

Region 5 Autobody ERP

States ERP Consortium meeting
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WI Changes for SB and ERP

- WI Small Business Clean Air Assistance Program moved to WDNR June 2011
- Renee now in Permits section, with both small business and permit policy responsibilities
- Email and phone same
- Contact info on last slide
- ERP web pages:
 - <http://dnr.wi.gov/air/sb/ERP.html>
 - <http://dnr.wi.gov/air/sb/AutobodyERP.html>
 - <http://dnr.wi.gov/air/sb/AutobodyShopCompTraining.html>

Overview

- ERP in Region 5
- Baseline Results
- Self-certification Status
- Progress on EPA Follow-up Inspections

What is ERP?

- Environmental Results Program
- Use statistical approach to measure performance in a sector
- Select a sub-set of regulatory and best management practices that apply in the sector, single or multi-media
- Report results on the selected practices with desired confidence level and confidence interval
- Facility self-audit and certification offers insight into their perception of performance – not statistically analyzed



Region 5 Autobody ERP

- How to reach ~13,000 autobody shops in Region 5 to address area source NESHAP?
 - Area source rules rely on Small Business Environmental Assistance Programs (SBEAPs) and compliance assistance rather than Title V permits
 - region 5 SBEAPS average 2-3 staff, have small budgets and fairly large states
 - only one region 5 state had delegation for NESHAPs and not planning much enforcement effort
 - How do we also get Region 5 EPA involved since they have enforcement role?
 - and provide assistance rather than BIG fines on limited number of shops
 - usual fines can put these size shops out of business
 - but do want to see some enforcement, to encourage higher compliance rates

What are Main Project Steps?

- Phase 1 – Universe and Sample Size (2009)
- Phase 2 – Develop Materials and Train Field Staff (*Mid- to late-2009*)
- Phase 3 – Baseline Visits (*Spring-late Summer 2010*)
- Phase 4 – Self-assessment Tool and Training to Shops (*Fall 2010-Spring 2011*)
- Phase 5 – EPA Conduct Follow-up Inspections (*Begun Fall 2011*)
- Final - Analyze Data and Complete Report (*Spring – Fall 2012*)

Project Design

- Use “ERP” on Autobody Refinishing sector
 - Combine population of shops in six states
 - Focus on urban areas and the area source NESHAP
 - Use SBEAPs connection to small biz and trades
 - baseline visits as free “assessment” in preparation for NESHAP
 - trades can help publicize training resources
- Take urban areas in all six states combined as universe and randomly select a sample of shops
 - Universe = about 5000 in urban counties
 - Sample design:
 - use 90% confidence level
 - sample a minimum of 140 total across all 6 states
 - states each take proportional sample (minimum 15, maximum ~40), but analyze as Region
 - using at least 15 allows possible measure of individual state data, with larger margin of error
 - each list randomized for statistical purposes

Sample Size for Each State

- Final sample = 156 visits

DATA SET:		URBAN SHOPS						
Confidence Level		90%						
Sample Size Goal (Each Round)		140						
Ensure Minimum Stratum Samples?		Y						
Minimum Stratum Sample Size		15						
		Wisconsin	Minnesota	Michigan	Indiana	Illinois	Ohio	Region-Wide
Population		456	675	877	489	1,225	1,347	5,069
Exact Proportional Sample Size		12.6	18.6	24.2	13.5	33.8	37.2	140
Rounded Sample Size		13	19	25	14	34	38	143
Recommended Sample Size		15	19	25	15	34	38	146
Margin of Error (+/-)	1 sample	19.3%	17.4%	15.4%	19.3%	13.4%	12.7%	6.8%
	2 samples	30.6%	27.0%	23.4%	30.6%	20.0%	18.8%	9.7%

Note: Margin of error figures produced using Sample Planner 2007 (for citations, see that tool). For regionwide figures, actual margin of error will likely be smaller, because of stratification. Margin of error figures for individual state results may b

Success Rate for “Assessments”

Visits	IL	IN	MI	MN	OH	WI
Dropped	19	33	5	33	61	19
Complete Assessment	37	19	26	20	38	18
Attempted	82	74	35	77	132	58
Drop out rate	23.2%	44.6%	14.3%	42.8%	46.2%	32.7%

- Drop = not affected, i.e. not a paint shop
- Attempt = affected, includes not completed (refused, not available, etc.)

Results Analysis

- Some analyzed in Excel
 - using “Results Analyzer” Excel tool to calculate confidence intervals
- Yes/No questions by groups
 - MS Access-based Performance Analyzer
 - works with JMP software for statistical analysis
 - will also try another Excel tool – “Results Pro 2.1”
 - but need regular access to Office 2010

Outreach Questions

- Source for regulatory information?
 - Coating suppliers – 85%
 - Other suppliers – 34%
 - Trade association – 30%
 - Other shops – 20%
 - SBEAPs – 7%
- Best way to get information?
 - Mailing/letter – 65%
 - Emails – 50%
 - Workshops – 30%
 - Video-based – 20%
 - Web based – 17%
 - On-site Visits – 17%

Awareness

- Know coatings contain HAPs?
 - Yes = 21.9%
- Know about the rule before visit?
 - Yes = 64.3%
- Aware of *petition for exemption* option?
 - Yes = 18.54%
 - No, but want more info = 31.8%

To Petition or Not?

- After learning about *petition for exemption* option, will you petition or comply?
 - Not sure = 33.5%
 - Explore alternates, decide later = 28.4%
 - Continue using HAPs, comply = 27.7%
 - Stop using and petition = 10.3%
- As of November 2011 \cong 600 petitions
 - out of 12,000? ~5%

Painter Training

- Have all painters been trained?
 - Yes = 49.7% \pm 6.4% (range 43.3 – 56.1%)
- How many painters?
 - Averaged numbers
 - 1.1 paint techs out of 1.7 employees
 - 124 out of 156 had responses on # trained
 - 57 = 0 trained
 - 29 = 1 trained
 - 38 = >1 trained

Spray Guns Used

- Rule requires HVLP or equivalent, but exempts when using 3 oz cups or less:
 - Using ALL HVLP?
 - Yes = 57.8% ± 6.4% (range 51.37 – 64.0%)
 - Using any 3 oz cups?
 - Yes = 36.5% ± 6.2% (range 30.6 – 42.9%)

Booths/Prep Areas

- Rule requires
 - enclosed booths and prep areas (4 walls and roof for whole vehicle; 3 walls and roof for parts),
 - with 98% efficient filter on exhaust

Booths (avg # 1.2)	% yes/compliant	confidence interval	number
Have a booth	92.9% ± 3.4%	88.9-95.6%	145
Booth complies	70.5% ± 6.0%	64.1-76.1%	105
Booth filter complies	53.8% ± 6.6%	47.1-60.3%	80
Prep areas (avg # 1.55)			
Have a prep area	41.7% ± 6.2%	35.5-48.1%	65
Prep area complies	32.9% ± 8.8%	24.7-42.3%	21
Prep filter complies	27.9% ± 8.7%	20.0-37.5%	18

Gun Cleaning

- Using fully enclosed or non-atomizing gun cleaning?
 - Yes = 84.5% ± 4.7% (range 79.2 – 88.6%)

Cleaning Method	Owner response (n=155)	Observation
Fully enclosed washer	47	55
Fully enclosed AND disassemble	51	45
Flush but don't spray	38	40
Clean by hand	38	41
Spray coatings/solvent through gun	23 (no's)	18
Others: have enclosed but not using; enclosed only for water-based; have Hercules washer, but broken		

Material Use/Waste Handling

Chemical use	average use (gal/mo)	number reporting
High-VOC coatings	17.36 (median = 8.33)	137
Low-VOC <2 lb/gal	8.81 (median = 3.52)	29
High-VOC cleaners	8.21	120
Low-VOC cleaners	1.90	22
Methylene chloride strippers	0.17	9
Non-MeCl	0.08	1
Paint hours (n=131)	hours/month	hours/day
Minimum	0.08	0.0036
Maximum	1187.33	54
Median	41.67	1.9
Average	91.86	4.2
Hazardous waste generation	gal/mo	
Average	8.599	<26 gal/mo = VSQG 7 shops >27 gal/month

- Collected paint hours to normalize paint use over time

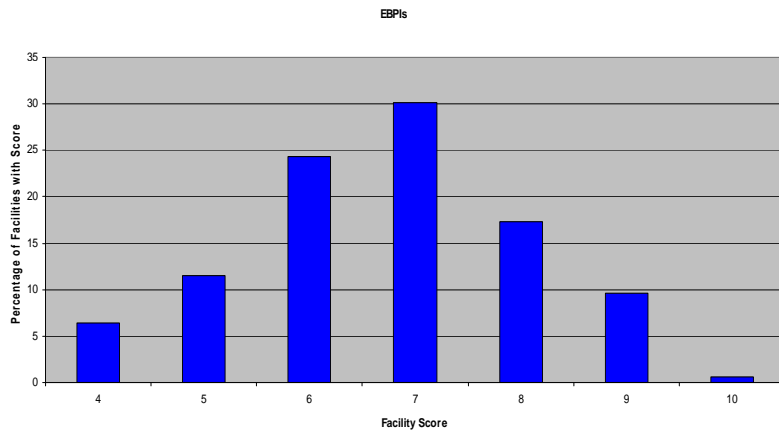
Pollution Prevention

Actions to reduce toxics in the past 3 years		Number	Percent
VOC/HAP	Keep ALL solvent containers closed	113	92.60%
	Ask suppliers for non-HAP metal coatings	36	29.50%
	Use paintless dent repair techniques	93	76.20%
	Avoid methylene-chloride paint strippers	101	82.80%
	Automatic enclosed gun washer	74	60.70%
	Use water-based or low-VOC coatings	26	21.30%
	Use low-VOC solvents or thinners	38	31.10%
	Two-stage solvent use	38	31.10%
	Recycle solvents with on- or off-site distiller	31	25.40%
	First-in, first-out system to prevent spoilage	83	68%
	Computerized paint mixing to reduce mistakes	97	79.50%
	Use non-solvent based putty/fillers	28	23.00%
Dust/PM	Use a disposable paint cup system	67	54.90%
	Use a ventilated sander	28	23.00%
	Reusable aerosol or pump spray containers	52	42.60%
	Use roll-on primer	13	10.70%

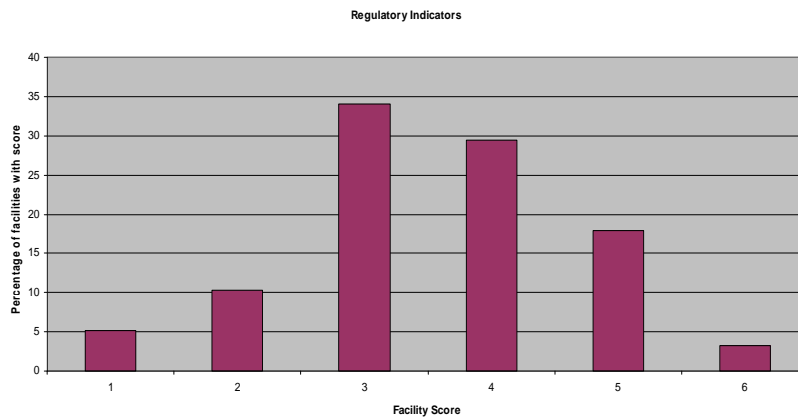
Energy Efficiency

Actions to reduce energy use in the past 3 years		Number	Percent
Booths	Energized only when necessary	112	91.80%
	Booth lights kept clean	107	87.70%
	Filters changed regularly for good airflow	111	91.00%
	Booth fan motors have variable speed drives	28	23.00%
	Booth uses heated air recirculation	68	55.70%
	Booth lighting on timers/motion sensors	26	21.30%
Shop	Timers, motion sensors, smart thermostats	48	39.86%
	Installed efficient fluorescent lights (<T-12)	72	59.00%
	Cleaned light fixture reflectors	76	62.30%
	Reduced lighting intensity where acceptable	41	33.60%
	Taken advantage of day-lighting	66	54.10%
	Completed an energy audit	19	15.60%
	Insulated building, windows, ducts, pipes	48	39.30%
	Regularly check/repair compressed air leaks	108	88.50%
	Use electric tools instead of compressed air	77	63.10%

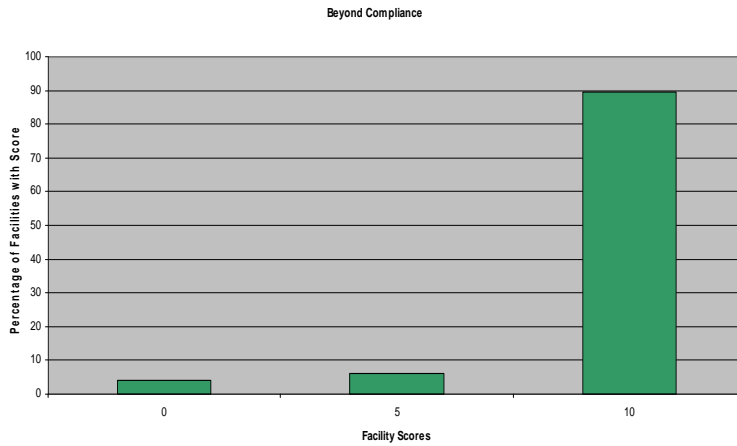
EBPIs – Performance Scores



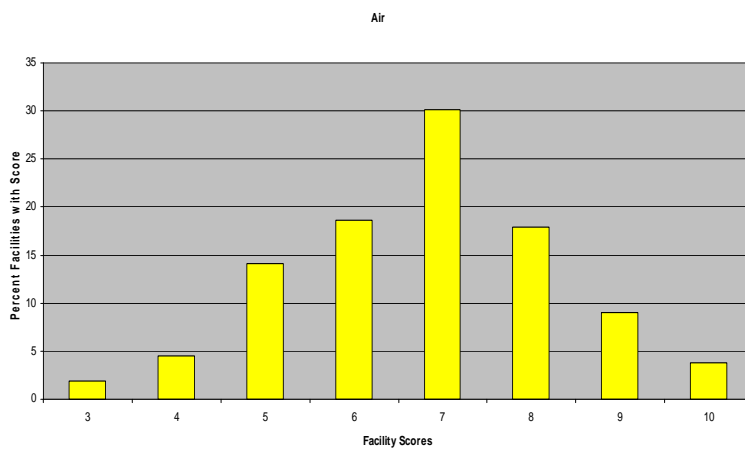
Regulatory Performance Scores



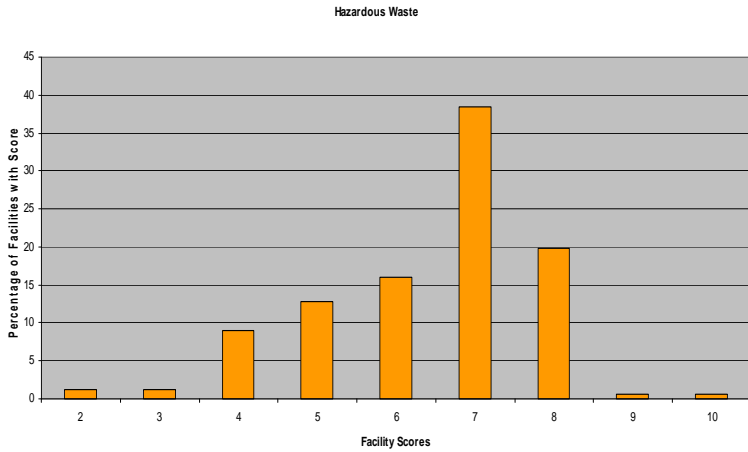
Beyond Compliance/BMP Scores



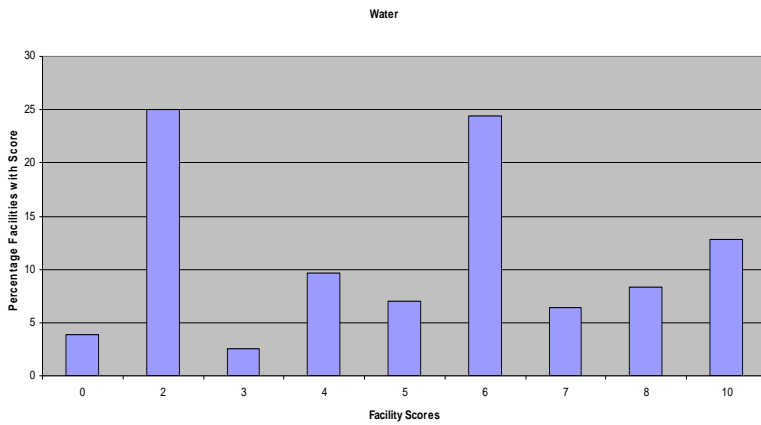
Air Performance



Waste Performance



Water Performance



Self-Certification Checklists

- Universe
 - sent out 12,000 in Nov, 2010
 - ~100 returns
 - mailed extras out over time

- Responses

- Goal = ??
 - 10-50% possible
- As of October 2011
 - <500 online
 - 2000+ hard copy, still coming 1 at a time
 - ~2500 total = 20% return!

ST	Hardcopy	Online
IL	525	75
IN	150	51
MI	350	84
MN	425	96
OH	500	67
WI	350	114

Self-Certification Analysis

- Online survey for data entry created and waiting
 - separate from one used by shops
 - waiting for approval to hire temporary staff to enter data
- Expect 3-4 months to complete
- Will also use temp staff to enter EPA checklists, once done with certifications

EPA Follow-up Inspections

- Started in September; finish early 2012
- Interesting take-away's so far:
 - calling ahead (not SOP for EPA) seems to improve attitude during inspection
 - calling ensures efficient trips; open and affected source
 - shops support regulation and want to comply
 - many shops not interested in exemption even if eligible
 - shops felt validated by actually getting visited by federal inspector
- WI will QA responses and enter data when all complete

Questions?

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