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

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Joe Schieffelin, Manager
Solid and Hazardous Waste Program
Colorado Department of Public Health and Environment

Kathryn Stewart, Unit Leader
Compliance Assurance Unit
Colorado Department of Public Health and the Environment
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!!!**
Our Options:

- **Mass-mailings**
  - We tried this, measured this, and 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

<table>
<thead>
<tr>
<th>D. Hazardous Waste Container Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are all containers used to store hazardous waste labeled with the words “Hazardous Waste”?</td>
</tr>
<tr>
<td>2. Are all hazardous waste containers, except satellite accumulation containers, marked with the date when the first drop of hazardous waste is added to the container?</td>
</tr>
<tr>
<td>3. Are all containers used to store hazardous waste in good condition (not rusted, dented, bulging or leaking)?</td>
</tr>
<tr>
<td>4. Are all containers used to store hazardous waste kept closed except when adding or removing waste?</td>
</tr>
<tr>
<td>5. Do you inspect weekly, and correct any issues noted, all containers that are used to store hazardous waste and look for: containers in poor condition, leaking containers, compatibility of wastes, hazardous waste labels, accumulation start dates, and ensure that the containers are closed?</td>
</tr>
<tr>
<td>6. Are incompatible wastes segregated from each other? For example, are acids and bases stored separately?</td>
</tr>
<tr>
<td>7. Are containers shipped to an appropriate treatment, storage, and disposal facility (TSD) within 180 days (or 270 days if the TSD is more than 200 miles away)?</td>
</tr>
<tr>
<td>8. If you answered “NO” to any of the questions listed in Section D, please indicate the item (for example D.2.) and explain how and by what date you plan to return to compliance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Off-Site Shipment of Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are off-site shipments of hazardous wastes that are not covered by a reclamation agreement accompanied by a hazardous waste manifest?</td>
</tr>
<tr>
<td>2. Are all hazardous waste manifests completed accurately?</td>
</tr>
</tbody>
</table>
History of Self-Certification
<table>
<thead>
<tr>
<th>COMPANY NAME</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anheuser-Busch Inc,</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Anheuser-Busch Inc,</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ARCHITECTURAL DOORS &amp; WINDOWS LLC</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Arthur's Auto Collision &amp; Paint, Inc.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>Yes</td>
</tr>
<tr>
<td>ARVADA SQUARE AUTO</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ashland Distribution</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aspen Technologies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aurora Public Schools</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Auto Truck Service</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Autocrafters of Colorado</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>AVX Corp.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bach Composite Colorado Inc.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>BAE Systems</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Barber-Nichols Inc</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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 = \[
  \frac{\text{# of “No” answers to a given question}}{\text{total # of “Yes” and “No” answers}}
  \]
    \[
  \text{ (“NA” answers not included)}
  \]
Compliance Rate Across SQG Sector

SQG Self-Certification Program
Percent of SQG facilities 100% compliant with all hazardous waste regulatory requirements
SQG Compliance Rate by Regulatory Requirement
2008 SQG Self-Cert Results:
Inspector Non-Compliance Rate
2008: 10 Questions ≥ 10% non-compliant

- Self-Cert Question 1: Disposal to ground - 11%
- Self-Cert Question 2: HW rags to trash - 10%
- Self-Cert Question 3: Containers kept closed - 19%
- Self-Cert Question 4: Container date - 12%
- Self-Cert Question 5: Weekly inspections - 10%
- Self-Cert Question 6: Container labeling - 18%
- Self-Cert Question 7: Used Oil container labeling - 24%
- Self-Cert Question 8: Employee training - 30%
- Self-Cert Question 9: Emerg info by phone - 27%

Inspector Non-Compliance Rate

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Effects on SQG Enforcement

Significant Decrease in Compliance Orders
- Decrease in workload
- Cost savings
Keys to Success

1. A regulation making this a requirement
2. Careful project set-up
   a. Prior sector outreach
   b. Question wording/instruction wording
   c. Inspector Training
3. Constant project monitoring
   a. Getting high % checklist return rate
      (Using enforcement if needed)
   b. Adequate number of follow-up inspections
   c. 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

Questions?

Kathryn Stewart  
Compliance Assurance Unit Supervisor  
Hazardous Materials Waste Management Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530  
303-692-3307 | kathryn.stewart@state.co.us

Joe Schieffelin  
Solid and Hazardous Waste Program Manager  
Hazardous Materials Waste Management Division  
Colorado Department of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80246-1530  
303-692-3356 | joe.schieffelin@state.co.us