



**2014 Annual Report  
For the Cooperative Environmental Agreement  
Between 3M -Menomonie  
And the Department of Natural Resources**

**July 17, 2015**

**Prepared For:**

**Wisconsin DNR**

**Prepared By:**

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## **Introduction**

This annual performance report is submitted in part to meet the requirements of Section XIII, Baseline and Periodic Performance Evaluations, of the October 2007 Extended Agreement. Included in the report is the following information concerning the environmental performance and commitment to superior environmental performance of 3M Company – Menomonie during 2014:

- Involvement and input from the Interested Person's Group to the Agreement
- Evaluation of the EMS (Environmental Management System), areas of success and areas for improvements beyond those specified, in addition to other objectives and targets set in the previous year's report
- 2014 3P (Pollution Prevention Pays) project summaries (goal of at least five approved projects during 2014)
- Status of reductions of hazardous waste levels per pound of good output
- Status of the goal of maintaining or reducing the emissions of VOC (volatile organic compounds) per pound of good output (semi-finished and finished goods) to a level equal or less than 4.11 pounds VOC / 1000 pounds good output through 2014 (2010 baseline)
- Status of progress toward the goal of a 2% reduction in waste per pound of good output by the end of 2014 (2010 baseline)
- Status of progress toward the goal of reducing energy usage per pound of good output by 3% by the end of 2014(2010 baseline)
- Status of progress made by the Wildlife Team to meet annual goals established by the team to maintain the Wildlife Habitat Council (WHC) site certification
- Water usage ratio indexed to production in the facility (2010-2014)
- General assessment of the success of the Agreement in reducing time and money spent by 3M and the DNR on paperwork and other activities that may not directly benefit the environment

## **Extension of the Cooperative Environmental Agreement (CEA) beyond October 1, 2012**

In September 2012 3M asked for an extension of the CEA which was set to expire on October 1, 2012. Knowing that the Agreement expired on this date, 3M Menomonie had previously submitted a Green Tier application as a Level 2 participant in 2009. On September 26, 2012 Secretary Stepp granted an extension of the Agreement while 3M and the DNR worked on the Green Tier Participation contract and a re-issuance of the current Title V Air Operating Permit (see Appendix A). All terms and conditions of the Agreement and the air permit, including its flexibility provisions, would remain in effect during this time.

## **Regarding Commitment to Superior Environmental Performance**

As stated in Section IX of the Extended Agreement, 3M Menomonie commits to pursue superior environmental performance while achieving a balance between economic, social, and environmental impacts for its efforts. The plant's commitment to reducing its environmental footprint continues to contribute to 3M's reputation in the community, the country, and the world and demonstrates that economic progress and environmental improvement can go hand-in-hand. The Environmental Targets 2015 (ET15) program is the corporate initiative that will serve as the basis for our commitment to superior environmental

performance for the next five year period beginning in 2011. These goals were designed to drive continued reductions in volatile organic compounds (VOCs), waste and energy efficiency, and continue the emphasis on the Pollution Prevention Pays (3P) program. Specific Menomonie goals for this program by the end of 2015 (2010 baseline) were:

- **Reduce Waste per pound of good output (semi-finished and finished goods only) by 10% by the end of 2015 (2010 baseline)**

Waste, as defined in the ET15 program, includes chemical waste sent for treatment, waste sent to waste to energy (W/E) facilities for disposal, and landfill. Plant recycle and reuse of raw materials, and the offsite recycle and reuse of materials sent to waste vendors are considered “neutral” in this program and serve as an incentive for 3P projects for cost reduction and pollution prevention.

- **Sustain or reduce Volatile Air Emissions (VOC) per 1000 pound of good output < 4.11 pounds VOC/1000 pound good output each year (2010 baseline)**
- **Improve Energy Efficiency per pound of good output by 15% by the end of 2015 (2010 baseline)**
- **Sustain wildlife management plan and certification to Wildlife Habitat Council (WHC) standards**
- **Submit at least five accepted 3P (Pollution Prevention Pays) projects each year**

These goals set the basis for superior environmental performance under the Extended Agreement.

### **Regarding the Interested Persons Group**

The 3M Company–Menomonie Interested Persons Group (IPG) is composed of representatives from business, government and academia in the Menomonie area who are interested in environmental stewardship and the impact of manufacturing on local communities. Group members include the following individuals:

- Barbara Thomas, Chippewa Valley (WI) Chapter of the Sierra Club
- Mike Beaupre, Director, Indianhead Enterprises
- Keith Bergeson, Dunn County Department of Public Health
- Mark Harings, Wisconsin Department of Natural Resources
- Paul Sterk, Superintendent, Menomonie Wastewater Utility
- Dr. Martin Ondrus, UW-Stout, Chemistry Department (retired)
- Ed Smith, City of Menomonie Planning Commission Member

This group has not met on a regular basis since 2012.

## **Regarding an Evaluation of the EMS**

A third party auditor, BSI (British Standards Institute), conducted a recertification audit of our EMS in September. The audit resulted in three minor non-conformities that required that an action plan response to BSI. The response plan was submitted and accepted by BSI in late October 2014. These non conformities dealt with inconsistent practices and procedures in managing documents and in one instance the proper labeling of spent raw materials in one of the plant processes. Corrective actions are in the process of being implemented, and the effective implementation of the plan will be verified at the next BSI audit visit (October 2015).

Internal assessments of the EMS were conducted in all operational and service areas of the facility during the year. These audits resulted in two corrective being issued from the eleven audits conducted. All corrective actions have been addressed. Regular management review is held at least quarterly with the EMS Core team and members of the plant management team to review progress towards the plant environmental goals and targets. Quarterly updates are communicated to all plant management to share with their departments at department team meetings. An annual review of all EMS elements was held with upper management during early September 2014.

A self –assessment audit called GEMSA (Global Environmental Management Self Assessment) that reviews environmental regulatory and other requirements to which 3M subscribes was reviewed and approved by plant management in April 2014. Overall score was 98.4 %. In addition, an internal compliance audit was conducted in June 2014 by 3M Corporate Environmental Operations with findings, observations, and best practices cited. Since audit results are protected under attorney/client privilege the final audit report cannot be shared with the public.

The 2014 Environmental Targets and Objectives and the EMP (Environmental Management Program) to achieve these objectives are attached in Appendix B.

## **Regarding a Summary of 2014 Approved 3P (Pollution Prevention Pays) Projects**

A standing EMS goal for the facility is to generate at least 5 approved 3P projects each year. In 2014 there were eight approved projects submitted. A summary of these projects is shown in Table 1:

**Table 1: 3P (Pollution Prevention Pays) Project Summary**

	<b>Project Description</b>	<b>Pollution Prevented/Energy Saved</b>	<b>\$ Saved (first year)</b>
ALCF Resin Recycling	Through process modifications and qualification of quality attributes at each customer, a process was established to recirculate the resin back into the system for re-conditioning and re-use.	29 tons of resin diverted from incineration	Cost savings is the sum of yield improvements of the input resin RM and the cost reduction of incinerating additional scrap resin plus additional product sales from increased yields: \$1.16M
MRC6 & MRC7 Winder Transfer Improvement	Improved splicing and wind quality decreased coated film losses that could be sold as good product and reduced material waste.	12.5 tons of plastic film diverted from waste stream	\$ 52,000
Ceramic Fiber Pre-Size Improvement	Sizing reformulation improved ceramic fiber yields 7%	32 tons waste avoided	\$ 200,000
Modifications to SBR coating die	Modifications to coating die width produced less converting waste of coated film	1 ton of coating saved that wasn't waste	\$15,000
Product core reduction by implementing single pass process for typically dual coated product	Implementing the MRC8 dual coat process enabled the core reduction and improved RTY film savings	Core and film savings of 17 tons	\$ 75,000
Input film waste reduction as a result of implementing a dual coat line in MRC	Same as above for a different version of brightness enhancement film	Yield improvements to divert 60 tons of materials from recycle or waste to energy	\$ 133,000
Yield Improvement in FA Tooling	Process improvements increased product yields	22 tons diverted from recycle	\$ 28,000
1096 mm Repeat Defect Reduction for 5 mil PET	Improved film scratch detection techniques	28 tons in scrap film diverted from recycle or waste to energy	\$ 63,000

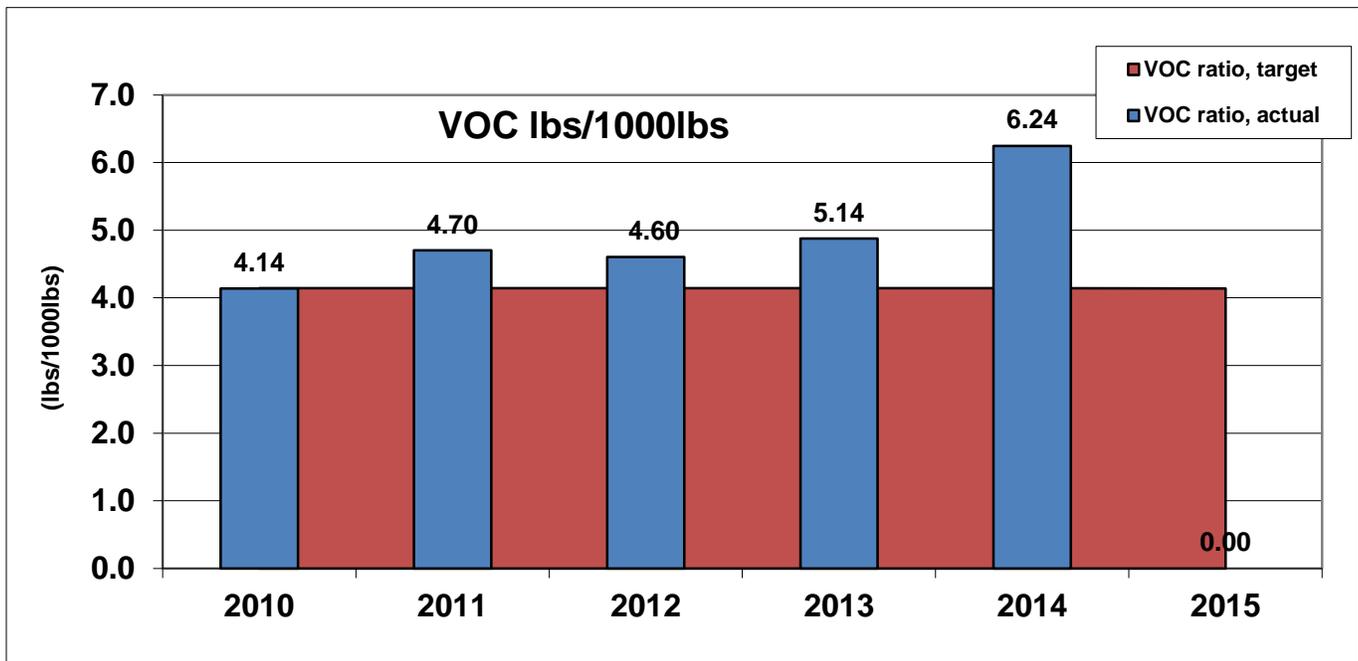
	<b>Project Description</b>	<b>Pollution Prevented/Energy Saved</b>	<b>\$ Saved (first year)</b>
Output core reduction on MRC2 UDF product by implementing virtual roll process	Changed from using a scrap core each time a splice change was required to using a virtual roll each time a splice was required	3 tons of material savings	\$ 7,400
Output film waste reduction with UDF products on MRC line by improving splice waste	Project focused on training of the operators and optimizing the splice change / waste on output cores by teaching each team member when to splice on spindle A/B.	2.5 tons	\$ 74,000
<b>Total Pollution Prevented &amp; First year Savings:</b>		<b>207 tons</b>	<b>\$ 1.55 MM</b>

## Regarding Status of the Goal of Maintaining or Reducing VOC Emissions

### Results:

Actual VOC emissions increased 56,000 lbs. or 22% in 2014 compared to 2013. This increased the actual ratio from the goal of 4.11 pounds VOC/ 1000 pounds good output to 6.24 pounds. The ratio increase is primarily due to the increase of VOC emissions from C5 Tape operations during the year. This is mainly influenced by product demand from the higher solvent tapes such as 3M Blue Exterior Painters Tape. A VOC reduction project to convert to solventless tape coatings is scheduled in 2015. Results of this goal are shown in Figure 1 and Table 2. Actual emissions by area (2010-2014) are shown in Figure 2.

**Figure 1: VOC lb./1000 lb. Good Output**



**Table 2: VOC/1000 lb. Good Output**

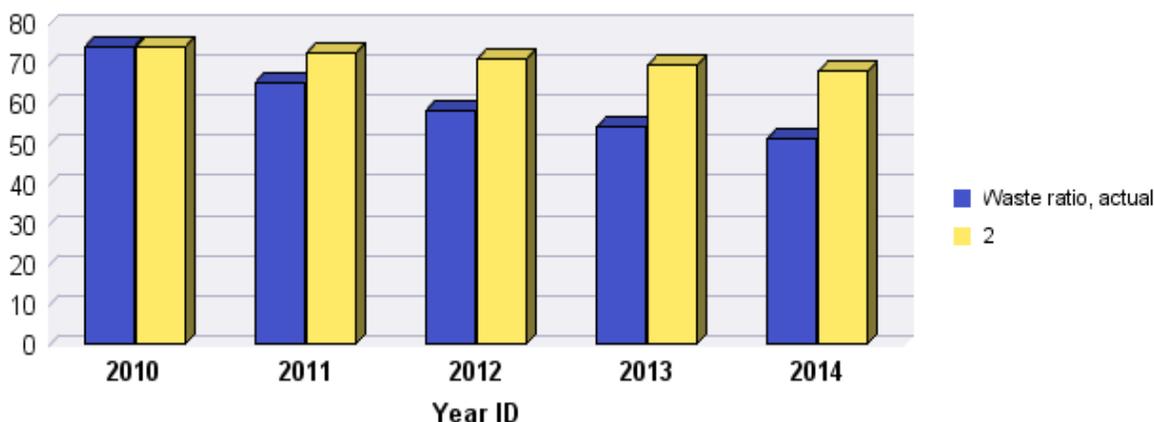
Metric	Baseline Year	Goal (%)	Baseline	2010	2011	2012	2013	2014
Total good output (1000 lbs)				40,496	39,766	47,014	51,551	49,132
VOC (1000 lbs)	2010	0	168	168	187	216	251	307
VOC ratio, actual (lbs/1000 lbs)			4.14	4.14	4.70	4.60	4.88	6.24
VOC ratio, target (lbs/1000 lbs)			4.14	4.14	4.14	4.14	4.14	4.14

**Status of Progress toward Reduction in Waste per Pound of Good Output**

**Results:**

The actual ratio for 2014 was 51.5 pounds waste/ 1000 pounds good output. This was a decrease of 44% from the baseline 2010 levels. There was a concerted effort to identify waste streams that were being sent for W/E treatment to recycle, thus reducing our waste ratio. Another impact on the waste reduction ratio has been the recycling of the hot melt adhesive from two areas of the plant : C5 Tape and Personal Care Division. Results of this goal are shown in Figure 3 and Table 3. As shown in Figure 4, about 76% of the non product output produced in 2014 was either recycled or reused. Refer to Figure 5 showing the raw material utilization by waste type for the period 2010-2014. Approximately 82 % of our raw materials went into a finished or semi-finished product in 2014.

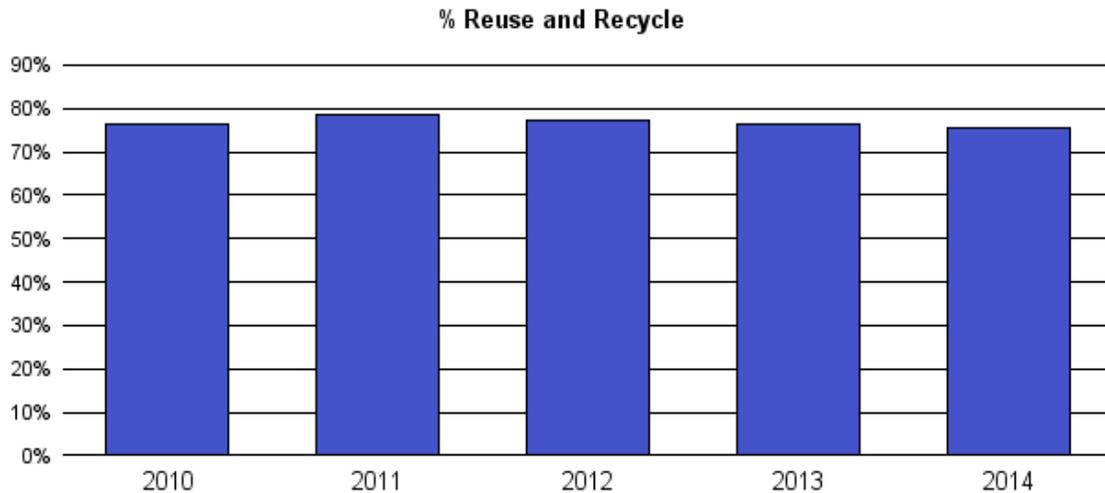
**Figure 2: Waste lbs./ 1000 lb. Good Output**



**Table 3: Waste / 1000 lb. Good Output**

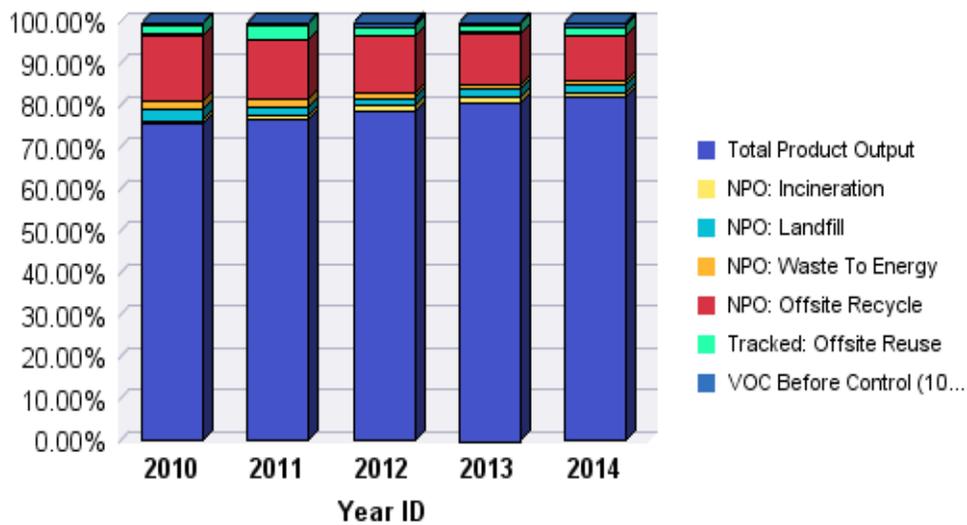
Metric	Baseline Year	Goal (%)	Baseline	2010	2011	2012	2013	2014
Total good output (1000 lbs)				40,496	39,766	47,014	51,551	49,132
Waste (1000 lbs)	2010	10	3,005	3,005	2,603	2,749	2,800	2,530
Waste ratio, actual (lbs/1000 lbs)			74.20	74.2	65.5	58.5	54.3	51.5
Waste ratio, target (lbs/1000 lbs)			74.20	74.2	72.7	71.2	69.7	68.3

**Figure 3: Percent Recycle & Reuse**



Metric	2010	2011	2012	2013	2014
% Reuse and Recycle	76.5%	78.8%	77.5%	76.4%	75.5%

**Figure 4: Raw Material Utilization (2010-2014)**



**Table 4: Raw Material Utilization**

Metric	2010	2011	2012	2013	2014
<b>RM Utilization %</b>	<b>75.8%</b>	<b>76.6%</b>	<b>78.7%</b>	<b>80.9%</b>	<b>82.0%</b>
Total Product Output	40,496	39,766	47,014	51,551	49,132
NPO: Incineration	507	580	821	804	634
NPO: Landfill	1,438	1,063	1,179	1,356	1,187
NPO: Waste To Energy	1,060	961	749	640	710
NPO: Offsite Recycle	8,384	7,364	8,141	7,783	6,476
Tracked: Offsite Reuse	1,405	1,914	1,325	1,269	1,338
VOC Before Control (1000 lbs.)	168	235	509	298	456

# Status of Progress toward the Goal of Reducing Energy Usage per Pound of Good Output

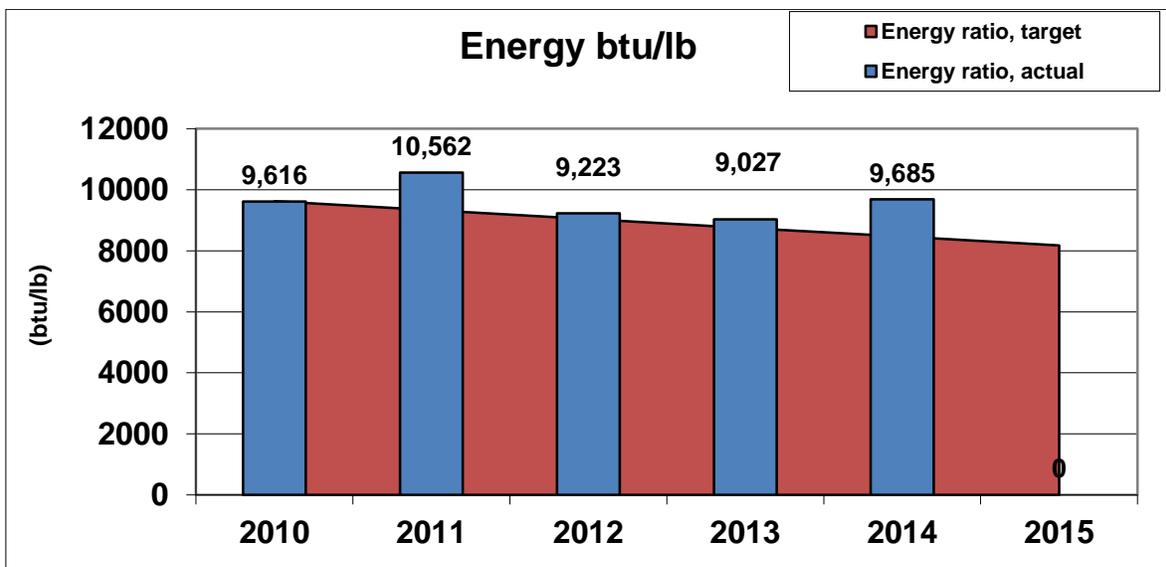
## Results:

The energy usage ratio increased over the previous year to 9,685 Btus/ pound good output vs. a 2014 goal of 8,462. A few small utility improvement projects were delivered during the year:

- Changed control scheme on Chiller 11 that operates pumps and valves to reduce energy consumption by 51,840 KWH annually with savings of \$ 3800.
- Installed large ventilation ceiling fans in warehouse to decrease gas usage by de-stratifying the air and mixing with room air at floor level. Annual natural gas savings expected to be 3150 CCF and annual savings of \$ 2,200.

Refer to Figure 6 and Table 5 to review the energy usage results for 2014.

**Figure 5: Energy Use/ Lb Good Output**



**Table 5: Energy Use/Lb. Good Output**

Metric	Baseline Year	Goal (%)	Baseline	2010	2011	2012	2013	2014
Total good output (1000 lbs.)				40,496	39,766	47,014	51,551	49,132
Energy Usage (mmbtu)	2010	15	389,432	389,432	420,011	433,594	465,334	475,839
Energy ratio, actual (btu/lb.)			9,616	9,616	10,562	9,223	9,027	9,685
Energy ratio, target (btu/lb.)			9,616	9,616	9,328	9,039	8,751	8,462

## Status of Progress Made by the Wildlife Team

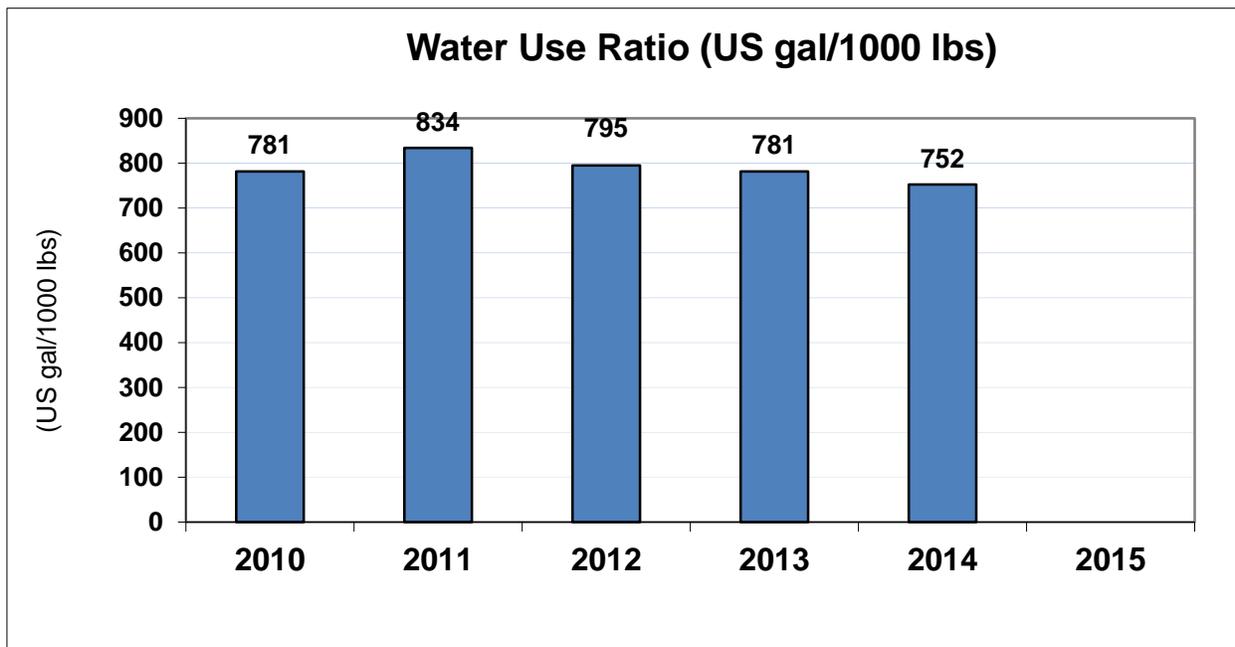
### Results:

For the ninth straight year the team conducted nest box monitoring for bluebirds and wood ducks. The blue bird project was again quite successful with many confirmed bluebirds and tree swallows raised from the 15 nest boxes. For the eighth straight year the plant provided funding for the Menomonie public schools for their annual Earth day activities and provided volunteers for the event. The wildlife team undertook various other projects during the year including a birdwatch activity, planning and building two bat houses, continued study and maintenance of the prairie restoration areas. The team also purchased and erected an official WHC (Wildlife Habitat Council ) sign at the employee entrance as part of the plant 40 year anniversary celebration.

### Regarding Actual Water Usage Ratio

Although water usage is not part of the Agreement environmental commitments, water usage is tracked as part of the overall corporate ET15 reporting. Water usage, although essential and important to our environmental impact, is not a significant resource consumed in the facility. The majority of the water used by the plant is for makeup water used by the plant chilled water cooling towers. Refer to Figure 7 for water use ratio in gallons for every 1,000 pounds of good output in 2010 -2014.

**Figure 6: Plant Water Use Ratio**



## Regarding Actual Waste Reductions

A summary of 2013/2014 3M-Menomonie actual wastes and air emissions are shown in Table 6:

**Table 6: 2013/2014 Waste & Air Emissions**  
(Lb.)

Type of Waste	2013	2014	% Change	Comment
Regulated Hazardous Waste	662,147	462,347	- 69 %	Increased product yields from most production areas due to Lean /Six Sigma efforts
Non-regulated chemical waste	158,603	171,653	+ 8%	A slight increase in non-hazardous chemical waste sent to the Cottage Grove Incinerator.
Landfill waste	1,179,000	1,186,600	+ 1 %	A slight increase in total landfill waste in 2014.
3M waste to energy	749,000	709,600	- 6 %	A slight decrease in 2014 as the impact of diverting more waste streams to recycle had full impact for the year with efforts focusing on diverting W/E waste streams to recycle
VOC emissions	216,000	306,560	+ 42 %	More VOC content in tapes produced by C5 Tape and larger volumes of solvent based tapes accounted for the increases of the actual emissions seen in 2014.
Reportable TRI (toxic release inventory) chemicals releases	138,150 (RY2012)	156,290 (RY2013)	+ 13 %	Offsite releases of toluene and Dimethylformamide account for these releases with the bulk of the releases being toluene air emissions from C5 Tape

## **Regarding Operational Flexibility:**

There were several exempt processes and modifications that were added during 2014 to which the Department was notified but there were no submittals for pre-approved projects.

## **Regarding Additional Time Requirements for Fulfilling this Agreement include:**

<u>Requirements Added:</u>	<u>Additional Time</u>
Compiling this Performance Report	30 hours/year

## **Regarding Overall Assessment of the Success of the Agreement:**

3M Menomonie regards the operational flexibility provided in this Agreement to be a business advantage. Although the flexibility provisions were not exercised in 2014 the Agreement showcases the business advantage with the ability to proceed with pre-approved projects and the flexibility to expand product manufacturing capability in such a short time frame.

Questions and requests for additional information should be directed to Michael Wendt, EHS Department, at the address below:

3M Company – Menomonie Plant  
1425 Stokke Parkway  
Menomonie, WI 54751  
Phone: 715/235-5541  
E-mail: [mrwendt@mmm.com](mailto:mrwendt@mmm.com)

## Appendix A: Extension of CEA

**State of Wisconsin**  
DEPARTMENT OF NATURAL RESOURCES  
101 S. Webster Street  
Box 7921  
Madison WI 53707-7921

**Scott Walker, Governor**  
**Cathy Stepp, Secretary**  
Telephone 608-266-2621  
Toll Free 1-888-936-7463  
TTY Access via relay - 711



September 26, 2012

Mr. Mark Manninen  
3M Environmental, Health and Safety Operations  
P.O. Box 33331  
St. Paul MN 55133-3331

Subject: Environmental Cooperative Agreement

Dear Mr. Manninen:

Thank you for your letter requesting our continued operation under the terms of the flexible permit created for the Environmental Cooperative Agreement. We are mutually agreed that we will continue with the terms of that permit and we will continue to use the flexibility afforded in the Cooperative Agreement to continue our existing working relationship until such time as the Tier 2 contract and accompanying permit between 3M and the Wisconsin Department of Natural Resources is signed.

The Department places high value on our working relationship that has developed over the last 10 years. We are eager to get the Tier 2 contract in place and we will be working with you and with other 3M staff to complete that work once we have figured out the best approach based on the work that we are doing with the 3M Prairie du Chien permit and contract. Once we have worked through the USEPA issues, I would expect that we would proceed quickly with the permit drafting, contract development, public notice and ultimately to the signing of the participation contract.

Please do not hesitate to contact me if there is more that we can do, not only with Green Tier but also with needs to grow your business units here in Wisconsin. Please feel free to also contact Mark McDermid (608.267.3125 or [mark.mcdermid@wisconsin.gov](mailto:mark.mcdermid@wisconsin.gov)) if there is anything that we can do. I very much look forward to seeing you again when we celebrate 3M's new participation contract.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cathy Stepp'.

Cathy Stepp  
Secretary

A small, stylized handwritten mark or signature in black ink, possibly a flourish or a small signature.

**Appendix B: 2014 Target & Objectives  
2014 EMP**

<b>Aspect</b>	<b>Objective(s)</b>	<b>Target(s)</b>	<b>Results/Progress</b>
Waste from raw materials and processes	Reduce waste ratio by 20% from 2010 baseline by the end of 2015	Reduce waste (chemical, landfill, waste to energy) per pound of good output (finished & semi-finished goods) to 68.3 #/ 1000 # output in 2014	Q1 2014: 58.1 #/ 1000# good output Q2 2014: 48.7 #/ 1000# good output Q3 2014: 52.0 #/ 1000# good output Q4 2014: 47.2 #/1000# good output 2014 YTD: 53.0 #/ 1000# good output
VOC emissions	Sustain the ratio of VOCs/ pound of good output to 4.11 #/1000 # good output by the end of 2015 (2010 baseline)	Sustain ratio to 4.11 by the end of 2014	Q1 2014: 5.98 # VOC/ 1000# good output Q2 2014: 6.60 # VOC/ 1000# good output Q3 2014: 5.71 # VOC/ 1000# good output Q4 2014: 6.24 # VOC/ 1000# good output 2014 YTD: 6.24 # VOC/ 1000# good output
Energy usage	Reduce energy usage per pound of good output by 15% by the end of 2015 (2010 baseline)	Reduce energy use per pound of good output to 8462 BTU/ # output in 2014	Q1 2014: 10,450 BTU/# good output Q2 2014: MISSING DATA Q3 2014: 11,421 BTU/# good output Q4 2014: 10,229 BTU/# Good Output 2014 YTD: 9,685 BTU/ # good output
Waste and energy reduction	3P (Pollution Prevention Pays) Projects	Submit at least 5 3P (Pollution Prevention Pays) projects in 2014	Q1 2014: 1 approved, 1 submitted, 1 draft Q2 2014: 2 approved, 2 submitted Q3 2014: 4 approved, 2 draft Q4 2014: 10 approved 2014 YTD: 10 approved projects
Legal Requirements Operational flexibility Sustainability	Renew T5 flexible Air Permit and enter as a WDNR Green Tier level 2 company by end of 2014	New operating permit and Tier 2 agreement in place by the end of 2014	See EMP (environmental management program) Draft permit submitted January 2015 for 3M review
Land conservation, habitat development, wildlife management, community involvement	Sustain WHC (Wildlife Habitat Council Certification) programs through 2016 (recertification in 2016)	Wild life projects scheduled in 2014: <ul style="list-style-type: none"> <li>• Nest box monitoring</li> <li>• Earth Day with public schools</li> <li>• Land use (lease)</li> <li>• Prairie restoration</li> <li>• Bat houses</li> </ul>	See EMP: Nest box monitoring complete for season Earth Day completed – April Seeking lease for hay crops (cover crops for 2015 and beyond) Reviewed prairie plantings – August 2015 2 bat houses to be erected by spring 2015 Planning Earth Day for 2015 – internal fair

<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Mike Wendt; EMS Core Team	<b>Start Date:</b> 1/1/2014
<b>Goal Statement: Reduce waste ratio by 20% from 2010 baseline by the end of 2015</b>		
<b>Objective(s): Reduce waste by 2% each year indexed to good output for the year 2010 – 2015 for an overall reduction of 10% by the end of 2015</b>		<b>Target: Reduce waste (chemical, landfill, waste to energy) per pound of good output (finished &amp; semi-finished goods) to 68.3 #/ 1000 # good output in 2014</b>
<b>Strategy: Reduce waste by applying source reduction, recycling, and administrative techniques</b>		
<b>Actions to Achieve Objectives and Target:</b> <ul style="list-style-type: none"> <li>• Partner with Lean Six Sigma and COPQ efforts to address intrinsic waste due to the product and process design and manufacturing</li> <li>• Partner with Resource Recovery to implement/improve waste reduction programs (recycling, reuse and disposal costs)</li> <li>• 3P (Pollution Prevention Pays) waste reduction or yield improvement projects</li> <li>• Zero Landfill efforts – investigate cafeteria/compostable waste with Advanced Disposal</li> </ul>		
<b>Metrics:</b> <div style="border: 1px solid blue; padding: 10px; margin: 10px 0;"> <math display="block">  \begin{array}{l}  \text{Waste} \\  \text{Target} \\  \text{Ratio} \\  \text{(Facility)}  \end{array}  = \frac{\text{Treatment/Incineration + Landfill + Waste-to-Energy (not include off-site recycle)}}{\text{Good Output}}  </math> </div>		
<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Mike Wendt; EMS Core Team	<b>Start Date:</b> 1/1/2014
<b>Goal Statement: Maintain or reduce VOC emissions indexed to good output</b>		
		<b>Target: Sustain VOC ratio to 4.11 by the end of 2014</b>

<b>Objective(s):</b> Sustain the ratio of VOCs/ pound of good output to 4.11 #/1000 # good output by the end of 2015 (2010 baseline)
<b>Strategy:</b> Sustain or reduce VOC emissions by product mix, solvent substitutions, or improved technologies
<b>Actions to Achieve Objectives and Target:</b> <ul style="list-style-type: none"> <li>• Partner with division laboratories via CTOC “PSA solvent reduction” project and “green chemistry” programs to understand internal targets for divisions</li> <li>• Monitor AERP status in CF5 Tape (&lt; 100 tons VOC emissions/year)</li> <li>• 3P Emission reduction projects</li> </ul>
<b>Metrics:</b>  Volatile Air Emissions ----- Finished and Semi-finished Goods

<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Mike Wendt; EMS Core Team	<b>Start Date:</b> 1/1/2014
<b>Goal Statement:</b> Submit 3P (Pollution Prevention Pays) Projects		
<b>Objective(s):</b> Submit at least 5 3P (Pollution Prevention Pays) Projects each year through the end of 2015		<b>Target:</b> Submit at least 5 3P (Pollution Prevention Pays) projects in 2014
<b>Strategy:</b> Submit 3P projects that will reduce waste, energy, GHG, or emissions		
<b>Actions to Achieve Objectives and Target:</b>		

## Pollution Prevention Methods

Method	Description
Product Reformulation	• Replace a part of entire product with less or no toxic chemical(s)
Process Modification	• Alter a manufacturing process to reduce pollution (air, water, waste)
Equipment Redesign	• Redesign of equipment with new concept to reduce pollution
Quality/Yield Improvement	• Improve efficiency with reduced defects or use fewer raw materials to reduce waste
Recovery and/or Reuse	• Develop/Improve system to recover or re-use waste stream
New Product	• Develop product with environmental attribute/benefit to assist customer with reducing pollution

**Metrics:**

**Number of approved projects submitted in the current year; 1<sup>st</sup> year savings( \$), pollution prevented (tons), energy saved (MMBTU)**

<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Will Carlson; Energy Team	<b>Start Date:</b> 1/1/2014
<b>Goal Statement: Improve energy efficiency by 15% between 2010 and 2015</b>		
<b>Objective(s): Reduce energy usage per pound of good output by 15% by the end of 2015 (2010 baseline)</b>		<b>Target: Reduce energy use per pound of good output to 8462 BTU/# output in 2014</b>
<b>Strategy: reduce energy usage or increase energy efficiency of processes and equipment through conservation or improved technologies</b>		
<p><b>Actions to Achieve Objectives and Target:</b></p> <ul style="list-style-type: none"> <li>• Develop prioritized plans for projects and spend.</li> <li>• Continue internal commitment to energy management excellence.</li> <li>• Promote energy team to identify opportunities for conservation and optimizing processes and equipment</li> <li>• 3P Energy projects</li> </ul>		
<b>Metrics:</b>		

<b>BTUs</b> -----		
<b>Finished and Semi-finished Goods</b>		
<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Mike Wendt, Andrew Willing	<b>Start Date:</b> 1/1/2014
<b>Goal Statement: Renew Title V air permit with Part III Operational flexibility and Enter as a WDNR Level 2 Green Tier company</b>		
<b>Objective(s): Renew T5 flexible Air Permit and enter as a WDNR Green Tier level 2 company by end of 2014</b>		<b>Target: Renew T5 flexible Air Permit and enter as a WDNR Green Tier level 2 company by end of 2014</b>
<b>Strategy: Renew Title V air permit with Part III operational flexibility and model Green Tier Level 2 Agreement similar to PDC approved permit and agreement</b>		
<b>Actions to Achieve Objectives and Target:</b> <ul style="list-style-type: none"> <li>• Permit renewal completed in March 2012</li> <li>• Continue to work with EO (Andrew Willing ) and WDNR contact (Sonny Zetner) to expedite permitting approvals</li> <li>• Submit draft agreement to WDNR similar to agreement approved for PDC plant and approved by EPA and WDNR</li> </ul>		
<b>Metrics: Reissued Title V permit and approved level 2 Green Tier contract/agreement</b>		

<b>Facility:</b> 3M Menomonie	<b>Responsible Person(s):</b> Debra Carty, Wild at Work wildlife team	<b>Start Date:</b> 1/1/2014
<b>Goal Statement: Maintain status as a Wildlife Habitat Council (WHC) certified site</b>		

<p><b>Objective(s )Sustain WHC programs through 2016 (recertification in 2016)</b></p>	<p><b>Target: Wild life projects scheduled in 2014:</b></p> <ul style="list-style-type: none"> <li>• Nest box monitoring</li> <li>• Earth Day with public schools</li> <li>• Land use (lease)</li> <li>• Prairie restoration</li> <li>• Bat houses</li> </ul>
<p><b>Strategy: Use Wild at Work wildlife team to plan and implement projects in 2014</b></p>	
<p><b>Actions to Achieve Objectives and Target:</b></p> <ul style="list-style-type: none"> <li>• Nest box monitoring of wood ducks - spring box check</li> <li>• Nest box monitoring of bluebirds – weekly in summer nesting season</li> <li>• Fund and provide volunteers with Earth Day – Menomonie Middle School – April 2014</li> <li>• Investigate and recommend lease options for 2015 for cover crops</li> <li>• Monitor/maintain prairie plantings – summer , fall 2014</li> <li>• Construct and install 2 bat houses</li> </ul>	
<p><b>Metrics: monitor activities of Wild at Work team – see team room in Lotus Notes</b></p>	