

DSM Nutritional Products LLC



Belvidere, Warren County

Andy Tynan - SHE Manager



Our Site

- DSM Nutritional Products (DNP) is one of the world's leading suppliers of vitamins, carotenoids and other ingredients to the feed, food, pharmaceutical and personal care industries. DNP is a core business of Royal DSM (Netherlands) and has a long tradition of innovation that benefits people, planet and profit. DSM's North American administrative headquarters reside in Parsippany with 270 employees and approximately 350 people staff our largest US production facility in Belvidere.
- Sustainable business practices are encouraged within all DSM groups and is reflected in the company's Dow Sustainability Index rankings. With environmental performance contributing 33% of the final ranking, Royal DSM has consistently been ranked as a world leader in the Chemical (now Materials) sector.
- Maintain certifications in ISO 9001, ISO 14001, RC, HALAL, Kosher, FSSC22000
- Subject to approximately 20 Customer audits/year, including SEDEX (Social Responsibility)

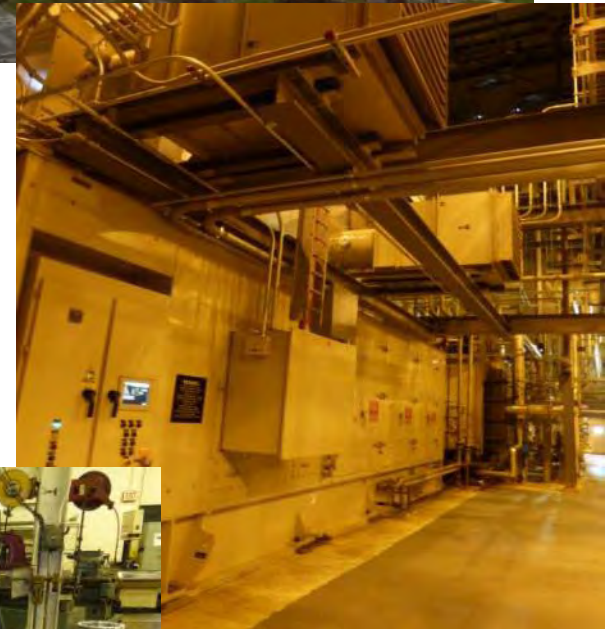
Sustainability - Solid Waste

- 2012 - Partnered with a second Biosolids facility to compost 100% of the 6,200 ton of wastewater treatment sludge generated at the site. Prior to this agreement, any excess sludge needed to be landfilled
- 2013 - An additional 900 tons of paper, cardboard, co-mingle, used oil, batteries, consumer electronics, drums, wood pallets and metals were recycled. Total site recycling/reuse rates reached 92%
- 2013 - Initiated a conversion from HPLC lab equipment to UPLC to reduce the generation of hazardous waste solvent
- 2014 - Approximately 30 tons of unneeded food grade raw materials were sent to a NJ processor to be incorporated into animal feed
- 2015 - Another 30 tons of raw materials sent to a local farmer for feed and crop supplements



Sustainability - Air & Energy

- 2013 - Full year operation of a new Combined Heat and Power Unit rated at 10 MW of electricity. Installed with State of the Art gas burners and add on controls for NOx (48 ton reduction) and CO (11 ton reduction vs. 2012)
- 2014 - Provided 25 acres of land to construct a 6 MW solar field for renewable energy and entered provider/purchaser agreement
- 2014 - Dedicated 5 employee preferred parking spaces to car pool vehicles
- 2014 - Replaced 2 gasoline driven site Maintenance carts with electric power
- Voluntary participant in USDOE *Save Energy Now* Leader initiative to reduce production energy intensity



Sustainability - Water

Current water usage is met by the Delaware River and groundwater wells. The site is not in a water scarcity area.

- 2014 - Started a water reuse feasibility study to return 500,000 gals/day of treated effluent as cooling tower feed water
- 2014 - Completed a site wide water balance



It Takes Everyone!

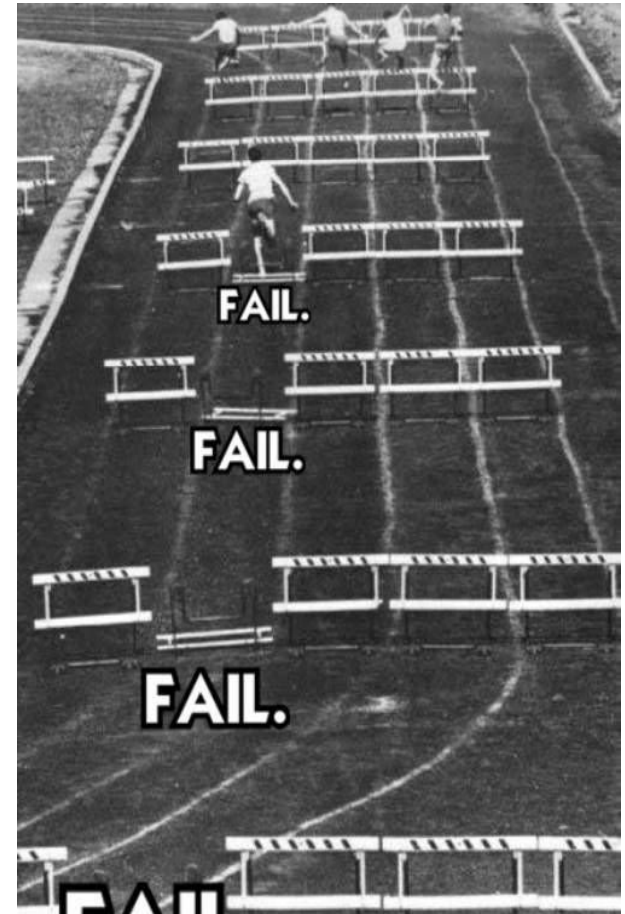
(well, at least a simple majority to start)



1. The **Administration Department** dedication (and expanded employee use) of preferred parking spaces for car poolers that reduce air pollution during their daily commute
2. The **Utility and IP Departments** decision to use electric vs. diesel driven temporary compressors to reduce air pollution from the site during the state's summer ozone season
3. The **Maintenance Department** decision to convert some carts from gasoline engines to electric reducing site air pollution
4. The **Quality Department** decision to switch some HPLC analyzers to UPLC to reduce the volume of hazardous waste generated
5. The **SHE Department** effort to approve a second biosolids facility and farmer reuse of surplus food grade raw material to keep solid waste from reaching landfills
6. The Belvidere site inclusion in the US Department of Energy Leader program to reduce energy use 25% over 10 years
7. The **Production Department's** 8 Kaizen and 11 Six Sigma projects that included approximately 60 coworkers to promote efficiency and profitability, thereby affecting sustainability
8. Our Lunch & Learn presentation on Residential Solar power and eventually having at least 4 employees install their own systems and commit to generating renewable energy
9. **Everyone's** collective effort to separate and recycle over 900 tons of daily production waste last year

Some Obstacles to Success

- Lack of Management Support
- No Written Mandates or Goals
- No Incentive
- Increased Workload
- Diversified work force
 - Personal Attitude & Belief
 - Lack of Recycling Education
 - No Continuity between Recycling Programs



Overcoming Obstacles



- Lack of Management Support - job descriptions
- Lack of Written Mandates and Goals - site/job SOP's, transparent corporate and site goals
- No Incentive - junk mail promo, cell phone, home metal recycling, NEMO and prize lottery
- Increased Workload - convenient locations
- Diversified work force - not just age, race and gender
 - Personal Attitude & Belief - peer pressure, education
 - Lack of Recycling Education - monthly RC meetings
 - No Continuity between Recycling Programs

New Environmental SOP

BD600 – E12 Recycling Standard

The site now has a new [Recycling SOP](#)

- Copies of the SOP can be found in Livelink under Environmental Standards
- If you identify a recycling stream not already listed, contact your Area Manager and the SHE Department
- As new recycling opportunities are identified, the site will be alerted
- **Recycling SOP Training is ready to be completed on Compass**
 - In order to pass the test, you should become familiar with the images below



Unlimited. **DSM**

YOUR CHANCE TO *RECYCLE* UNWANTED METAL!!

To reinforce the Recycling Program that we have on site, Bill Wolverton has arranged for George's Salvage to place a metal collection rolloff in the employee parking lot. **Employees and site contractors** will be allowed to use the rolloff to discard any metal that has been collecting around our homes.

RULES:

- 1. NO liquids**
- 2. NO paint cans**
- 3. NO CFC's - unless appliance is properly emptied, cleaned and tagged**
- 4. NO tires**
- 5. NO sealed containers - Pressurized containers are OK if container is depressurized, valves are removed and clean. Any large liquid container should be cut open and cleaned.**



DATES:

Thursday June 5 thru Thursday June 19

PROCEDURE:

- 1. Bring acceptable metal items to the Employee Parking lot during the collection period**
- 2. SAFELY transfer the metal to the rolloff**
- 3. Visit the Guardhouse and sign the participant's log**

If this is successful, we may be able to expand the program in the future to other household recyclable scrap.

Thanks to Bill for helping to coordinate this! Contact the SHE Staff if there are any questions

Recycle Your Unneeded *Cellular Phones*!!

The Belvidere Site is collecting unused cell phones to donate to the nonprofit group, Abilities of Northwest New Jersey. The phones will be distributed to deserving individuals in the area in order to remotely access any 911 Emergency Communications Center

- ***DO NOT include chargers or other accessories, just the cell phone.***

Thank You 

Dates: Now thru First Week of January 2008

Location: Container in B206 Hallway near ATM

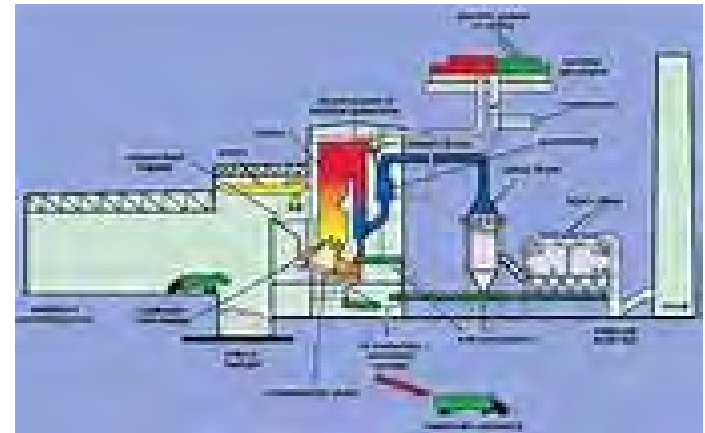


Cost Benefit

Material	Weight (tons)	Recycle Cost Cost avoidance/total cost
Comingle (plastic, metal, glass)	1.70	N
Cardboard/Paper	72.50	+1,200/-
Lube Oil	8.65	N
Drums (plastic, fiber, steel)	17.00	+/N
Wood pallets	401.00	+24,000/+
Scrap Metal	196.30	+12,000/+
Batteries (alkaline and others)	0.50	-570/-
Batteries (lead acid)	0	+/+
Consumer Electronics	11.40	+/+
Concrete/Asphalt	1,080.00	+22,000/-
WWTP Biosolids	7,104.00	N/-

Site Limitations to Improve

- Pay for convenience
- No other industry in the area
- Some volumes too low
- No baler but use compactors for some cardboard
- Some recovered values too low
- Liability
 - Limits options for off spec product
- The alternative is not that bad
 - Site general trash is burned to generate electricity



NJDEP Recognition

- Compliance & Enforcement - Environmental Stewardship Initiative

Environmental Stewardship

The New Jersey Department of Environmental Protection's
Environmental Stewardship Initiative recognizes

DSM NUTRITIONAL PRODUCTS INC

for its voluntary and proactive measures taken to go beyond compliance
in an effort to improve the environment and ensure a sustainable future.

* Participation Category

- * Environmental Policy
- * Environmental Management System
- * Annual Environmental Report
- * Carbon Footprint Analysis
- * Environmental Purchasing Policy
- * Vendor/Supply Chain Requirements
- * Mentoring To Other Businesses
- * Outreach Program
- * Green Building Certification
- * Green Building Implementation
- * Life Cycle Assessments
- * Hazardous Materials Reduction
- * Water Use Reduction
- * Materials Conservation
- * Employee Trip Reduction
- * Process/Operations Energy Use Reduction
- * Transportation Energy Use Reduction
- * Renewable Energy Use
- * Environmental Enhancement Project
- * Innovative Program
- * EPA Voluntary Programs

Date of Inspection: February 08, 2011



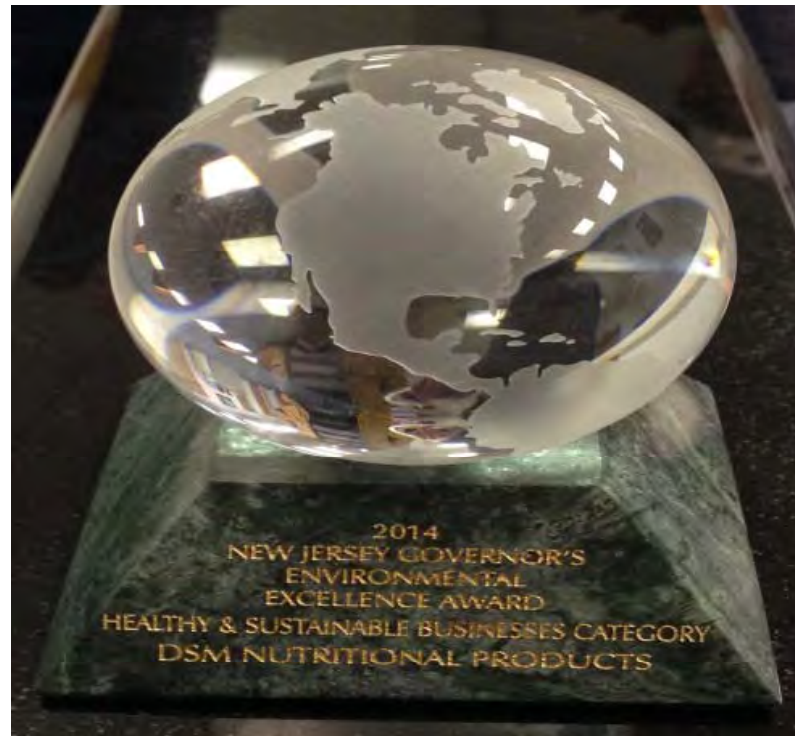
Wolfgang Skacel
Assistant Commissioner
Compliance & Enforcement



NJDEP Recognition



- Governors Award - Healthy & Sustainable Business Category
 - The **Governor's Environmental Excellence Awards** are the State's premier environmental awards program for recognizing outstanding environmental performance, programs and projects in the state.



Questions?

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