

Part IV: VOC and Green Chemistry



VOC- Where Our Products Are Regulated

- California
 - Both statewide (CARB) and also at local level (AQMDs)
 - OTC
 - CT, DE, DC, ME, MD, MA, NH, NJ, NY, PA, RI, VT, and Northern VA
 - Canada (Environment Canada- US EPA Equal)
 - 2010 and 2011
 - LADCO- OH, MI, IN, IL, WI
 - Maricopa County, Arizona
- Note: Due to product stewardship, we typically like to treat whole states and/or areas as one entity and apply the strictest rule across the whole area.

California

- BAAQMD and SCAQMD are always the leaders in reduction rules.

- Among poorest air quality in US

- About 10% of the state by area, 75% of population.

- Also guide for the “LEED Rules”.



What Product Groups are Regulated?

- Sealants:

- Any sealant under 16oz. considered a consumer product... falls under Consumer Product Rule
- Larger packages under Architectural Sealants Rules

- AIM's

- Vulkem Coating Systems fall under this Category

- Waterproofing Sealers and Membranes:

- Our Membranes (TREMproof, Paraseal)
- ExoAir Membranes (Impacted in California and Maricopa County only).

- Primers

- Multi-use primers fall under the category with the strictest rule.
- Single use primers regulated by that use's rule

What the Rules Are Today

•Sealants:

- Consumer product... 4% by weight
 - OTC, LADCO, CARB
- Architectural... 250 g/L
 - OTC, LADCO, CARB

•AIM's and Primers

- OTC, LADCO, Maricopa... 340 g/L
- BAAQMD... 250 g/L
- SCAQMD... 100 g/L
- Note: Size Exemption below 1 gallon size

•Waterproofing Sealers/Membranes and Primers:

- OTC, LADCO, CARB... 250 g/L
- SCAQMD... 100 g/L



What the Rules Are Today

- **US Federal Government**

- Executive Orders 13101, 13148 and 13123 require all Federal agencies to comply with strict procurement and construction practice guidelines that insure building longevity and maximize environmental protection.
 - These became the “Federal LEED Mandate” in January 2006
 - As such, all US government buildings (total is 500,000+) must be built/renovated to LEED standards.

- **LEED**

- Many states (over 1/2) now require or have pending LEED type building regulations, which vicariously force VOC reductions in building products.
- Note- VOC only matters inside of the exterior/weathering surface of the building for LEED...

Affected Products

- Consumer Products over 4%:

- Mono 555
- Tremco Butyl Sealant
- Tremco 830 (except clear)
- TRS 600
- Tremco Gutterseal
- Tremco Curtainwall Sealant
- The similar IPD/RW/OEM products also are impacted

- Architectural Sealants over 250 g/L:

- None

VOC- Affected Products

- Coatings over 100 g/L (none over 340):
 - TremGard 640/642
 - Vulkem 351
 - Vulkem 345/346
 - Note: New 350's, 351 will be < 100 g/L
- Waterproofing over 100 g/L:
 - 201/60 and 250GC non-LV versions
 - Note: 250GC-T and EA Termination Mastic are sealant mastics and as such are controlled by the Architectural Sealant Rule
- Primers:
 - ParaPrimer, Vulkem 171 and 191 can only be sold in Quarts in these areas.
 - Tremprime QD-Low Odor and EA 10 (CA and AZ Only) not allowed.

VOC- What New Rules Are Coming

•Canada...

- Consumer Product Sealants 4% by weight in 2010
- Architectural Sealants 250 g/L in 2010
- AIM 250 g/L in 2010
- Waterproofing 250 g/L in 2010

•California...

- Chemically Curing Consumer Sealants 3% by weight in 2012
 - This will impact V.921 and its equivalents
- Non-Chemically Curing Consumer Sealants 1.5% by weight in 2010
- Consumer Sealants will need labeled Chemically Curing or Non-Chemically Curing (rule anticipated for Architectural Size soon as well)

VOC- What New Rules Are Coming

- OTC and LADCO

- In the next 12-24 months it is expected they will lower their levels to be more like California.

- US-wide

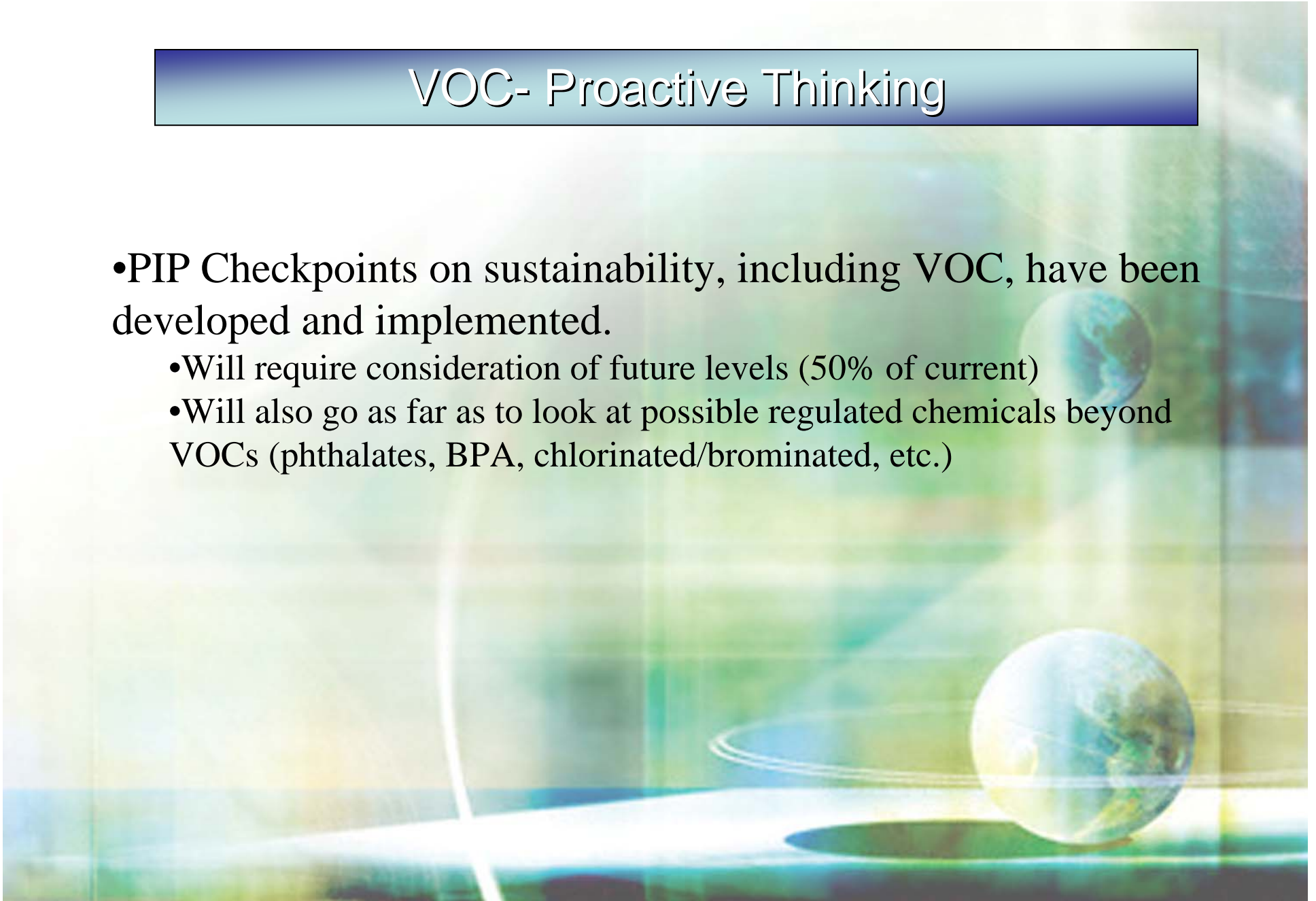
- In 2010 EPA is expected to update the Federal Rule and essentially adopt the OTC/LADCO rule nationwide for sometime in 2010 or 2011.

- This will be good as it will help unify the policy across the whole country... more or less.

- But, individual areas (i.e. California) will still be allowed to set their own stricter rules to help meet their air quality plans.

VOC- Proactive Thinking

- PIP Checkpoints on sustainability, including VOC, have been developed and implemented.
 - Will require consideration of future levels (50% of current)
 - Will also go as far as to look at possible regulated chemicals beyond VOCs (phthalates, BPA, chlorinated/brominated, etc.)



Future Issues

- California and Canada are expanding the roles of their air governing bodies to include other HS&E issues.
 - REACH
 - California and Canada are both looking at having REACH type rules in place to monitor and regulate chemicals.
 - Chlorinated and brominated Compounds
 - Canada especially looking at eventual removal of these
 - Chlorinated paraffins will likely be banned across North America by 2012 or 2013
 - Cyclic siloxanes
 - BPA
 - Especially in consumer goods
 - Phthalates
 - Used as plasticizers
 - We are exploring non-phthalate materials/oils (soy, castor, etc.)
 - Already banned/being banned in EU.

VOC- Closing

- Regulations are always changing both locally and regionally
- Customer Service has an updated listing of what materials and what package restrictions exist throughout North America.

•There are red flags in place internally to restrict sale and shipment.