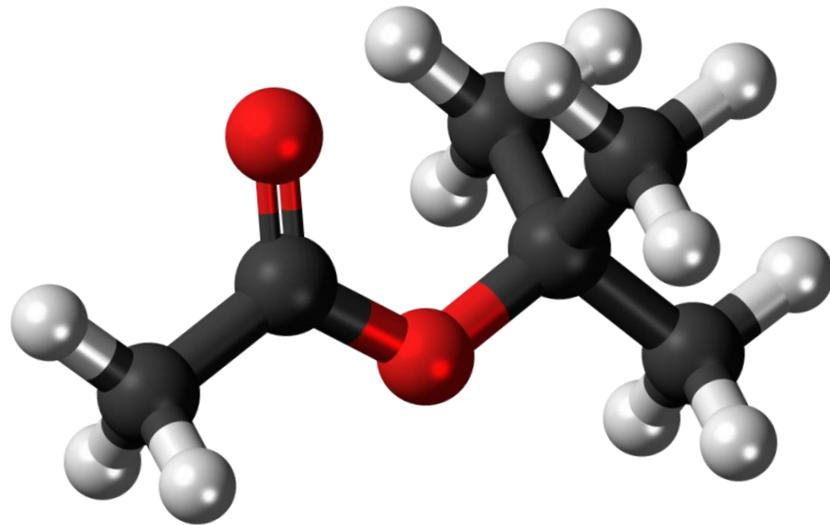


tertiary-Butyl Acetate (tBAc) Assessment



November 1, 2016

Diana Thai
Air Quality Specialist
VOC Rules

BACKGROUND

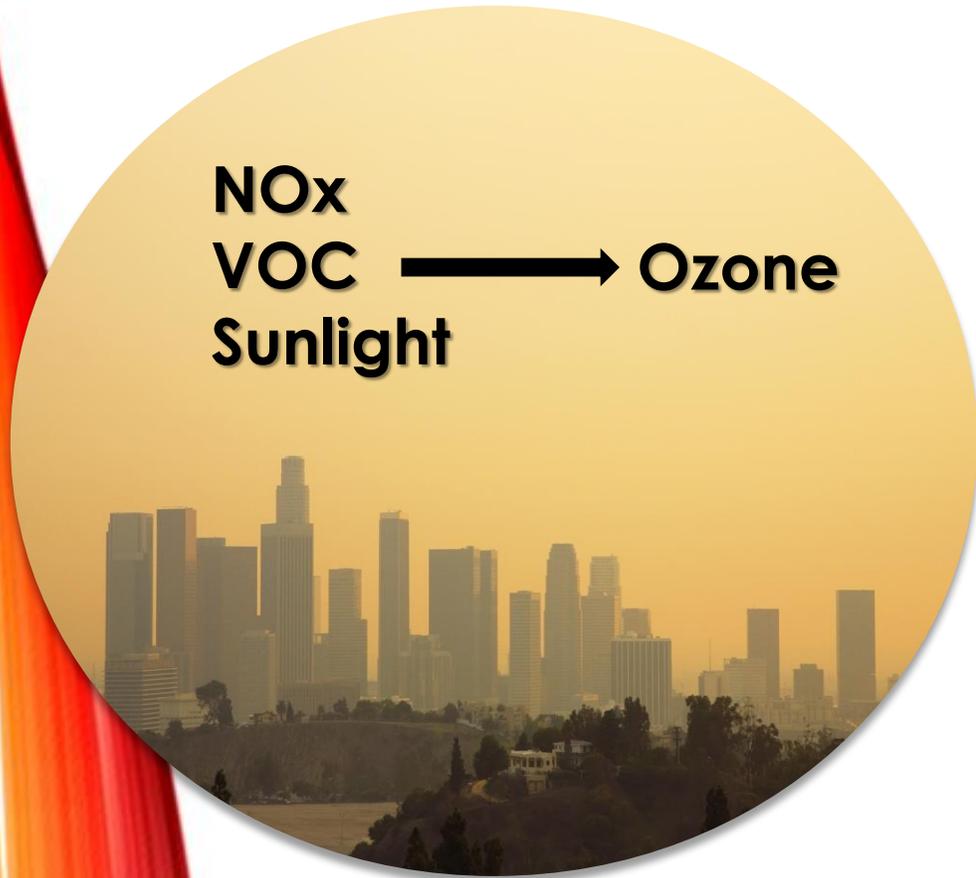
Why was this assessment conducted?

Re-examine tBAc health risk in current rules

- New Draft OEHHA Cancer Potency Factor (CPF)
- PAR 1113 Resolution
- Rule 1151 Technical Assessment



HISTORY OF VOC EXEMPTION FOR tBAC



U.S. Environmental Protection Agency (U.S. EPA)

- 2004: Exempted as a VOC
- Early 2016: Recordkeeping requirements removed
- Mid-2016: Draft Assessment using Integrated Risk Information System (IRIS) released for tertiary-butanol (tBA)

California Air Resources Board (CARB)

- 2005: Automotive Coatings Suggested Control Measure (SCM)
- 2006: Environmental Impact Assessment (EIA)

SCAQMD Rule 1151 - Motor Vehicle and Mobile Non-Assembly Line Coating Operations

- 2005: Non-topcoats (Coatings other than Clear and Color)

SCAQMD Rule 1113 – Architectural Coatings

- 2006: Industrial Maintenance (IM) Coatings

ASSESSING RISK

- **OEHHA**

- Proposition 65
- Guidelines for HRAs, including CPFs and RELs
- Scientific Review Panel (SRP)
- Anticipated final: Mid-2017

- **CEQA Analysis for Rule Amendments**

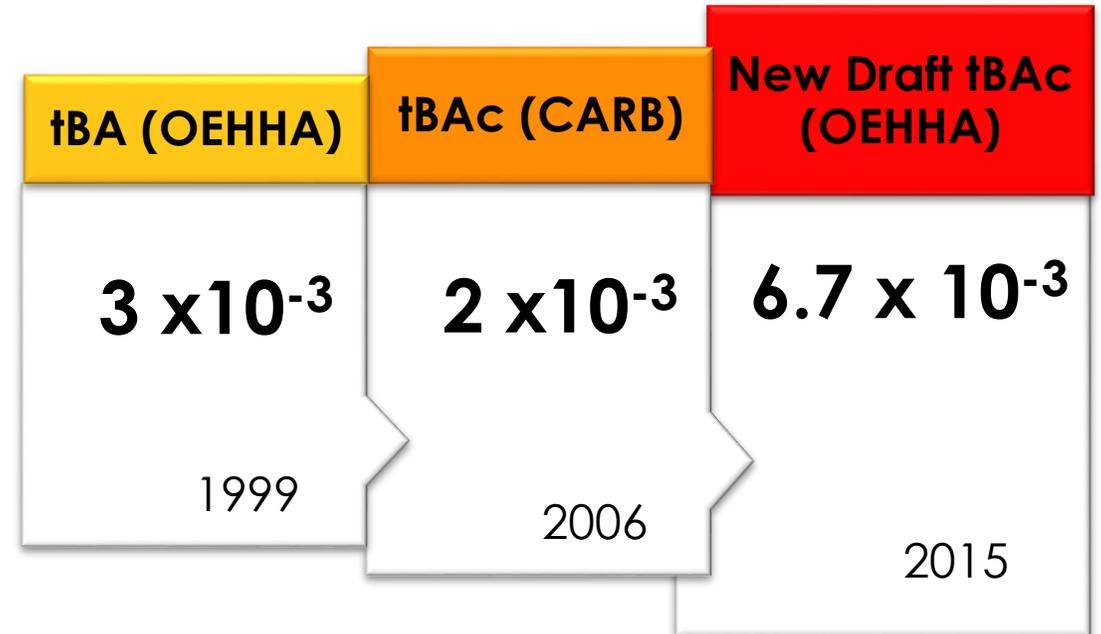
- **HRAs (Off-site)**

- MICR for residential and workers (Long-term)
- HI for Non-Cancer Risk (Acute and Chronic)

- **SCAQMD's CEQA Significance Thresholds:**

- MICR ≥ 10 in a million
- HI (acute and chronic) ≥ 1.0

Cancer Potency Factors (mg/kg-day)⁻¹



ACRONYMS

- CEQA** California Environmental Quality Act
- CPF** Cancer Potency Factor
- REL** Reference Exposure Level
- HI** Hazard Index
- HRA** Health Risk Assessment
- MICR** Maximum Incremental Cancer Risk
- OEHHA** Office of Environmental Health Hazard Assessments

UPDATED ANALYSES - Rule 1151

Risk Value	Cancer Risk (in a million)	Non-cancer Acute HI
Original Analysis	5	0.02
OEHHA's New Draft CPF	60	0.02
OEHHA's New Draft CPF and Updated Usage Estimates	3	0.001
SCAQMD's CEQA Significance Threshold	10	1.0

UPDATED ANALYSES - Rule 1113

Risk Value	Non-Cancer Acute HI	Cancer Risk (in a million)		
		Sewage Treatment Scenario	Refinery Scenario	Water/Power Scenario
Original Analysis	0.4	2	1	0.04
OEHHA's New Draft CPF	0.2	4.7	1.9	0.2
OEHHA's New Draft CPF and Updated Usage Estimates	0.4	7.4	3	0.3
SCAQMD's CEQA Significance Threshold	1.0	10	10	10

RECOMMENDATIONS: RULES 1113 AND 1151

Wait for final CPF



No Changes Recommended at this time

Off-site risks - LESS than CEQA thresholds
On-site analyses - NOT conducted



If CPF increases based on the final
SRP findings, re-evaluate the
off-site risks



AMENDMENTS TO EXISTING RULES WITH LIMITED tBAC EXEMPTIONS

Based on new analysis – no amendments recommended.

If limited exemptions are to be addressed the following options can be considered:

Remove the exemptions and
KEEP the existing
VOC limits

-OR-

Remove the exemptions and
INCREASE the VOC
limits

-OR-

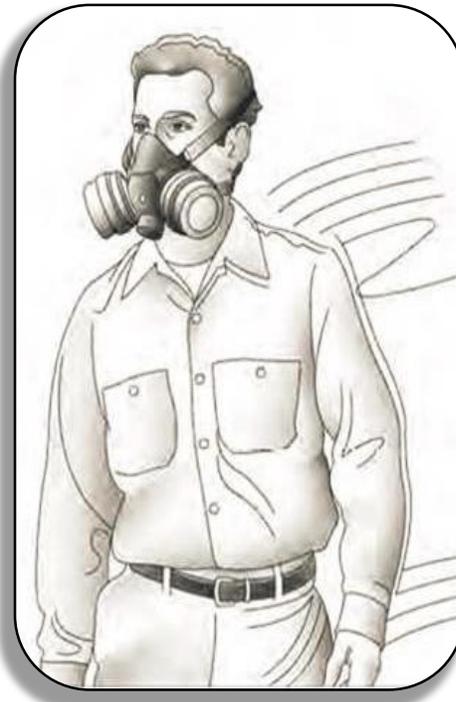
Adopt a toxic rule
or prohibit the use
of tBAC (Group II
exempt
compound)

Staff will continue to collaborate with OEHHA, CARB, U.S. EPA, and stakeholders on future rule making.

ON-SITE ANALYSIS AND OSHA

OSHA

- Sets PELs to minimize worker exposure
- PPE minimizes worker exposure (i.e. respirators, gloves, safety shoes, etc.)
- SCAQMD cannot enforce OSHA's regulations



On-Site Analysis

- No established on-site methodology or thresholds to assess CEQA significance
- Mass Balance Approach
 - On-site risks far exceeded off-site risks thresholds
 - Off-site thresholds may not be appropriate in assessing on-site risk

RULES 1107 – COATINGS OF METAL PARTS AND 1168 – ADHESIVES AND SEALANTS



†BAC

DMC

**Move forward with
amendments
without exemptions**

- Keep existing VOC limits in instances where new exempt compounds were considered for reduced VOC limits

Potential On-site Options:



Rely on OSHA to address and enforce occupational exposure, unless an analysis of exposure is required.



Use an outside source to develop a methodology and CEQA threshold to assist staff in assessing occupational exposure.



Use mass balance type approach as a screening tool to calculate the on-site exposure, to ensure worker exposure does not exceed applicable toxicity limits.

CONCLUSIONS

- ✓ Wait for final CPF from OEHHA's SRP
- ✓ Seek Board direction concerning on-site analysis
- ✓ Use a precautionary approach when considering future exempt compounds



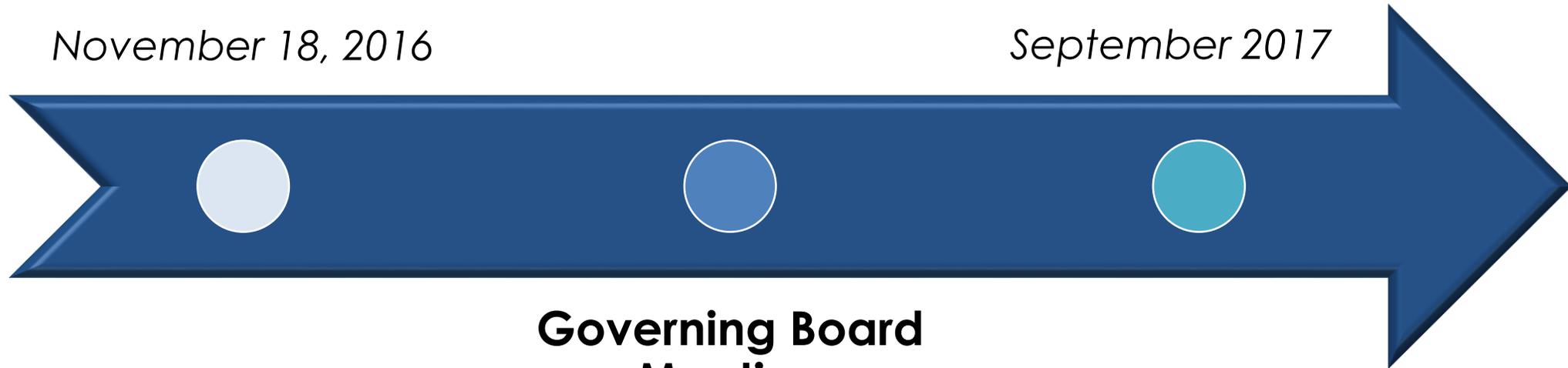
NEXT STEPS

**Stationary Source
Committee**

November 18, 2016

Rule 1168

September 2017



**Governing Board
Meeting**

December 2, 2016

CONTACT INFORMATION

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tBAc Webpage

<http://www.aqmd.gov/home/regulations/compliance/vocs/tbac-assessment>