



FY 2016 Green Tier Annual Report

June 20, 2016

Executive Summary

Kikkoman Foods, Inc. (KFI) achieved Green Tier certification on November 29, 2013. This report provides environmental performance information for the period April 1, 2015 to March 30, 2016.

As part of KFI's ISO 14001-certified Environmental Management System (EMS), the company establishes annual objectives and targets. Some objectives and targets were fully achieved in FY2016; others will require additional time for full completion. KFI missed its FY2016 CO2 reduction target, primarily due to new food safety equipment additions that offset the CO2 reduction from energy efficiency projects. KFI missed its FY2016 reduce water usage target, primarily due to increased equipment washing and sanitation procedures related to food safety. KFI did succeed at diverting 37.2 tons of waste away from the landfill and into recycling channels. KFI increased beneficial reuse of CO - brine water. A local hog farmer incorporated brine water into a liquid feed process for his hogs.

28,526,873 kWh of electricity and 2,529,223 therms of natural gas were used in FY2016. 140,560,135 gallons of water were utilized to produce over 31,000,000 gallons of sauces in FY2016. In addition to serving as a key ingredient in KFI products, the balance of the water was needed for plant sanitation activities, steam generation, etc.

KFI sent only 345 tons of waste to landfill out of the 24,406 tons of waste shipped offsite in FY 2016. KFI achieved a 69 to 1 ratio of waste, recycled, reclaimed or beneficially reused material to waste sent to the landfill.

As a very small quantity generator of hazardous waste, KFI produces minimal hazardous waste, primarily from the quality assurance laboratory. KFI generated 158 gallons of hazardous waste FY 2016.

KFI's environmental management system was audited by two independent third party auditors in FY2015. One audit focused on conformance to the ISO 14001:2004 standards. A second, independent audit focused specifically on compliance with Federal and State environmental regulations. These audits are conducted annually. Both results were positive demonstrating KFI's commitment to the environment.

Environmental Performance

ISO 14001 - EMS Audit Report

KFI maintains a certified ISO 14001 environmental management system. KFI's program received its first certification in June, 2002. KFI's ISO 14001 EMS is certified by Perry Johnson Registrars. Certification audits are performed on a three year cycle with two surveillance audits conducted annually in between.

Following KFI's Wisconsin Plant audit in May 2016, Perry Johnson renewed KFI's ISO14001 certification. The KFI Wisconsin Plant audit resulted in zero nonconformance finding.

Environmental Compliance Audit Report

As part of the ISO 14001 EMS, KFI contracts with an independent third party to perform environmental compliance audit every year. The third party auditor is Short, Elliot and Hendrickson, Inc., a nationally-recognized environmental consulting firm. Each year, a professional engineer from SEH, Sheboygan office, comes to the KFI facility and conducts an audit to assess compliance with applicable State and Federal environmental regulations.

Applicable programs include:

- Air quality programs regulated by the Wisconsin Department of Natural Resources (WDNR) and the United States Environmental Protection Agency (USEPA). The Wisconsin air quality regulations are found in the Wisconsin Administrative Code, Chapter NR 400. The federal air quality rules are found in Title 40 of the Code of Federal Regulations (CFR) Parts 50 to 99.
- Water quality programs regulated by WDNR and USEPA. State rules are found in NR 216. The Federal Spill Prevention, Control, and Countermeasure (SPCC) program rules are found in 40 CFR 112.
- Hazardous and Special Waste programs found in Chapters NR 500 and NR 600, and Title 40 CFR Parts 260 to 282.
- Reporting obligations under the Superfund Amendments and Reauthorization Act (SARA) and Emergency Planning and Community Right-to-Know Act (EPCRA).

No non-conformances with applicable environmental regulations were identified in the audit.

Description of progress

ISO 14001 Objectives and Targets – FY 2016

Each fiscal year, KFI implements plant wide ISO 14001 Objectives and Targets. KFI staff applies personnel and financial resources to achieve the targets. As some targets are aggressive, they sometimes require multiple years of continuous effort to achieve.

| | |
|---|-------------------------------------|
| Objective #1 | Target |
| Reduce CO2 Emission | Reduce CO2 emission by 1% vs FY2015 |
| Result: | |
| CO2 emission decreased 0.01%, while producing 1 million more gallons of soy sauce than FY2015 | |

Objective #2

Reduce water usage

Target

Reduce water usage by 1% vs FY2015 usage

Result:

Water usage increased by 14%.

The water usage increase was a result of food safety sanitation improvements

Objective #3

Reduce trash to landfill

Target

Reduce by 4% vs FY 2015 volume

Result:

KFI diverted 37 tons of bottling department waste from landfill to recycling.

Objective #4

Increase CO water beneficial reuse

Target

Reuse 5% more CO water vs FY2015 reuse volume

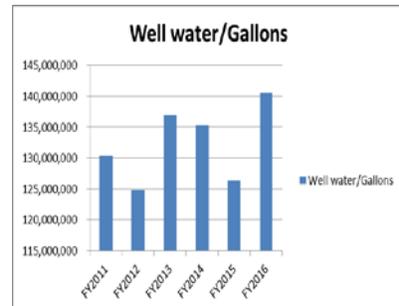
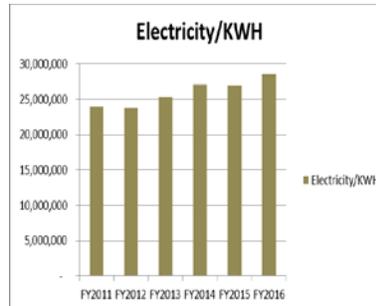
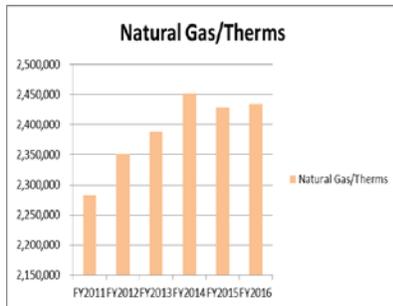
Result:

KFI beneficially reused 4100 gallons or 21% more CO water than FY 2015

Sustainability Metrics

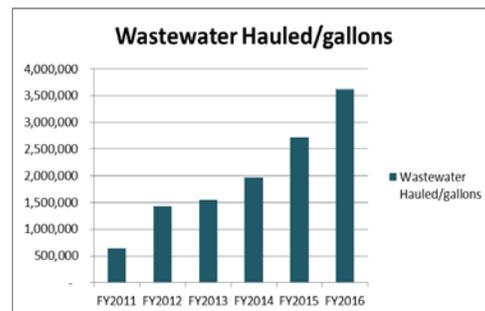
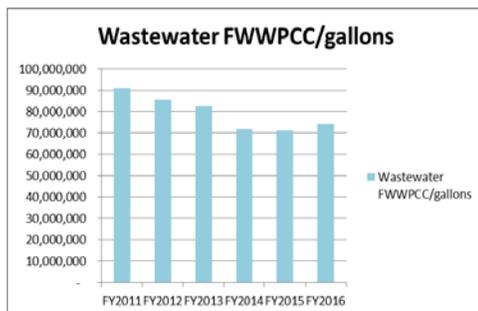
Utilities

During FY 2016, KFI used 28,526,873 kWh of electricity and 2,434,355 therms of natural gas. 140,560,135 gallons of water were utilized to produce over 31,000,000 gallons of soy sauce and related products.



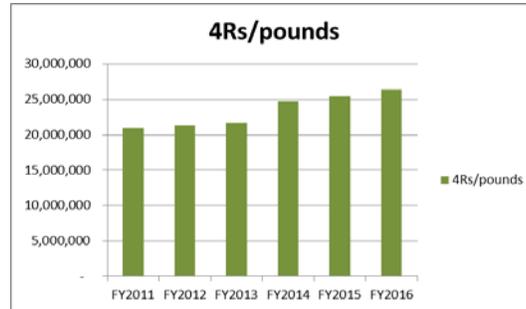
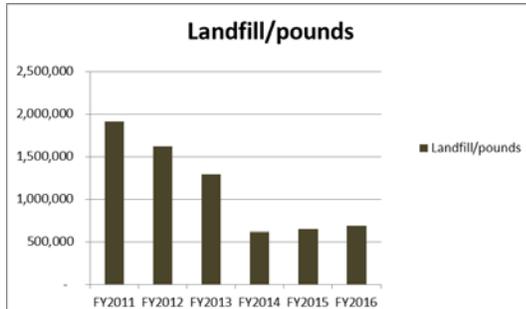
Wastewater

During FY 2016 KFI sent 74,225,100 gallons of wastewater to FWWPCC. This was an increase of 2,874,400 gallons compared to FY 2015. During FY 2016 KFI sent 3,617,500 gallons offsite for treatment due to chloride concentration. This was an increase of 633,750 gallons compared to FY 2015. The offsite wastewater disposal practice is conducted to help FWWPCC meet their chloride limit in their WPDES permit for discharge to the Piskasaw creek.



Waste

KFI sent 690,000 pounds of trash to the landfill in FY 2016 while recycling and reusing 26,419,666 pounds of waste materials. KFI generated only 158 gallons of hazardous waste.



Transportation

KFI does not operate a truck fleet. Products are transported by common carriers. Wherever possible, products are transported by rail. Rail transportation is significantly more energy-efficient than truck transport.

Supply Chain

KFI cooperates with customers and suppliers on environmental efforts. KFI supply chain efforts include reusing pallets supplied by customers and suppliers. KFI works in cooperation with one large customer to ship their product out on rental pallets which are continuously re-used. KFI works in cooperation with its suppliers on pallet corner boards and slip sheet return programs. The use of packaging material is reduced and eliminated wherever possible. KFI works with glass supplier by shipping rejected glass directly back to supplier for recycling.

The sustainability metrics spreadsheet is attached.

Stakeholder Involvement

KFI is proud to receive support from its Green Tier program stakeholders. KFI's stakeholders are:

University of Wisconsin Milwaukee Foundation - School of Freshwater Science - Dr. David Garman
University of Wisconsin Madison The Nelson Institute for Environmental Studies - Dr. Paul Robbins
University of Wisconsin Madison – Food Research Institute Dr. Charles Czuprynski , Director
Geneva Lake Conservancy – Mr. Charles L. Colman, Chairman
Geneva Lake Environmental Agency: Mr. Ted Peters, Executive Director
Village of Fontana Mr. Dennis Martin, City Administrator
Village of Walworth Ms. Lisa Rogers, Deputy Clerk Treasurer
Township of Walworth Mr. Joe Abell, Chairperson
Walworth County Mr. David Bretl, County Administrator
Fontana Walworth Wastewater Pollution Prevention Commission – Mr. Doug York, Superintendent
WMC – Mr. Scott Manley, VP of Government Relations
WMC- Mr. Eric Bott, Director of Environmental & Energy Policy
Dr. Robert Spitzer – Board of Directors, Kikkoman Foods Inc.
Mr. William Nelson - Board of Directors, Kikkoman Foods Inc.
Mr. James Haney – Board of Directors, Kikkoman Foods, Inc.
Mr. Kaz Shimizu – President & CEO Kikkoman Foods Inc.:
Mr. Masa Oura – VP of Manufacturing & Plant Manger Kikkoman Foods Inc.
Mr. Dan Miller – VP of Administration Kikkoman Foods, Inc.
Mr. Karl Keane – VP of Finance Kikkoman Foods, Inc.
Mr. Milton Neshek – General Counsel & Board of Directors, Kikkoman Foods, Inc.
Mr. Robert Conover – Assistant General Counsel Board of Directors, Kikkoman Foods, Inc

DNR Relationship

During FY 2015, the WDNR staff has been very helpful answering questions and providing necessary instruction. WDNR provided excellent customer service.

The WDNR staff continues to engage with KFI to work on our CO water re-use project. The WDNR staff guided KFI through the process to receive a low hazard waste exemption for CO water. CO water has a freeze depression point which makes it environmentally beneficial for winter road de-icing. The WDNR staff recognized this and coordinated a meeting with interested parties to understand how counties could beneficially re-use the CO water for road de-icing during the winter months.

KFI looks forward to a positive relationship and mutual cooperation with the WDNR on this and other projects.

Conclusion

KFI is committed to being a good environmental steward. This can only be achieved by efforts to comply with all environmental regulations and internal environmental policies, prevention of unnecessary use of natural resources and generation of waste and continual improvement of environmental efforts. This is the foundation of KFI's environmental policy. Through the Green Tier program, the WDNR will be a valuable partner in KFI's journey toward sustainability.

| WISCONSIN DNR GREEN TIER SUSTAINABILITY METRICS | | Period Covered: April 1, 2015 - March 31, 2016 | | |
|---|--|--|--------------|----------------------------------|
| Company Name: | Kikkoman Foods Inc | | | |
| Facility Name: | Kikkoman Foods Inc | | | |
| Address: | N 1365 Six Corners Road | | | |
| City, State, Zip: | Walworth, Wi 53184 | | | |
| Environmental Coordinator: | Jon Raymond | | | |
| Coordinator Phone: | 262-275-1617 | | | |
| Coordinator E-Mail: | jraymond@kikkoman.com | | | |
| Metric | Not Collected/ Not Available | Quantity | Units | Period - if not Calendar Year |
| DEMOGRAPHICS | | | | |
| Sales | | | | |
| Money saved because of material or process improvements | | | \$ | |
| Profit or Loss | | | % | |
| Employees | | 170 | Each | FY2015 |
| Multiple between highest paid and lowest paid employee | | | % | |
| Alternative Transportation Support | | | \$ or ? | |
| Total Purchases | | | \$ | |
| In-State Purchases | | | \$ | |
| % of Purchases Made from Companies that participate in Green Tier or Green Masters: | | | % | |
| LAND | | | | |
| Total Land | | | Acres | |
| Paved/Covered Land | | 626,712 | sq ft | |
| ENERGY | | | | |
| Electricity | | 28526873 | kWh | |
| | | 6 | %increase | |
| Natural Gas | | 2.43E+11 | btu | |
| | | 0.2 | %increase | |
| WATER | | | | |
| Total Water Used | | 140560135 | gallons/year | FY2016 |
| | | 11 | % increase | FY2016 |
| Water Recycled/Reused | NA | | gallons/year | |
| | NA | | % reduction | |
| Regulated Pollutants Discharged | NA | | lbs/ year | |
| | NA | | % reduction | |
| AIR | | | | |
| Total Air Emissions | | 141250 | lbs/ year | 2015 |
| | | | % reduction | |
| Ozone-Depleting Substances | | 197523 | lbs/ year | 2015 |
| | | | % reduction | |
| Greenhouse Gas Emissions | | 202384445 | lbs/ year | 2015 |
| | | | % reduction | |
| WASTE | | | | |
| Hazardous Waste Disposal | | 750 | lbs/ year | FY2016 |
| | | 4 | % increase | |

| | | | | |
|---|----|----------|--------------|--------|
| Non-Hazardous Waste Disposal | | 690,000 | lbs/ year | FY2016 |
| | | 6 | % increase | |
| Material Recycled/ Reused | | 26419666 | lbs/ year | FY2016 |
| | | 4 | % increase | |
| Recycled/ Reused Content | | | % of product | |
| TRANSPORTATION | | | | |
| Hybrid Vehicles | NA | | Each | |
| Gasoline Used | NA | | Gallons | |
| Diesel Used | NA | | Gallons | |
| Alternative Fuels Used | NA | | | |
| ADDITIONAL METRICS | | | | |
| Please list all other certifications (for example: LEED, Energy Star, ISO 14001): | | | | |
| | | | | |
| | | | | |