

# Environmental Sciences Branch/TNI Update

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Laboratory Director's Conference  
November 2013

# Activities –Drinking Water

- Future Drinking Water Issues Revisited
  - Regulation of Perchlorate Early 2013? EPA delayed perchlorate report to December-ish
  - Notice of preliminary rulemaking for nitrosamines by end of year? Not Yet.
- TCEQ is adding potassium to the all metals list
- TCEQ is changing routine radiochemical uranium analysis from alpha spectroscopy (activity pCi/L) to less expensive ICP/MS (ug/L). Analysis will be routine part of radiochemical grab sample.

# Activities –Drinking Water

- TCEQ is going to take BETA Group samples.
  - Anticipate 10-15 Public Water Supplies to sample
  - Criteria: If Gross beta activity less naturally occurring potassium-40 activity  $> 50$  pCi/L then BETA group analysis is performed.
  - Beta Group: Tritium, Potassium, Strontium-89, Strontium-90, Cesium-134, Cesium-137, Iodine-131 and any other significant peaks from gamma scan.

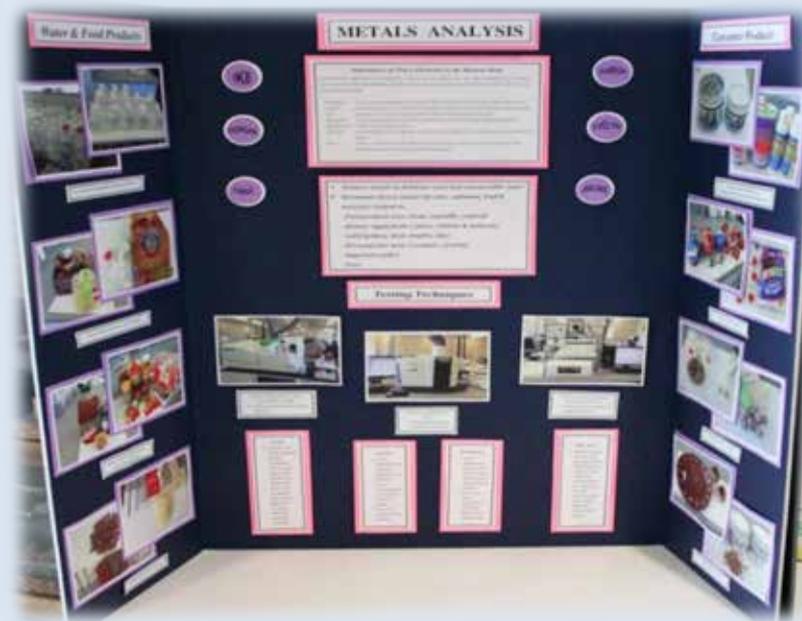
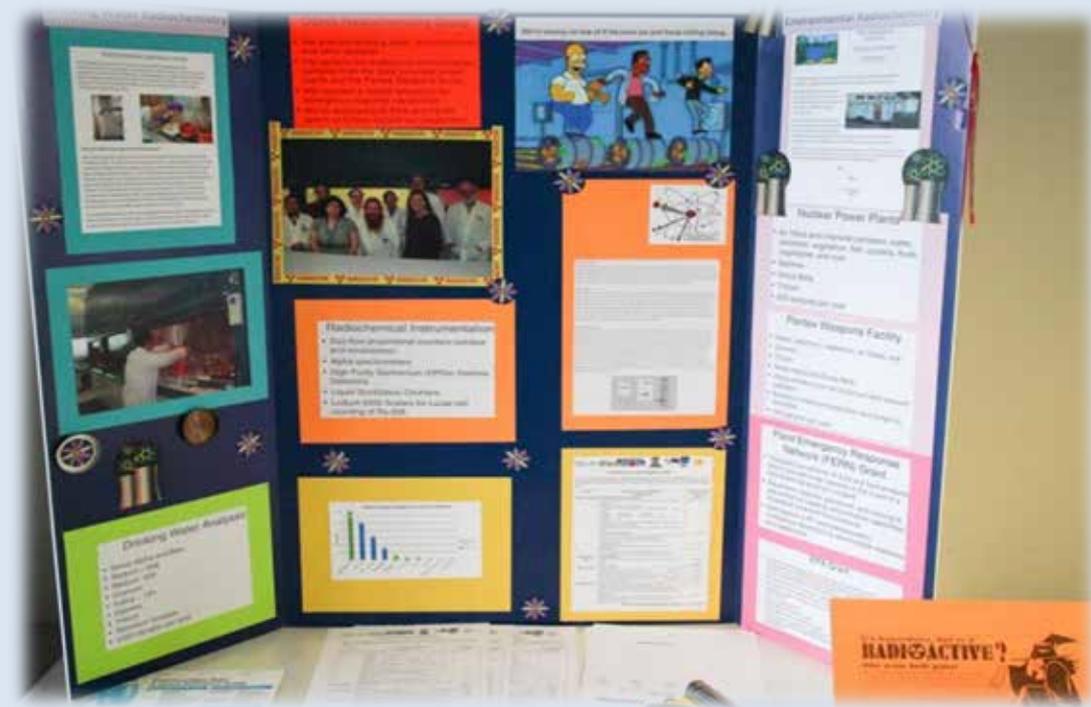
# Food Update

- FDA ISO 17025 Accreditation Grant
  - Planning accreditation for following
    - 🌾 pH
    - 🌾 Protein
    - 🌾 Salt
    - 🌾 Moisture
    - 🌾 Food Colorants
    - 🌾 Water Activity
    - 🌾 Sulfites
    - 🌾 Lead
    - 🌾 Gluten

# Food Continued

- Working on adding the following food testing
  - Allergens by Enzyme-Linked Immunosorbent Assay (ELISA)
    - Eggs Tree Nuts Peanuts Milk Soy
- Possible future additions
  - Pesticide screening by QUECHERS- LC/MS/MS (Quick Easy Cheap Effective Rugged Safe)
  - Fumonisin by LC/MS/MS
  - Fish speciation



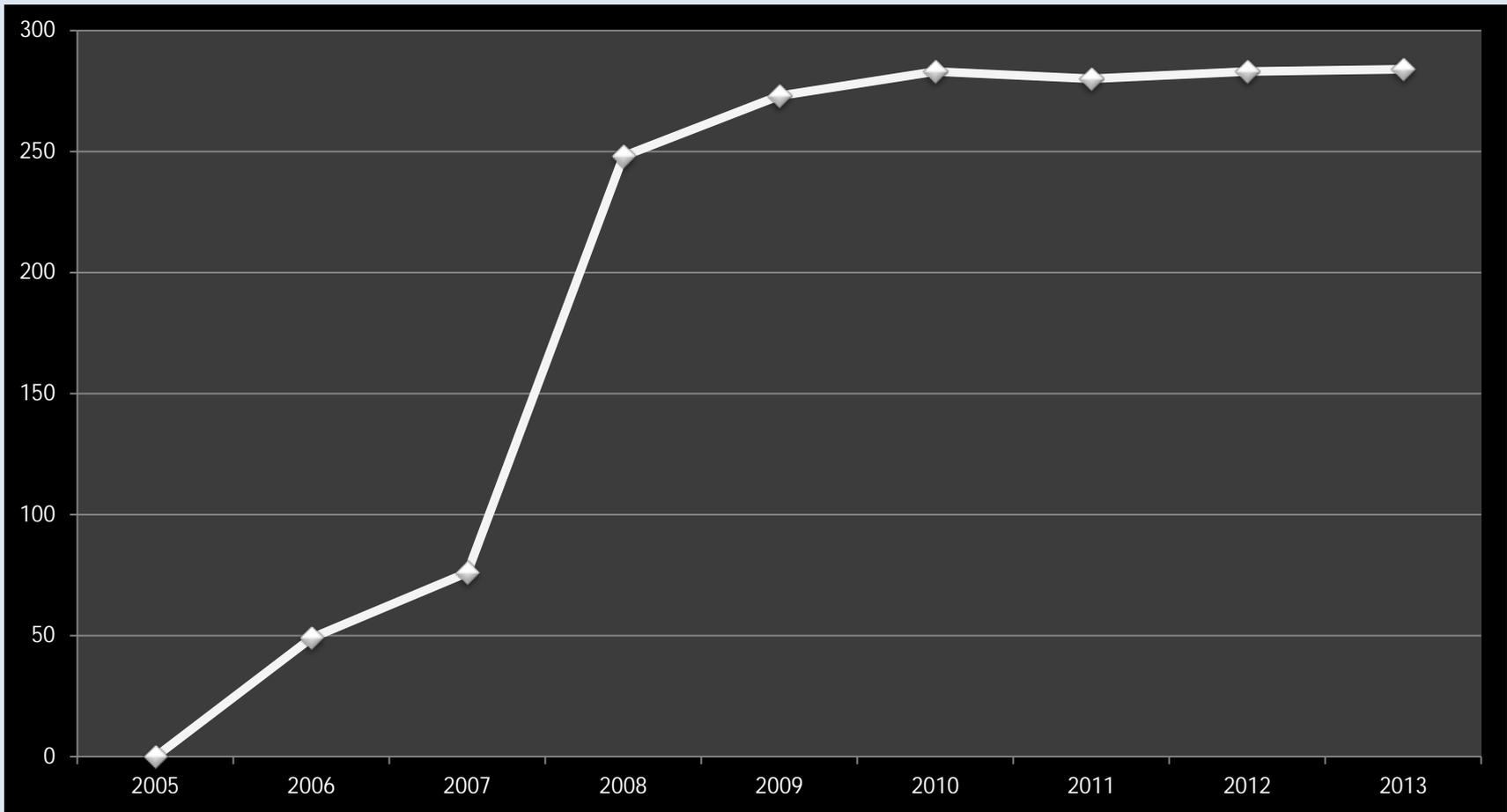


# TCEQ TNI Update

## Who is What

- Section Manager, Laboratory and QA Team – Cindy Maresh 512 / 239-0885
- Acting Team Lead, QA and Lab Accreditation and TNI Program Manager – Alice Colt 512 / 239-3927
- Frank Jamison - Records Specialist for Lab Accreditation 512 / 239-3754
- Ruth Wedig - Work Group Lead and Lead Laboratory Assessor 512 / 239-6156
- Lead Laboratory Assessor – Po Chang, Ph.D.
- Lead Laboratory Assessor – Melissa Kelly
- Lead Laboratory Assessor – N.D. Kaku
- Laboratory Assessor – Eric Dedden
- Laboratory Assessor – Karna Holquist, Ph.D.

# Status: Accreditations (March 1)

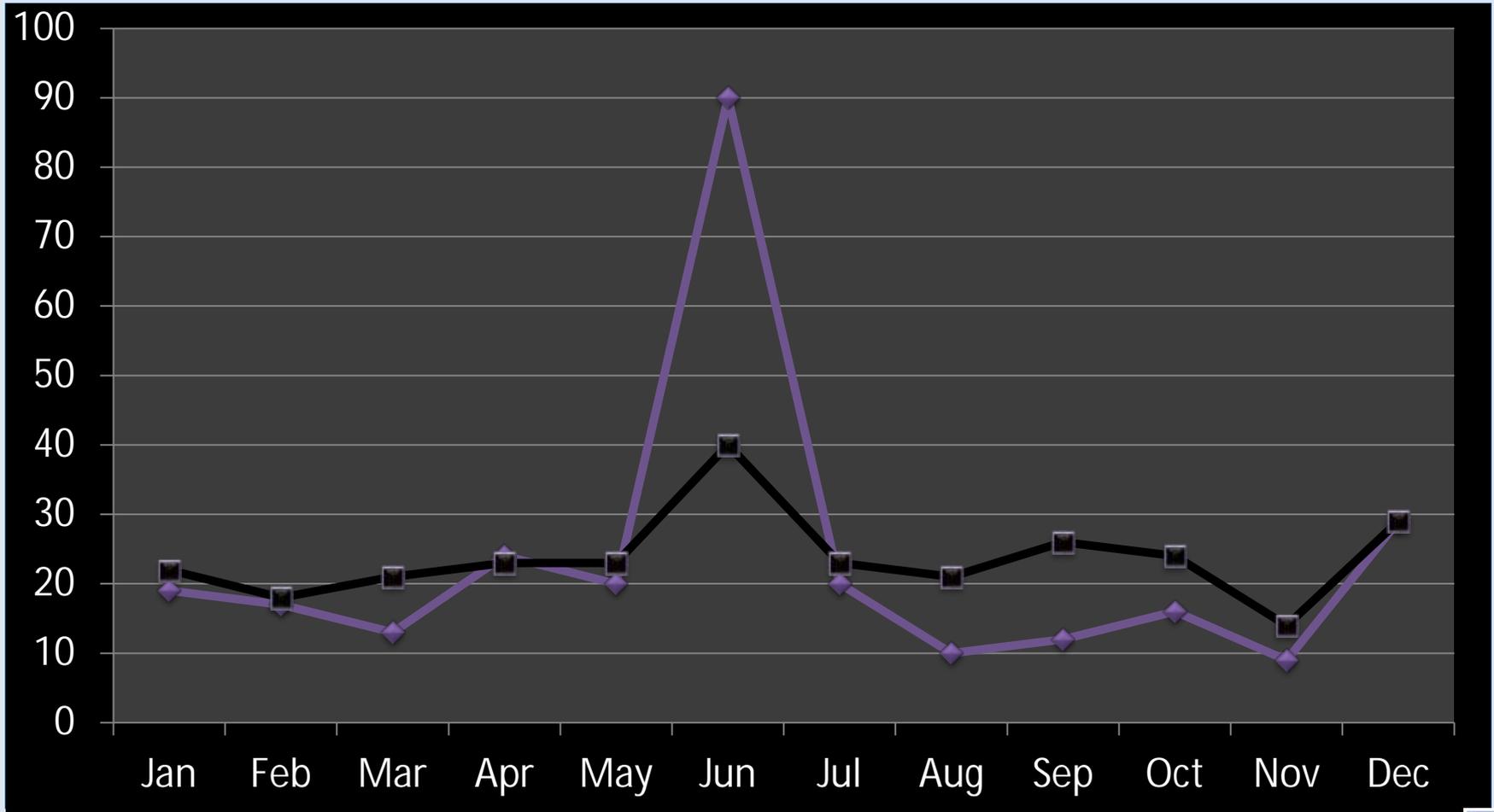


# Status: Accreditations (Oct. 17)

Accredited:		281
Primary	172	
Secondary	102	
Primary/Secondary	7	
Pending:		26
Applications	11	
Amendments	15	



# Renewal Cycle: Current



# TCEQ Memo on Electronic Data

- Can labs scan original documents, store the electronic facsimiles, and discard original documents?
- Can TCEQ receive and store electronic data from environmental testing labs?
- “Yes” and “Yes” in 10-page legal memo with 55 footnotes published 9/10/12.



# Top 10 Assessment Findings

- Article published in the first quarter 2013 issue of The Institute Review on March 22.
- Stephanie Drier (MNDOH), Carl Kircher (FLDOH), Steve Gibson co-authored the article.
- This issue will be posted at some point on the TNI web site under “Documents” (top row in blue) and then “Newsletter.”



# Chlorine Checks and V1M5-1.7.5.b

- Chlorine checks for chlorinated sources, new clients or sources, and all potable water sources (including source water)
- Exception for potable water (but not for non-potable water until recently): monthly check of one sample from each source if four conditions are met and demonstrated history of acceptable preservation



# Chlorine Checks and V1M5-1.7.5.b

SIR #138 published April 7, 2013:

- Added definition of source water.
- Changed “potable water sources” to “potable water supplies (including source water).”

December 2011 VDS proposed to add “known chlorinated sources (such as wastewater effluent)” to the exemption for monthly chlorine checks **for each client**. SIR did not include.



# Traceability of Data

- Lab: “Most of the findings are related to recordkeeping, which did not affect data generated/reported to the clients.”
- V1M2-1.1: “The quality system provides the framework ... to provide the client with data of known and documented quality, sufficient to evaluate usability of the data to the clients *[sic]* needs.”





# Traceability of Data

V1M2-4.13.3.a: “... establish a record keeping system that allows the history of the sample and associated data to be readily understood through documentation. This system shall produce unequivocal, accurate records that document all laboratory activities such as ...”





# Traceability of Data

- V1M2-4.13.3.f: “All information necessary for the historical reconstruction of data shall be maintained by the laboratory.”
- 19 subparts then follow in V1M2-4.13.3.f
- V1M2-4.13.2.1: “The laboratory shall retain records of original observations, derived data, and sufficient information to establish an audit trail, ...”



# Traceability of Data

Charlie Dyer, TNI/TCEQ Microbiology Workshop, Fort Worth, 3/14/07:

- Most simple original observation – measured incubator temperature
- Most simple derived data – corrected incubator temperature after applying correction factor for thermometer





# Other Common Findings

Failure to control external documents  
(Standard Methods, SW-846, instrument  
manuals, etc.) according to V1M2-4.3.1

Documents vs. records



# Other Common Findings

- Document: An instruction providing information where an unauthorized change could cause a problem.
- Record: Information created, received, and maintained as evidence by an organization or person, in pursuance of legal obligations or in transaction of business.





# Other Common Findings

- Failure to meet requirements for data integrity training in V1M2-4.2.8.1, 4.16, and 5.2.7
- Failure to verify LOD or LOQ annually according to V1M4-1.5.2.1 and 1.5.2.2.
- Failure to assess precision during IDOCs according to V1M4-1.6 and V1M2-3.1.



# Designating New Technical Managers

- V1M2-4.1.7.2: Duties
- V1M2-5.2.6.1: Must meet requirements for both bench experience and academic credentials. A college transcript must be submitted.
- V1M2-5.2.6.2.c: “Grandfather” provision effectively ended on July 1, 2008.



Sources - All presentations for the 2013 TCEQ ETF&C can be accessed at: <http://www.freeman-cloud.com/eftc2013/> TCEQ Slides are from Steve Gibson's update.

## Lab Practices and Data Reporting

### Update on TCEQ NELAP and TNI Program

+ [Steve Gibson](#)

### Traceability of Measurements: What It Is and What It Isn't

+ [Michael Shepherd](#)

### The Hidden Costs of Accreditation— A Decade Later

+ [Nan Thomey](#)

### The Sediment World: Testing Challenges and Trends

+ [Bob Stearns](#)

### Quality Issues with Radionuclide Measurements

+ [David Gratson](#)

### The NELAC Institute's Activities to Improve Data Quality

+ [Jerry Parr](#)

### Data Security: Maintaining Integrity, Mitigating Risk, and Ensuring Compliance

+ [Michael Hintz](#)

### A Novel Approach to Verifying Detection Limits

+ [Rock Vitale](#)

### Requirements for the Use of Test Methods by Accredited Laboratories

+ [Jerry Parr](#)