2012 Award Recipients

Dow Chemical Company, Hanging Rock: Brian Funk, Site Leader

This site is currently nearing 7 ½ years injury free for their employees and 5 years injury free for their contractor staff. The site has been successful in its efforts by utilizing a program titled "Safety Buddy". This program requires annual certification for our workforce by having a Safety Buddy assigned to the work group to monitor their behavior and provide guidance on working safely and within the company's guidelines.

The Safety Buddy is a rotating weekly assignment with the plant staff supporting the effort. As many of their injuries result from inexperience, this program goes beyond the initial job review and permitting process to have a plant staff member frequent the job site throughout the day to ensure the safety standards are being followed. The program requires that the workforce group be observed for 5 consecutive occurrences before becoming certified.

Dow Chemical, Findlay: Todd Kindle, EHS Delivery Specialist

The Findlay leadership invested in the removal and disposal of asbestos Transite board material located in their production area. A safety plan was developed which included an elevated work plan, a production interruption plan and daily work permitting to include individual Safety Task Analysis Card evaluations from each person working that day.

Site Safety Team members, maintenance team members, and administrative team members were trained on safely working around asbestos, elevated work, safe work permitting and intervention skills. Throughout the project, safety walkthroughs were conducted at least daily to verify no exposure issues were present and that all safety equipment involved in the project was in good working order.

A 100% safety observer program was also implemented by Dow by requiring Safety Team members to be available for observing, assisting, and making safety interventions when needed. Upon completion of the project, over 10,500 square feet of Asbestos Transite Board had been safely removed and properly disposed of.

Safety Statistics:

- Over 4,000 safe work hours for contract company and Dow Employees during the asbestos abatement project, much of the work was in elevated locations
    - Zero OSHA recordable incidents on the site in 2012 for all Dow employees and all contract company employees and all visitors throughout the year (over 170,000 safe work hours)
- Zero Loss of Primary Containment incidents
- Zero Process Safety Incidents
- Zero First Aid Cases

OMNOVA Solutions, Akron: Dave Effler, Plant Manager

The OMNOVA Solutions Technology Center is a 50 year old facility located in Akron, Ohio which houses the company's US based research and development activities. Because of the age of the facility and its utility systems, the annual energy bill was significantly higher than expected for a building of its size and utilization. In 2006, OMNOVA's Global Technology Center initiated a comprehensive sustainability program, an initiative

focused on reducing the environmental impact of their operations and increased their ability to offer products with sustainable features. One of the key elements of the sustainability program is an emphasis on energy efficiency and reduced use of fossil fuels and electrical energy. Over the last decade, the facility has taken on several projects aimed at reducing the amount of energy used in the manufacture of its products. For the period of 2006-2012, the company's efforts resulted in reductions of 34% for electrical use and 40% for natural gas use, respectively.

Emery Oleochemicals, Cincinnati: Mike Groh, Global EHS Manager and BASF (as a joint project at their co-located facilities)

As BASF & Emery Oleochemicals were looking for an environmentally sound method for storm water management, they implemented their Storm Water Management Project which installed a bioswale to reduce the company's storm water pollution impact, by cleaning the water prior to its discharge. A bioswale is a landscaped area designed to remove silt and other pollutants from surface runoff water. As stormwater runoff flows through bioswales, pollutants are removed through filtering by vegetation and soils.

Obstacles Overcome: Approval from the U.S. Army Corps of Engineers and Mill Creek Watershed Council of Communities was necessary to install bioswales on the "back side" of the Mill Creek floodwall. A consultant was hired to review the potential hydraulic pressure that could be developed. In addition, a wall was required along the full length of the bioswale project to bring the elevation up high enough to provide the proper drainage and holding capacity needed for the bioswales to handle a 3-4" rain over a 24 hr. period. Furthermore, curbing along the plant roadway had to be removed and replaced with a flush concrete curb that allows surface water runoff into the bioswale while also preventing the asphalt road from breaking under the weight of 80,000 lb. tractor trailers. Finally, a 7500 ft^2 section of roadway had to be torn up and re-graded to eliminate a low point where the outfall storm sewer was located.

In mid-April, 2012—Emery and BASF invited their OEPA storm water management compliance officer and representatives of the Mill Creek Restoration and Mill Creek Watershed Councils to join their employees in planting the first native wildflowers in the bioswale. With the first bioswale now complete, BASF has closed three surface water runoff outfalls and Emery has closed off two. Based on an average annual rainfall, over 2,000,000 gallons of surface water runoff is now draining naturally into the ground water through the bioswale.

Dow Chemical – West Alexandria: Jerry Winkler, Health & Safety

This facility has achieved exemplary EH&S performance through employee commitment at all levels. Their accomplishments include 8+ years since the last Process Safety Incident, 2+ years since the last OSHA recordable, and have never had a reportable spill quantity. The site was also the recipient of the 2012 Dow WRAP Award (Waste Reduction Always Pays) – this award recognizes individuals who find innovative ways to save money while reducing waste or emissions at Dow. Waste reduction includes waste avoidance, source reduction, greenhouse gas emissions reduction, material reuse and/or recycles, by-product synergy, and energy conservation. The facility successfully generated $90,000 in revenue by selling waste streams as viable products to other companies. This effort reduced waste disposal costs, generated revenue and provided a raw material to someone else at a fraction of the cost of virgin material.

The implementation of several other initiatives has contributed to these success stories. They include, but are not limited to:

- An LOPC Team (Loss of Primary Containment) – primary purpose to prevent the spill or release of any materials from their primary containment (pipes, containers, vessels, etc.). The team anticipates where the next potential spill may occur and puts preventative measures in place to prevent that potential event from happening (e.g., strapping drums to pallets during transportation and storage, strapping totes to forklift during transportation, etc.)
- Drive to Zero Team – works on a variety of projects/initiatives throughout the year to drive the site to ZERO injuries, ZERO spills and ZERO Process Safety incidents.
- A robust web-based employee Safety Concern reporting system called "Safety Matters"
- A web-based, fully-comprehensive "Management of Change" process
- A web-based "My Learning" system which assures every employee obtains all the training necessary to excel at their individual jobs.

Potash Corporation, Lima: Mike Resar, EHS Manager

Because of the PSM Facility siting rule, Potash had to abandon their administration building and construct a new facility. To eliminate security risks at their new facility, a new security system with multiple security access levels was installed, which allows plant security to create numerous security levels appropriate for each individual. During the new building's 2-year construction, the PCS Nitrogen Lima facility continued to operate without a lost time injury, (Potash is currently at over 11 years since their last LTA) and the site saw a two year total recordable injury rate for all contractors including construction workers and PCS personnel of 0.25. The new administration building is also equipped with energy saving lighting and HVAC system. The leak test on the building shows that the air exchange rate is about 10 times better than industry standards require.

In addition, incorporated with the move into their new maintenance shop, Potash-Lima has eliminated the use of solvent based parts washers and switched to an aqueous based wash system that eliminates the hazards of fire, emissions and hazardous waste disposal for their employees and contractors.

Ashta Chemicals, Ashtabula: Richard Jackson, Executive Vice President, Operations

This year ASHTA implemented two major environmental projects that have moved ASHTA toward a sustainable future. The first project was their Storm Water Sediment Retention Basin for Pollution Minimization. ASHTA has voluntarily worked with Ohio EPA to design and install a two-acre sediment retention basin to reduce final mercury concentration in the storm water by reducing the total suspended solids in the run-off. The installation of the retention basin and landscape maintenance of the area has led to a 96% reduction of the mercury concentration in the storm water.

Their second project consists of a couple of **key improvements to the Main Plant Building.** During implementation of ASHTA's VAP program, Ohio EPA had voiced concerns over contamination under the foundation that could affect indoor air quality. Although there was no evidence of underground contamination, ASHTA offered to install a state of the art, chemical resistant and impermeable membrane flooring system to prevent any potential migration of vapors that could affect indoor air quality. ASHTA resurfaced the entire 60,000 square foot building with a special coating system. The new coating also added a "shine" to a fifty-year old chloralkali process building which has allowed leaks and spills to be quickly recognized and easier to clean up. Furthermore, to enhance the facility lighting utilizing ambient sunlight, ASHTA installed approximately

17,000 square feet of translucent panel on the side walls of the entire perimeter of the building. The combined improvements of the plant lighting and floor coating have enhanced safety and environmental performance as well as the morale of ASHTA personnel.

Procter and Gamble Company, Cincinnati: Jack Dison, EHS Site Leader

The Cincinnati Plant collaborated with the Federal Railroad Administration (FRA) to develop an Integrated Rail Compliance Management program for the site. The site inspects all incoming railcars prior to use to verify that each railcar is in DOT/FRA compliance and to standardize the closure components being used in the fleet. An onsite repair facility is utilized to correct any defects identified. Because of P&G's continued emphasis on railcar safety, this site has received the "Norfolk Southern Thoroughbred Safety Award" for shipping over 3,000 railcars containing regulated materials with zero incidents in 2012. In addition, this process of railcar standardization has reduced maintenance costs by over $200,000 per year.

PPG Industries, Barberton: Dan Pellegrini, Safety Supervisor

This site established a Machine Guarding Focus Team that comprised of salary and wage employees. The team's primary objectives were to identify potential machine guarding risks, reduce risk and communicate machine guarding efforts to the facility. Team members received specialized machine guarding training and developed a guarding assessment tool to calculate a "Risk Score" based on the frequency and severity of exposure. This tool was used to perform a plant wide guarding assessment and the results were prioritized based on the "Risk Score". A mixture of traditional and newer machine guarding technology (ex. Light curtains and interlocked safety cages) was implemented to address the risks identified by the assessments. Through these machine guarding efforts, the team was able to become subject matter experts on machine guarding requirements and achieved a greater than 90% completion rate for the 2012 action plan.

Shepherd Chemical Company, Cincinnati: Rob Paxton, Operational Risk Manager

In early 2012, Shepherd Chemical completed installation of new equipment which recovers copper waste at the process source. At a cost of $60,000 the new operation chemically treats the copper laden process stream to precipitate a recoverable copper compound which is captured in a filter press. The recovered copper compound is recycled through the manufacturing process. The clean water is subsequently sent to our water treatment plant.

Since the operation's start up in February, 2012, copper waste has been reduced by 48% from 2011 to 2012. This represents an annualized recovery of 30,260 pounds of copper metal. By investing in equipment to recover the metal at the process source, they are able to conserve the use of natural resources while further decreasing the potential for risk to the environment. The site realized a conservative return on investment of more than 300%, improving their ability to compete globally.

DAP Products, Tipp City: Ken Barr, Plant Manager

One of the ways that the DAP Tipp City facility demonstrates its commitment to the environment is through its extensive recycling program. Through active associate involvement, the Dap Tipp City facility recycled over 997 tons of materials in calendar year 2012 that would otherwise be sent to landfill.

These materials include wooden and plastic skids, empty metal and plastic drums, and empty intermediate bulk containers. Additionally cardboard, paper, and metals are recycled. As you know, recycling generally results in saving natural resources, maintaining natural areas, and pollution prevention.

PPG Industries, Circleville: Steve McCorry, EHS Manager

The PPG Circleville facility handles raw materials in various forms including bulk containers, drums, super sacks, 50lb. bags, pails, and in some instances, cylinders. PPG receives the material with four (4) cylinders on a pallet. Traditionally, the operator would need to manually move a cylinder off the skid and onto a cylinder cradle mounted to the fork truck forks. In addition, they would need to move the cylinder from the cradle to an elevated scale once in the operations area. Once the material was charged, the reverse process would be followed to get the empty cylinder (160 lbs.) back into the staging area and onto the skid. These four instances of manual moving of the cylinders posed significant ergonomic and safety concerns.

PPG's ergonomic team decided to find a better way of accomplishing this task. They focused on eliminating the need to manually handle the cylinder. Through use of a customized fork truck mounted boom and a revised cradle system which allowed the cylinder to remain on the cradle during the charging operation, they no longer perform any manual handling of these cylinders and have completely eliminated the ergonomic risks associated with this task.

Ashland Specialty Ingredients, Columbus: Jackie Lewis, Sr. HR Project Coordinator

The fluorescent lighting in the plant used a 40 Watt T12 lamp, which not only consumes 40 Watts per tube, but the tubes are a hazardous material to dispose of. Therefore, John Evans, the plant Senior Instrumentation Engineer, spearheaded a recent "T8 Lamp Upgrade Project" at the Ashland Columbus facility.

The new lamps would not only allow Ashland to capture a rebate from the local power company - AEP, but would also realize an energy savings since the new T8 tubes only consume 28 Watts each. The electrical savings that will be gained from the fixture upgrade will pay for the cost of doing the project in approximately two years, and the hazardous disposal cost savings is an extra bonus. The electrical savings means less need for electrical generation at the power plants resulting in less fuel and emissions at the power plants.

Lubrizol Advanced Materials, Brecksville: Tim Mandilakis, Jones Lang LaSalle Site Coordinator

Lubrizol's "B" Building Fume Hood Exhaust System was originally designed in 1944, and by today's building code and HS&E standards, this design concept falls significantly short of engineering standards applicable to critical laboratory ventilation systems.

As such, Lubrizol has installed is a new strobic fan exhaust system, which concept is currently utilized as a common engineering practice for laboratory fume hood exhaust systems. This concept allows multiple exhaust ports (Chemical Fume Hoods, Spot Vents, Etc.) to be centrally collected and exhausted through one main high volume, high plume discharge fan system. This concept will reduce energy costs, and increase reliability**.** The new system is engineered and designed with a level of redundancy by incorporating two fan units to be fabricated and installed on top of the existing (Dog House) roof structure. This design eliminates the confined space and any exposure to chemicals, thus minimizing potential health and safety risks. The first of six phases was executed in 2012 at a cost of $500k. Subsequent phases are planned for 2013, 2014 & 2015.

BASF Corporation, Streetsboro: Jason Kalpac, Site Manager

As part of this site's RC14001 certification process, the plant management team identified one of the processes where material is run through a kiln to burn off any impurities. In 2011 the group identified the need to upgrade the natural gas burner in order to make the unit more efficient. This project was extremely successful but the site wanted to continue to improve the process and continue to be more environmentally responsible.

In 2012 they identified another section of the process, called the scrubber that needed improvements. **They upgraded the scrubber to a stainless steel design that will improve life, decrease water leaks, improve draw by reducing air leaks due to corrosion, thus leading to higher capture efficiency of particulates.** At the time of the scrubber install, the pre-cleaner was also upgraded with a new cyclone vane design that will improve knockout of larger particles leading to even longer scrubber life and less loading. With the elimination of diesel fuel with the burner project coupled with the replacement and upgrade of the scrubber, possible environmental impact of the kiln operation has become negligible with improvements in energy consumption. This is just one of many examples from a site dedicated to the health, safety, and environmental controls for their employees and neighbors.

Lubrizol Corporation, Wickliffe: Greg Taylor, Environmental Assurance Manager

In the past year, this Wickliffe facility has seen several noteworthy achievements, including:

- Recertification of the VPP Star and RCMS programs at the site;
- Completion of a $4 million infrastructure project to replace and upgrade the site's wastewater treatment system. This project had a very broad scope which included several elements;
- Removal and replacement of 3 aging tanks with 2 new tanks resulting in improved sedimentation and storm water control;
- New instrumentation and automatic control valves integrated into a Delta-V control system with touch screen operation;
- Completely upgraded electrical system with emergency back-up power allowing continuous operation during power outages;
- New pH neutralization tank and redundant acid pumps resulting in improved operation and reliability;
- Expanding employee awareness and involvement in recycling at home and at work. Twenty eight materials are recycled, and a recycling rate of 73% of all solid materials was achieved in 2012.

Lubrizol Corporation, Painesville: Ken Frato, EHS&S Manager

As active community support began with The Lubrizol Corporation's founders, this site decided to create a vegetable garden on a ¼ acre plot on Lubrizol property, to grow produce to give to our local food banks and to Project Hope--the homeless shelter near our plant. To create this garden Lubrizol elicited the help of the Ohio State Extension Master Gardeners to partner with them. They provided their expertise in all aspects including garden location, soil prep, what to grow, seed starting, when and how to plant, plant maintenance and pest control. Lubrizol's 24 volunteers received classroom and hands-on training in all of these areas.

The garden was a huge success – harvesting 445 half bushels of 14 different crops! Squash, zucchini, tomatoes, peppers, eggplant, swiss chard, cabbage, kale, green beans, broccoli, potatoes, cucumbers, carrots and watermelon. Lubrizol's future plans are to engage local elementary school students as both an educational opportunity as well as to encourage giving back as a community value.

BASF Corporation, Greenville: Cheryl Batten, Site EHS Services

The BASF Greenville site recognized a need to improve near miss reporting as a mechanism to remove hazards from the workplace before an injury or other undesired incident could occur. To launch the program, hazard identification and near miss reporting training was provided to all associates in January. This training coordinated well with the hazard recognition training started in 2011 with the KISS Team Safety Observation Program, as well as BASF's established Root Cause Analysis training program.

This site also validated corrective actions identified in every event with a high potential for injury or off- site impact to prevent reoccurrence. The validation rated those near miss incidents against pre-determined criteria to verify that sustainable corrective actions were identified and implemented. To demonstrate the success of our 2012 Near Miss Reporting program, the Greenville site led the BASF Coatings Division in Near Miss Reporting with a 61% increase over 2011, as well as achieving zero injuries.

Americas Styrenics, Hanging Rock: Randy Webb, Coach

At Americas Styrenics' Hanging Rock facility, the health and safety of their employees as well as protection of the environment and the community is highest priority. The Hanging Rock site operates daily in a culture that puts safety above all and heeds responsible environmental policy and practices. To that end, they believe in preserving a safe and clean environment and work to reduce waste and conserve and reduce energy. Through capital project upgrades, synergies, and through repairs and refined work processes they are successfully reducing greenhouse emissions and improving air quality**.** *Some examples of successful energy savings initiatives in 2012 at this facility were:*

1) Installation of energy savings lighting system
2) Process dowtherm heater efficiency improvements
3) Optimizing energy usage in our product transfer system
4) Office and building energy reducing initiatives

Americas Styrenics also believes it is their responsibility and privilege to help improve the quality of lives of individuals and of their community. This Hanging Rock facility and its employees give back to the community through giving of resources, time and encouragement. *Some examples of this are:*

1) Co-hosting, with Dow Chemical and Rumpke Waste Disposal, the Annual Community Household Hazardous Waste Collection Day. During this event community members are invited to bring household hazardous waste products to the plant at no cost for disposal. It was a successful event which included many volunteer participants collecting tires, computers, paint, batteries and controlled substances.
2) Employee participation and contributions to the local United Way Agency
3) Participation in the Community Advisory Panel
4) Product and packaging recycling initiatives
5) Employee health screening programs along with health and wellness lifestyle improvement programs such as our "Walk it Off" program.

BASF Corporation, Whitehouse: Karl Schnapp, Site Administrative Services Manager

The CDC (Center for Disease Control) works with local health departments to establish Open and Closed PODs (Point of Dispensing). The PODs are used during emergencies (such as bioterrorism or natural disaster) in order to provide prophylaxis to local residents within 48-hours of the event starting. Closed PODs are usually hosted by businesses and only provide emergency services to their employees and their families.

In 2012, the BASF Whitehouse, Ohio facility was approached by the Toledo-Lucas County Health Department to create a Closed POD, which would help keep their employees and their families healthy, as well as lessen the burden on the Open POD facilities in Lucas County. The BASF Whitehouse Closed POD team is comprised of 25 members. The team includes both employees and medical professionals (1 doctor, 2 nurses, 1 pharmacist) from the community and has established a site specific plan to be used in case of an emergency and has secured the necessary supplies. The Whitehouse Closed POD team meets periodically to review materials provided by the CDC and to discuss any updates to the site's plan. The Closed POD team will conduct and stress test the established plan in their first of several drills in 2013. The plan may be modified to address any issues uncovered during stress testing.

McGean, Cleveland: Tom Edmunds, EHS Engineer

McGean strives to reduce hazardous waste generation every year. One method is to find new uses or users for their waste streams. In 2012, a facility was found that will take our waste acid scrubber solution, and use it in its entirety at their facility. McGean now uses this waste acid as a feedstock for their processes to make industrial chemicals, instead of the previous method of sending it to an injection well. This will reduce hazardous waste from this facility by 214 tons a year.

Lubrizol Corporation, Avon Lake: John Uptmor, Manager, HSE

During 2012, the facility achieved a 25% reduction in the volume of waste isopropyl alcohol (IPA) generated during production operations in which IPA is used as a solvent to make products. The products have strict IPA quality requirements. The facility had been generating IPA waste faster than the material could be reused. The undesirable result was that full tanks of IPA had to be sent off-site for incineration, and new IPA had to be purchased.

The reduction in IPA waste generating was the result of a project undertaken by a dedicated cross-functional team including process engineers, control engineers, operators, and schedulers. They worked together to improve the operation of recovery columns, increase IPA recycling across multiple product lines, and to make significant direct and indirect environmental contributions. The facility reused 196,658 pounds in 2012—saving more than $112,000 by avoiding purchases of new IPA. Waste loads shipped off site were reduced by some 64,000 pounds, and the waste load to the plant's waste water treatment system was significantly reduced when measured in terms of chemical oxygen demand.

John Uptmor will receive the award in behalf of the facility.