

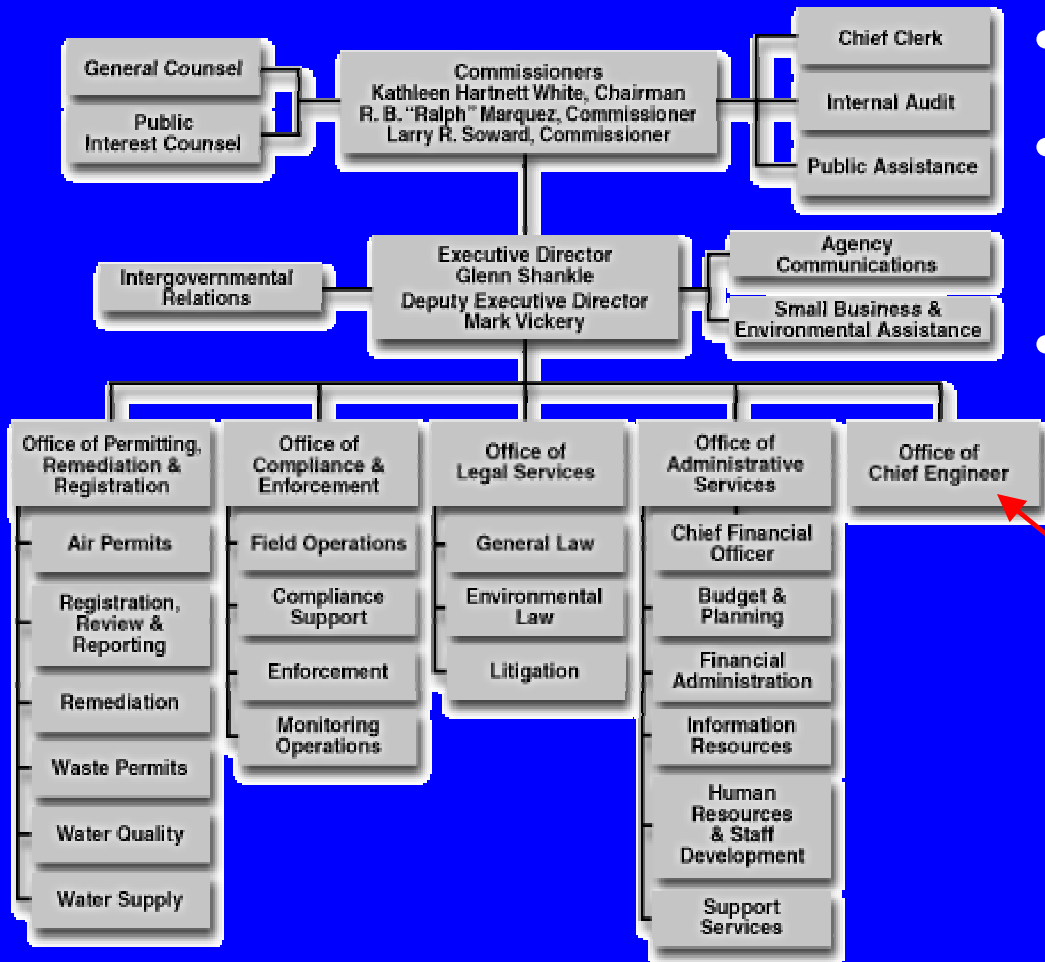
Toxicology Section
of the
Texas Commission on Environmental Quality
(TCEQ)

TSCC-HH

TCEQ Representatives

Joseph “Kip” Haney & Vincent Leopold

Texas Commission on Environmental Quality



- The state “EPA”
- 16 Regional TCEQ Offices
- HQ in Austin

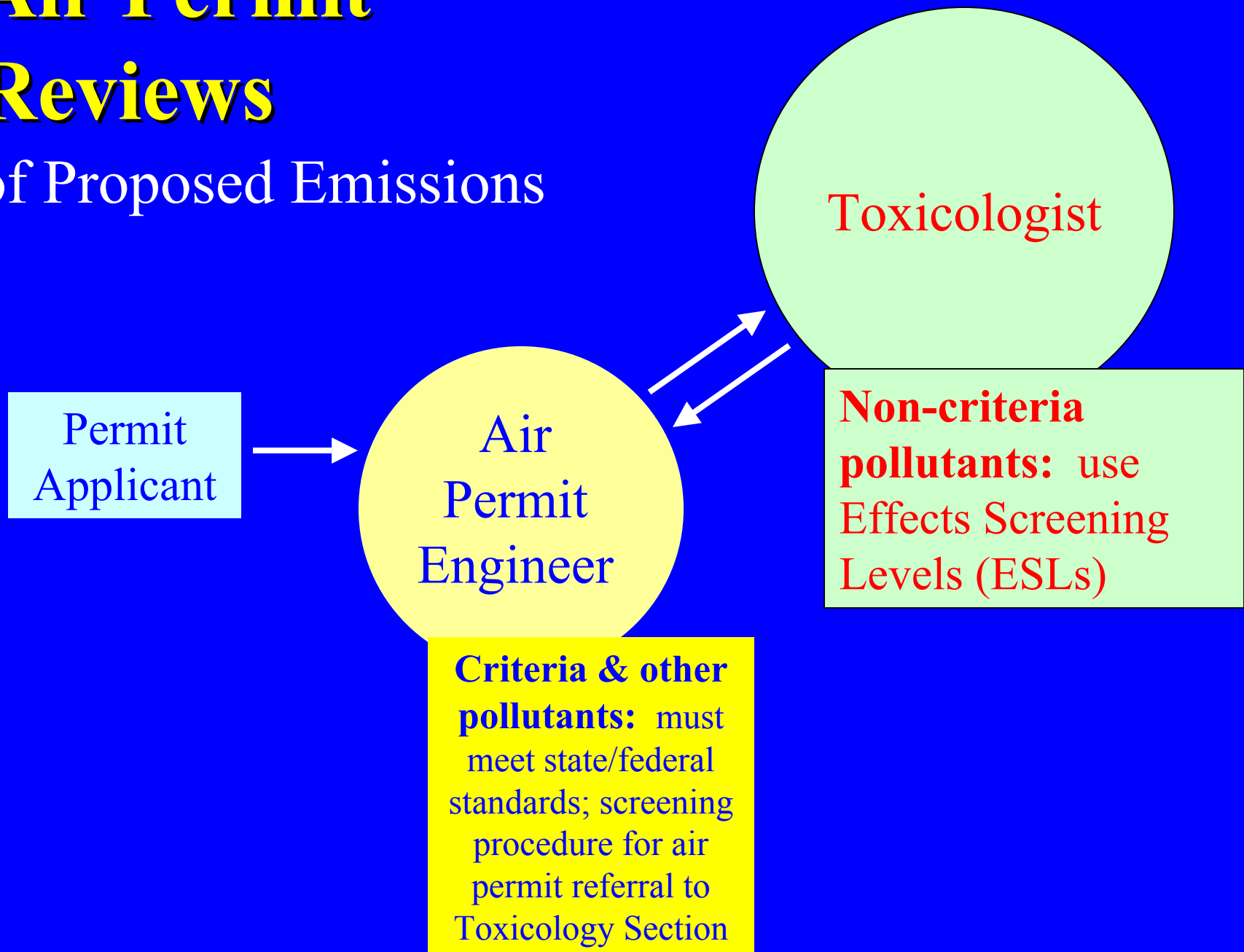
**Toxicology
Section**

Toxicology Section

- Assesses toxicity & risk
- Supports most programs in TCEQ, but mainly
 - > Air permitting
 - > Air monitoring
 - > Remediation risk assessment
- Also supports other programs/functions (e.g., surface water quality, HB3030, homeland security, rule writing, public hearings)

Air Permit Reviews

of Proposed Emissions



Toxicologist

**Non-criteria
pollutants:** use
Effects Screening
Levels (ESLs)

**Criteria & other
pollutants:** must
meet state/federal
standards; screening
procedure for air
permit referral to
Toxicology Section

Permit
Applicant

Air
Permit
Engineer

Air Permit Reviews (cont.)

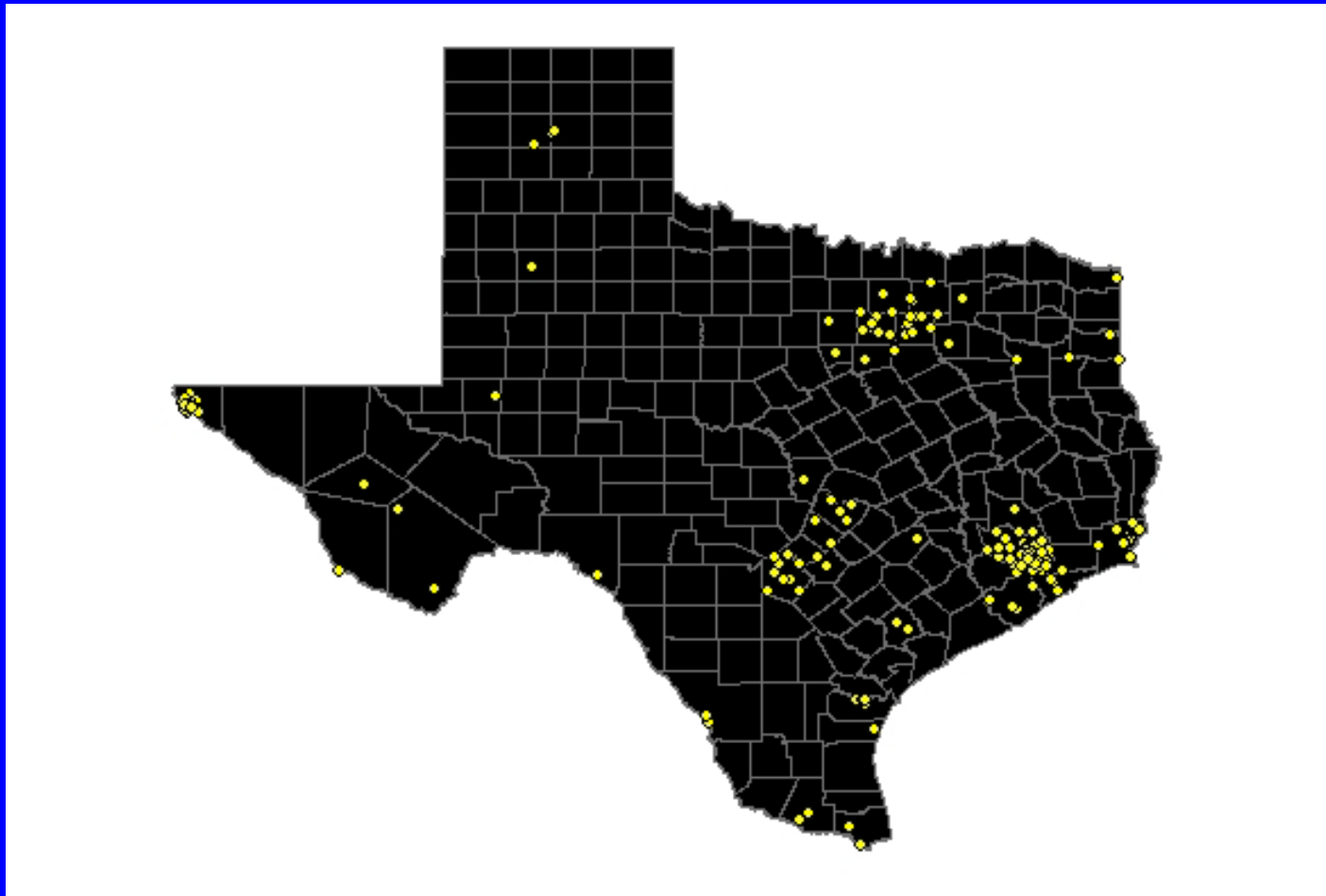
- Texas Clean Air Act requires ALL emissions from ALL sources to be authorized – even BBQ pits and water heaters
- TCEQ has different types of permits generally based on complexity
 - > De minimus
 - > Permit By Rule
 - > Standard Permit
 - > New Source Permit

Effects Screening Levels (ESLs)

- Currently used for both air permitting & monitoring
- Consider health and welfare effects ...
 - > Health:
 - Acute (e.g., respiratory irritation)
 - Chronic (e.g., cancer)
 - > Welfare:
 - Odor
 - Vegetation effects
- New Guidance document almost complete
(Development of ESLs, ReVs, and URFs)

Air Monitoring

Evaluate ambient air toxics concentrations



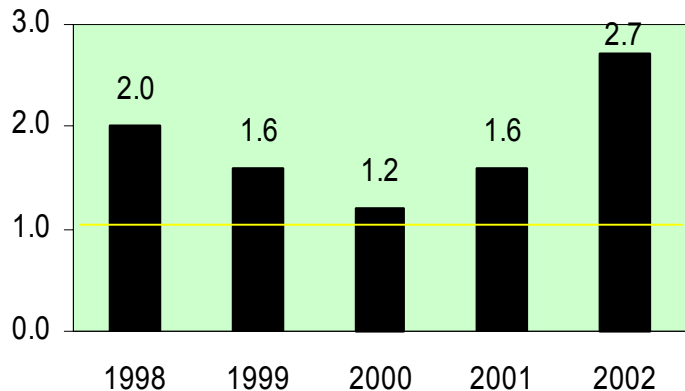
Air Monitoring (cont.)

- Various analytes
(e.g., VOCs, carbonyls, metals)
- Fixed site monitors (~ 82 sites)
- Mobile monitoring
- Field Ops
 - > Emergency Response
 - > Homeland Security

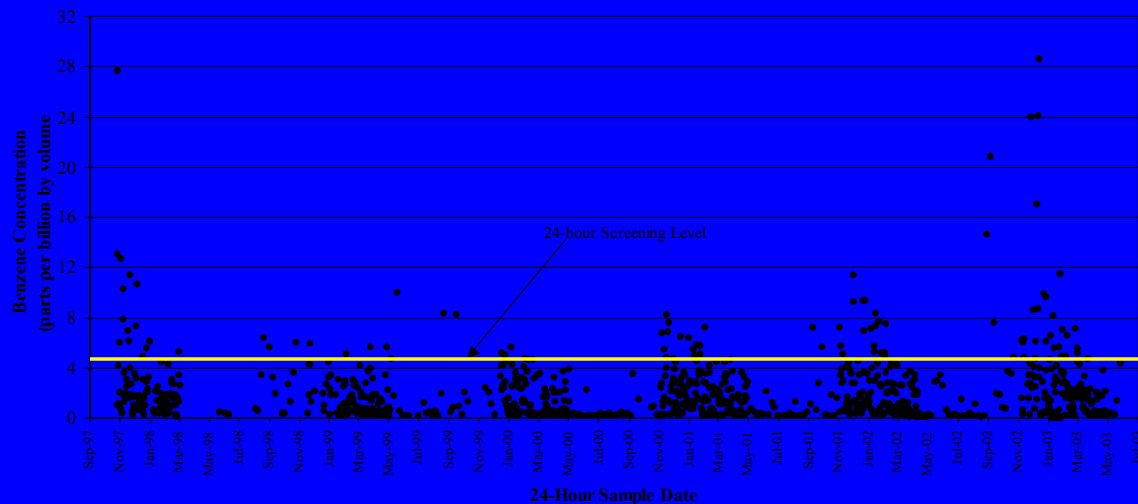
Air Monitoring (cont.)

- Data reviewed to:
 - > assess the potential for a measured air toxic concentration to cause acute or chronic health effects and odors
 - > identify pollution sources
 - > evaluate air permit applications

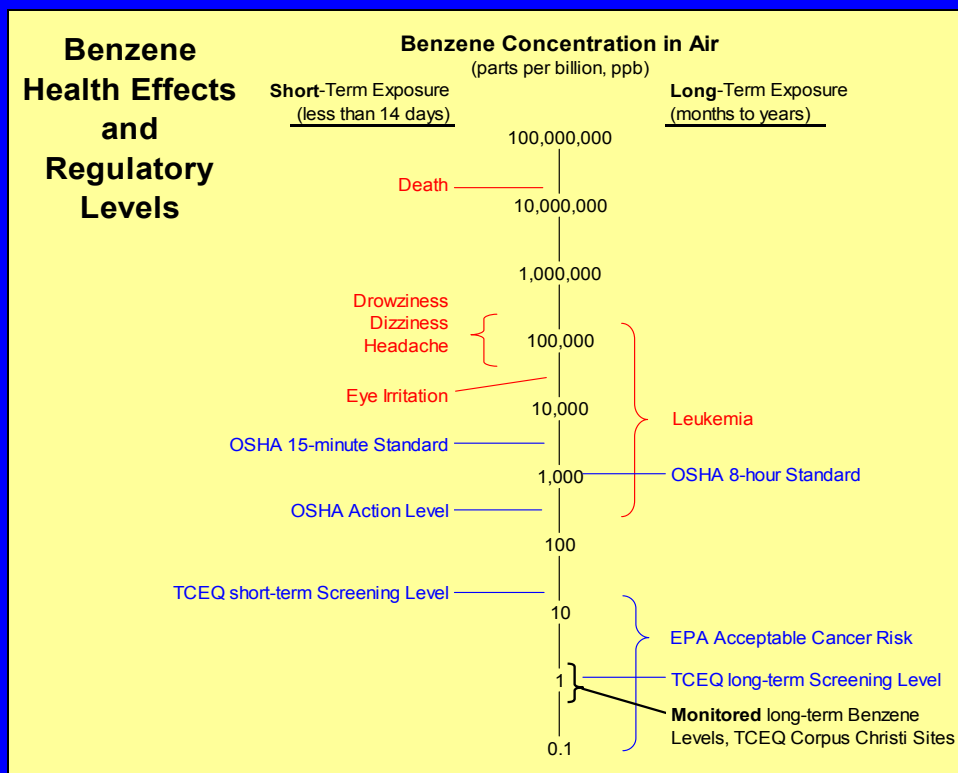
Annual Averages (ppb)



TCEQ Benzene Air Monitoring
 3810 Huisache Street, Corpus Christi
 AIRS No. 483550032



Monitoring Benzene at a Corpus Christi site



Air Monitoring (cont.)

- In some cases, toxicology reviews DSHS cancer cluster studies in conjunction with long-term ambient air data
- Toxicology also supports TCEQ Field Operations Division and Emergency Response Strike Team, TCEQ Media Relations, and talks to concerned citizens

Remediation Risk Assessment

- Texas Risk Reduction Program (TRRP, 30 Texas Administrative Code (TAC) §350)
- 1993 Risk Reduction Rule (30 TAC §335) and Consistency Document
- Various exposure media/pathways considered
- Receptor exposure scenarios based on current/future land use (e.g., residential, commercial/industrial, recreator)

Remediation Risk Assessment (cont.)

- TRRP ~ 13 exposure pathways total in multiple media which may be complete/reasonably anticipated to be complete based on land use
 - > Soil – incidental ingestion, inhalation, and dermal contact for both residential and commercial/industrial; vegetable ingestion for residential
 - > Groundwater – ingestion (federal MCLs used) and inhalation
 - > Other – incidental ingestion and dermal contact with sediment or surface water, ingestion of fish or fish + drinking water from surface water

Remediation Risk Assessment (cont.)

- DSHS staff frequently contacted to review media concentration data and/or prepare health consultations for attendance of TCEQ public meetings
- TCEQ defers to DSHS for evaluation of medical records and blood/urine contaminant data

Questions ???

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**Toxicology Section
Chief Engineer’s Office
TCEQ**