropped from 18 companies at the first workshop to six by the last workshop. Despite this attrition, the six companies completing the EMS workshop series took advantage of the very significant telephone and on-site technical assistance available benefited greatly from the assistance. These six companies are the ones who stayed with the partnership to the end and contributed heavily to the reduction numbers achieved. This large investment in technical assistance, including the telephone and on-site data collection efforts, was essential to the project's success.

Correlating results to improved community health may not be possible:

Correlating the environmental results achieved to improved community health is a very difficult link to make. One expected health benefit for reducing 85,313 pounds of air pollution, and reducing the power plant emissions associated with conserving 60 million kWh of electricity is *less asthma*, particularly for sensitive individuals, but we have no way to make that direct link. Asthma admissions to local emergency rooms were not tracked because they couldn't be correlated to the project activities due to the many other asthma irritants generated by other activities in the Phoenix valley that far outweigh the IC/GN emission reductions. It is possible that a cancer case may have been prevented, although less certain. The partnership targeted chemicals for reduction that were among the higher toxicity chemicals released in the Phoenix valley (see list below). What is certain is that the individuals living in the South Phoenix area experienced less chemical exposure than they

otherwise would have, especially those individuals living in the immediate vicinity of the partnering facilities.

Chemicals of Concern	Targets for Emission Reductions	Targets for Accident Prevention
1,4 - trichlorobenzene	X	
1,3-butadiene	X	
1,1 - dichloroethylene	X	
Acetaldehyde	X	
Acetylene	X	
Acrylonitrile	X	
Ammonia		X
Arsenic	X	
Benzene	X	
Cadmium	X	
Carbon Tetrachloride	X	
Chlorine		X
Chloroform	X	
Chloromethane (methyl)	X	
Cobalt	X	
Dichlorofluoromethane	X	
Dichloromethane	X	
Diesel PM	X	
Toluene Diisocyanates	X	
Ethylbenzene	X	
Ethylene dibromide	X	
Ethylene oxide	X	
Formaldehyde	X	
Glycol ethers	X	
Hexavalent chromium	X	
Hydrochloric Acid	X	
Hydrogen Fluoride	X	
Hydrofluoric Acid	X	
Lead	X	
Methyl ethyl ketone (MEK)	X	
MTBE	X	
n-Hexane	X	
Nickel	X	
Nitric Acid	X	X
PCBs	X	
Propane	X	
Styrene	X	
Sulfuric Acid	X	
Tetrachloroethylene (perc)	X	
Trichloroethylene	X	
Trimethylbenzene	X	
Toluene	X	
Trichlorofluoromethane	X	
Xylene	X	

How the chemicals were selected for this list:

1. They were listed by ADEQ and the Maricopa County Environmental Services Division as being toxic chemicals of concern for the South Phoenix area.
2. They ranked in the top 98% of chemicals that posed the highest risk to residents due to their inherent toxicity, quantity released, prevailing wind conditions, and population profile of residents downwind of each release. The model used to make this



determination is EPA's Risk Screening Environmental Indicator's (RSEI) model:  
<http://www.epa.gov/oppt/rsei/>

3. It is a chemical that would trigger a facility to develop a Risk Management Plan under SARA Title III requirements: <http://www.epa.gov/OEM/guidance.htm>
4. It is a chemical that was involved in a past release in south Phoenix. These chemicals appeared in Table 5 of the October 6, 2003 report prepared by SECOR International, Inc. entitled *Available Documentation of Toxic Chemicals in South Phoenix* for the Arizona Department of Environmental Quality.
5. It is one of EPA's list of the 33 air toxics that present the greatest threat to public health in the largest number of urban areas (source: <http://www.epa.gov/ttn/atw/urban/list33.html>)

Sustained leadership is critical:

Several people played leadership roles in implementing the project from beginning to end. The primary EPA representative, MCAQD representative, MCAQD press person, industry representative/chairperson for the outreach committee and the EPA Contractor provided project leadership throughout the partnership. This leadership was critical because key components of the partnership required constant refining and maintenance: relationships, data reporting, the website, etc.

Remind/help participating companies to conduct periodic compliance reviews/self-audits: One company was not eligible for the EPA award at the end of the partnership because it was involved in an enforcement case. EPA's policy is to not provide awards when there is an on-going enforcement case. Perhaps this could have been avoided if the company had conducted a more thorough compliance self-audit, and/or the partnership had provided more detailed compliance training workshops.