

OSHA and EPA Update

Presented By:

Gary A. Jones

Assistant Vice President

Environmental Health and Safety Affairs

Printing Industries of America



Today's Agenda

- ▶ OSHA
 - ▶ Enforcement
 - ▶ Recent Regulations
 - ▶ Proposed Regulations
- ▶ EPA
 - ▶ Recent Regulations
 - ▶ Proposed Regulations
- ▶ Extended Producer Responsibility



What to expect from OSHA?

- ▶ Continuation of strong enforcement activities
 - ▶ Change in penalty policy - effective October 2010
 - ▶ Continuation of National Emphasis programs
 - ▶ Emergency Exits
- ▶ Continuation of rulemaking
 - ▶ Hazard Communication-Global Harmonization Std
 - ▶ Combustible dust - working on a regulation
 - ▶ Injury prevention rule – held hearings
 - ▶ Injury/Illness reporting
 - ▶ Ergonomics - column for Form 300 (withdrawn)
 - ▶ Hearing Conservation Interpretation (withdrawn)



Amputation National Emphasis Program

- ▶ “Targets workplaces with machinery and equipment that cause (or are capable of causing) amputations and workplaces where amputations have occurred...”
 - ▶ Specifically identifies **commercial printers**
 - ▶ **No** expiration date
- ▶ Compliance with standards
 - ▶ *Lockout/Tagout standard (1910.147)*
 - ▶ *Guarding standards (1910.212, 1910.217, 1910.219)*
- ▶ *Unsafe practices*
 - ▶ Activities during running conditions
 - ▶ Clearing jams without proper safety controls



Combustible Dust NEP

- ▶ “Targets workplaces that create or handle combustible dusts...”
 - ▶ Broad assumption that all paper dusts cause fire and explosion hazards
 - ▶ No expiration date indicated
- ▶ 1/32 of an inch over 5% of horizontal surfaces
- ▶ Compliance With Standards
 - ▶ Housekeeping (1910.22)
 - ▶ Electrical (1910.303-306)
 - ▶ General Duty Clause (Section 5(a)(1))
- ▶ OSHA to propose standard



Emergency Exits

- ▶ New OSHA Enforcement Emphasis
 - ▶ Launched June 17, 2013
 - ▶ Result of a chicken processing plant fire in China - 120 people died due to blocked and locked exits
- ▶ August 2013 - Drugstore chain was issued three repeat citations, totaling \$71,500 in proposed penalties
 - ▶ “An emergency exit door, sprinkler system heads and an electrical panel in the store were all blocked or obstructed by piles of boxes and crates of merchandise”



Emergency Exit Requirements (29 CFR 1910.36)

- ▶ Employers must determine how many exits routes are required in its building
 - ▶ Generally, workplaces must have a minimum of two exits, and possibly more based on number of employees, building size, and workplace arrangement
- ▶ Exit routes must be maintained unobstructed, and exit doors must remain unlocked from the inside
- ▶ Exit routes and doors must be properly labeled and maintained
 - ▶ Exits and routes marked “EXIT” or “TO EXIT”
 - ▶ Doors and passageways not leading to EXIT marked “NOT AN EXIT”



Most Frequent OSHA Violations-FY12

Commercial Printing (except Screen and Books)(323111)

Rank	1910.	Standard	Ave. Fine
1.	.147	Control of hazardous energy (LOTO)	\$1,408
2.	.1200	Hazard Communication	\$317
3.	.178	Powered Industrial Trucks	\$820
4.	.212	General Requirements for Machines	\$2,526
5.	.132	PPE Hazard Assessment	\$835
6.	.219	Mechanical Power-Transmission apparatus	\$948
7.	.215	Abrasive wheel machinery	\$970
8.	.157	Portable Fire Extinguishers	\$612
9.	.038	Emergency action plans	\$263
10.	.303	General requirements	\$829
11.	.305	Wiring methods, components, and equipment for general use	\$850

Hazard Communication Revisions

- ▶ Global Harmonized System of Classification and Labeling of Chemicals (GHS)
 - ▶ Started in 1992 and Finalized in 2002 by UN
- ▶ OSHA started process to adopt GHS in 2006
 - ▶ Final Rule - March 20, 2012
 - ▶ Long phase in period
 - ▶ Final implementation date of June 1, 2015
- ▶ GHS Elements
 - ▶ Uniform hazard classification system
 - ▶ Mandatory Labels
 - ▶ Mandatory Safety Data Sheets

Safety Data Sheet		ACME Co.
1. IDENTIFICATION		Version 1.1 Revised: Oct 01/2012 Print Date 12/12/12
Product Name:	ACMEONE	
Product Number:	123456-78	
Lot:	098765	
Supplier:	ACME Company 321 Main Street Anytown, MA 04011 USA Telephone: +1 800-555-1212 Fax: +1 800-555-1213 E-mail: sales@acme.com ACME Company	
Emergency Phone:		
Preparation Information:		
2. HAZARD IDENTIFICATION		
Emergency Overview:		
GHS Hazard:		
Pictogram(s):		
Signal Word:		
Hazard Statements:		
Precautionary Statements:		

GHS Elements

▶ Classification Criteria

- ▶ Health and Environmental Hazards
- ▶ Physical & Health Hazards
- ▶ Mixtures



▶ Hazard Communication

- ▶ Labels
 - ▶ Based on pictograms, hazard statements and signal words
- ▶ Safety Data Sheets
 - ▶ Required 16 Section Safety Data Sheet
 - ▶ Must be revised by June 1, 2015

▶ Employee Training

- ▶ **Initial training due by December 1, 2013**

Injury and Illness Prevention Program

- ▶ Proposed Injury and Illness Prevention Program Standard (I2P2)
 - ▶ Announced by OSHA in April 2010
 - ▶ OSHA held stakeholder meetings to collect comments and information
- ▶ Would require employers to develop a prevention program for planning, implementing, evaluating, and improving activities and identifying hazards
- ▶ Designed to require industry to identifying and addressing hazards specific to each location
- ▶ May require employers to assess chemical-related risks where no PEL exists



Reporting Injuries and Illnesses

- ▶ Proposal released June 2011
- ▶ Required to report
 - ▶ Within eight hours, all work-related fatalities and in-patient hospitalizations
 - ▶ Within 24 hours, all work-related amputations
- ▶ Existing rule (since 1994) required to report
 - ▶ Within eight hours, all work-related fatalities or the in-patient hospitalization of three or more employees



Reporting Injuries and Illnesses

- ▶ Proposal released November 2013
- ▶ Electronic submission of Injury/Illness information
 - ▶ Employers with 250 or more employees to submit quarterly info from 300 Logs and 301 Incident Report
 - ▶ OSHA to post the data on its website after redacting only injured employees' identifying information.
 - ▶ Employers with 20 or more employees in high hazard industry to annually submit information from 300A Annual Summary form
 - ▶ DART Rate greater than 2.0
- ▶ OSHA also intends to post the data on its website



What to expect from the EPA?



- ▶ Recent rulemaking
 - ▶ Solvent contaminated wipes
 - ▶ Flexible Packaging/Lithographic RACT Rules
 - ▶ Revised Chrome MACT Standard
- ▶ Proposed rulemakings
 - ▶ Ozone standard revision
 - ▶ Greenhouse gas reporting requirements
 - ▶ Additional Climate Change Regulations

Solvent-Contaminated Wipes

- ▶ Rule became effective on January 31, 2014
- ▶ Considered an “Exclusionary” rule
 - ▶ Less stringent than base federal program
 - ▶ **States must adopt rule to make it effective**
- ▶ Reusable Wipes [40 CFR 261.4(a)(26)]
 - ▶ A conditional exclusion from the definition of solid waste for solvent-contaminated wipes sent for cleaning
- ▶ Disposable Wipes [40 CFR 261.4(b)(18)]
 - ▶ A conditional exclusion from the definition of hazardous waste for solvent-contaminated wipes sent for disposal
 - ▶ Wipes cannot contain trichloroethylene



Wiper Management



- ▶ Wipes must be accumulated, stored, and transported in non-leaking containers
- ▶ Containers must capture any free liquids by compression of wipes or percolation due to gravity
- ▶ Containers must be **closed** (not sealed) during accumulation
 - ▶ Lid in complete contact with container except when adding or removing wipes
- ▶ Containers must be **sealed** when full, wipes are no longer being accumulated, and during transportation
 - ▶ Container with locked lid or non-leaking laundry bags

Wiper Management

- ▶ May not contain free liquids at the point of being sent off site for cleaning or disposal
 - ▶ Must pass paint filter test
- ▶ Container Labeling
 - ▶ Must be labeled “Excluded Solvent-Contaminated Wipes”
 - ▶ Must be labeled during accumulation, storage, and transportation
- ▶ Accumulation Time Limit
 - ▶ 180 days from accumulation start date for each container



Recordkeeping



- ▶ The following documentation must be kept
 - ▶ Name and address of destination facility (laundry, combustor, or landfill) receiving the wipes
 - ▶ How the 180-day accumulation time limit is being met
 - ▶ Could include a service contract specifying frequency of pick-up, a log that lists the start date of each container, or container labels with the start date
 - ▶ Description of the process being used to meet the “no free liquids” condition
 - ▶ Description of technologies, methods, sampling, or knowledge that a generator is using to ensure wipes contain no free liquids at the point of transport

Status of State Rules

- ▶ In order for the rule to become effective, each state needs to adopt the rule.
 - ▶ Each state has been contacted and some responded

States adopting the rule by reference and is effective January 31, 2014.

- FL, ID, IN, IA, KS, MT, NJ, NC, PA, VA, and WY

States planning on adopting the rule during 2014 and early 2015

- AZ, AK, CT, IL, ME, MA, MS, MO, NH, ND, OH, OK, SD, TN, TX, VT, WV, and WI

States not adopting the rule at this time

- HI, MN (existing rule is more stringent than EPA's rule)

RICE Rule- Emergency Engines

- ▶ 40 CFR part 63 subpart ZZZZ
- ▶ Regulates emissions from stationary **R**eciprocating **I**nternal **C**ombustion **E**ngines at
- ▶ Emergency Engines (Generators and Fire Pumps)
- ▶ No limits on operation hours for emergency service
- ▶ Maintenance checks & readiness testing limited to 100 hrs/yr
 - ▶ Used for demand response in emergency situations
 - ▶ Used for peak shaving until May 3, 2014



Emergency Engine Requirements

- ▶ Change oil/filter, inspect air cleaner or spark plugs, hoses/belts annually or every 500 hours
- ▶ Operate/maintain engine & control device per manufacturer's instructions or owner-developed maintenance plan
- ▶ May use oil analysis program instead of prescribed oil change frequency
- ▶ Install hour meter and record hours of operation
- ▶ Keep records of maintenance
- ▶ Notifications
 - ▶ Demand response – certain engines & ULS fuel 1/1/2015
 - ▶ New emergency generator >500 HP at major source



Boiler Rule

- ▶ Rules to reduce hazardous air pollutant emissions
- ▶ NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (Subpart DDDDD of part 63)
 - ▶ “Boiler MACT” - Boilers at large (“major”) sources of HAP
- ▶ NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers (Subpart JJJJJ of part 63)
 - ▶ “Boiler Area Source Rule” - Boilers at small (“area”) sources of HAP



Boiler Rule

Exemptions



- ▶ There are several exemptions based on other rule coverage
- ▶ Any gas-fired boiler
 - ▶ Natural gas, propane, etc.
- ▶ Any hot water heater less than 120 gallons in capacity
- ▶ Hot water boilers (e.g., not generating steam) rated at less than 1.6 million Btu per hour
- ▶ Process heaters – press dryers where emissions from press mix with products of fuel combustion

RACT Rules

- ▶ Based on Control Technique Guidelines
 - ▶ Guidance containing “recommendations” by EPA to States on how to control VOC emissions
 - ▶ Sets Reasonably Available Control Technology limits
 - ▶ Printers in moderate or worse ozone nonattainment areas
 - ▶ Can be nonattainment area only or statewide
- ▶ Flexible Packaging
- ▶ Lithographic/Letterpress
- ▶ Industrial Solvent Cleaning



Flexible Package Printing CTG

- ▶ Applicability
 - ▶ 15 lb/day **actual** VOC emissions before controls
- ▶ Control requirements for any press with potential VOC emissions greater than 25 TPY
 - ▶ Material substitution – low VOC products
 - ▶ Add-on controls – oxidizers
 - ▶ Limits based on first installation date of control equipment
 - ▶ Cleaning Solvent Work Practices
 - ▶ Keep cleaning materials and used shop towels in closed containers
 - ▶ Convey cleaning materials from one location to another in closed containers or pipes.



Lithographic/Letterpress CTG

- ▶ Applicability
 - ▶ 15 lb/day **actual** VOC emissions before controls
- ▶ Inks, Varnishes, and Coatings
 - ▶ No reformulation required
- ▶ Heatset web add-on controls (oxidizer)
 - ▶ Any press with **potential** ink oil emissions greater than 25 tons per year
 - ▶ Book and presses 22 inches in width or less are exempt
- ▶ Fountain Solution
 - ▶ VOC content limits based on press type and type of VOC
- ▶ Cleaning Solvent
 - ▶ VOC content limit of less than 70% or composite vapor pressure of less than 10mmHg at 20°C



Industrial Solvent Cleaning CTG

▶ Applicability

- ▶ All printing operations with VOC emissions greater than 15 lb/day, 450 lb/mo, or 3 tons/year
- ▶ Lithographic, Letterpress, Flexible Packaging are exempt due to CTG
- ▶ Digital operations are exempt
 - ▶ Except Utah and Georgia



▶ Limits

- ▶ Low VOC content - 50 grams/liter (0.42 lbs/gal)
- ▶ Low vapor pressure - Less than 8mm Hg at 20°C (68°F)
- ▶ Work Practices – closed containers, proper solvent and shop towel disposal, practices to minimize emissions

States With New/Proposed RACT Rules

State	Litho/Letterpress	Flexible Packaging	ISCR
Arkansas		X	
Arizona	X		
California	X	X	
Connecticut	X	X	X
Delaware	X	X	X
District of Columbia	X		X
Georgia	X	X	X
Illinois	X	X	X
Indiana	X	X	X
Kansas	X		X
Louisiana	X	X	
Maine	X	X	
Maryland	X	X	X
Massachusetts	X	X	
Missouri	X	X	X

States With New/Proposed RACT Rules Cont.

State	Litho/Letterpress	Flexible Packaging	ISCR
New Hampshire	X	X	X
New Jersey	X	X	
New York	X	X	X
North Carolina	X	X	X
Ohio	X	X	X
Pennsylvania	X	X	X
Rhode Island		X	
South Carolina		X	
Tennessee	X	X	
Texas	X	X	X
Utah	X		X
Vermont		X	
Virginia		X	X
Wisconsin	X	X	X

OSHA Revised Chrome Exposure Limit

- ▶ February 2006 final rule
- ▶ OSHA lowered permissible exposure level for hexavalent chromium and Cr(VI) compounds
 - ▶ From 52 to 5 micrograms per cubic meter of air over an 8 hour time weighted average
- ▶ Provisions relating to preferred methods for controlling exposure, respiratory protection, protective work clothing and equipment, hygiene areas and practices, medical surveillance, hazard communication and recordkeeping



EPA Revised Chrome MACT Standard

- ▶ Final rule effective September 19, 2012
- ▶ Cr emissions from hard and decorative chromium electroplating and chromium anodizing tanks
- ▶ Additional housekeeping rules - March 19, 2013
- ▶ Phasing out mist suppressants containing Perflourooctane Sulfonate (PFOs) – Sept 21, 2015
- ▶ Lower emission limits for new and existing plating operations and decorative and anodizing lines – Sept 19, 2014
 - ▶ Lower surface tension limits as alternate compliance option



Chrome MACT Emission Limits

Emission Source	Previous Limit (mg/dscm)	New Limit
Existing Large Hard Chromium Sources	0.015 mg/dscm	0.011 mg/dscm
New Large Hard Chromium Sources	0.015 mg/dscm	0.006 mg/dscm
Existing Small Hard Chromium Sources	0.03 mg/dscm	0.015 mg/dscm
New Small Hard Chromium Sources	0.015 mg/dscm	0.006 mg/dscm
Surface Tension measured w/ stalagmometer	45 dynes/cm	40 dynes/cm
Surface Tension measured w/ tensiometer	33 dynes/cm	35 dynes/cm

EPA Revised Chrome MACT Standard – Effect on Gravure Printers

- ▶ Housekeeping requirements will require more stringent process controls.
- ▶ Changes will have a larger impact on chrome plating facilities using open face chrome plating tanks - facilities implementing newer technology already be meeting emissions limits.



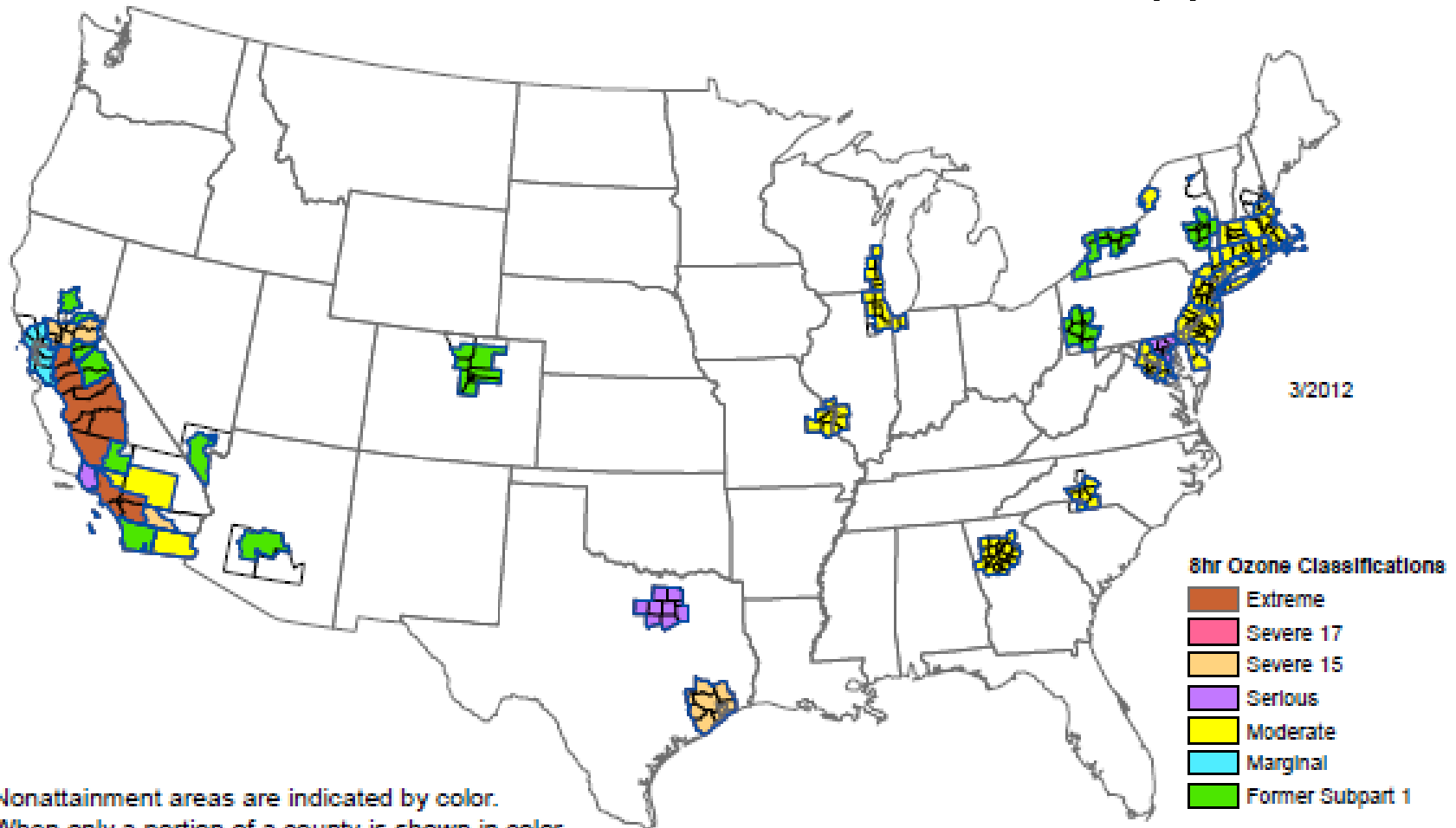
Ozone Standard Revision



- ▶ CAA requires ozone standard review every 5 yrs
- ▶ EPA released revised standard March 27, 2008
 - ▶ Reduced it to 0.075 ppm measured over 8 hours
 - ▶ 322 nonattainment areas vs 85 under 0.08 ppm standard
- ▶ Replaced July 1997 standard
 - ▶ Reduced from 0.12 ppm (1 hour) to 0.08 ppm (8 hour)
- ▶ Environmental and other groups filed suit challenging new standard
 - ▶ Believe evidence supports lower standard
 - ▶ Obama's EPA agreed and has proposed lowering it to between 0.06 and 0.07 ppm.

Ozone Nonattainment Areas

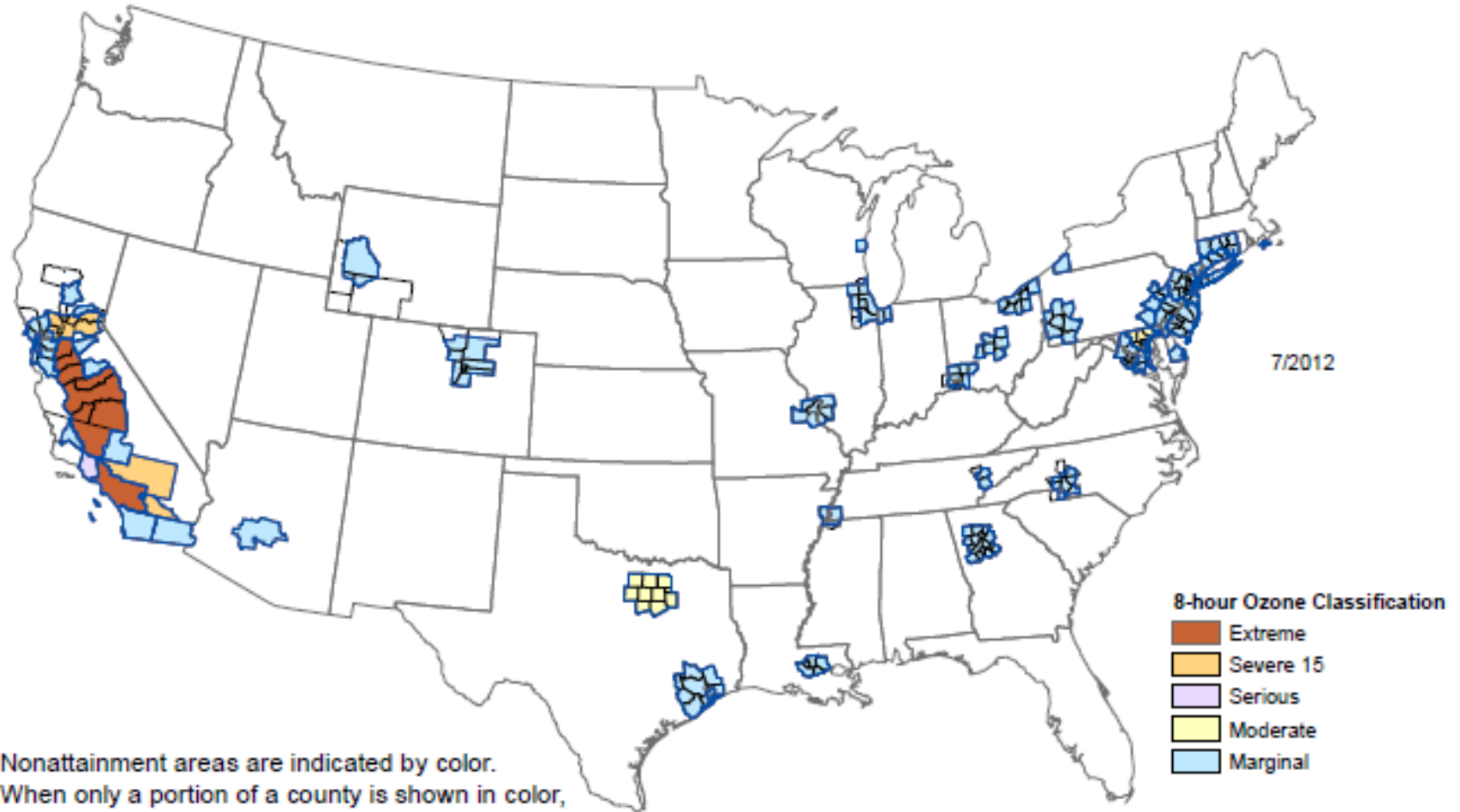
► 8-Hour Ozone 1997 Standard of 0.080 ppm



Nonattainment areas are indicated by color.
When only a portion of a county is shown in color,
it indicates that only that part of the county is within
a nonattainment area boundary.

Ozone Nonattainment Areas

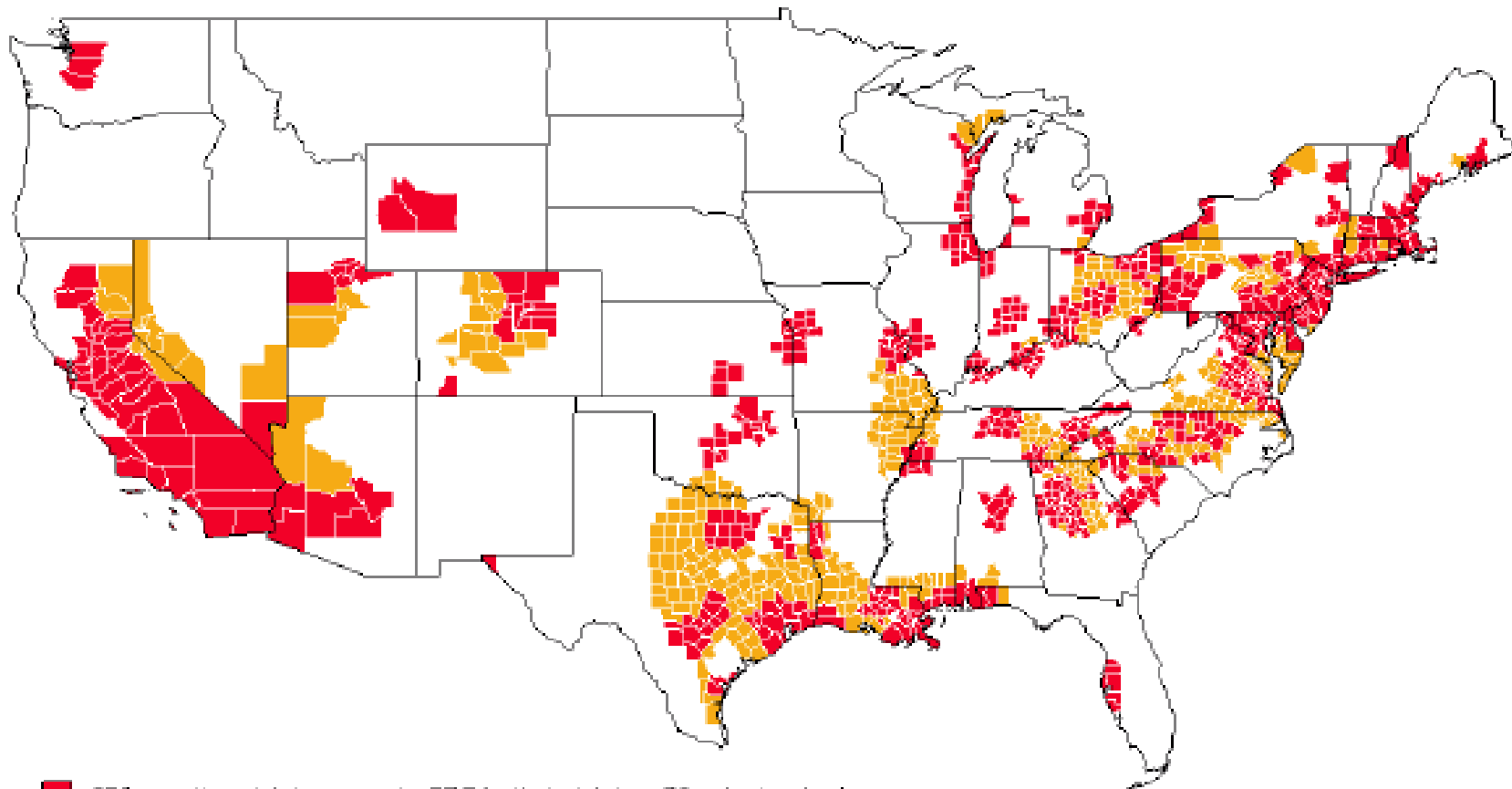
▶ 8-Hour Ozone 2008 Standard of 0.075 ppm



Nonattainment areas are indicated by color. When only a portion of a county is shown in color, it indicates that only that part of the county is within a nonattainment area boundary.

Ozone Nonattainment Areas

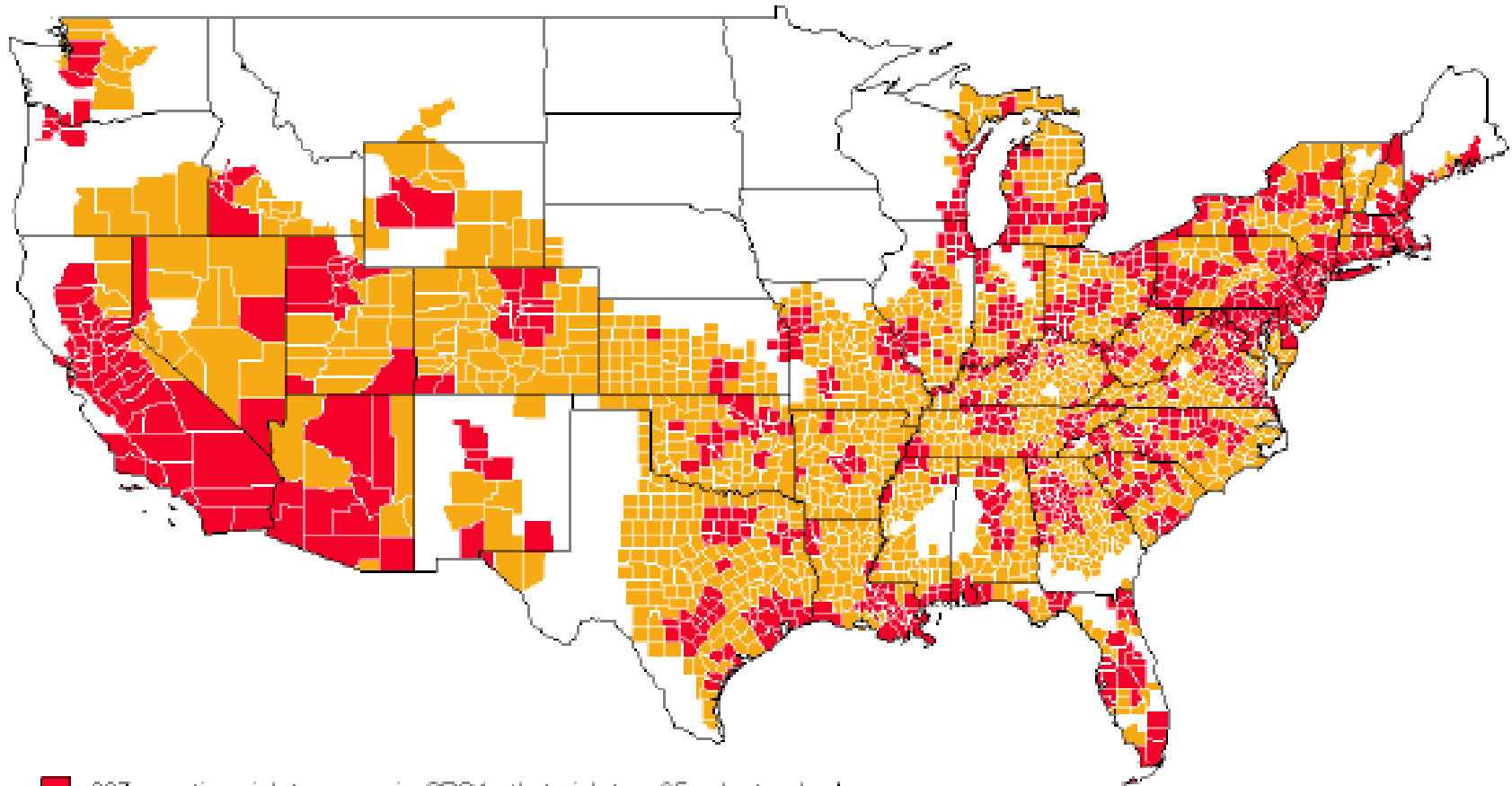
- ▶ Standard of 0.070 ppm based on 2008-2010



- 652 counties violate, or are in CBSAs that violate a 70 ppb standard
- 401 additional counties are anticipated to violate a 70 ppb standard based on spatial interpolation

Ozone Nonattainment Areas

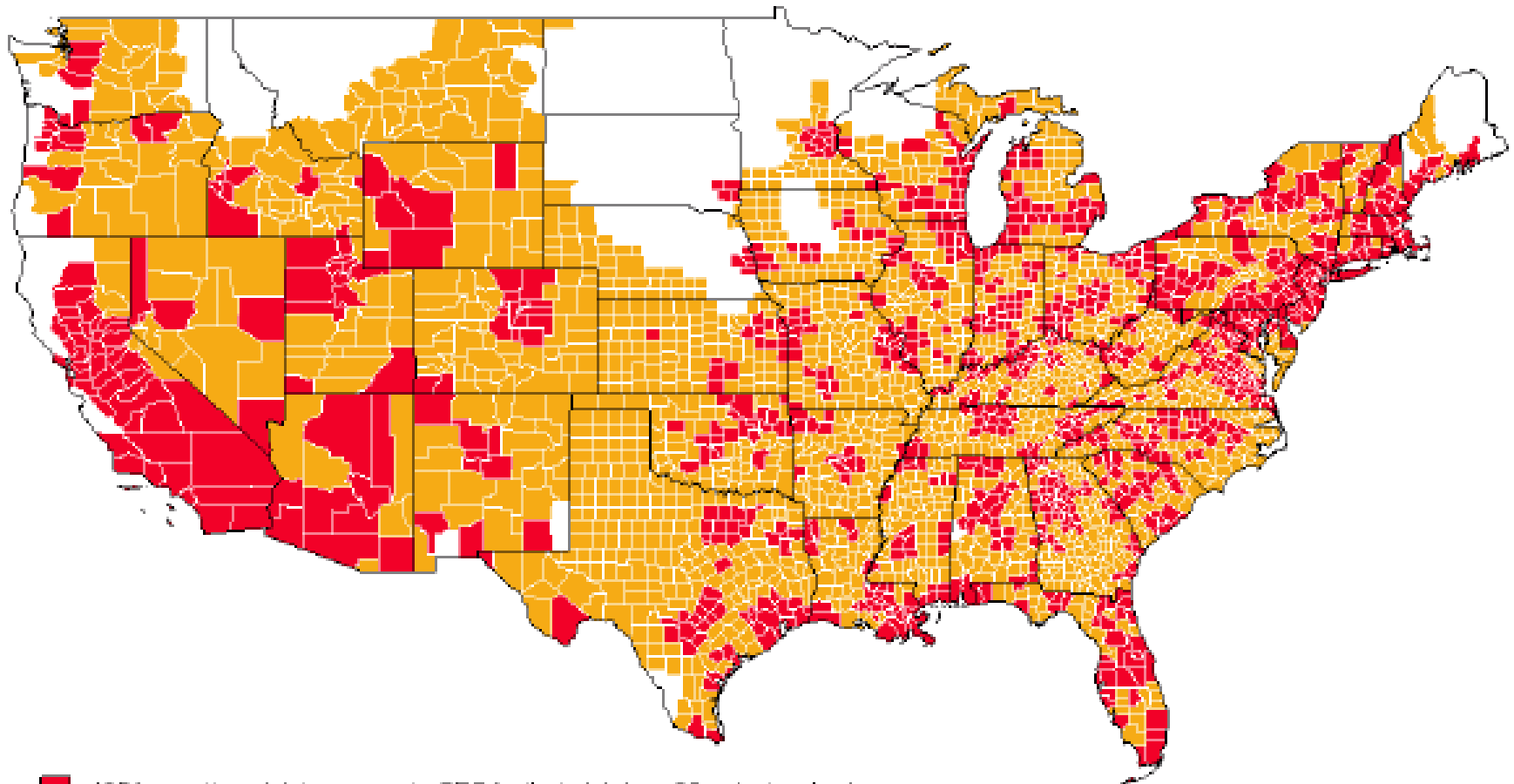
- ▶ Standard of 0.065 ppm based on 2008-2010



- 897 counties violate, or are in CBSAs that violate a 65 ppb standard
- 1320 additional counties are anticipated to violate a 65 ppb standard based on spatial interpolation

Ozone Nonattainment Areas

- ▶ Standard of 0.06 ppm based on 2008-2010 Data



- 1051 counties violate, or are in CBSAs that violate a 60 ppb standard
- 1744 additional counties are anticipated to violate a 60 ppb standard based on spatial interpolation

Climate Change Regulation

- ▶ Expect additional climate change regulations to be adopted during this presidential term.
- ▶ Current Regulations
 - ▶ Mandatory Greenhouse Gas Reporting
 - ▶ New Source Performance Standards (Tailoring Rule)
- ▶ Proposed Legislation
 - ▶ Climate Safety Sanders Legislation (2013)
- ▶ Proposed Regulation
 - ▶ Carbon Pollution Standard for New Power Plants



Mandatory EPA GHG Reporting



- ▶ Federal reporting - Due March 31 annually
 - ▶ Annual emissions of 25,000 or more metric tons carbon dioxide equivalent (CO₂e)
 - ▶ New GWPs and emission factors for certain GHGs
- ▶ State thresholds vary and may be lower than EPA's
 - ▶ Massachusetts GHG reporting threshold is 5,000 short tons or more of CO₂e, due April 15 annually
 - ▶ Annual emission statements and certifications require detailed information on GHG emissions
 - ▶ Title V and FESOP permit application requires detailed information on GHG emission based on direct emissions

Tailoring Rule Step 3

- ▶ New and existing sources with GHG emissions above 100,000 tons per year of CO₂e must obtain Title V permits
- ▶ New sources that emit 100,000 or more tons per year of CO₂e must obtain a PSD permit
- ▶ Certain existing sources making changes that would increase GHG emissions by 75,000 tons must obtain a PSD permit
 - ▶ Existing sources that emit at least 100,000 tons CO₂e
 - ▶ Existing sources that must obtain a PSD permit for other regulated pollutants



Extended Producer Responsibility (EPR)

- ▶ Policy intended to shift responsibility for the end-of-life of products and/or packaging from the municipality to the manufacturer/brand owner
 - ▶ Specific Product Legislation
 - ▶ Framework Legislation
 - ▶ Governor's Directive
 - ▶ Solid Waste Management Plan
- ▶ 11 states with legislative and/or regulatory action
 - ▶ Only RI and NC proposed rules (struck down)



Questions and Answers



Thank you for listening!

Gary A. Jones

Assistant Vice President,
Environmental, Health, &
Safety Affairs
(412) 259-1794

gjones@printing.org
www.printing.org

