



EMS Annual Report

Fiscal Year 2016-2017

Printing with Purpose

EMPIRE SCREEN PRINTING

EMS Annual Report

Fiscal Year 2016-2017



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(Art Creative Director)

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(Engineering)

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Our Company Mission

At Empire, we are dedicated to being a cutting-edge print supplier. We create custom products that enrich our customers' brand and identity by providing a friendly, knowledgeable customer experience every time.

Our Company Vision

Empire is customer focused. We listen to both our internal and external customers and look to improve based upon their input. Through relentless pursuit of customer satisfaction, we work to grow our customer base and make our company strong. We develop our people by investing in education and training to empower them to make improvements to the products, services, processes and themselves. We concentrate on implementing sustainable production methods that are environmentally safe to protect our planet for future generations.

Our Core Values

- Respect
- Integrity
- Responsibility
- Continual Improvement
- Knowledge
- Excellence

Pursuit of sustainability is rooted in optimism.
-unknown



Small acts, when multiplied by millions of people, can transform the world.
 -Howard Zinn

photo credit: Jennifer Schloesser (Art Creative Director)

Executive Summary (President's Statement)

AS I REFLECT on our journey of sustainability and how far we've come, I have to thank our employees for their integrity, hard work and perseverance. Without their knowledge and expertise, we wouldn't be where we are today. I am humbled by their commitment to build a better workplace for themselves and their fellow employees.

This company has always been built on self reliance. We found ways to develop technology ourselves when the industry didn't have what we were looking for. This culture has enabled us to grow and expand in different ways, allowing us to lead in this industry rather than follow in someone else's footprints. Back in the 70's, we first attempted running UV inks instead of solvent inks to improve the health and safety of our employees. Although the current industry standard continues to use solvent inks, we are proud to say we manufacture our products using 99% UV ink.

In 2011, we introduced UV LED ink curing technology to the industry with the world's first UV LED roll-to-roll screen printing press. We found willing partners to participate in developing

this technology with us. UV LED is both environmentally friendly and economically sound, and it was our research and willingness to question the industry that led us down this path.

As we learned more about the environmental improvements of LED technology, our employees established a Green Team in 2012. Their involvement and the support from fellow coworkers took us on a path that far exceeded my expectation. Our company adopted a sustainable mindset and implemented our Green Sustainability Policy. This policy outlines our changing values, and today we are now 75% UV LED within our screen printing manufacturing. We are also starting to see an overall reduction in our energy use; this comes with increased sales and added equipment to our facility.

I'm looking forward to our future as we continue to make decisions based on the triple bottom line: people, planet and profit. Improvements must be safe for our employees, our environment and the overall health of our business.



John W. Freismuth
 John Freismuth, President

Our Environmental Vision

Empire's **FOCUS** is providing our customers with products and services that produce sustainable results and business practices. Through our relentless pursuit of customer satisfaction, we will grow Empire's customer base and strengthen our company. We will strive to improve our process by listening to our customers, collaborating with our business partners and developing our people through education and training. Our employees will be empowered to continually make improvements to the process, their work environment and themselves. We will develop production methods that implement sustainable environmental, health and safety (EHS) practices into all aspects of our operations.

We **COMMIT** to being compliant with all applicable EHS and labor regulations (federal and state). We will continue to implement programs and procedures in accordance with these requirements.

We **PLEDGE** to look for new opportunities and innovations that will help enhance and improve our sustainability program beyond regulatory compliance. We will strive to incorporate activities and procedures that will reduce our impact on the environment as well as improving the quality of health and wellness of the

employees. We will measure our progress through regular audits and annual reviews.

Empire will **STRIVE** to implement procedures to target prevention of activities, services or products that may cause harm to human health, safety, or the environment. These procedures will be designed to affect Empire and/or the surrounding community.

We will **COMMUNICATE** our sustainability commitment to our employees, vendors, customers and community through educational training and marketing. We will encourage their input on meeting our goals and improving our procedures.



photo credit: Amy Bettis (HR/Marketing)

We failed to perform an internal audit of our Environmental Management System for the fiscal year October 2016 - September 2017. Management was informed. The reason for the failure was due to having only one qualified internal auditor who was working on new standards for ISO 9001-2015. His time was spent working on that standard and being pulled to help in production. Empire is in the process of establishing an audit team. In this next fiscal year, the audit will be added to the calendar and is set to be performed by June 2018.

Accomplishments | Creating Awareness

Article written by Tom Eggert, WI Sustainable Business Council (published in Empire's Fall 2016 / Winter 2017 Newsletter)

WISCONSIN BUSINESSES COMMITTED TO SUSTAINABILITY



John Freismuth, President

The Wisconsin Sustainable Business Council presented the 9th Annual Wisconsin Sustainable Business Conference on December 8th at Empire Screen Printing. This was the first time the conference was held in the western part of the state, and we are so indebted to Empire Screen for volunteering to host. One of the greatest benefits to

hosting the conference in Onalaska was the large number of first-time attendees from the western part of the state.

Sustainability continues to occupy an important place on the agendas of senior management teams from both product and service providers. Whether a commitment to becoming more sustainable is driven by the prospect of becoming more efficient (and thus saving money) or reducing risk, or meeting the demands of customers, or attracting talent, or satisfying investors, companies are moving to become more sustainable. This one-day conference highlighted the changes made at a number of Wisconsin companies, including the changes made at Empire in the printing process.

Empire president **John Freismuth** talked about both the motivation for sustainable, energy efficient changes and

the impact of the changes. Though Empire was driven by the prospect of saving money by making the printing process more efficient, a side benefit was an excited and supportive work force. At the conference, John announced that the company is sharing its technological advancements with its competitors because, according to John, "It's important for the entire industry to reduce its footprint."

As part of the conference, tours were provided of the new printing presses and the LED curing process. The audience was keenly interested in both how the changes were made and in the motivation for the changes. Actually being able to see the final outcome of a sustainable decision is important to send the message that sustainability is really about business as usual.



SGIA|SGP|GREEN TIER WEBINAR Over the past few years, Empire has built a strong relationship with SGIA in regards to sustainability. Because of this relationship, Creative Director/Sustainability Coordinator, **Jennifer Schloesser**, was invited by SGIA's Marci Kinter, VP of Government & Business Information, to be a guest



Jennifer Schloesser
Empire Creative Director & Sustainability Coordinator

panelist for the Sustainable Green Printer Partnership informational webinar.

On April 20, 2017, in celebration of Earth Week, Jennifer presented Empire's story with panelists **Jessica Lawent** (DNR's WI Air Management and Print Sector Specialist) and **Renee Lasjak Bashel** (DNR's WI Environmental Assistance Program Manager). The webinar panelists incorporated

their organization's sustainable journey and/or role, describing how a robust green program designed to reduce environmental footprints can bring a strong return on investment, improving the bottom line. This webinar highlighted the linkage between the industry's national **Sustainable Green Printing Partnership (SGP) certification program** and **Wisconsin's Green Tier program**, making it simpler for Wisconsin printers to participate in both and laying out clear expectations for additional learning and sharing.

SUNY-ESF|RADTECH COLLABORATION Jennifer's participation in SGIA's webinar on April 20th captured the interest of **Brandon Murphy** from the State University of New York College of Environmental Science and Forestry (SUNY-ESF) Outreach Program. He was impressed by Empire's advances in technology and invited Jennifer to share the company's sustainable journey in a national webinar on June 15, 2017, featuring our innovative UV LED ink curing technology for the screen printing industry.

To advance energy curing training, education, and professional practice, RadTech International, North America (RadTech)

and SUNY-ESF have partnered to create programs that bridge academic and professional development.

Future of UV/EB Advanced Manufacturing: Trends, Strategies, and Applications is a free national webinar series that addresses timely and relevant trends, issues and applications for individuals and organizations committed to expanding or exploring ultraviolet/electron beam (UV/EB) curing technologies. It was a great opportunity to advance UV LED technology within the industry, reaching a whole new audience. Webinar attendees learned how Empire Screen Printing partnered with industry leaders Phoseon Technology, Nazdar Inks and Coatings, and Kammann USA to become the first to successfully implement UV LED ink curing technology for screen print manufacturing.

HR COLLABORATIVE In July 2017, **Amy Bettis** presented the topic "How to Attract and Retain Talent with Environmental Sustainability in the Workplace" to area HR professionals and business leaders at the **Coulee Region HR Collaborative**.



Amy Bettis, SHRM-CP
HR | Marketing

This presentation showcased our efforts of sustainability and how we can leverage that in a tight labor market: 53% of workers want to be in a job where they can make an impact. Implementing sustainability practices teaches our existing workers valuable new skills they can bring back to their regular roles for the company. We also want our future hires, business partners, colleagues and community to be conscious of the fact that by following a sustainable path, we are elevating our community as a great place to work, live and play.

Amy commented, "As an HR strategic partner, I am learning firsthand how interconnected and essential human resources is to sustainability. As we move along our sustainable path as a Green Tier Company, I am able to stay connected to sustainability and how it relates to employee and community engagement."



For the third year in a row, Empire has been recognized with the SGIA Sustainability Award.

2016-2017 Objectives & Targets Results

Sustainability's goal is to create possibilities, not to limit options.
-unknown

OVERVIEW

OBJECTIVE 1

Reduce our annual landfill waste to 23.85% by 2022.

OBJECTIVE 2

Implement sustainable print methods with equipment using UV LED technology.

OBJECTIVE 3

Update/replace equipment as needed for better efficiency &/or per legal and other requirements.

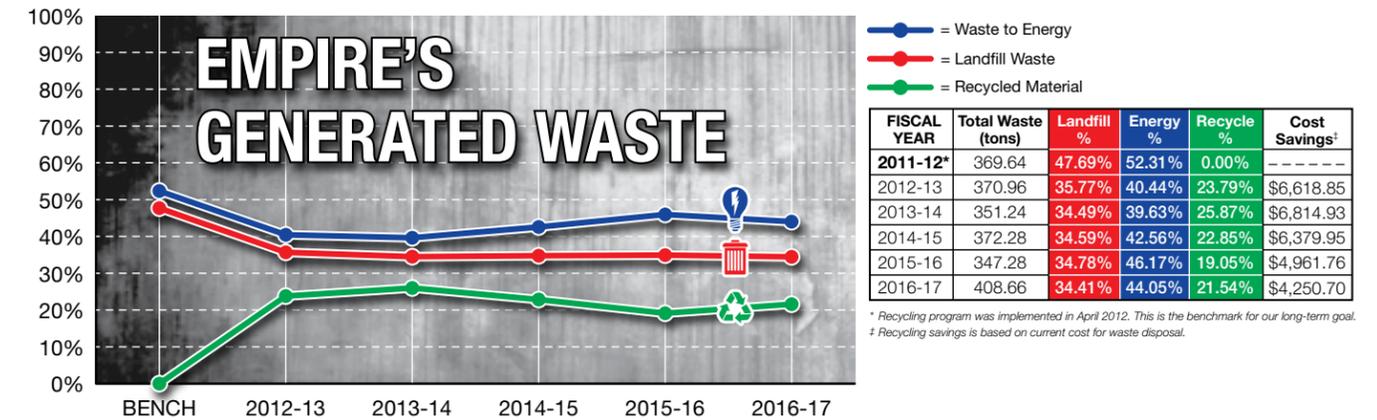
OBJECTIVE 4

Make improvements based on our 2016 external audit.

Objective 1:

Reduce our annual landfill waste to 23.85% by 2022

Empire Screen identified 2012 as the baseline year for setting a waste reduction goal. In 2012, 47.69% of waste generated was sent to the landfill. By 2022, Empire Screen will reduce the waste sent to the landfill by 50%, with an annual reduction of 2.39%, resulting in no more than 23.85% of all the waste generated being sent to the landfill.



Action Item #1: Reduce material usage on jobs that can be produced in flow from 8% to 4%

Our current standard is an 8% reject factor. By setting a goal of a 4% reject factor, less material was used when printing in flow. We were able to accomplish a 4.36% reject factor with a 3.37% material savings.

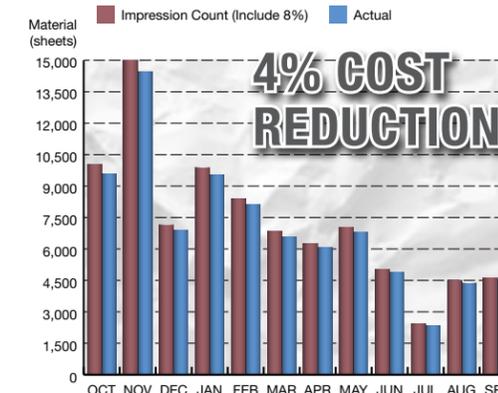
Action Item #2: Garbage Audit

Performing a garbage audit helped identify potential issues with our current waste streams. In September, a small group from the green committee went with maintenance during the landfill waste collection to determine how we are performing. The team identified areas for improvement: large amounts of paper and food waste (wrappers, etc.) were found in the landfill trash receptacles rather than getting recycled or burned for energy. Our biggest culprits were styrene (which is recyclable) and liner paper (which can be burned for energy).

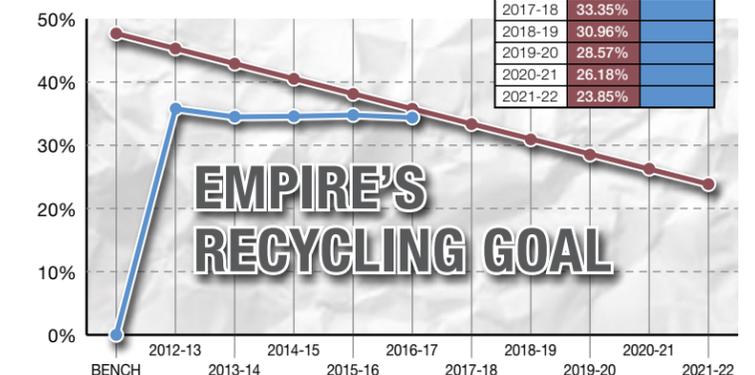
Our audit findings included the following: (1) recyclable stickers were not always being put on the job ticket, (2) bins did not have labels, (3) recycle or burn-for-energy waste was placed in landfill receptacles, and (4) inconvenient locations for general waste or lack of receptacles.

To fix some of these issues, we've updated procedures for labeling recycled materials on the work ticket to help operators identify recycled materials. We will be creating "Landfill" labels that will be placed on all bins going to the landfill, hopefully making everyone think twice before dumping that piece of paper or sheet of styrene. We will also work with supervisors on making their areas more efficient for the various waste produced.

Total Impression Count87,155
Total sheets actually used84,215
4.36% Reject Factor with a 3.37% material savings



| YEAR | TARGET | ACTUAL |
|---------|------------------|--------|
| 2011-12 | 47.69% Benchmark | |
| 2012-13 | 45.30% | 35.77% |
| 2013-14 | 42.91% | 34.49% |
| 2014-15 | 40.52% | 34.59% |
| 2015-16 | 38.13% | 34.78% |
| 2016-17 | 35.74% | 34.41% |
| 2017-18 | 33.35% | |
| 2018-19 | 30.96% | |
| 2019-20 | 28.57% | |
| 2020-21 | 26.18% | |
| 2021-22 | 23.85% | |



Objective 2: Implement sustainable print methods with equipment using UV LED technology

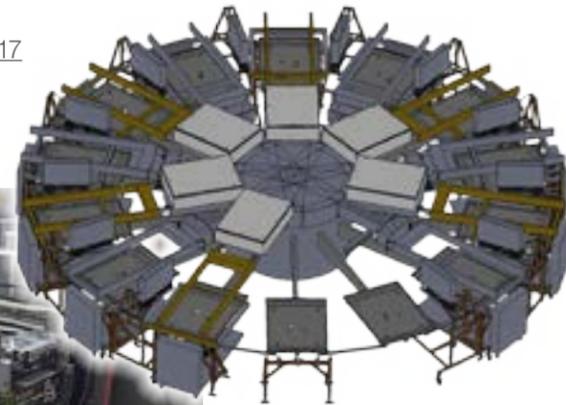
Convert a 6-color UV mercury-curing 38x50 press to a 12-color UV LED curing press. This is a continuing objective from 2015-16. By converting a 6-color mercury vapor press to a 12-color UV LED press, we will double our capacity. It will give us the ability to run jobs with 6 or more colors in flow, which will reduce material waste and over-processing. This press is the first of its kind and we do not have metrics for energy use at this time. Based on comparing our existing UV mercury 38x50 and our experience with UV LED technology, we aim for a 70% reduction in energy use with this new 12-color UV LED press*.

*The previous projection of 85.23% energy savings with a cost savings of \$28,000 was based on a new press using traditional UV curing print methods, running at 5,000 hours. Updated information is based on actual run time of the existing 38x50 press.

Action Item #1: Decommission the existing 38x50 press in January 2017

This was completed on December 16, 2016.

Action Item #2: Retrofit and redesign of 12-color press



Original schematic drawing of Empire's 12-Color LED Carousel Press

Empire's completed 12-Color LED 25x38 Carousel Legacy Press

The plans for the 12-color conversion started in the 2015-2016 fiscal year. The first phase involved planning, designing, purchasing equipment, and building components for the conversion process. In January 2017, we decommissioned the 6-color 38x50 UV mercury press and pulled it from production. During this next phase, our machine shop implemented the new designs, retrofitting six new print heads (including a load and unload station), our exclusive registration system, new electrical features, automated press controls and LED lighting units for curing. With the exclusive registration system, the press holds mechanical tolerances of .001" and can hold color-to-color registration between .005-.007". This greatly improves efficiency in quality and lead times for our customers. The table size was also adjusted from 38x50 to 25x38 to accommodate existing screens we use throughout the plant. We had one unit completely fitted and tested prior to completing the 11 other units at the end of September 2017.

The final completion phase, print testing and validation process, will be done in the 2017-2018 fiscal year's objectives, along with metric comparisons between the previous 6-color 38x50 UV mercury press and the new 12-color 25x38 UV LED press. As stated in this year's objective, we aim to have a 70% reduction in energy use when comparing the two presses and increasing capacity by 25%.



one of the twelve print head areas

Objective 3: Update/replace equipment as needed for better efficiency and/or per legal and other requirements

Replace compressor

Empire will replace two of our current compressors with one more efficient compressor, due for completion in November 2016, reducing the kWh usage of this equipment by 50% per year.

On November 03, 2016, Empire replaced 2 air compressors with one Sulair compressor. A 60HP screw air compressor S-Energy 4500 VB (variable-speed) system (Model 4509 VB) replaced two 30HP compressors - 1 modulating and 1 load/unload. The two previous were 125 cfm, each at 125 psi. The new compressor is 264 cfm at 125 psi.

BEFORE: Average energy use / cost for previous 30HP compressors (3 shifts):

44.90 kw/hr x 24 hrs = 1,077.6 kW
 1077.6 x 5 days = 5,388 kW
 5388 x 50 weeks = 269,400 kW/year
 269,400 x \$.072 = \$19,396.80 cost per year

AFTER: Average energy use / cost for new 60HP compressor (3 shifts):

22.84 kw/hr x 24 hrs = 548.16 kW
 548.16 x 5 days = 2740.8 kW
 2740.8 x 50 weeks = 137,040 kW/year energy savings of 132,360 kW/year (49.13% reduction)
 137040 x \$.072 = \$9,866.88 cost savings of \$9,529.92/year

A Pure-Aire chiller/dryer was also purchased at the same time as the compressor, which replaced the two standard air dryers used with the old compressors. This is the most efficient way to dry air at 325 cfm.

Lighting conversion

404 fluorescent T12 bulbs will be replaced with 404 LED T8 bulbs in the 1998 building edition by September 2016. This will result in a 30% reduction in bulb kWh usage.

This project was put on hold by management. The construction of the 12-color conversion took precedence over other improvements due to increased production and customer demand. This objective will be carried over to the 2017-18 year.

Objective 4: Make improvements based on our 2016 External Audit

Reevaluate and rescore our Aspects & Impacts report to better see what needs improvement. This improvement is based on the EMS Auditor's report (Clause 4.3.3, Objective, Targets and Programs).

During our 2016 external audit, it was suggested that our scoring of the Aspects and Impacts report (Clause 4.3.1) could be improved to help the organization identify priority by reevaluating the risk of the impact if it were uncontrolled, verses the risk once operational controls were in place. We took these suggestions and started working on improving our scoring system based on the auditors suggestions. To help us identify the risk, we based the numbering system on fact-based questions rather than opinion. Questions are based on evidence of occurrence (frequency) and severity of the impact and risk (uncontrolled vs. controlled). When reevaluating the Aspects & Impacts report, we also felt it necessary to add a section providing resources for our operational controls. By including links to policies and procedures directly related to the activities listed, this document can be used for training as well as aiding with future audits. The improvements to the Aspects and Impacts document is 75% complete and will continue into 2017-2018's objectives. The new scoring system will be added to the EMS manual and will be included in our 2018 objectives as well.

Create a complete list of environment permits and legal requirements. This improvement is based on the EMS Auditor's report (Clause 4.3.2, Legal and Other Requirements and 4.5.2, Evaluation of Compliance).

During our 2016 external audit, it was determined that record keeping for our legal and other requirements needed improvement. The auditor analyzed the physical permit requirements, but we were lacking in following the procedure set forth in the EMS document manual. Since the audit, we created **GT_3.0 EMS List of Legal Requirements**, which identifies our legal requirements. It includes the permit number, title, description, necessary forms, due dates, account person, and whether it's state, federal, county or township. These records are now saved within our company's Quality Management System (QMS) under our policies: EMS documents.

2016-2017

Our Environmental Performance

Performance for the Fiscal Year
10/2016 – 09/2017



Empire Screen Printing is located in Onalaska, Wisconsin, on a spacious 140.58 acre property. The commercial area covers 12.37 acres with a large 150,000 square foot facility, employing 258 full-time and 20 part-time people.

Demographics

| | |
|---|--------------------|
| Total Sales..... | \$24,155,798 |
| \$ saved from material/process improvements..... | \$800,000 |
| Profit of..... | \$1,460,225 |
| Multiple between highest paid and lowest paid employee..... | 4 |
| Total purchases..... | \$22,664,966 |
| Total in-stage purchases (approx.) | Info Not Available |
| % or purchases made from companies in Green Tier | Info Not Available |

Energy

| | |
|------------------------------|---------------|
| Total Electricity used | 3,485,640 kWh |
| Total Natural Gas used..... | 52,475 Therms |
| Renewable energy | N/A |

Water

Empire has 2 water wells, which are not regulated by the city. The amount of recycled/reused and pollutants discharged is not recorded.

Waste

| | |
|---|----------------------------|
| Hazardous waste disposal (still bottoms)..... | 6 drums (3,150 lb/yr) |
| Reduction from previous year | 10.00% |
| Non-hazardous waste disposal (ink) | 20.18 drums (9,257 lbs/yr) |
| Increase from previous year..... | 12.11% |
| Material recycled/reused..... | 88.03 tons/yr |
| Material sent for energy conversion..... | 180.02 tons/yr |
| Total amount diverted from landfill..... | 65.59% of product |

Air

| | |
|---|---------------|
| Total air emissions from 01/2015-01/2016***..... | 14,282 lbs/yr |
| Reduction from previous year..... | 2.14% |
| Ozone-depleting substances (refrigerant added every fiscal year)..... | 100 lbs/yr |
| Reduction from previous year..... | 0.00% |
| Greenhouse gas emissions..... | N/A |

***Air emissions are recorded annually.

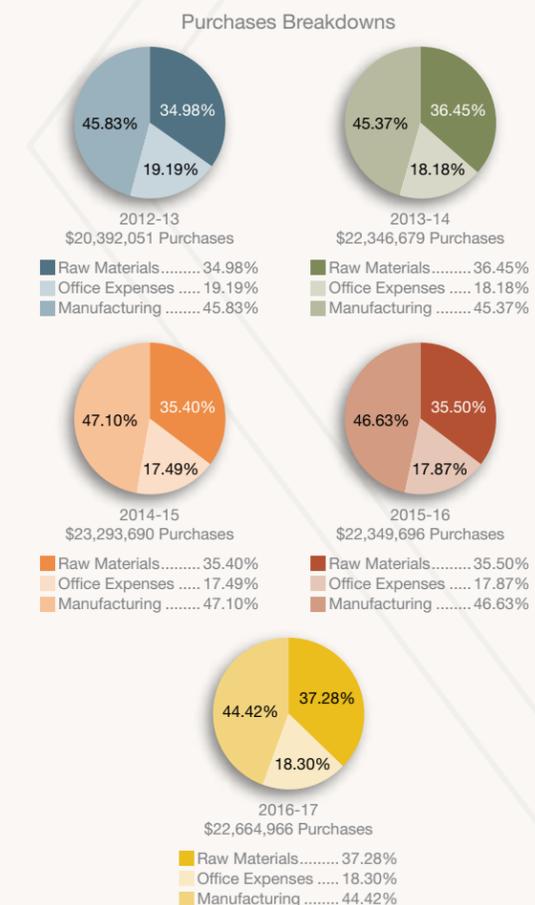
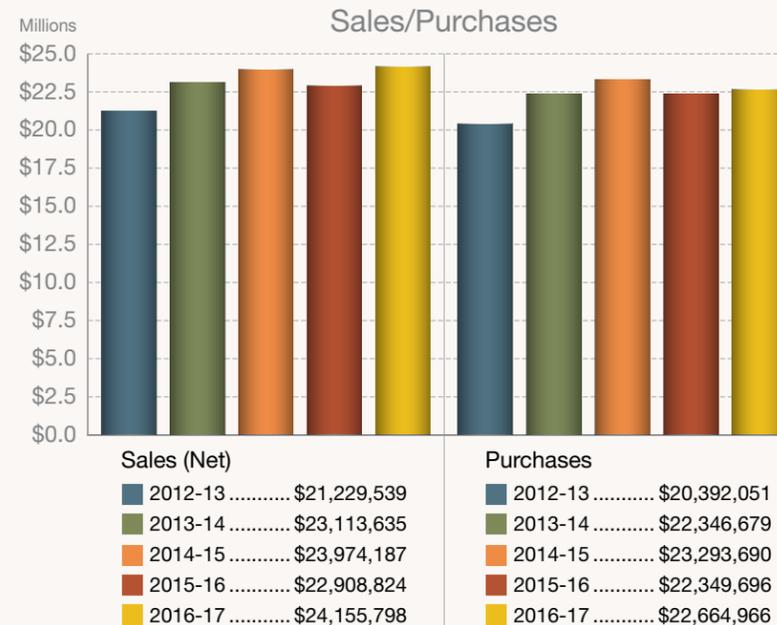
Transportation

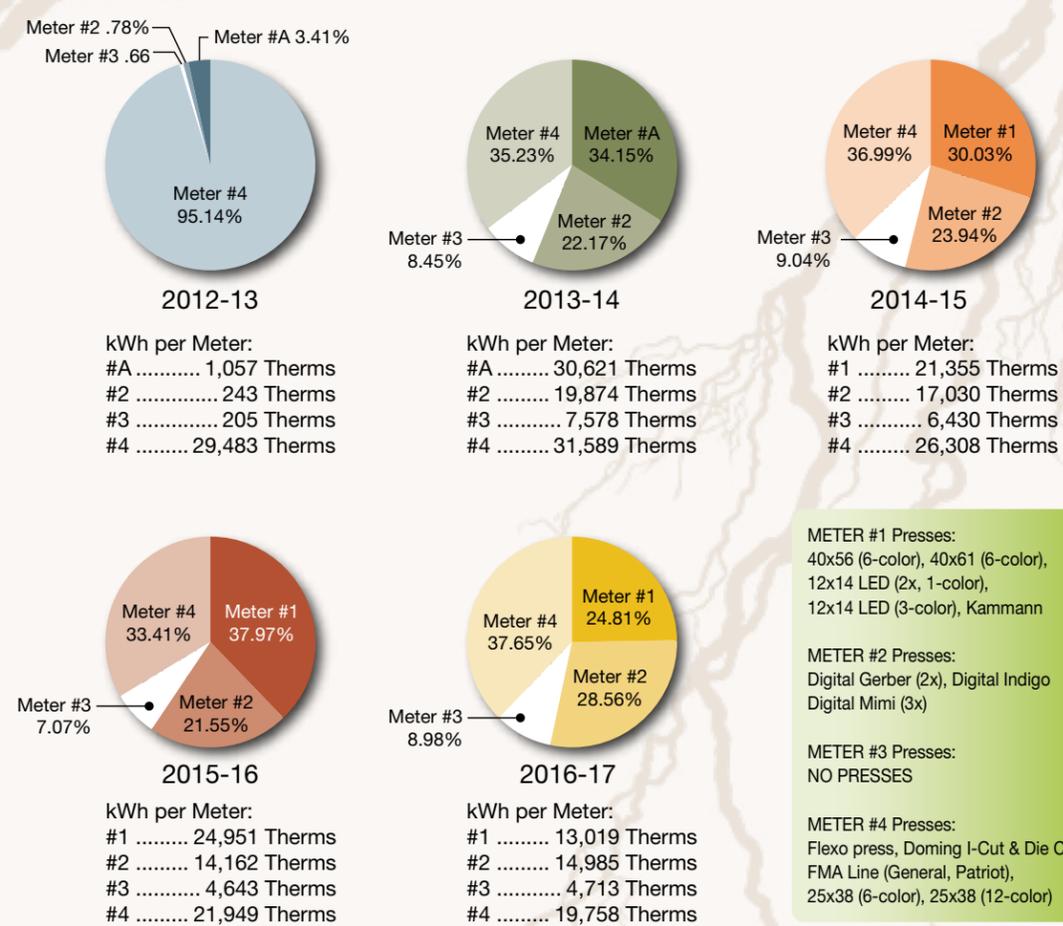
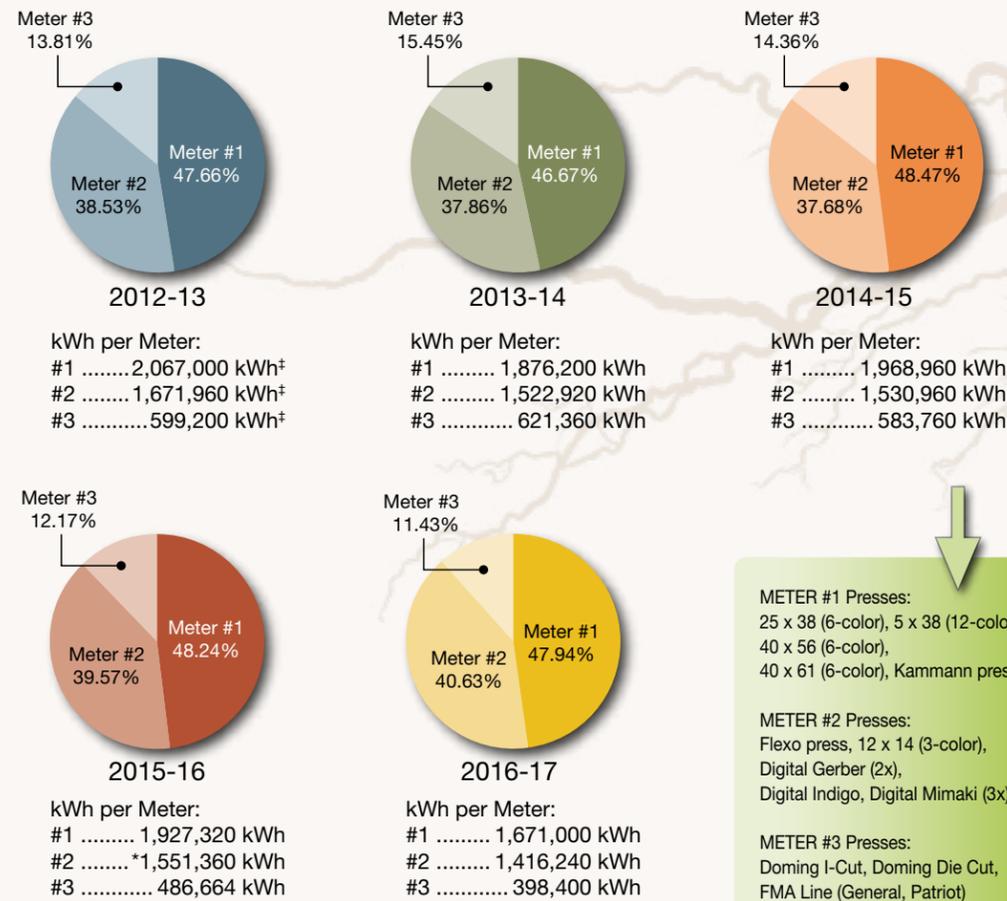
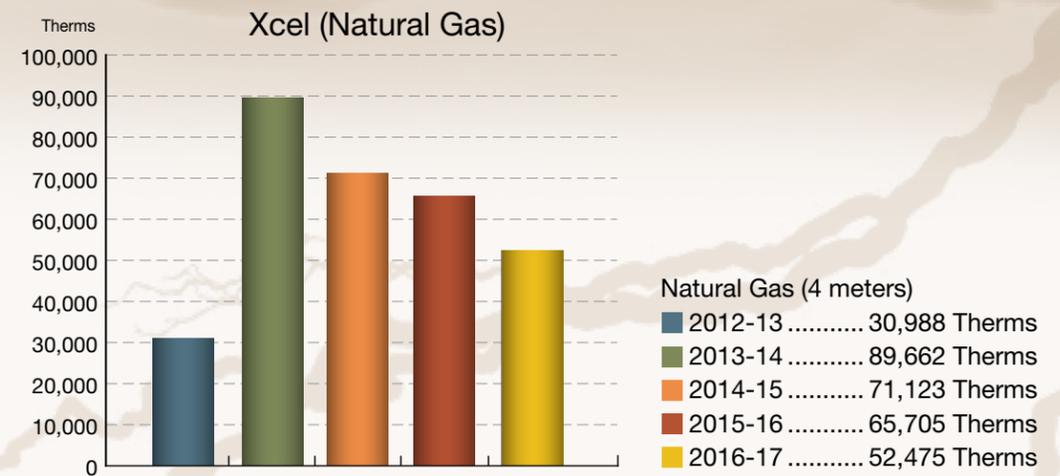
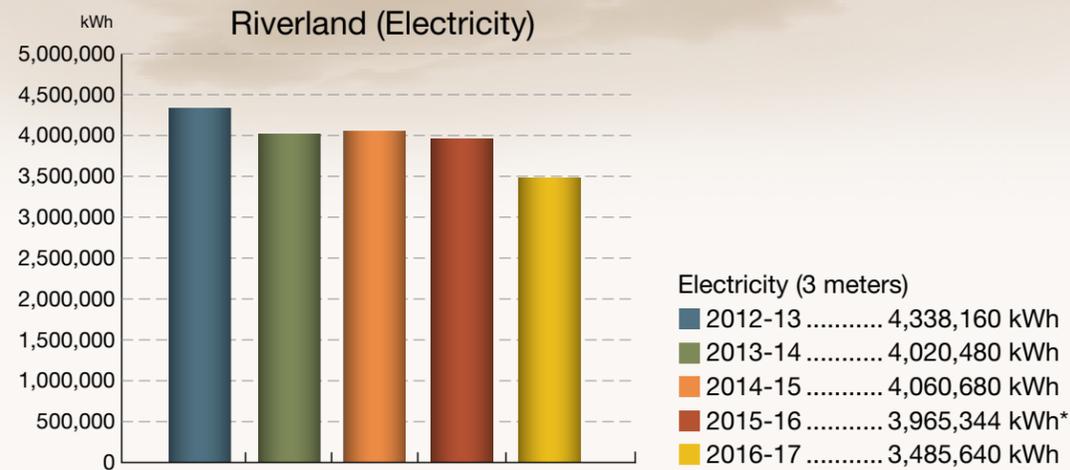
| | |
|--|---------|
| Hybrid vehicles..... | 2 |
| Gas vehicles (includes 1 tractor for mowing) | 3 |
| Diesel tractor used for mowing/snow removal..... | 1 |
| Vehicle maintenance expenses*** | \$3,003 |

***Vehicle expense includes gas, oil, tires & misc. maintenance (not itemized)



Demographics





METER #1 Presses:
25 x 38 (6-color), 5 x 38 (12-color), 40 x 56 (6-color), 40 x 61 (6-color), Kammann press

METER #2 Presses:
Flexo press, 12 x 14 (3-color), Digital Gerber (2x), Digital Indigo, Digital Mimaki (3x)

METER #3 Presses:
Doming I-Cut, Doming Die Cut, FMA Line (General, Patriot)

METER #1 Presses:
40x56 (6-color), 40x61 (6-color), 12x14 LED (2x, 1-color), 12x14 LED (3-color), Kammann

METER #2 Presses:
Digital Gerber (2x), Digital Indigo, Digital Mimi (3x)

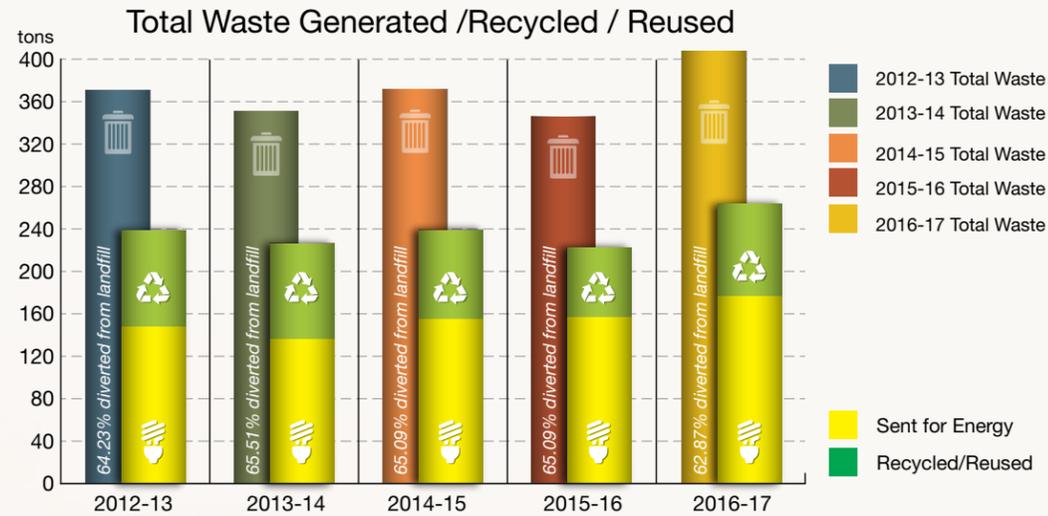
METER #3 Presses:
NO PRESSES

METER #4 Presses:
Flexo press, Doming I-Cut & Die Cut, FMA Line (General, Patriot), 25x38 (6-color), 25x38 (12-color)

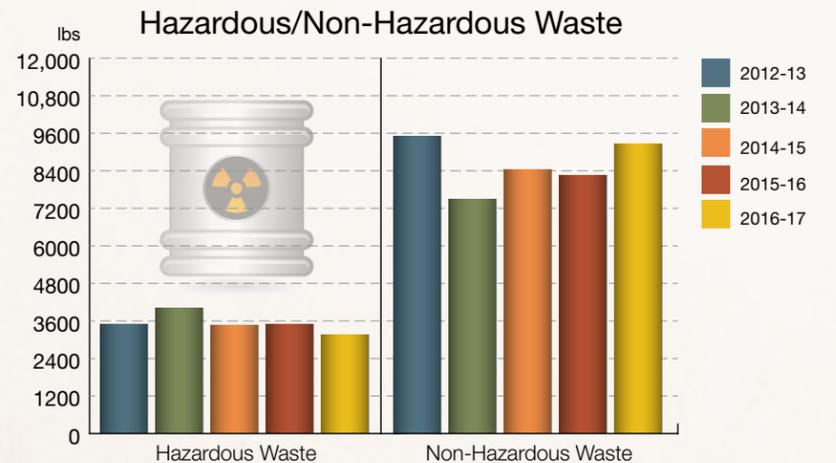
*Adjustment from previous annual report: 2015-16 kWh was incorrect
[‡]Individual meters were incorrectly documented on previous annual report, but graph, %'s and overall kWh are correct



Waste



| Year | Total Tons | % from landfill | Sent for Energy | Recycled/Reused |
|---------|-------------|-----------------|---------------------------|--------------------------|
| 2012-13 | 370.96 tons | 64.23% | 2012-13 150.03 tons | 2012-13 88.24 tons |
| 2013-14 | 351.21 tons | 65.51% | 2013-14 139.21 tons | 2013-14 90.84 tons |
| 2014-15 | 372.28 tons | 65.41% | 2014-15 158.45 tons | 2014-15 85.06 tons |
| 2015-16 | 347.28 tons | 65.22% | 2015-16 160.35 tons | 2015-16 66.16 tons |
| 2016-17 | 408.66 tons | 65.59% | 2016-17 180.02 tons | 2016-17 88.03 tons |



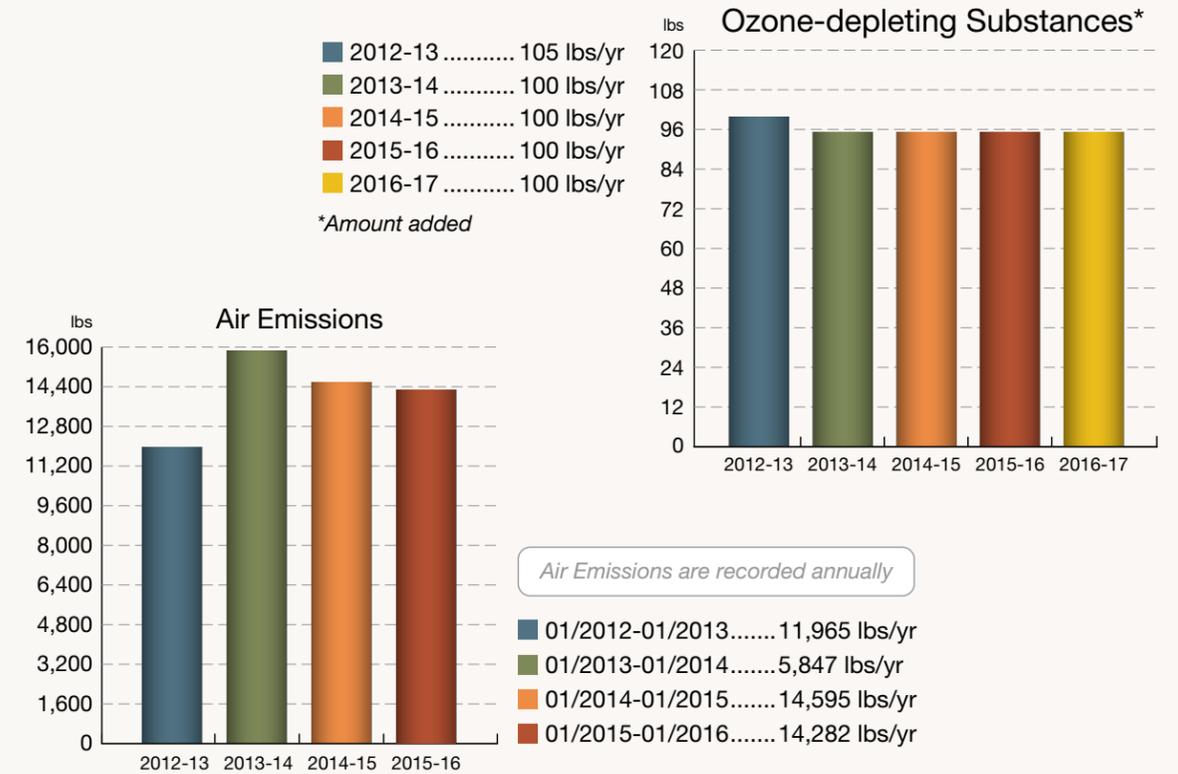
| | |
|--|---|
| 2012-13 Haz. Waste 3,500 lbs (7 Drums) Non-Hazardous..... 9,500 lbs (19 Drums) | 2014-15 Haz. Waste 3,450 lbs (7 Drums) Non-Hazardous..... 8,450 lbs (17 Drums) |
| 2013-14 Haz. Waste 4,000 lbs (8 Drums) Non-Hazardous..... 7,500 lbs (15 Drums) | 2015-16 Haz. Waste 3,500 lbs (7 Drums) Non-Hazardous..... 8,257 lbs (18 Drums)* |
| 2014-15 Haz. Waste 3,450 lbs (7 Drums) Non-Hazardous..... 8,450 lbs (17 Drums) | 2016-17 Haz. Waste 3,150 lbs (6 Drums) Non-Hazardous..... 9,257 lbs (20.18 Drums) |

*2015-16 Non-Hazardous amount was incorrectly listed on the 2015-16 report. This has been fixed.

*There is no such thing as "away."
When we throw anything away it
must go somewhere. -unknown*



Air



Transportation / Equipment



In an effort to reduce our carbon footprint, Empire uses hybrid automobiles for outside sales and other transportation needs. The maintenance expenses for the year were \$3,003**. Information on our transportation and vehicle equipment is as follows:

- 2 Prius hybrid automobiles (yr. 2000)..... used for outside sales / transportation
- 2 Chevrolet Silverado trucks (yr. 1998, 2000) used primarily for maintenance needs
- 1 John Deere 4310 diesel tractor..... used for mowing and snow removal
- 1 John Deere 425 Rider used for mowing

** The maintenance expense includes gas, oil, tires and miscellaneous maintenance. Expenses are not itemized.



2017-2018

Annual Environmental Improvement Goals

OVERVIEW

Our objectives and targets for the upcoming 2017-2018 year were established during our annual management review.

OBJECTIVE 1

Reduce our annual landfill waste to 23.85% by 2022

Empire Screen identified 2012 as the baseline year for setting a waste reduction goal. In 2012, 47.69% of waste generated was sent to the landfill. By 2022, Empire Screen will reduce the waste sent to the landfill by 50%, with an annual reduction of 2.39%, resulting in no more than 23.85% of all the waste generated being sent to the landfill.

OBJECTIVE 2

Implement sustainable print methods with equipment using UV LED technology

Achieve a 70% reduction in energy use on the new 12-color UV LED curing press vs. traditional printing methods

This is the final stage of our 2015-16 objective. Print testing and a validation process will be done in the 2018-2019 fiscal year along with metric comparisons between the previous 6-color 38x50 UV mercury press and the new 12-color 25x38 UV LED press. As stated in the original objective, we aim to have a 70% reduction in energy use when comparing the two and increasing capacity by 25%.

Baseline Metrics for new Graphium Press

The Graphium is a hybrid digital/flexo printer that was purchased by Empire. This printer will come equipped with LED curing technology. Delivery of the Graphium will take place on February 19th, 2018. Assembly, installation, work flow and training will occur through the month of March 2018. The press should be ready for production April 2018.

Action Items:

- » Create the baseline for energy use
- » Add the Graphium press to our Aspects/Impacts report
- » Develop proper procedures for safety and storage, as well as procedures for maintenance and waste stream

OBJECTIVE 3

Update/replace equipment as needed for better efficiency and/or per legal and other requirements

Lighting Conversion

404 fluorescent T12 bulbs will be replaced with 404 LED T8 bulbs in the 1998 building edition by March 2018. This will result in a 30% reduction in bulb kWh usage.

**Note: This project was put on hold by management last year. The construction of the 12-color conversion took precedence over other improvements due to increased production and customer demand.*

Convert areas to motion sensor lighting

Empire built a new conference room in the fall of 2017. This room was equipped with 4-2x2 and 4-2x4 LED lighting fixtures. During the first few months of use, we noticed lights had been left on for an extended period of time and in many cases, over 24 hours. This is due to the inconvenient location of the switches. This room is only utilized for meetings and/or training sessions. Due to the minimal use, we will be installing motion sensors. With an average use of 6 hours per day, we will reduce our energy usage by 75%. This will be completed in conjunction with the lighting conversion.

OBJECTIVE 4

Make improvements based on our 2016 external audit

Reevaluate and rescore our Aspects & Impacts

Based on our evaluation, we will rescore our Aspects & Impacts report and update our EMS to reflect the revisions. Completion will be March 2018. This is based on the EMS External Auditor's report (Clause 4.3.3, Objective, Targets and Programs)

**Note: this is a continuation from the previous year's objective.*

OBJECTIVE 5

Reduce and/or contain air emissions in die-making department

On August 16, 2017, an occupational health consultation was provided by the WisCon Program. The evaluation determined that employees in our die-making department were exposed to formaldehyde 2.4-2.5 times above the NIOSH full-shift recommended exposure limit of .016 ppm during plywood lasering activities. Controlled testing will be conducted to identify the source. Once identified, we will either create a contained area to reduce full-shift exposure or adjust equipment/ventilation to get levels within acceptable limits. This will be completed by September 2018.



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is the

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to the future we want for all.

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FRAMEWORK

to generate economic growth,
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SOCIAL JUSTICE,

exercise environmental

STEWARDSHIP

and strengthen

GOVERNANCE.

*Ban Ki-moon,
former Secretary-General of the United Nations*

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