



## Colorado's Self-Certification Program For Small Quantity Generators (SQGs) of Hazardous Waste

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## OUR PROBLEM:

### Low-population, but high-priority, sectors (LQGs, TSDs)

- measurably improved compliance rates through a traditional inspection program
- high inspection frequency (~1.5 FTE = 100%/3 years/LQGs; 75%/yr/TSDs)

### High-population SQG universe, also high priority

- NO improvement in compliance rates
  - Despite more (~2 FTE) resource investment of staff
  - But low inspection frequency (~2 FTE = 100%/8 years)
  - Additional resources? Forget it.

### Needed another method

- Increase the inspection rate
- Increase the regulatory sophistication
- Compensate for high staff turnover at these small facilities
- Without increasing our staff

# WHY ARE SQGs HIGH PRIORITY?

## LQGs

- 115 Total
- Subtracting off the top 5, bottom 110 = 10,000 tons/year of hw
- Generally larger companies; value compliance
- Generally stable, well-trained environmental staff

## SQGs

- ~600 Total
- 8,000 tons/year hw
- Smaller companies; compliance is lower priority
- High staff turnover
- 6x more locations; significant amount of waste; more variety of wastes; limited training for staff; unsophisticated facilities = **HIGH RISK!!!**



## LQGs:

- ~115 facilities
- ~40 inspection/yr
- ~35% coverage/yr
- ~100%/3 yrs



## SQGs:

- ~600 facilities
- ~80 inspection/yr
- ~13% coverage/yr
- ~100%/8 yrs

## OUR OPTIONS:

Mass-mailings



We tried this and measured this;  
it failed miserably

Trainings



We have been doing this; popular w/  
business, but no measured compliance  
rate improvement

Self-Certification



Worked wonderfully!!

## SELF-CERTIFICATION

Compliance checklist sent to every sector member each year

- w/ instruction booklet/guidance document

Each facility required to complete checklist and submit it back to our department

- [2007 – regulatory requirement added](#)
- Electronically or hard-copy

HW inspectors choose statistically significant # of random facilities to inspect using the same checklist

- 90% confidence sample set represents total population
- With no more than a 10% margin of error

Results compared and evaluated

# CHECKLIST

Yes = Compliance

No = Non-compliance

N/A = Not applicable

SMALL QUANTITY GENERATOR (SQG)  
200 HAZARDOUS WASTE COMPLIANCE SELF-CERTIFICATION CHECKLIST

If you answered "NO" to any of the questions listed in Section I, please indicate the reason (per paragraph 2.1.1) and explain how and by what date you plan to correct the compliance.

B. Hazardous Waste Container Management		YES	NO	N/A
1.	Are all containers used to store hazardous waste labeled with the words "Hazardous Waste"?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	Are all hazardous waste containers properly sealed or completely encased, marked with the date when the filling of hazardous waste is added to the container?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	Are all containers used to store hazardous waste in good condition (not rusted, dented, leaking or leaking)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	Are all containers used to store hazardous waste properly closed except when adding or removing waste?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	Do you inspect waste, and identify any leaks, and, if necessary, take the lead or close hazardous waste and leak for treatment or good condition, labeling, treatment, transportation of waste, hazardous waste label, accumulation and date, and ensure that the containers are closed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	Are appropriate forms completed (MSDS/MSDs)? For example, are MSDS and forms stored separately?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	Are containers labeled in an appropriate language, receipt and disposal facility (TSD) within 120 days of TSD date of the TSD to have been TSD date received?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	If you answered "NO" to any of the questions listed in Section B, please indicate the reason (per paragraph 2.1.1) and explain how and by what date you plan to correct the compliance.			

C. Off Site Disposal of Hazardous Waste		YES	NO	N/A
1.	Are all site shipment of hazardous waste that are not covered by a discharge agreement accompanied by a hazardous waste manifest?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	Are all hazardous waste manifests completed accurately?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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# HISTORY OF SELF-CERTIFICATION



# DATA PAIRS

COMPANY NAME	QUESTION NUMBER									
	1	2	3	4	5	6	7	8	9	10
Anheuser-Busch Inc.	Yes	Yes	Yes	Yes	Yes					
Anheuser-Busch Inc.	Yes	Yes	Yes	Yes	Yes					
ARCHITECTURAL DOORS & WINDOWS LLC	Yes	Yes	Yes	Yes	Yes	N/A	N/A		Yes	Yes
Arthur's Auto Collision & Paint, Inc.	Yes	Yes	Yes	Yes	N/A				Yes	Yes
ARVADA SQUARE AUTO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ashland Distribution	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aspen Technologies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aurora Public Schools	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto Truck Service	Yes	Yes	Yes	Yes	N/A				N/A	N/A
Autocrafters of Colorado	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No
AVX Corp.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bach Composite Colorado Inc.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BAE Systems	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Barber-Nichols Inc	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Facility Response

Inspector Response

# EVALUATING COMPLIANCE RATES

Even though we make all SQGs self-certify – we do not use their data to calculate compliance rates

We use only the inspector data!

- Can facilities be trusted to honestly assess and report their compliance?
- Inspectors are better at finding non-compliance
- Self-certification becomes only a training vehicle

Compliance rate across SQG Sector

Compliance rates by checklist question (reg. reqmt.)

# EVALUATING COMPLIANCE RATES

## Compliance rate across SQG Sector

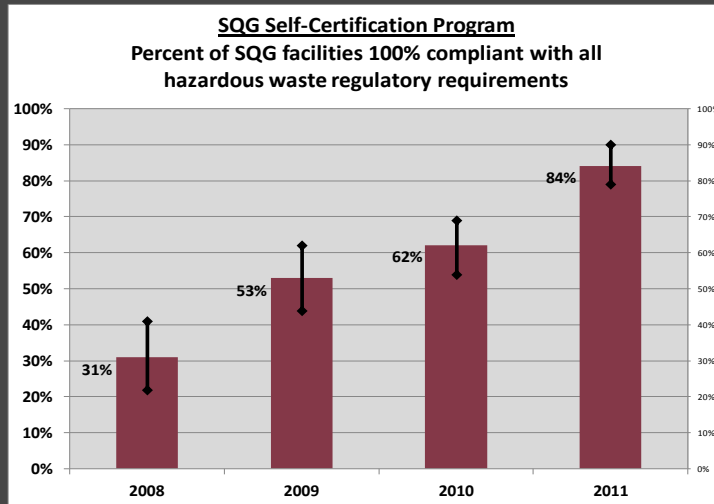
Compliance rate =  $\frac{\text{\# of facilities with 100\% "Yes" and "NA" answers}}{\text{total \# of inspected facilities}}$

## Compliance rates by Checklist question (reg reqmt)

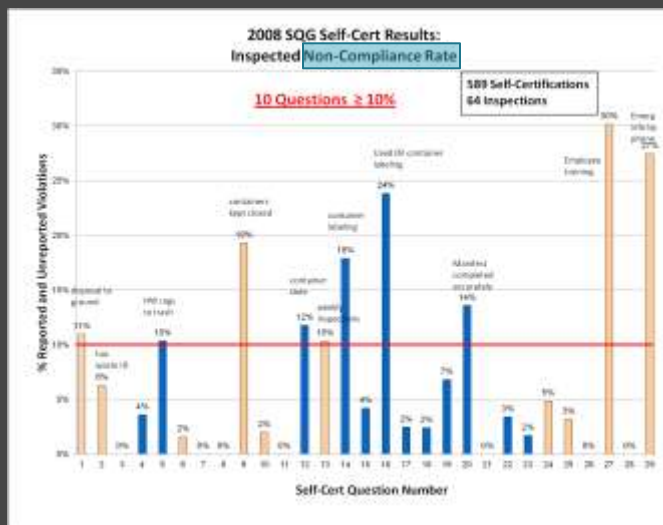
Non-compliance rate =  $\frac{\text{\# of "No" answers to a given question}}{\text{total \# of "Yes" and "No" answers ("NA" answers not included)}}$

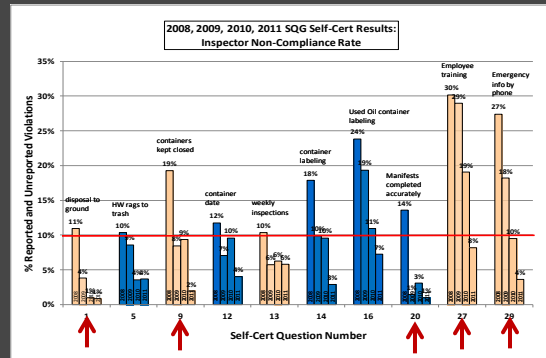


## COMPLIANCE RATE ACROSS SQG SECTOR



## SQG COMPLIANCE RATE BY REGULATORY REQUIREMENT

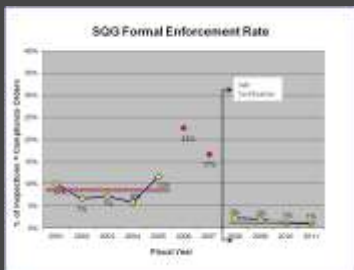




## EFFECTS ON SQG ENFORCEMENT



Temporary Increase in Warning Letters



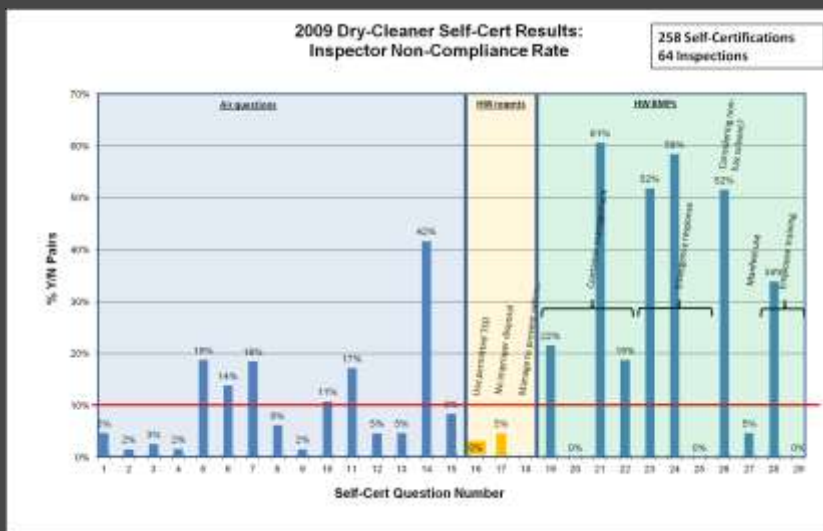
Significant Decrease in Compliance Orders



## DRY CLEANERS

- Includes ALL dry cleaners – SQGs and CESQGs
- All SQG dry cleaners have been subtracted from the SQG self-certification pool

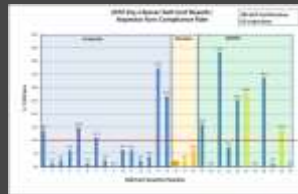
## DRY CLEANER COMPLIANCE RATE BY REGULATORY REQUIREMENT



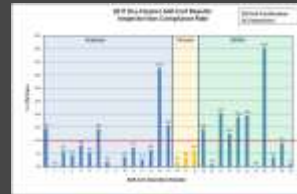
## COMPLIANCE RATE BY REQUIREMENT (DRY CLEANERS)



2009



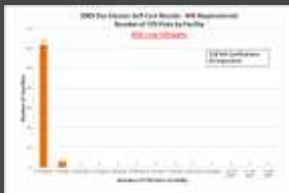
2010



2011

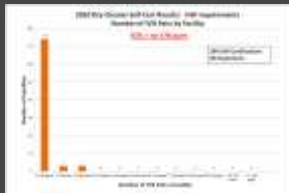
## COMPLIANCE RATE BY GROUP (DRY CLEANERS: HW REQUIREMENTS)

2009



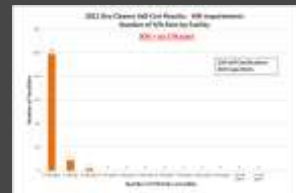
DC compliance rate = 95%

2010



DC compliance rate = 93%

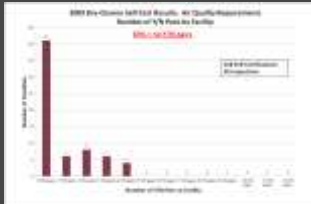
2011



DC compliance rate = 90%

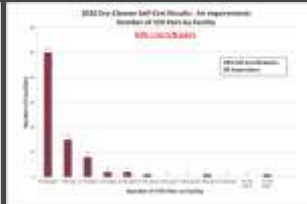
## COMPLIANCE RATE BY GROUP (DRY CLEANERS: AIR REQUIREMENTS)

2009



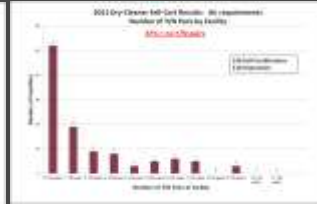
DC compliance rate = 63%

2010



DC compliance rate = 63%

2011



DC compliance rate = 47%

## KEYS TO SUCCESS

A regulation making this a requirement

Careful project set-up

- Prior sector outreach
- Question wording/instruction wording
- Inspector Training

Constant project monitoring

- Getting high % checklist return rate (Using enforcement if needed)
- Adequate number of follow-up inspections
- Evaluating results

## WHERE ELSE COULD THIS WORK?

Large universes with low inspection rates

Where you care about improving compliance

Where compliance “looks the same” everywhere

i.e., few site-specific requirements (like permits)

Single or Multi-media regulatory obligations

- School chemicals/school safety/school radon
- Hospitals/Nursing homes
- Etc.

## SQG SELF-CERTIFICATION REPORT

<http://www.colorado.gov/cs/Satellite/CDPHE-HM/CBON/1251618176715>

# QUESTIONS?

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