

# Data Fabrication in CA

2021 National Environmental Monitoring Conference

California Environmental Laboratory Accreditation Program

Alexandria Turner, Supervisor of Enforcement Unit

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# Program History

- No enforcement program prior to 2015
- Since 2015 ELAP's enforcement unit has conducted ~100 investigations
- Uncovered a wide spectrum of laboratory violations

# Findings

- Violations and improper practices
  - Notice of Violations
  - Suspensions
  - Revocations
  - Citations
- Lab Fraud
  - Criminal conviction
  - Debarment
- Dry Labbing
  - Suspension
  - Citations

# Introduction of Relevant Entities

- California Environmental Laboratory Accreditation Program (“ELAP”)
- Western Analytical Laboratories Inc. (“WAL”)
- Skyline Ranch Country Club LLC (“Skyline”)
- Invirotreat Inc.
- San Diego Regional Water Quality Control Board (“San Diego Water Board”)

# California Environmental Laboratory Accreditation Program (“ELAP”)

- Established under the Environmental Laboratory Accreditation Act (“ELAA”).
- Verify competency and capability of a laboratory to perform analysis for regulatory compliance.
- Ensure that data from environmental laboratories can be used for making reliable decisions which impact public health and the environment.



# Western Analytical Laboratories, Inc. (“WAL”)

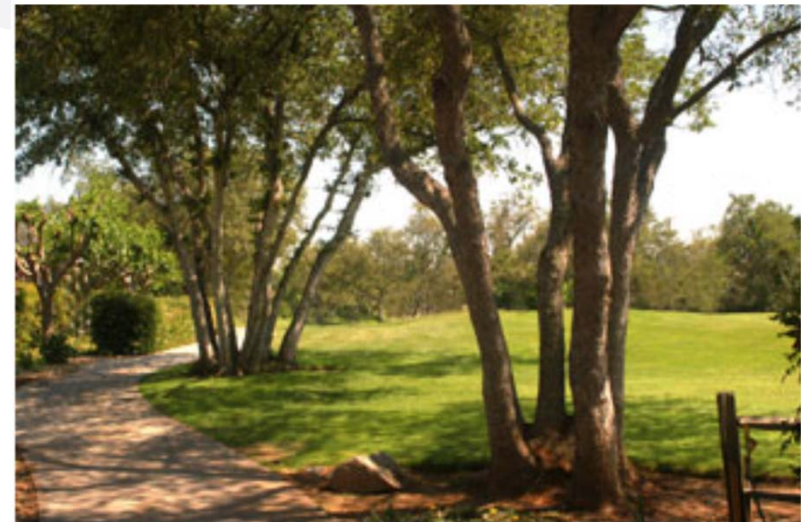
- Located in Chino, CA
- Privately owned by Mr. Conti since 2015 (Laboratory Director since 2005)
- Approximately 20 employees
- Approximately 1,900 clients  
(WAL Ex. D “Petition”)



**WAL provided laboratory reports for Skyline’s wastewater treatment plant**

# Skyline Ranch Country Club LLC. (“Skyline”)

- Located in Valley Center, CA
- Operates an onsite wastewater treatment plant
- San Diego Water Board Order No. R9-2005-0258 and addenda
  - Required testing:
    - Total Coliforms – daily
    - Inorganic constituents – quarterly
- Testing must be performed by an ELAP accredited laboratory



# Invirotreat, Inc.

- Owned and operated by Dr. Alon Lebel
- Skyline's environmental consultant
  - Assists Skyline's compliance with Order No. R9-2005-0258 and addenda
- Prepared Quarterly Monitoring Reports ("QMR's") submitted to the San Diego Water Board on behalf of Skyline
  - QMR's include laboratory reports from WAL

**INVIROTREAT INC.**  
INNOVATIVE TREATMENT

RECYCLING WATER  
FOR A BETTER  
WORLD



APPLYING INNOVATIVE  
PROCESSES FOR  
RECYCLING WATER,  
WASTEWATER AND GRAY  
WATER



# Complaint From a Resident of Skyline

Skyline resident complained to the San Diego Water Board she was getting sick from water sprayed onto her home.



# San Diego Water Board's Investigation

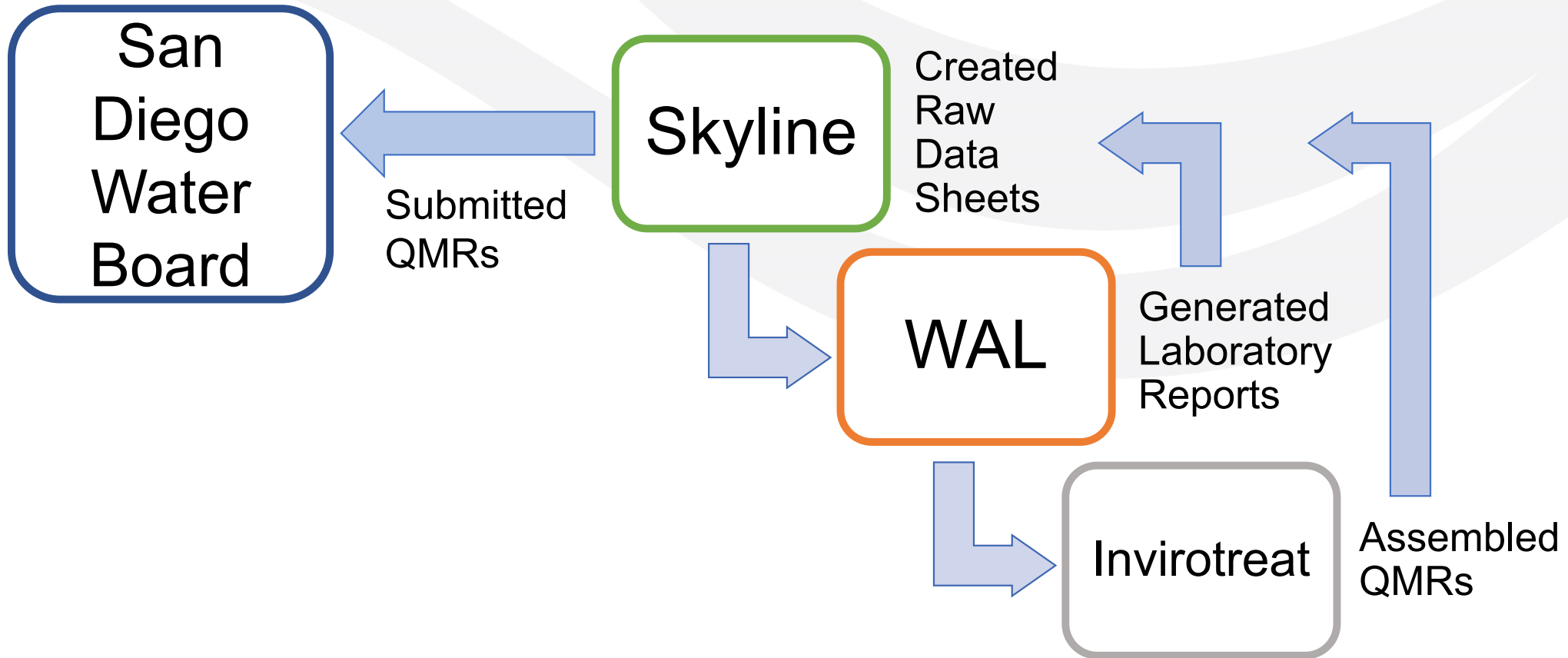
- Inspected Skyline on April 30, 2018
- Identified red flags during inspection and refers to ELAP
- Issued Notice of Violation to Skyline for improper collection and analysis of total coliform samples

# ELAP's Investigation

- Inspected WAL on June 20, 2018
- Requested documentation from Mr. Conti
- Obtained WAL's final, signed laboratory reports from San Diego Water Board database
  - WAL did not provide the finalized reports either during or after the inspection
- Identified data integrity concerns

# ELAP's Findings

1. Skyline collected samples (unverified)
2. Skyline performed analysis (unverified)
3. Skyline faxed raw data sheets to WAL
4. WAL generated laboratory report
5. WAL faxed/emailed laboratory report to Skyline and Invirotreat
6. Invirotreat developed QMR's on behalf of Skyline
7. Skyline signed QMR's
8. Invirotreat submitted QMR's to San Diego Water Board



# Violations of the ELAA

- WAL reported results for a test it did not perform
- WAL misrepresented material facts in reports designed for regulatory purposes

# Data Fabrication

Reporting Results For a Test WAL Did Not Perform

# Data Fabrication

- WAL generated analytical reports for total coliform analysis that were created **without WAL's own scientific measurement**
- WAL does not have the equipment necessary to perform SM 9221 B
- Instead WAL used unsupported data sheets provided by the regulated discharger



## **WAL Admits Data Was Not Generated in the Laboratory**

*“WAL was not collecting or receiving any samples or conducting any total coliform analysis under SM 9221 B.”*

# Unsupported Raw Data Sheets

- Unaccredited
  - No oversight of analytical and operational activities
  - Performed by unqualified staff
  - No quality control samples to verify the analysis was performed properly
- Not defensible
  - No chain-of-custody (“COC”)
  - Results are not traceable
- Incomplete
  - Several instances of missing or incomplete data
  - Starting in April of 2015, data sheets were prefilled, indicating that the confirmation phase was never performed

# Missing Data

DATE RECEIVED: 09/05/2017  
 DATE REPORTED: 09/05/2017  
 CUSTOMER: Skyline Ranch Country Club LLC  
 ADDRESS: 18218 Paradise Mountain Rd, Valley Center, CA 92082  
 ATTENTION: Kelly Moore  
 SAMPLE I.D.: MBR Plant Effluent  
 SAMPLE POINT: Final Effluent Tank  
 PERMIT NO.: R9-2005-0258 Addendum 1

WAL NO.: 17100147  
 bactiSKY  
 S360

## Total Coliform Raw Data Form

Date of Sample	Time Sampled	Sampler	Time Set Up											
8-24-17	8:00	RC	8:15	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na
				na	na	na	na	na	na	na	na	na	na	na

24-Hr lauryl tryptose broth  
 48-Hr lauryl tryptose broth  
 24-Hr brilliant green bile  
 48-Hr brilliant green bile

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
17100147 A	08/21/17	8:05	RC	<1.1
17100147 B	08/22/17	8:00	RC	<1.1
17100147 D	08/24/17	8:10	RC	<1.1
17100147 E	08/25/17	8:00	RC	<1.1
17100147 G	08/27/17	7:50	PJ	<1.1
17100147 H	08/28/17	8:30	PJ	<1.1
17100147 I	08/29/17	8:45	PJ	<1.1
17100147 J	08/30/17	7:30	PJ	<1.1

Note: Samples analyzed using SM 9221B.

*Gregory P. Conti*

Gregory P. Conti, Laboratory Director

Fax to 760-749-8830  
DK

# Incomplete Testing

## Western Analytical Laboratories

13744 Monte Vista Ave · Chino, CA 91710-5512 · Phone (909) 627-3528 · Fax (909) 627-0491 · www.walab.com

DATE RECEIVED: 09/05/2014  
 DATE REPORTED: 10/16/2014  
 CUSTOMER: SKYLINE RANCH COUNTRY CLUB LLC  
 ADDRESS: 18218 PARADISE MOUNTAIN RD, VALLEY CENTER, CA 92082  
 ATTENTION: PHIL JOHNSON  
 SAMPLE I.D.: MBR Plant Effluent  
 SAMPLE POINT: Final Effluent Tank  
 PERMIT NO.: R9-2005-0258 Addendum 1

WAL NO.: 14090012  
 bactiSKY  
 S360

WAL No. DATE SAMPLED TIME SAMPLED SAMPLER TIME SETUP TIME COMPLETE ANALYST

14090012 A 9-1-14 7:30 BW 7:40

RESULTS (report + or -)

24-hr lauryl tryptose broth	RESULT
48-hr lauryl tryptose broth	MPN/100mL
24-hr brilliant green bile	
48-hr brilliant green bile	

WAL No. DATE SAMPLED TIME SAMPLED SAMPLER TIME SETUP TIME COMPLETE ANALYST

B 9-2-14 7:25 BW 7:35

RESULTS (report + or -)

24-hr lauryl tryptose broth	RESULT
48-hr lauryl tryptose broth	MPN/100mL
24-hr brilliant green bile	
48-hr brilliant green bile	

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
14090012 A	09/01/14	7:30	BW	< 1.1
14090012 B	09/02/14	7:25	BW	< 1.1

14090012 E	09/05/14	7:20	RC	< 1.1
14090012 F	09/06/14	7:15	RC	< 1.1
14090012 G	09/07/14	7:20	RC	< 1.1
14090012 H	09/08/14	7:30	RC	< 1.1
14090012 I	09/09/14	7:20	RC	< 1.1
14090012 J	09/10/14	7:15	RC	< 1.1

Note: Samples analyzed using SM 9221B.

*Gregory P. Conti*  
 Gregory P. Conti, Laboratory Director

FAX TO 760-749-8830  
 DK

Sep 02 14 10:23a SKYLINE RANCH C C 17607498830 P.7

# Data Missing & Incomplete

02/17/2015  
 03/06/2015  
 SKYLINE RANCH COUNTRY CLUB LLC  
 18218 PARADISE MOUNTAIN RD, VALLEY CENTER, CA 92082  
 PHIL JOHNSON  
 MBR Plant Effluent  
 Final Effluent Tank  
 R9-2005-0258 Addendum 1

WAL NO.: 15020156  
 bactiSKY  
 S360

WAL No. DATE SAMPLED TIME SAMPLED SAMPLER TIME SETUP TIME COMPLETE ANALYST

F 2-16-15 7:25 RC 7:50

RESULTS (report + or -)

										24-hr lauryl tryptose broth	RESULT
										48-hr lauryl tryptose broth	MPN/100mL
										24-hr brilliant green bile	
										48-hr brilliant green bile	

WAL No. DATE SAMPLED TIME SAMPLED SAMPLER TIME SETUP TIME COMPLETE ANALYST

G 2-17-15 7:15 RC 7:40

RESULTS (report + or -)

										24-hr lauryl tryptose broth	RESULT
										48-hr lauryl tryptose broth	MPN/100mL
										24-hr brilliant green bile	
										48-hr brilliant green bile	

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
15020156 A	02/11/15	7:10	RC	<1.1
15020156 B	02/12/15	7:15	RC	<1.1
15020156 C	02/13/15	7:20	RC	<1.1

15020156 F	02/16/15	7:25	RC	<1.1
15020156 G	02/17/15	7:15	RC	<1.1

15020156 H	02/18/15	7:15	RC	<1.1
15020156 I	02/19/15	7:20	RC	<1.1
15020156 J	02/20/15	7:10	RC	<1.1

Note: Samples analyzed using SM 9221B.

*Gregory P. Conti*  
 Gregory P. Conti, Laboratory Director

FAX TO 760-749-8830  
 DK

# Prefilled Raw Data

## Total Coliform Raw Data Form

Date of Sample	Time Sampled	Sampler	Time Set Up										
12/1/17	8:10	RJC	8:16	-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth
				-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth

Time Complete	Analyst
48HR	RJC

na	na	na	na	na	na	na	na	na	na	na	24-Hr brilliant green bile
na	na	na	na	na	na	na	na	na	na	na	24-Hr brilliant green bile

Date of Sample	Time Sampled	Sampler	Time Set Up										
12/2/17	5:00	RJC	5:10	-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth
				-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth

Time Complete	Analyst
48HR	RJC

na	na	na	na	na	na	na	na	na	na	na	24-Hr brilliant green bile
na	na	na	na	na	na	na	na	na	na	na	24-Hr brilliant green bile

Date of Sample	Time Sampled	Sampler	Time Set Up										
12/3/17	8:10	RJC	8:20	-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth
				-	-	-	-	-	-	-	-	-	24-Hr lauryl tryptose broth

Time Complete	Analyst
48HR	AR

na	na	na	na	na	na	na	na	na	na	na	24-Hr brilliant green bile
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# **Misrepresented Material Facts In Reports That Were Submitted For Regulatory Purposes**



# Total Coliform Results Were Presented on WAL Letterhead

## Western Analytical Laboratories

13744 Monte Vista Ave · Chino, CA 91710-5512 · Phone (909) 627-3628 · Fax (909) 627-0491 · www.walab.com  
 ELAP #1559 · LACSD #10145


DATE RECEIVED: 4/4/2017  
 DATE REPORTED: 5/3/2017  
 CUSTOMER: Skyline Ranch Country Club LLC  
 ADDRESS: 18218 Paradise Mountain Rd, Valley Center, CA 92082  
 ATTENTION: Phil Johnson  
 SAMPLE I.D.: MBR Plant Effluent  
 SAMPLE POINT: Final Effluent Tank  
 PERMIT NO.: R9-2005-0258 Addendum 1

WAL NO.: 17050031  
 bacSIKY  
 S360

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
17050031 A	04/01/17	8:10	JG	<1.1
17050031 B	04/02/17	8:10	RC	<1.1
17050031 C	04/04/17	8:00	RC	<1.1
17050031 D	04/04/17	8:00	RC	<1.1
17050031 E	04/05/17	7:50	RC	<1.1
17050031 F	04/08/17	8:00	JG	<1.1
17050031 G	04/07/17	7:35	JG	<1.1
17050031 H	04/08/17	8:00	SR	<1.1
17050031 I	04/09/17	8:10	SR	<1.1
17050031 J	04/10/17	7:45	SR	<1.1

Note: Samples analyzed using SM 9221B.

Fax to 760-749-8830  
 AO

  
 Gregory P. Conti, Laboratory Director

ELAP Accredited Laboratory · Industrial Wastewater · Hazardous Waste · Domestic Water · Stormwater  
 Metal Finishing Solution Analysis And Process Control



# WAL Made It Appear an ELAP Accredited Laboratory Performed The Analysis

- Identifies ELAP Certificate Number
- Identifies that WAL is an “ELAP Accredited Laboratory”
- Reports are signed by the Laboratory Director, Mr. Conti

Western Analytical Laboratories  
 13744 Monte Vista Ave., Fremont, CA 91710-5512 - Phone (909) 627-3628 - Fax (909) 627-1481 - www.walab.com  
 ELAP #1559 - LACSD #10145

DATE RECEIVED: 4/4/2017 WAL NO.: 17050031  
 DATE REPORTED: 5/3/2017  
 CUSTOMER: Skyline Ranch Country Club LLC  
 ADDRESS: 18218 Paradise Mountain Rd., Valley Center, CA 92082  
 ATTENTION: Phil Johnson  
 SAMPLE I.D.: MBR Plant Effluent  
 SAMPLE POINT: Final Effluent Tank  
 PERMIT NO.: R9-2005-0258 Addendum 1

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
17050031 A	04/01/17	8:10	JG	<1.1
17050031 B	04/02/17	8:10	RC	<1.1
17050031 C	04/04/17	8:00	RC	<1.1
17050031 D	04/04/17	8:00	RC	<1.1
17050031 E	04/05/17	7:50	RC	<1.1
17050031 F	04/08/17	8:00	JG	<1.1
17050031 G	04/07/17	7:35	JG	<1.1
17050031 H	04/08/17	8:00	SR	<1.1
17050031 I	04/09/17	8:10	SR	<1.1
17050031 J	04/10/17	7:45	SR	<1.1

Note: Samples analyzed using SM 9221B.

Fax to 760-749-8830  
 AO

Gregory P. Conti, Laboratory Director

ELAP Accredited Laboratory - Industrial Wastewater - Hazardous Waste - Domestic Water - Stormwater  
 Metal Finishing Solution Analysis And Process Control

# WAL Made It Appear The Results Were To Be Used For Regulatory Compliance

- Reports included “Permit Number”
- Reports denote use of SM 9221 B

**Western Analytical Laboratories**  
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ELAP #1559 · LACSD #10145

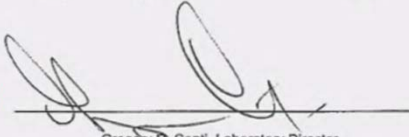
DATE RECEIVED: 4/4/2017  
DATE REPORTED: 5/3/2017  
CUSTOMER: Skyline Ranch Country Club LLC  
ADDRESS: 18218 Paradise Mountain Rd, Valley Center, CA 92082  
ATTENTION: Phil Johnson  
SAMPLE I.D.: **MRR-01 Effluent Tank**  
SAMPLE POINT: **R9-2005-0258 Addendum 1**  
PERMIT NO.: **R9-2005-0258 Addendum 1**

WAL NO.: 17050031  
bactiSKY  
S360

WAL NO.	DATE SAMPLED	TIME SAMPLED	SAMPLED BY	TOTAL COLIFORM (MPN/100mL)
17050031 A	04/01/17	8:10	JG	<1.1
17050031 B	04/02/17	8:10	RC	<1.1
17050031 C	04/04/17	8:00	RC	<1.1
17050031 D	04/04/17	8:00	RC	<1.1
17050031 E	04/05/17	7:50	RC	<1.1
17050031 F	04/08/17	8:00	JG	<1.1
17050031 G	04/07/17	7:35	JG	<1.1
17050031 H	04/08/17	8:00	SR	<1.1
17050031 I	04/09/17	8:10	SR	<1.1
17050031 J	04/10/17	7:45	SR	<1.1

Note: **Samples analyzed using SM 9221B.**

Fax to 760-749-8830  
AO

  
Gregory P. Conti, Laboratory Director

ELAP Accredited Laboratory · Industrial Wastewater · Hazardous Waste · Domestic Water · Stormwater  
Metal Finishing Solution Analysis And Process Control

# Compliance is the Goal not Enforcement

- State Waterboard upheld ELAP's enforcement Order
  - Ordered WAL:
    - Pay \$90,000 in civil liability
    - Denied accreditation
    - Implement Quality Management System
- WAL is working to implement Quality Management System
  - ELAP staff worked with WAL to help it come into compliance (ongoing)

# QUESTIONS