

Challenges and roadblocks adopting new laboratory Accreditation Standards



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Presentation Overview

OCSD Organization & Background

TNI & CA ELAP Accreditation standards

OCSD TNI & CA ELAP preliminary Audit results

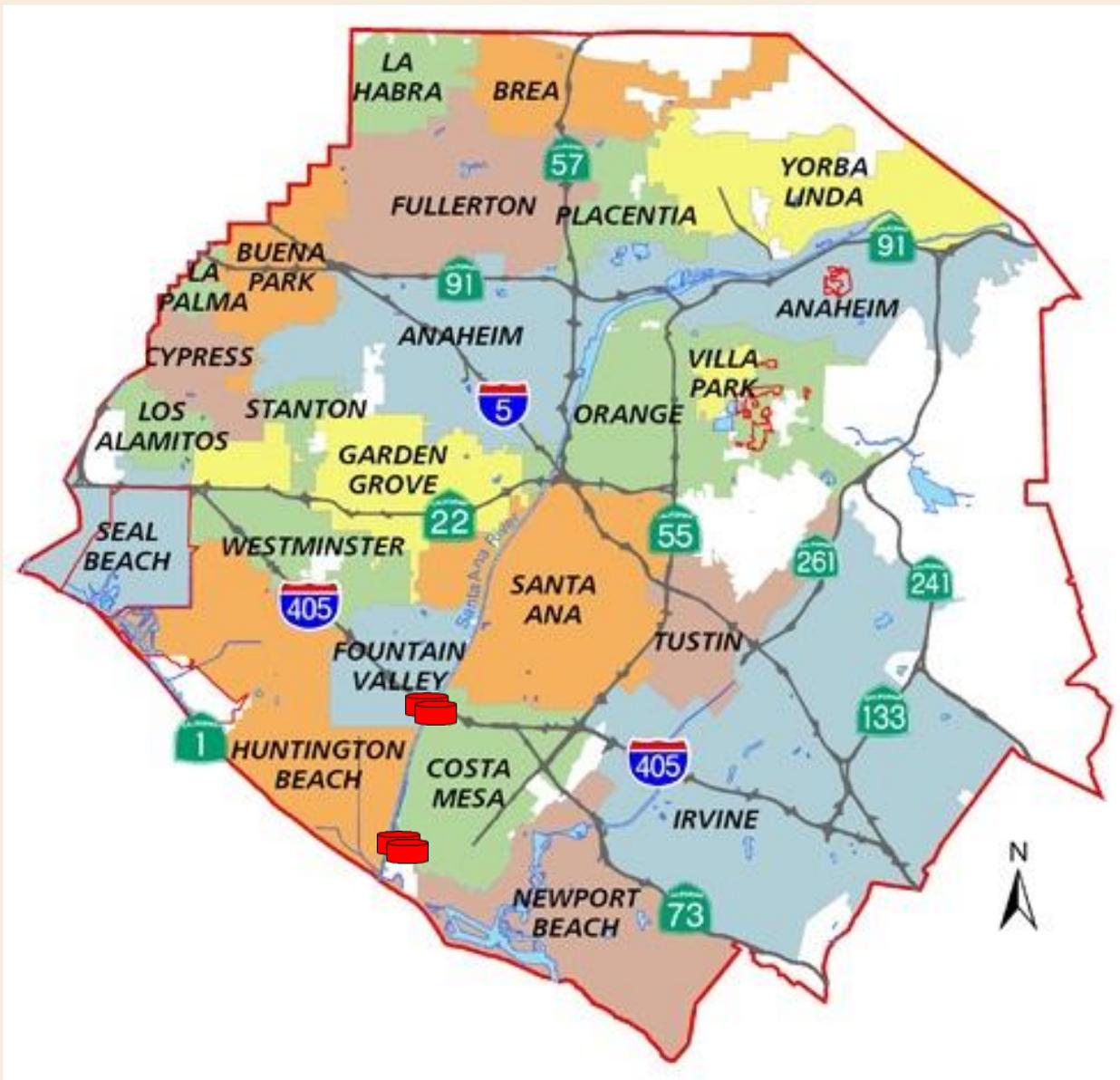


OCSD Mission

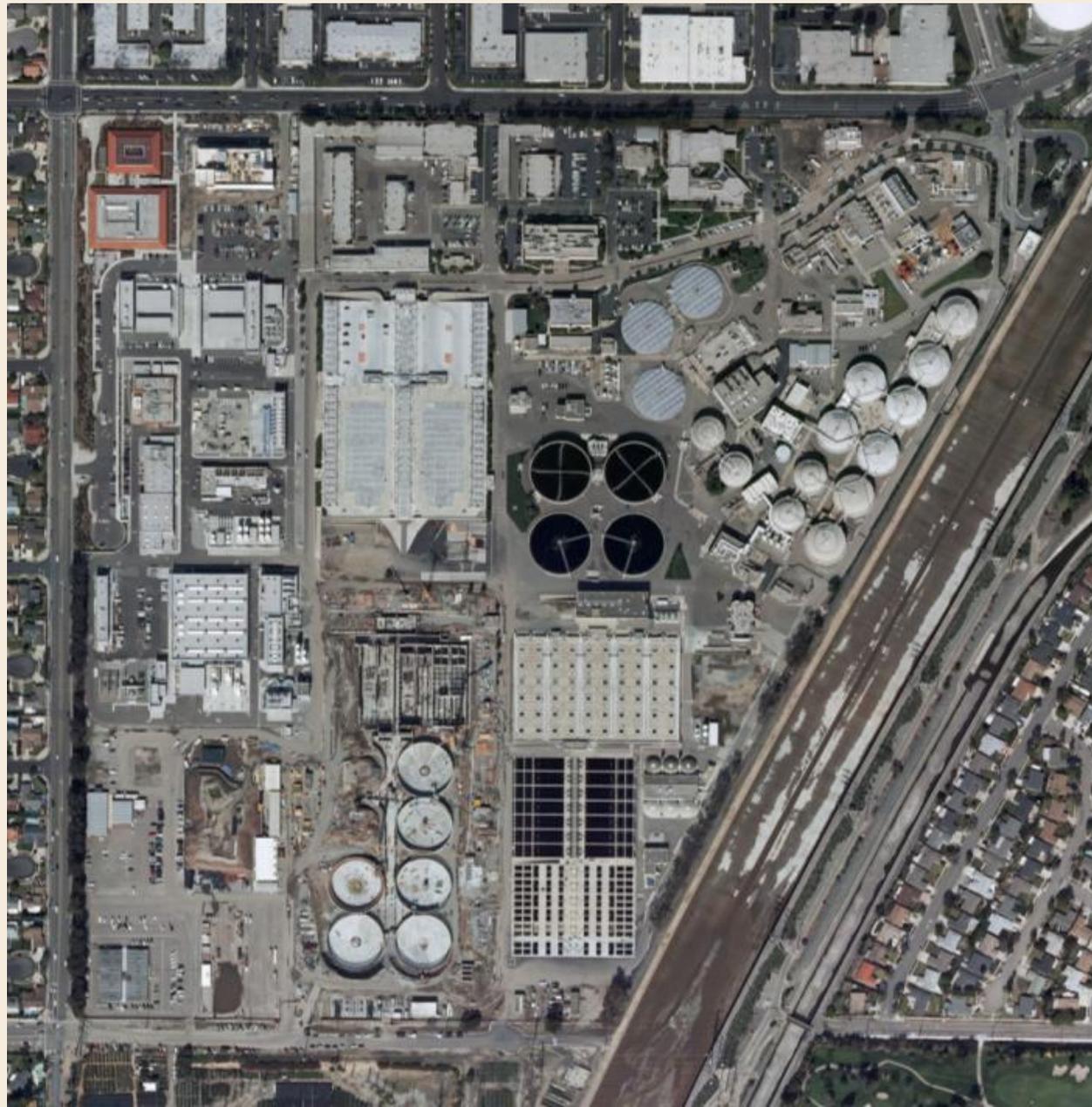
To protect public health and the environment by providing effective wastewater collection, treatment, and recycling



OCSD Service Area



Water Recovery Facility

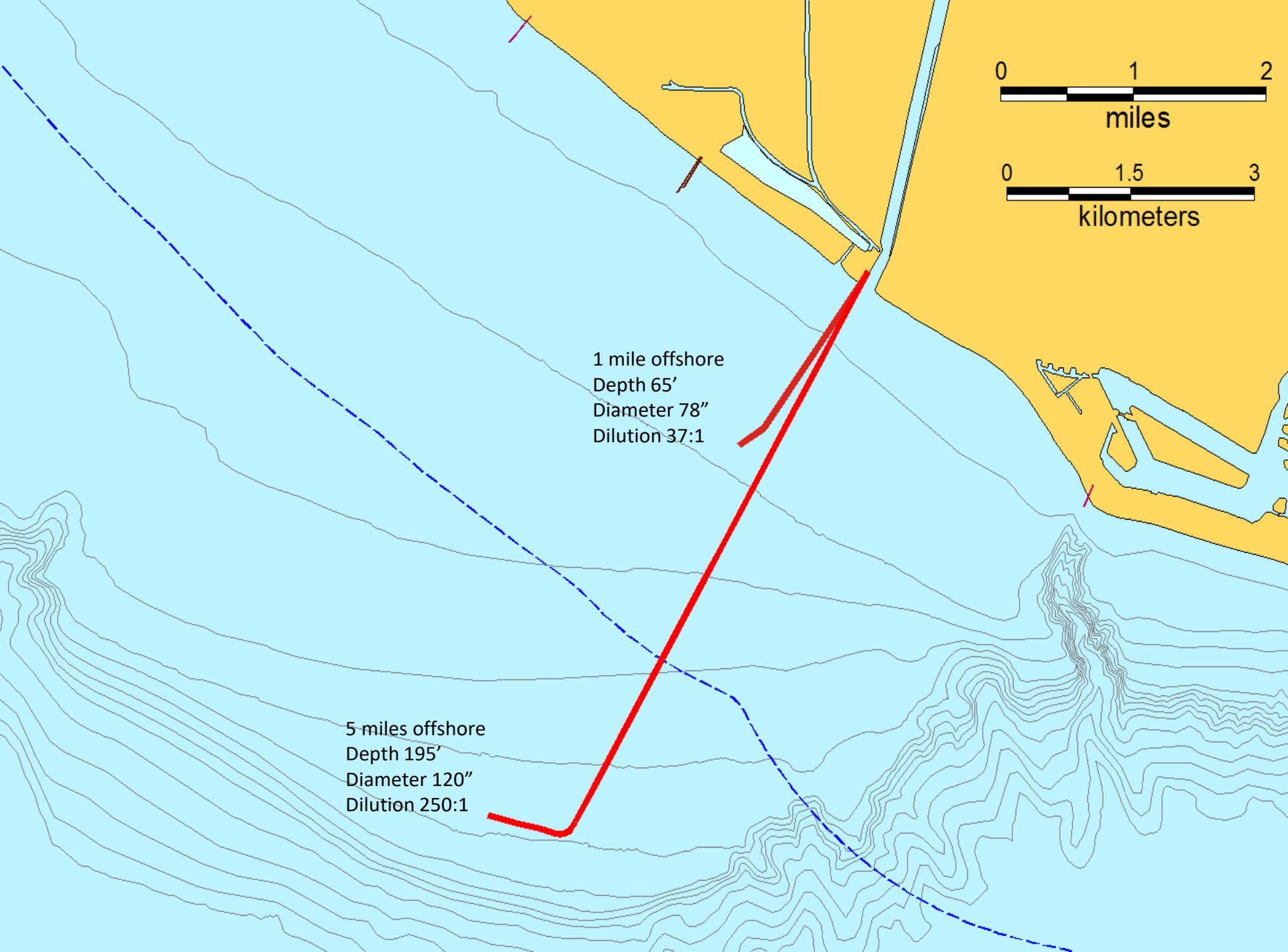


Water Recovery Facility

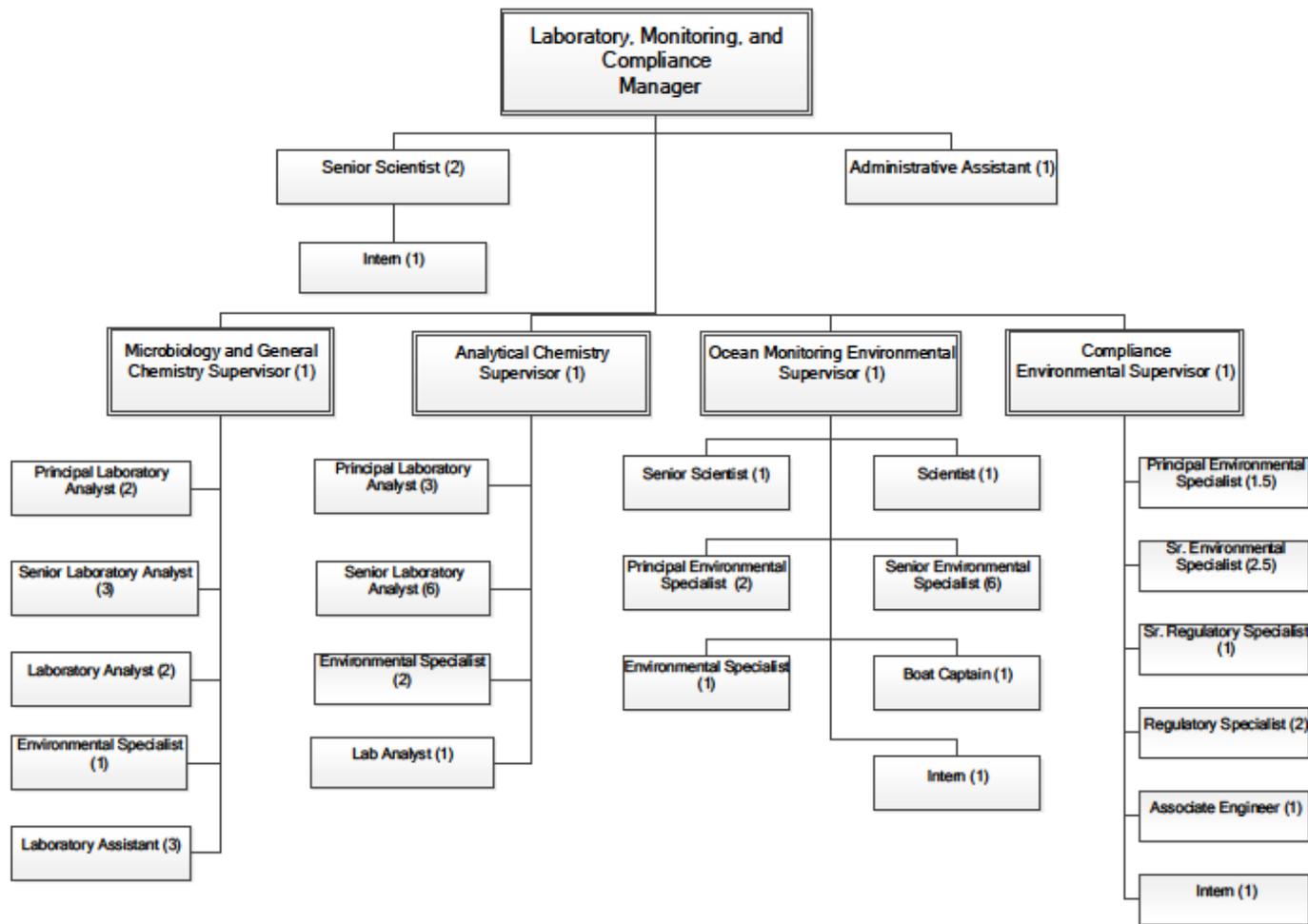


Wastewater Treatment Facility





OCSD Laboratory Organization



OCSD Laboratory Workload

Sample type	Total # of Samples 2016
General Chemistry	69,039
Inorganic Chemistry	142
Metals	7,578
Microbiology	24,182
Organic Chemistry	7,266
Toxicology	288
	108,495

Staffing

	Lab staff	Ocean Monitoring staff	Average Daily Treatment (MGD)	Lab Staff / MGD	OMP staff / MGD
OCSD	27	14	187	0.14	0.07
LACSD	175	32	510	0.34	0.06
City of SD	95	27	144	0.66	0.19
OCWD	24	-	100	0.24	-

OCSD Preparation for TNI

- 2010 Lab reorganized and moved to O&M Dept, QC section dissolved
- 2010 QA Administrator appointed
- 2011 TNI template adopted for OCSD SOPs
- 2013 Internal audits implemented
- 2014 TNI standards accepted as best practices
- 2016 Lab reorganized and moved to Environmental Services Dept, QC section created
- 2016 OCSD decides to become TNI accredited
- 2017 OCSD applies for TNI accreditation

TNI & CA ELAP Standards

TNI 2009

- Standard 8 years old
- Significant guidance and support materials available
- 2 PE studies each year
- Trained auditors, with extensive check lists
- Multiple day audits, often with multiple auditors

CA ELAP (1989)

- Standards 28 years old
- Little to no support materials, regulations used for guidance
- 1 PE study each year
- Auditors vary from year to year, each with their own area of expertise.
Microbiology check list
- 1 auditor for 1 day
- Auditors could be inflexible on findings

TNI & CA ELAP Standards

TNI 2016

- 7 Modules, 176 pages
- Standard in 14 States
- Consensus Standards Developed by 10 Committees
- Extensive support resources & manuals
- 2 PE studies each year

CA ELAP (2017 Draft)

- 7 Articles, 53 pages
- Reciprocity with 2 States
- Standards heavily reference TNI 2016
- On-line support resources & regulations
- 1 PE study each year

Comparison

TNI

- Applied in May 28th
- Application fee \$8,500
- Audited July 31st – August 2nd, 2 auditors for 3 days
- Auditors were open to discussions with analysts
- Audit reviewed all aspects of laboratory operations, emphasized areas of documentation

CA ELAP

- Applied April 24th
- Application fee \$8,698
- Audited August 2nd – 3rd
2 auditors for 2 days
- Auditors were open to discussions with analysts
- Audit reviewed all aspects of laboratory operations, emphasized procedures and methods

TNI Audit Findings

- Fluoride spreadsheet is not secure and no record of verification calculations.
- BOD: Analyst “cheat sheet” is not current.
- Quality Manual does not contain OCSD address and phone number, or Complaint Procedure, or Record of Complaints.
- Management Review does not document procedure to seek feedback from customers or review of Quality Manual.
- Mercury SOP must include addition of salt. SOP specifies 15 minutes for color development, analysts only to allow some time after reagent is added.

TNI Audit Findings (cont)

- TS & VS analysts do not document weight confirmation after final measurement is recorded.
- Analytical pipettes do not need to be sent out for calibration annually, but dispensing volume must be verified quarterly.
- SOP for manual integration of GC/MS data, must include data from before integration, after integration, and analyst who performed the integration.
- Metals preparation (Method 200.2) DOC not fully documented.

CA ELAP Audit Findings

- Method 200.7 & 200.8 SOP does not specify QA samples be processed as analytical samples.
- Metals method specifies amber sample vials for analysis, clear vials are in use.
- Method 625 SOP does not specify reagent blank to be same as sample matrix & inadequate record of analyst training.
- Cyanide SOP must include when sulfide is detected holding time is reduced from 14 days to 24 hours.
- Traceability of thermometer is missing data for transport of samples to lab.

Timeline for Accreditation

April 24th applied for ELAP renewal (\$8,698)

May 28th applied for TNI accreditation (\$8,500)

July 1st QA section formed

Laboratory audit by TNI AB (Utah), July 31st – August 2nd

Laboratory audit by CA ELAP, August 2nd – August 3rd

TNI audit report of OCSD, expected by September 1st

CA ELAP audit report of OCSD, expected by September 2nd

OCSD TNI accreditation (Utah), pending acceptance of corrective action response, expected November 1st

CA ELAP accreditation renewal, pending acceptance of corrective action response, expected November 2nd

Questions?

