



Standard Process Inc.

**2016 Green Tier
Annual Report**

(September 2015 – August 2016)



GREEN TIER

Wisconsin Department of Natural Resources



Our Mission

Standard Process is the visionary leader in whole food nutrient solutions. We apply systems thinking to holistic nutrition that empowers practitioners to transform lives.

Our Corporate Values

Standard Process demonstrates commitment to the Whole:

| Person | Product | Process | Planet | Posterity |
|---|---|--|--|--|
| By fostering the physical, emotional, intellectual, and spiritual health of customers and employees | By emphasizing the importance of concentrated whole food ingredient sources and herbs in the product line | By ensuring the highest quality in every stage of development, from farming through shipping | By utilizing environmentally safe farming, manufacturing, and business practices | By preserving and strengthening the company for all future generations |

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Executive Summary

In recognition of our long tradition of commitment to the environment, along with our commitment to continue to expand our environmental and sustainability efforts, Standard Process was accepted into the Wisconsin Department of Natural Resources Green Tier Program on August 21, 2014. As part of the Green Tier application process, we committed to continue compliance with all applicable rules and regulations; continue organic farming practices; implement a formal Environmental Management System (EMS); expand beneficial reuse, waste reduction and recycling efforts; and identify and implement opportunities for additional energy conservation/reduction measures.

During our first year in the Program, Standard Process developed and implemented an ISO 14001 equivalent EMS. The independent third party audit of the EMS in early 2015 verified successful implementation of our EMS as well as compliance with the ISO 14001 equivalency requirements (documented in last year's report).

During this past year, our second year in the Program, we continued with our ongoing reduce, reuse, and recycling efforts as well as our organic farming practices, and also worked to expand our energy and environmental sustainability efforts. We also evaluated benchmark parameters to help us measure the impact of our ongoing improvements. Following are some of the recent Green Tier related highlights. Further detail is provided in the main body of this report.

- **313,000 kWh/yr additional electrical reductions** completed in 2015 (215 additional metric tons CO₂e reductions/yr)
- **12,800 therms/yr additional natural gas reductions** completed in 2015 (68 additional metric tons CO₂e reductions/yr)
- **1,560,000 gal/yr additional water use reductions** completed in 2015
- **1,560,000 gal/yr additional wastewater reductions** completed in 2015
- **2,500,000 lb (est.) byproduct vegetable solids composted** in 2015
- **200 tons byproduct solids and compost used** as soil amendment on the organic farm in 2015
- **61 pair of shoes recycled** during the most recent shoe drive

During the past Green Tier year, our benchmarking efforts have primarily focused on electrical and natural gas usage at the Main Plant compared to various production-related parameters. Due to the nature of our operations, it is difficult to identify a single production parameter that represents all aspects of the facility. We ultimately focused on the *number of bottles packaged* to be a reasonable representation of production levels within the facility. The following bullet points identify some of the significant gains that have been made on energy efficiency over the past several years:

- Electrical usage reductions per bottle packaged in each of the past four years.
- **>24% reduction in electrical usage per bottle packaged** since 2011.
- Natural gas usage reductions per bottle packaged in three of the past four years.
- **>24% reduction in natural gas usage per bottle packaged** since 2011.

Additional detail is provided in the body of this **2016 Green Tier Annual Report**.

1.0 Introduction

Standard Process has a long history and tradition of commitment to sustainability and the environment. As a direct result our commitment to the environment and superior environmental performance, in August 2014 we were accepted into the Wisconsin Department of Natural Resources (DNR) Green Tier program. The Green Tier program recognizes companies that distinguish themselves as environmental innovators and demonstrate a strong commitment to the environment and sustainability beyond simply maintaining a good environmental compliance record. By accepting us into the Green Tier Program, the State of Wisconsin recognized the environmental and sustainability efforts we have already taken and our overall commitment to continuing to expand and focus on those efforts.

This report provides an update on our goals and accomplishments during the second year in the Program.

2.0 EMS Audit Report

As presented in last year's Annual Green Tier Report, Standard Process completed and implemented an Environmental Management System (EMS) that is "functionally equivalent", according to the DNR requirements, in function and scope to an ISO 14001 EMS, during our first year in the program. Perfect Environmental Performance (PEP), LLC performed the first-year functional equivalency audit in March and April 2015. PEP determined that *"the results of the EMS audit indicated that Standard Process' environmental management system conforms to the "functional equivalency requirements of ss. 299.83"*, and issued a Letter of Conformance at the completion of the audit. A copy of the EMS Audit 2015 Letter of Conformance was included in last year's report.

The PEP report did not identify any non-conformances with our EMS. The report did include information on some potential opportunities to continue to improve our EMS. Over the past year, each opportunity presented in the PEP report was evaluated for potential impact on improving our EMS, and the plan was adjusted as appropriate to incorporate the changes that were deemed to have the potential to improve our program.

In April 2016, Standard Process retained PEP to assist with an "internal audit" of our EMS for this year. Once again, no instances of non-conformance were identified during this most recent audit. Suggestions to continue to improve the EMS were identified as part of the audit. The suggestions will be reviewed and implemented as appropriate during the next Green Tier year. Overall our current EMS appears to be working very well.

3.0 Description of Progress

As part of the Green Tier application process, Standard Process committed to continue its long tradition of commitment to the environment by focusing on the following items:

- Continuing compliance with all applicable rules and regulations
- Continuing organic farming practices
- Implementing a formal Environmental Management System
- Expanding beneficial reuse, waste reduction and recycling efforts
- Identifying and implementing opportunities for additional energy conservation/reduction measures

The following sections provide an update on these commitments.

3.1 Compliance with Applicable Rules and Regulations

Standard Process remained in good standing with all regulatory agencies throughout the Green Tier Reporting year. No regulatory issues, notices of noncompliance, or other compliance issues were identified during this period.

Annual environmental reports for the 2015 reporting year were all filed as required by the applicable deadline dates in 2016. Data is being compiled throughout 2016 in preparation for the annual reports that will be due in early 2017.

Throughout the year, we continued to work closely with regulatory agencies and personnel to continue to remain in good compliance with all applicable rules and regulations. We work closely with DNR personnel as questions arise to help assure that we remain in good standing with the Department throughout all areas of our environmental programs. Our Green Tier contact, Renee Bashel, is also an excellent resource who has provided valuable input, guidance, and answers on environmental related questions.

3.2 Organic Farming Practices

Standard Process is proud of our certified organic farm and continues to remain in good standing with Midwest Organic Service Association (MOSA) certification. As an organic certification agency, MOSA is regulated by the National Organic Program (NOP) of the United States Department of Agriculture (USDA).

Additional detail on our organic farming practices can be found on our website at <https://www.standardprocess.com/About-Us/Organic-Farming> .

3.3 Implementation of a Formal Environmental Management System

As discussed in Section 2.0, during our first year in the Green Tier program, we successfully developed and implemented a formal Environmental Management System that is functionally equivalent in function and scope to an ISO 14001 EMS. We continue to expand and improve the EMS as appropriate to help us continue on the path of environmental sustainability and commitment to the environment. We reviewed opportunities for improvement identified in the 2015 EMS audit and implemented improvements to the plan from that review. We have established a goal to review suggestions provided during the 2016 “internal audit” for continued improvement of the EMS during the upcoming Green Tier year.

3.4 Beneficial Reuse, Waste Reduction, and Recycling

Beneficial reuse, waste reduction, and recycling are an integral part of everyday operations at Standard Process. A recycling program has been in place for over 25 years at this facility for common recyclables such as paper, cardboard, glass, metal, plastics, as well as for used oil, print cartridges, electronics, batteries, etc. Additionally, beneficial reuse of byproduct solids on our farm fields has been, and continues to be, an important part of our operations. Byproduct plant solids are composted prior to being spread on the fields as a valuable soil amendment. Compost improves soil structure, water holding capacity, and returns important nutrients back to the land where the crops were grown. This process helps sustain the health and quality of our farmland.

3.5 Energy Conservation and Reduction

Efficient use of energy has also been an important aspect of operations at Standard Process for many years. During 2015, 11 individual energy reduction projects were documented. Several additional energy related projects are also underway in 2016. Section 4 of this report includes additional information on the type of projects and impact of our energy conservation efforts.

Standard Process received Focus on Energy rebates for energy efficiency improvements on seven of the projects that were completed in 2015. Focus on Energy is Wisconsin utilities’ statewide energy efficiency and renewable resource program that verifies energy efficiency and renewable energy type projects, and provides incentives for projects that meet specific requirements.

4.0 Environmental Performance/Sustainability Metrics

During the past year, we continued to develop and refine metrics and baseline data. Our commitment to the environment and sustainability predates our acceptance into the Green Tier program. The benefits from our historical efforts have reduced the potential to show significant incremental improvements each year; however, the cumulative benefits of these past improvements has compounded throughout the years.

The following sections of this report provide information on utility and environmental efforts associated with our operations, including information on achievements associated with each area over the past year.

We have focused on energy and environmental sustainability for many years and have been working to refine and develop measurement methods associated with our progress to normalize parameters to representative production-based data. For evaluation purposes, several different production parameters were evaluated to represent overall production levels for the entire Main Plant. The best parameter is difficult to determine since no single measure of production level encompasses all aspects of our facility. The parameter that appears to be most representative of overall operation of the Main Plant is the *annual number of bottles packaged*. During the past year we focused on evaluating utility usage rates compared to that production indicator. We are still working to identify appropriate production parameters for operations at the Farm Headquarters.

The main focus over the past year has been on electric and natural gas usage at the Main Plant. Progress was also made on other parameters at the Main Plant as well as efforts at other Standard Process facilities (Farm, etc.).

4.1 Electricity

During 2015, we implemented several energy conservation type projects related to improvements in lighting, HVAC systems, process, and infrastructure. A brief summary of the additional estimated electrical reductions associated with these projects are included in Table 4-1. The estimated CO2 equivalent reductions associated with these projects are also provided (*ref.: www.epa.gov/cleanenergy/energy-resources/refs.html*).

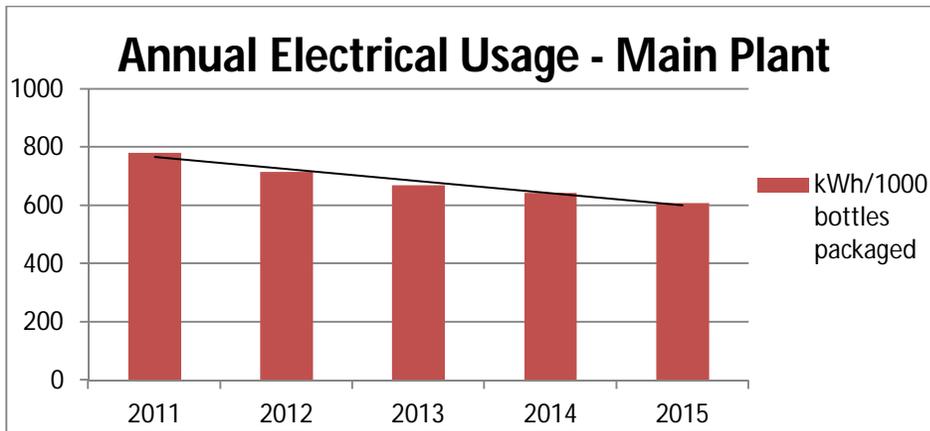
Table 4-1: Additional Electrical and CO2e Reductions (CY 2015)

| Project Type | Electrical Reduction (kWh/yr) | CO2 Equivalent Reduction (metric tons/yr) |
|--------------------------------|--|--|
| Lighting | 21,500 | 15 |
| HVAC | 6,500 | 4 |
| Process/Infrastructure | 285,300 | 196 |
| Total Reductions (2015) | 313,300 | 215 |

Over the past Green Tier year, we continued to work to establish metrics and baselines to monitor and quantify electrical reduction efforts. Table 4-2 and the associated graph provide a summary of annual electricity usage at the Main Plant per bottle packaged. As shown, our focus on energy efficiency improvements over the past several years has resulted in consistent annual reductions of electricity used per bottle packaged each year. Cumulatively we have **reduced electrical usage per bottle packaged by 24+% since 2011**. This is a significant reduction.

Table 4-2: Electrical Usage per Bottle Packaged (Main Plant)

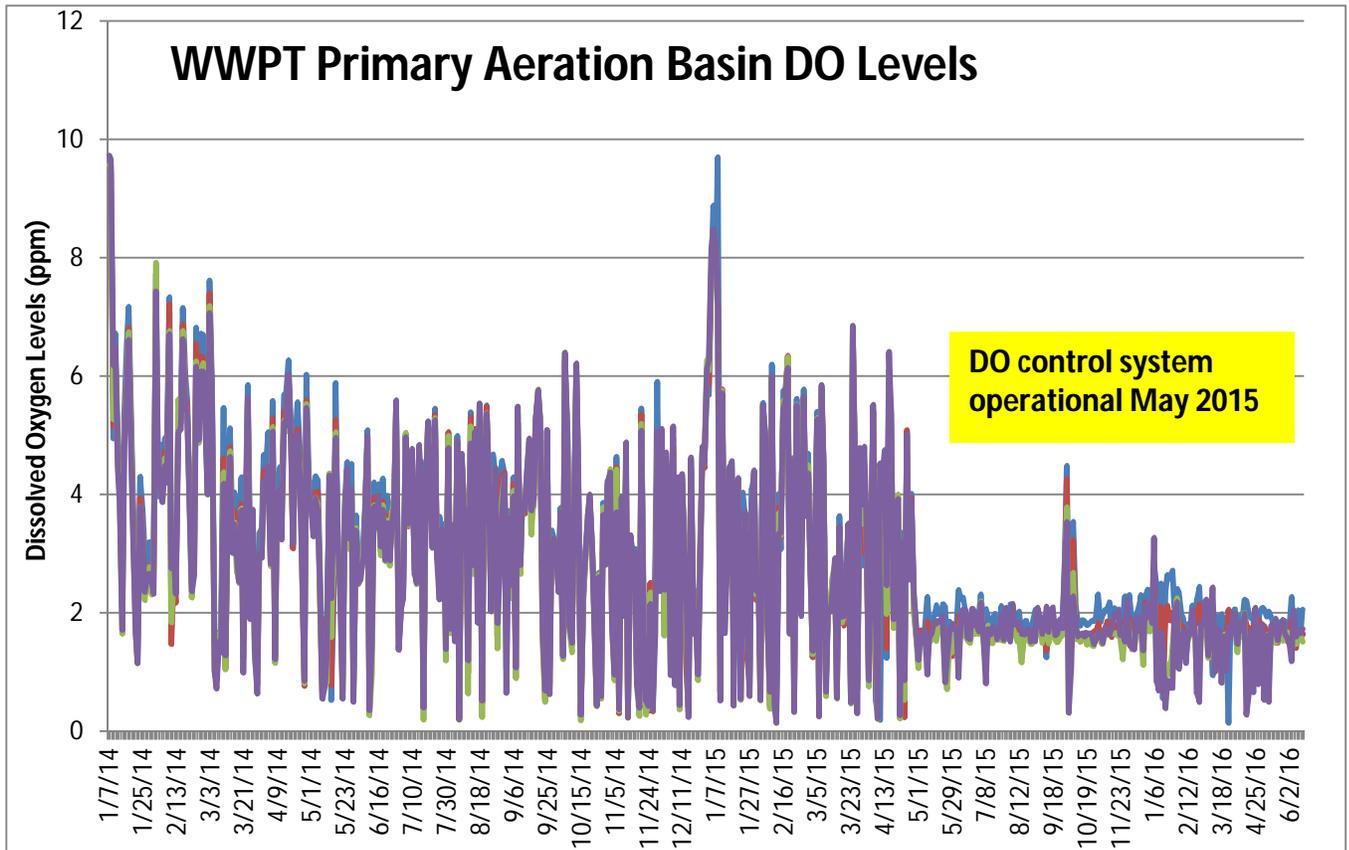
| Year | Electrical Usage (kWh/1000 bottles) | % Change | |
|--------------|-------------------------------------|----------------|--------|
| 2015 | 609 | 2014 to 2015 | -5.36% |
| 2014 | 644 | 2013 to 2014 | -4.01% |
| 2013 | 670 | 2012 to 2013 | -6.39% |
| 2012 | 716 | 2011 to 2012 | -8.27% |
| 2011 | 781 | | |
| Total | | -24.02% | |



One of the energy reduction projects implemented in 2015 is the dissolved oxygen (DO) monitoring and control system for our wastewater pretreatment system. Prior to implementation of this project, the blowers for the wastewater aeration basin ran at full speed regardless of DO levels, which consistently resulted in excess air being supplied to the system. Since the excess air was not needed or used to treat the wastewater, the blowers were consuming more energy than was needed in the process. The system upgrades match blower output (**and energy usage**) with the oxygen needs of the wastewater system, resulting in a **>21% reduction in energy used per pound of COD treated** in the system. [The energy reductions associated with this project are not included in the energy reduction information presented earlier in this section because the WWPT plant is separate from the Main Plant.]

The following figure (Figure 4A) shows the impact of the new control system on dissolved oxygen levels in the wastewater pretreatment system before and after implementation in May 2015. As shown, there is a significant reduction in excess oxygen (with a corresponding reduction in electrical usage) now that the system is in place.

Figure 4A: Impact of DO Control on WWPT Operation



4.2 Natural Gas

During 2015, we also completed additional energy conservation projects to reduce natural gas usage. These improvements are primarily associated with insulation of steam system components and increased efficiencies of new fuel combustion equipment. The additional estimated natural gas reductions implemented in 2015 are shown in Table 4-3. The estimated CO₂ equivalent reductions for 2015 (*ref.: www.epa.gov/cleanenergy/energy-resources/refs.html*) are also provided in the Table.

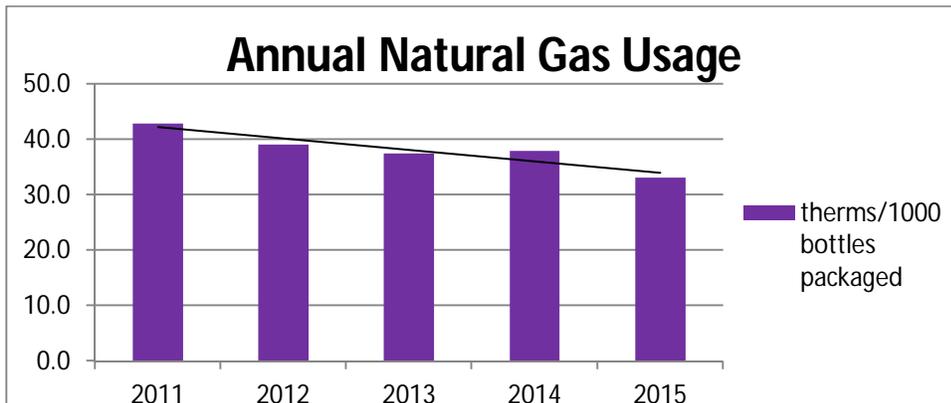
Table 4-3: Additional Natural Gas and CO₂e Reductions (CY 2015)

| | Natural Gas Reduction (therms/yr) | CO ₂ Equivalent Reduction (metric tons/yr) |
|-------------------------------|--------------------------------------|--|
| Natural Gas Reductions | 12,800 | 68 |

As with the electrical usage, we also worked to establish metrics and baselines to monitor and quantify natural gas reduction efforts. Table 4-4 and the associated graph provide a summary of annual natural gas usage at the Main Plant per bottle packaged. As shown, our focus on energy efficiency improvements over the past several years has resulted in annual reductions of natural gas usage per bottle packaged in three of the past four years, and cumulatively we have **reduced natural gas usage per bottle packaged by nearly 24.5% since 2011**. This is a significant reduction.

Table 4-4: Natural Gas Usage per Bottle Packaged (Main Plant)

| Year | Natural Gas Usage (therms/1000 bottles) | % Change | |
|------|--|--------------|----------------|
| 2015 | 33.1 | 2014 to 2015 | -12.73% |
| 2014 | 38.0 | 2013 to 2014 | 1.28% |
| 2013 | 37.5 | 2012 to 2013 | -4.13% |
| 2012 | 39.1 | 2011 to 2012 | -8.89% |
| 2011 | 42.9 | Total | -24.47% |



4.3 Water and Wastewater

Work is also underway to benchmark water usage and wastewater generation rates for the Main Plant and Farm Headquarters. The evaluation process for these parameters is not as far along as the evaluation for electrical and natural gas usage. The data available to date shows mixed results over the past few years, with a 6.5% reduction in water usage per bottle packaged from 2013 to 2015 and a slight increase in wastewater generation per bottle packaged during this same period. Additional benchmarking and evaluation will be conducted on water usage and wastewater generation for the Main Plant as well as for the Farm Headquarters.

The following projects, and associated reductions of water usage and wastewater generation, were completed in 2015. These projects provide a general idea of the type of projects that have been, and will continue to be, implemented to reduce water usage and wastewater generation at the Main Plant and Farm Headquarters:

- Control of Seal Water for Process Pumps – Needle valves were installed to control seal water flow to 4 large process pumps at the Farm Headquarters. This project is estimated to have **reduced water usage and associated wastewater generation by approximately 60,000 gallons per year.**
- Barrel Washing Improvements – Modifications to the controls for the rinse section of the barrel washer (used to clean barrels for reuse) resulted in a significant reduction in **water usage and wastewater** associated with this operation at the Main Plant. The closure report for this project estimates annual **reductions of 1,500,000 gallons per year.**

4.4 Solid Waste and Raw Materials

Standard Process continues to make beneficial reuse of byproduct materials as a soil amendment at the Farm Headquarters. It is estimated that **over 2.5 million pounds of raw vegetable solids** are **composted** each year, eliminating the need for alternative disposal of these materials. These solids are composted and ultimately used to improve soil quality at the farm headquarters each year.

In 2015, **over 200 tons of byproduct solids and composted vegetable solids** were applied as a beneficial **soil amendment to our farm fields.**

In addition to beneficial reuse of byproduct solids, in 2015 we were also able to identify opportunities to donate various chemicals (cleaning products, etc.) for beneficial reuse by other companies, local school district, and employees. Many of these chemicals would have ended up as waste materials. By donating these materials, not only did we avoid disposal of the materials, we also reduced the amount of new materials purchased and used by the recipients.

4.5 Other

In addition to the focused energy and environmental type projects, Standard Process has also had recycling programs in place for paper, cardboard, plastic, glass, metal, print cartridges, batteries, used oil, etc. for many years (25+ years for most materials). Following are a few additional examples of other actions that have an environmental/sustainability impact again over the past Green Tier year:

- Standard Process continued its long tradition of presenting trees to employees in recognition of Arbor Day. This tradition began in the 1990s with a tree presented to, or planted for, every employee at the corporate office. *(According to a NC State University fact sheet, a tree can absorb 48 pounds of CO2 per year. Using this factor, the trees presented during the most recent Green Tier year will ultimately absorb an additional eight million metric tons CO2e per year.)*
- The Standard Process Wellness Department coordinated the second annual shoe drive to collect old athletic shoes for recycling in early 2016. This effort is an indicator of the commitment of our employees to sustainability and the environment. For the second straight year, 61 pair of shoes were collected during this drive.
- An effort is currently underway to increase the use of reusable food containers in the Standard Process cafeteria. Standard Process has implemented an incentive program to support and expand the effort to reduce the number of single-use containers used in the cafeteria. Specific information on the effectiveness of this program will be included in the next Green Tier report.

5.0 Conclusion

Standard Process is pleased to be recognized by the State of Wisconsin for our commitment to environmental and energy sustainability through our acceptance into the DNR Green Tier Program. We have a long tradition of environmental stewardship and sustainability. A portion of that commitment is summarized in this report.

Through the Green Tier Program, we have reaffirmed our commitment to continuing to move forward with environmental and energy sustainability. This commitment is one of our core Corporate Values (see inside front cover). In addition to providing us with an opportunity to reaffirm our commitment to future environmental excellence and sustainability, our acceptance into, and continued good standing in, the Green Tier Program also validates our commitment to sustainability and the environment as well as the successes of our historical efforts.