

**Intel Ocotillo  
Environmental Excellence**

**ANNUAL**

**PROGRESS REPORT**

**Issued April 1, 2010**

**(January 1 - December 31, 2009)**

**ANNUAL PROGRESS REPORT  
(Issued April 1, 2010)**

**Intel Corporation  
Ocotillo Campus  
Chandler, Arizona**

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**REPORTING FACILITY**

Intel Corporation  
Ocotillo Campus  
4500 S. Dobson Road  
Chandler, Arizona 85248

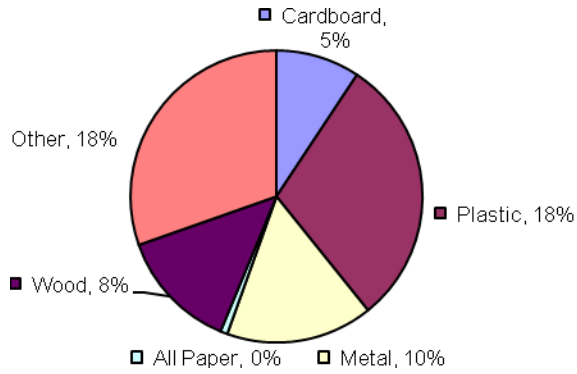
Year: January 1 - December 31, 2009  
Report date: April 1, 2010  
Report prepared by: Len Drago / Sean Aldrich  
Telephone Number: (480) 715-0206/ (480) 715-0132  
Fax Number: (480) 715-5140

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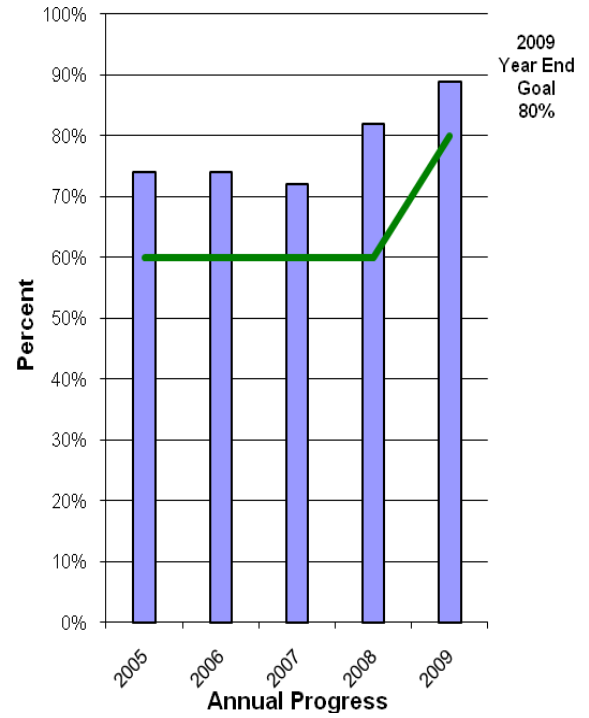
## 2009 SOLID WASTE RECYCLED

Reporting period: January 1 - December 31, 2009

Percent recycled: 89%



## SOLID WASTE RECYCLED



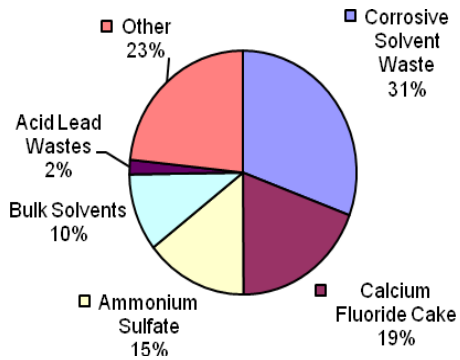
**Other:** Auctions, Donations, Reused Containers/Drums/Totes, Gloves, Glass, Compost, Concrete, Asphalt, and Coffee

**7,489 TOTAL TONS SOLID WASTE RECYCLED IN 2009**

## 2009 TOTAL CHEMICAL WASTE RECYCLED

Reporting period: January 1 - December 31, 2009

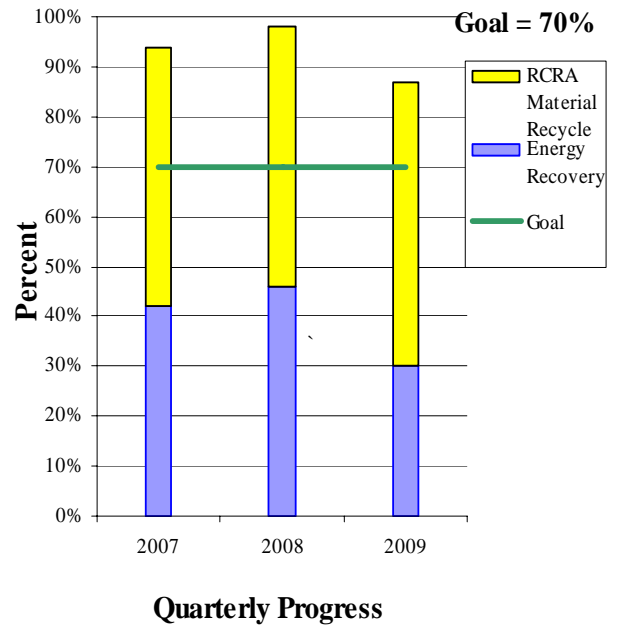
Percent recycled: 86%



**Other:** Non-Bulk Wastes which includes Aerosols, Fluorescent Bulbs, Debris, Batteries, Used Oil, Empty Drums, Ion Exchange Beds, Drums of Discarded Chemicals, etc.

**3,884 TOTAL TONS TOTAL CHEMICAL WASTE RECYCLED IN 2009**

## TOTAL CHEMICAL WASTE RECYCLED



## 2009 Site Wide Water Conservation

Reporting period: January 1 - December 31, 2009

Percent conserved for 2009: 78%

### Water Flow Details:

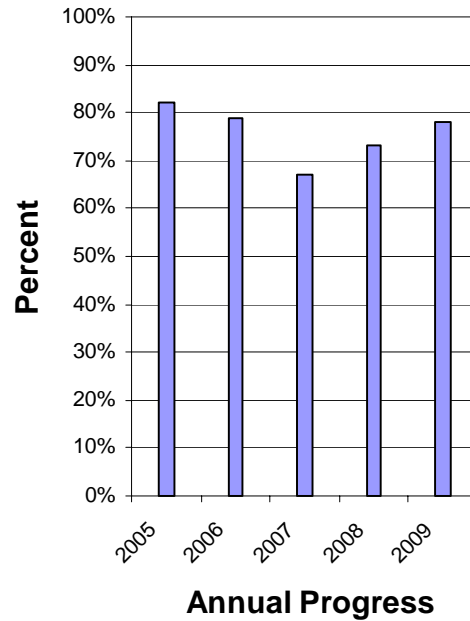
- ❑ Water Recycled Internally 509 MG
- ❑ Reclaimed Wastewater Used 855 MG
- ❑ Water Sent to Chandler RO for Groundwater Recharge 621 MG
- ❑ Incoming City Water 1,192 MG

**MG** = Million Gallons

$$\frac{\text{Water Recycled} + \text{Reused} + \text{Recharged}}{\text{All Water Used}}$$

$$\frac{509 + 855 + 621}{509 + 855 + 1,192} = 0.78 \times 100\% = 78\%$$

## Site Wide Water Conservation

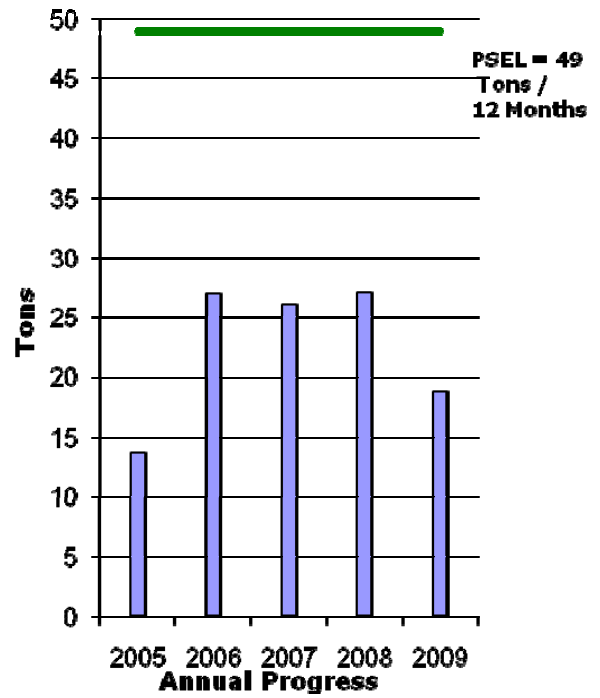


## 2009 VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS

Reporting period: January 1 - December 31, 2009

VOC emissions in tons (12-month rolling summation): 18.8

## VOC EMISSIONS

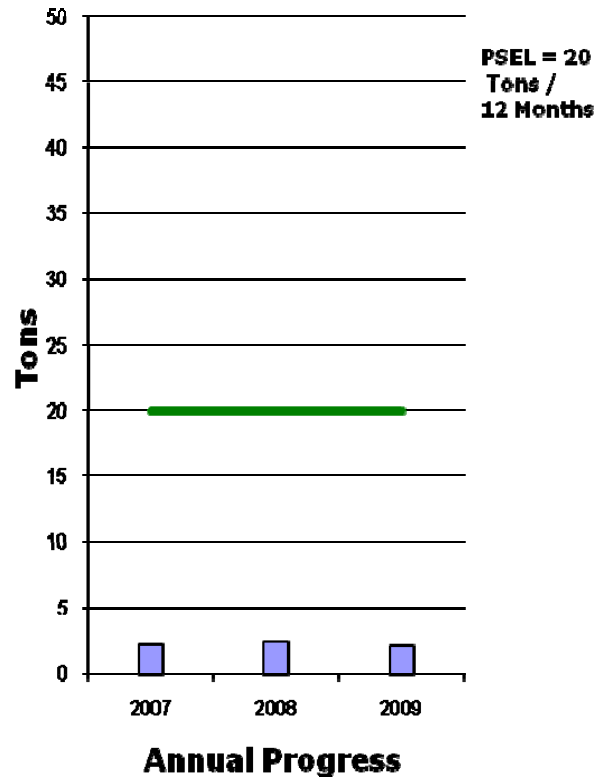


## 2009 TOTAL HAZARDOUS AIR POLLUTANTS (HAPs) EMISSIONS

Reporting period: January 1 - December 31, 2009

Total HAPs emissions in tons (12-month rolling summation): 2.0

## TOTAL HAZARDOUS AIR POLLUTANTS (HAPs) EMISSIONS

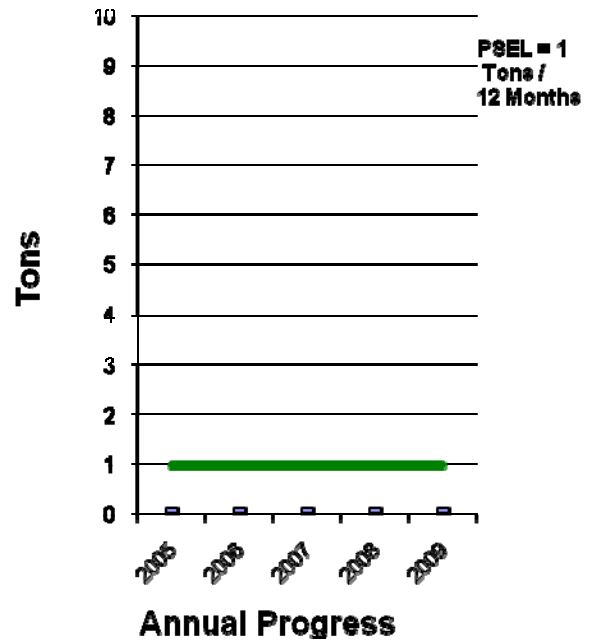


### 2009 PHOSPHINE EMISSIONS

Reporting period: January 1 - December 31, 2009

Phosphine emissions in tons (12-month rolling summation): <0.01 Tons

### PHOSPHINE EMISSIONS

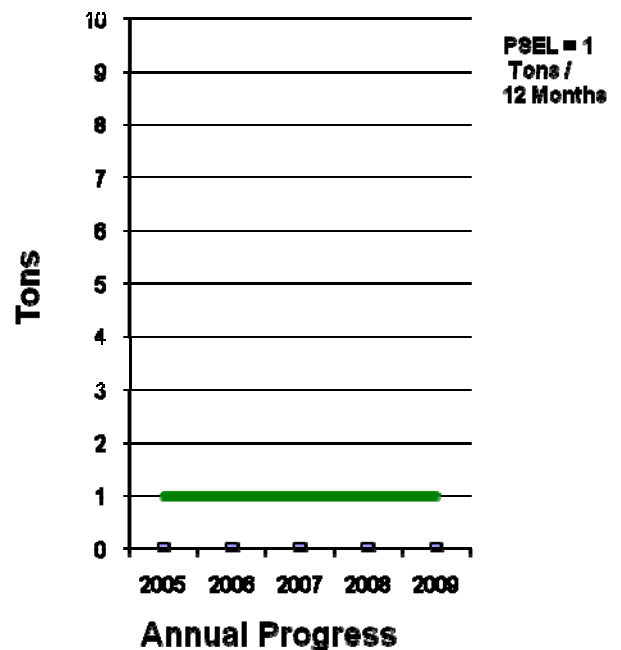


### 2009 SULFURIC ACID EMISSIONS

Reporting period: January 1 - December 31, 2009

Sulfuric Acid emissions in tons (12-month rolling summation): 0.02

### SULFURIC ACID EMISSIONS

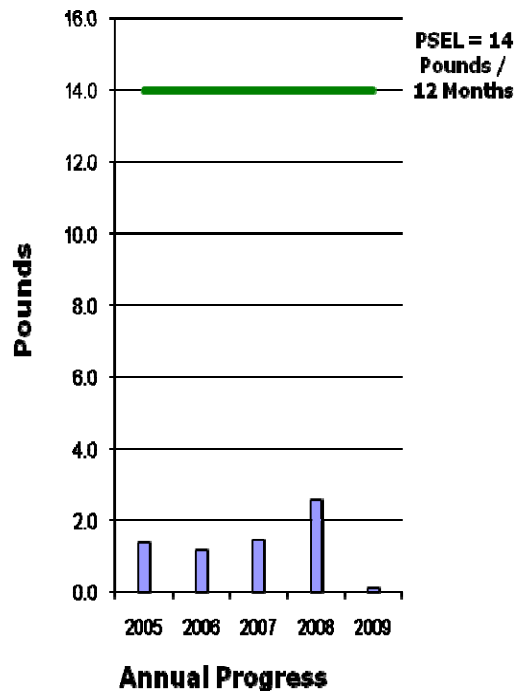


## 2009 ARSINE EMISSIONS

Reporting period: January 1 - December 31, 2009

Arsine emissions in pounds (12-month rolling summation): <0.1 lbs

## ARSINE EMISSIONS

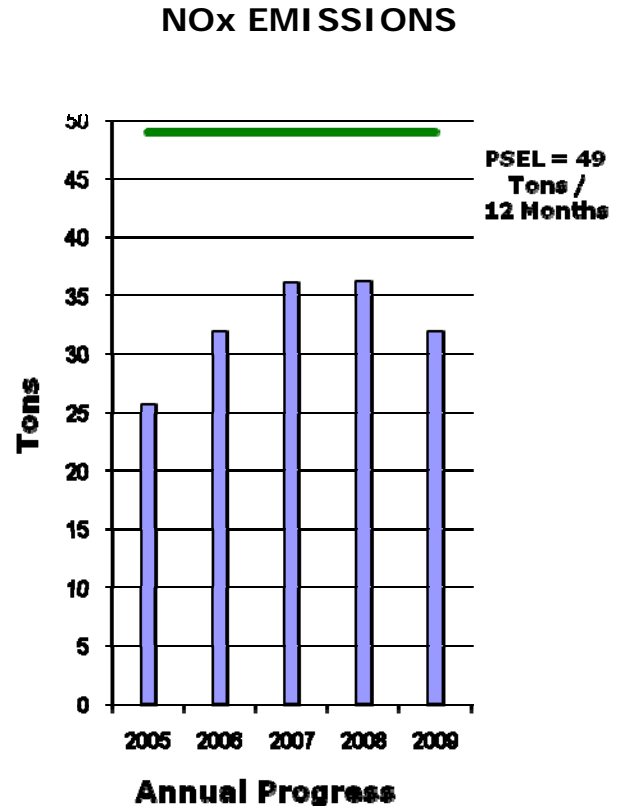




## 2009 NITROGEN OXIDE (NOx) EMISSIONS

Reporting period: January 1 - December 31, 2009

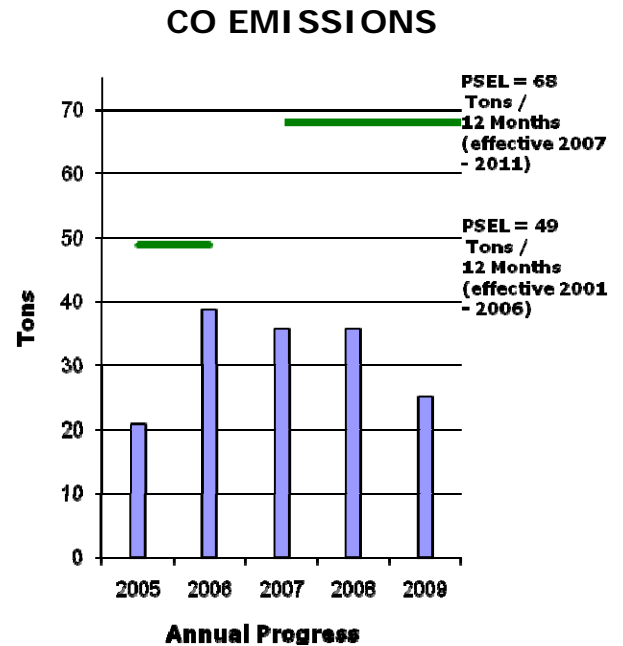
NOx emissions in tons (12-month rolling summation): 31.8



## 2009 CARBON MONOXIDE (CO) EMISSIONS

Reporting period: January 1 - December 31, 2009

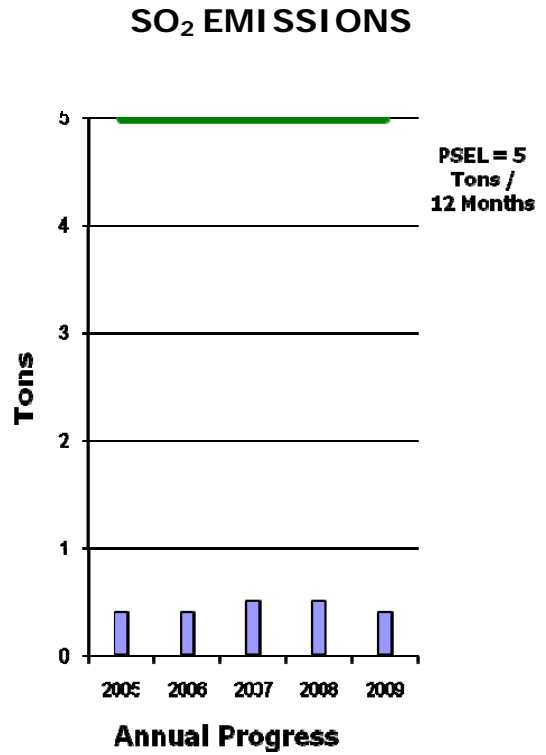
CO emissions in tons (12-month rolling summation): 24.9



### 2009 SULFUR DIOXIDE (SO<sub>2</sub>) EMISSIONS

Reporting period: January 1 - December 31, 2009

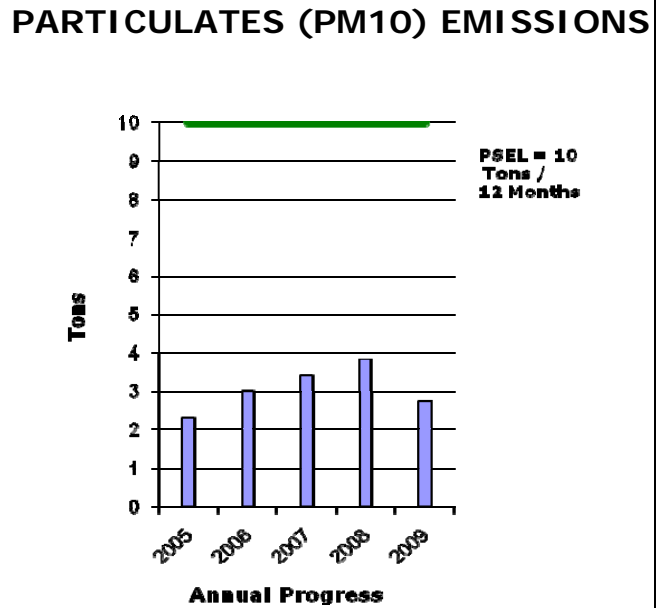
SO<sub>2</sub> emissions in tons (12-month rolling summation): 0.4



### 2009 PARTICULATES (PM10) EMISSIONS

Reporting period: January 1 - December 31, 2009

PM10 emissions in tons (12-month rolling summation): 2.7



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## OC 2009 ANNUAL FOSSIL FUEL USAGE

Natural Gas	544 Million Cubic Feet
Fuel Oil	12, 519 Gallons (Low sulfur content)
Emergency Generator Hours of Operation	162 Hours

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## 2009 OTHER ACTIVITIES THAT BENEFIT THE ENVIRONMENT

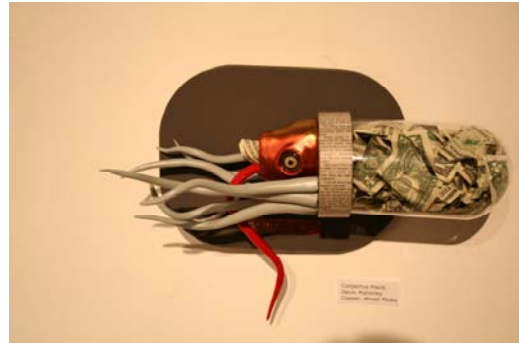
On January 24, 2009 Sun Lakes, Maricopa County and Intel partnered with Sun Lakes to sponsor the 7th Sun Lakes Household Hazardous Waste Collection Day. Supervisor Fulton Brock (Maricopa County) participated in this year's event. Approximately 906 vehicles turned in waste material totaling 35,782 pounds along with and electronic waste collected. The Students Recycling Used Technology (AZ StRUT) program was also on hand collecting old computers, printers, and various electronic equipment.

### Volunteers Supporting the Event!



## Copper Metal Donation

Intel made several donations of copper to the Arizona State University Art Department totaling approximately 4,000 pounds. The art students transform the donated copper into art as shown below.



## Trip Reduction Program

In 2009, Intel employees completed 13th annual trip reduction electronic survey for the Ocotillo campus and has submitted the plan to Maricopa County. 62% of the Ocotillo employees completed the survey which is used by the county to track alternate commute mode users. The results for the Single Occupancy Vehicle (SOV) Trip Rate were 60.34% and the Single Occupancy Vehicle Miles Traveled Rate was 54.19%. Options under the Rideshare program include compressed workweeks, telecommuting, car pooling and driving alternate fuel vehicles all of which help to reduce the single occupancy vehicle rate. Intel reimburses employees for up to \$30.00 per month for van pool and bus use. Emergency ride homes are subsidized at 100% for employees who use rideshare programs. Preferential parking is provided for car pool usage.

## StRUT Computer Recycle Day



Arizona StRUT Computer Recycle Day is an opportunity for civic organizations, small businesses, and the general public to recycle their used and obsolete computers, old cell phones, and computer parts, while benefiting schools and non-profits. On April 25, 2009, donations were dropped off at the following locations collecting approximately 28,680 pounds of electronic equipment:

- Basha High School
- Gilbert High School
- Mesa High School
- Tempe High School
- Metro Tech High
- APS Service Center
- ASU Service Center
- The Phoenix Zoo
- ASU West
- Phoenix Greyhound Park

For more information on the AZ StRUT program, visit [www.AZStRUT.org](http://www.AZStRUT.org)



**Valley Forward Water Efficiency Award:** Valley Forward Association brings business and civic leaders together to convene thoughtful public dialogue on regional issues and to promote cooperative efforts to improve the environment and livability of Valley communities. Valley Forward's Water Committee serves as an advocate of conservation and provides education and support for new water technologies, such as gray water reuse, water harvesting designs, cisterns, etc. Intel's water conservation program was recently named one of the finalists for the Water Efficiency Leaders Award.

### **Intel/USGBC AZ Community Conversation: Sustainable**

**Manufacturing:** This year's Greenbuild International Conference & Expo held in Phoenix, Arizona attracted over 25,000 attendees from across the globe. To open the event Intel sponsored a Community Conversation that discussed Sustainable Manufacturing and green building certification under the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) standards. A keynote address for this Community Conversation event was made by Intel's Brian Krzanich, Vice President and General Manager for Manufacturing and Supply Chain, followed by a panel discussion with company and LEED experts:

- Michael Arny, LEED® AP, Founder, Leonardo Academy
- James Beasley, LEED® AP, ESH Project Manager, Sematech, ISMI ESH Technology Center and moderator of the session
- Taimur Burki, Senior Environmental Engineer, LEED Program Manager, Intel Corporation
- Jim Hartzfeld, Managing Director, InterfaceRAISE, Past Chairman, U.S. Green Building Council
- Patrick Okamura, CFM, CSS, CIAQM, LEED® AP, Facility Manager, General Dynamics C4 Systems
- Mike Opitz, PE, LEED® AP, Vice President, LEED Implementation, U.S. Green Building Council
- Paul Westbrook, Sustainable Development Manager, SMTS, LEED® AP, Texas Instruments International Facilities
- Mark Wilhelm, MEP, LEED® AP, Greenbuild 2009 Host Committee Chair, Green Ideas Principal

This Community Conversation panel provided a kickoff venue for a healthy dialogue among company and LEED experts regarding manufacturing facilities' ability to demonstrate environmental management excellence through LEED certification for existing buildings. The session also provided an opportunity to communicate to the USGBC the challenges in applying LEED standards to manufacturing spaces as well as to discuss the availability of industry benchmarks that allow manufacturing facilities to demonstrate leadership in energy management under the LEED program.

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## GLOSSARY OF TERMS

**CARBON MONOXIDE (CO)** - CO is defined in Section 302, Subsection W of the United States Clean Air Act, as carbon monoxide. This is a combustion emission produced when fossil fuel is burned (oxidized) incompletely.

**ANNUAL REPORT** - This is a summary of progress for the previous calendar year and is published on April 1.

**QUARTERLY PROGRESS REPORT** - This is a progress report that is published by Intel on the following schedule which documents progress against its goals:

REPORTING PERIOD	DATE PUBLISHED
January, February, March	By May 31
April, May, June	By August 31
July, August, September	By November 30
October, November, December (included as part of the annual report)	By April 1

**HAZARDOUS AIR POLLUTANTS** - Hazardous Air Pollutants (HAPs) refers to the 189 chemicals and chemical categories listed in section 112(b) of the United States Clean Air Act. Under the Act, a major source of HAPs is defined as one that emits 10 tons/yr. of any single chemical on the list, or 25 tons/yr. of any combination of these chemicals.

**HAZARDOUS MATERIALS MANAGEMENT PLAN (HMMP)** - An emergency plan required by the City of Chandler for all operations, which store hazardous materials above a certain quantity on-site.

**LEED** – Stands for The Leadership in Energy and Environmental Design. LEED’s Green Building Rating System encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria.

(source: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222>. See LEED Rating System for Existing Buildings)

**NITROUS OXIDES** - In accordance with the definition in section 302, subsection V of the United States Clean Air Act, NOx refers to oxides of



nitrogen. The oxides of nitrogen typically emitted from combustion processes are nitrogen monoxide (NO) and nitrogen dioxide (NO<sub>2</sub>).

**OTHER ACTIVITIES THAT BENEFIT THE ENVIRONMENT** - Intel has committed to voluntarily engage in other activities, which may connect back to programs implemented by Intel Arizona and/or Intel's corporate programs. The items that may be reported on include:

- Environmental mentoring/education
- Donation of equipment
- Environmental activities with suppliers
- Transferability

**PARTICULATE MATTER (PM10) EMISSIONS** - Airborne particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM10) as defined in 40 CFR 51.100(qq).

**PLANT SITE EMISSIONS LIMITS (PSEL)** - The air permit establishes PSELs for emissions (tons per year (tpy)) of volatile organic compounds (VOCs, 49 tpy), oxides of nitrogen (NO<sub>x</sub>, 49 tpy), carbon monoxide (CO, 68 tpy), particulate matter of 10 microns or smaller (PM10, 10 tpy), sulfur dioxide (SO<sub>2</sub>, 5 tpy), Total and individual HAPs, (Total HAPs, 20 tpy), (Individual HAPs, 9.9 tpy), sulfuric acid and phosphine (1 tpy), and arsine (14 pounds per year).

**REGULATORY AGENCIES** - The following are the regulatory agencies who participate in the Intel Ocotillo Environmental Excellence Stakeholder meetings:

ADEQ - Arizona Department of Environmental Quality  
City of Chandler  
EPA - U.S. Environmental Protection Agency  
MCAQD - Maricopa County Air Quality Department

**RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)** - Refer to the statutes and promulgated EPA regulations in 40 CFR 260 through 282 which address the generation, storage, treatment and disposal of hazardous waste.

**REVERSE OSMOSIS (RO)** - Reverse Osmosis is a high-pressure filtration process which separates dissolved salt and minerals from water, using a membrane. Clean water passes through the membrane, and the salt and minerals are rejected.

**SOLID WASTE RECYCLE** - This includes materials that are designated as non-hazardous waste, based upon EPA's definitions under the Resource Conservation and Recovery Act, which include such materials as, plastics, aluminum, glass, wood, pallets, metal, cardboard, etc. The percent recycled

is calculated by dividing the quantity of materials within this category that are sent to beneficial recycle by the total volume of solid waste shipped off-site.

**SULFUR DIOXIDE (SO<sub>2</sub>)** - This is an oxide of sulfur, which is emitted during the combustion of fossil fuels.

**SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA) - TITLE III** - Refers to the statutes and promulgated EPA regulations, which address Emergency Planning and Community Right-to-Know.

**TOTAL CHEMICAL WASTE RECYCLE** - This category includes used chemical materials, which are collected for the purpose of returning them back into beneficial reuse via recycling, re-use, reclaim or fuel blending. The percent recycled is calculated by dividing the material in this category sent for beneficial reuse, divided by the total quantity of chemical waste generated.

**TOTAL DISSOLVED SOLIDS** - A measurement of the salt and mineral content in water.

**VOLATILE ORGANIC COMPOUNDS** - Volatile Organic Compounds (VOCs) are any compound of carbon which participate in atmospheric photochemical reactions, except those which are specifically excluded, as defined in 40 CFR 51.100(s).

**WATER CONSERVATION** - Efforts to Reduce, Reuse or Recycle water to avoid the use of the City of Chandler's drinking water supply.