DAVID CERNA

Title

QA Manager

Education

B.S. - Californo ull Service Environmental Testing laboratory

nds on experience for the analysis of environmental samples by different techniques, including chromatography, Liquid Chromatography, GC/MS and sample extraction and preparation for by Liquid-Liquid, Solid Phase, sonication and other techniques.
for the IC/HPLC section he was instrumental in developing analytical methods, selecting and alytical instrumentation and providing training to lab personnel.
so been a data reviewer for analytical batches in the organic department including QA/QC and

Mr. Cerna is responsible for monitoring and upgrading the QA program for the laboratory, al audits and interacting with State and client auditors. Other responsibilities include providing ts for QA/QC issues and verifying that SOPs are in compliance with current laboratory

perience and projects in which Mr. Cerna has participated are as follows:

packages generated by IC or HPLC for different methods.

for laboratory procedures.

t of analytical methods for trace level contaminants in water by LC/MS/MS and IC

C troubleshooting and maintenance

water, wastewater, soil and hazardous waste samples by GC/MS for volatile organics

environmental samples by HPLC using different detectors and post-column derivatization

Seminars and Conferences

Mr. Cerna has participated in many technical seminars for IC, HPLC and LC/MS. He has also attended training classes and conferences relevant to his current position as QA Manager.

JOE CHAU

Title

Technical Director Inorganic

Education

C

- Develop of methods by atomic fluorescence and amalgamation for ultra trace level analysis of mercury.

- Design of a clean room and develop protocols for its operation for analysis of trace metals in ambient waters and ultra trace levels of mercury

- Maintenance and troubleshooting of spectroscopy instrumentation.

- Design and improvement of sample digestion procedures for metal analysis to reduce contamination and improve recoveries.

- Development of analytical methods for speciation analysis of metals, including the use of hyphenated analytical techniques.

Participation in Seminars and Conferences

During his time at Weck Laboratories, Mr. Chau has participated in many technical and user meetings provided by spectroscopy equipment manufacturers, such as Perkin Elmer, Thermo and Agilent.
He routinely participates in technical conferences about environmental analysis, where technical issues, new techniques and regulatory subjects are discussed; they include NEMC, NELAC and Pittcon, among others.

ALAN CHING

Title

Technical Director Organic

Education

B.S. - Chu Hai College, Hong Kong, 1985
Chemistry
Shangai University of Technology, China
Analytical Chemistry Courses 1978 - 1981

M.S. - California Polytechnic University, Pomona
Analytical Chemistry, 1997

Professional Experience

Oct/1990 to Present	Weck Laboratories, Inc., City of Industry, CA Full Service Environmental Testing laboratory
Jan/1985 to Jun/1989	Dinippon Ink and Chemical, Sheng Zheng, China Chemical Manufacturing Company

Mr. Ching' primary experience is in the organic analysis field although he has performed as bench chemist inorganic and metal analyses as well. At Weck Labs, he has hands on experience in GC, GC/MS, HPLC and organic extractions.
Mr. Ching has developed many analytical procedures for volatile organic compounds, pesticides, herbicide and semivolatile organicdicii cr. o.48 Tc (o) Tj-0.07632 Tc (92912 Tc10Tc (rOTc (.48 Tc (o) Tj-0.07 Tc (il) Tj-0.58176 Tc (e) Tj-

- Separation and detection of four different arsenic compounds using ion exchange chromatography and UV detection. (Master's degree project).

- Development of new methods for UCMR testing and other emergent contaminants

- Developing a comprehensive QA/QC program for the Laboratory in compliance with NELAC and ISO 17025.

Participation in Seminars and Conferences

Mr. Ching regularly attends many technical meeting regarding technical and regulatory issues. He has participated in NELAC conferences and other meeting related to Quality Assurance and regulatory compliance issues.

HAI-VAN NGUYEN

Title

Senior Project Manager – Technical Director Microbiology

Education

B.S. - California Polytechnic University, Pomona, CA, 2000
Biology, Minor in Chemistry

University of California, Irvine, CA, 2008
Environmental management Certificate Program

Professional Experience

Apr/2000 to Present	Weck Laboratories, Inc., City of Industry, CA Full Service Environmental Testing laboratory

Ms. Nguyen has extensive experience in the environmental laboratory. She has been a bench chemist for inorganic, bacteriological testing, HPLC, GC and GC/MS, which has given her a well rounded view of the operation of the environmental laboratory in all its aspects. Other important tasks completed include assisting the QA Manager in preparing SOPs and updating the program.
As Technical Director for Microbiology she oversees the department and provides training to analysts.
Ms. Nguyen is also very well versed in compliance regulations for potable water and wastewater programs, as well as interpretation of analytical data.
In her position as Senior Project Manager, she has managed many large environmental projects for potable water, wastewater and groundwater investigations, proving consulting to clients and interacting with regulatory agencies.

Other relevant experience and projects in which Ms. Nguyen has participated are as follows:

- Managing testing projects for large clients.
- Assisting the QA Manger in supervising and designing QA/QC operations.
- Writing and upgrading of SOPs.
- Evaluation and reviewing analytical data for inorganic analysis, HPLC, GC, GC/MS and wet chemistry methods.
- Reviewing analytical data for microbiological determinations and providing technical support to analysts.

Participation in Seminars and Conferences

Ms. Nguyen regularly participates in technical seminars and meeting regarding regulatory compliance issues.

APPENDIX 2

CODE OF ETHICS

Weck Laboratories, Inc. is committed to ensuring the integrity of our data and meeting the quality needs of our clients. We pledge to manage our business according to the following principals:

- To produce results that are technically sound and legally defensible;
- To assert competency only for work for which adequate equipment and personnel are available;
- To present services in a confidential, honest, and forthright manner;
- To have a clear understanding with the client as to the extent and kind of services to be rendered;
- To provide employees with guidelines and an understanding of the ethical and quality standards required in this industry;
- To operate facilities in a manner that protects the environment and the health and safety of employees and the public;
- To obey all pertinent federal, state, and local laws and regulations;
- To continually improve product and service quality;
- To treat employees equitably, acknowledge their scientific contributions, and provide them with opportunities for professional growth and development;
- To recognize and respond to community concerns; and
- To deal openly, honestly, and fairly in all business and financial matters with employees, clients and the public.

Weck Laboratories, Inc.

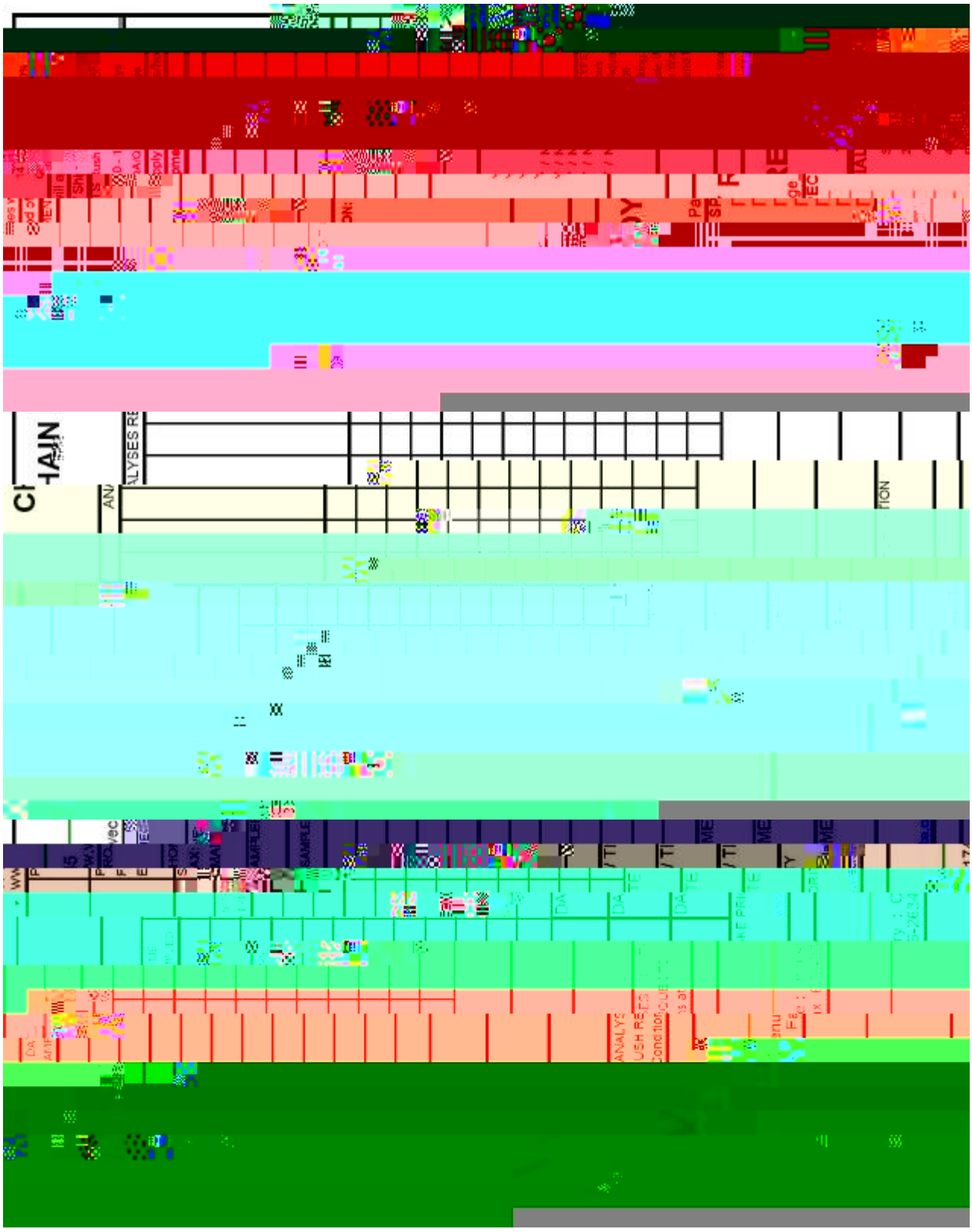
Company Organization Chart

GC	Semivolatile Organics	1	Gas chromatographs Varian 3800 with autosampler and dual ECDs and TSD detectors	EPA 504.1, EPA 552.2
Type	**Section**	**Number**	**Instrument Description**	**Tests Performed**
GC	Semivolatile Organics	1	Gas chromatograph Hewlett Packard model 5890A with autosampler and ECD and NPD detector.	EPA 507, Backup instrument for EPA 508, 504 or 515.3
GC	Semivolatile Organics	1	Gas chromatograph Hewlett Packard model 5890A with autosampler and FID and TCD detectors.	Backup instrument for EPA 8015 TPH and alcohols
GC	Volatile Organics	1	Gas Chromatograph, Hewlett-Packard 5890A with FID/PID in series with Tekmar 2016 autosampler and Tekmar 2000 Purge and Trap	EPA 8021 BTEX
HPLC	IC/HPLC	1	Liquid Chromatograph system Dionex DX500 with gradient pump, post-column reaction systems, and fluorescence and UV-VIS detectors.	EPA 531.1 and 547
HPLC	IC/HPLC	1	Liquid Chromatograph system Dionex DX500 with gradient pump and UV-VIS detector	EPA 549.2, 8315 and 8330
IC	IC/HPLC	1	Ion chromatograph DIONEX DX-120 with isocratic pump and conductivity detector	EPA 300.0
IC	IC/HPLC	1	Ion Chromatograph Dionex with gradient pump, post-column derivatization and UV-Vis detector dedicated for hexavalent chromium.	EPA 218.6, EPA 7199
IC	IC/HPLC	1	Ion Chromatograph Dionex DX-500 with gradient pump and conductivity detector dedicated to perchlorate analysis	EPA 314.0
IC	IC/HPLC	1	Ion Chromatograph system Dionex DX-600 with gradient pump, post column derivatization, conductivity and Photodiode array detectors.	EPA 300.1 and 326 low levels Bromide, chlorite, chlorate and bromate
ICP-MS	Metals	1	ICP-MS Spectrometer Agilent 7500ce	EPA 200.8, EPA 6020, EPA 1638, EPA 1640
ICP-MS	Metals	1	ICP-MS Spectrometer Perkin Elmer model ELAN DRC-II with Apex Duo Fast autosampler option with Preconcentration column On-line. Also option with hydride generation On-line.	EPA 200.8, EPA 1638, EPA 1640, Modified 200.8 for sea water and brines; hydride analysis
ICP	Metals	1	ICP Spectrometer Perkin Elmer model Optima DV-5300 with FAST autosampler	EPA 200.7, EPA 6010
CVAA	Metals	1	Mercury analyzer CETAC model M-6000 with autosampler	EPA 245.1; EPA 7470; EPA 7471

CVAF	Metals	1	Low Level Mercury Analyzer Leeman Labs model Hydra AF Gold +	EPA 1631; EPA 245.7 and methyl mercury

APPENDIX 5

Chain of Custody Form



APPENDIX 6

Sample Collection and Holding Times

Weck laboratories, Inc. - Sampling Guidelines

				Preservative					
Test Name	**Matrix**	**Bottle Type**	**Bottle size**	**Unchlorinated Water (Raw)**	**Chlorinated Water (Treated)**	**Soil/Solid**	**Holding Time until start of analysis**	**Analytical Technique**	**Analytical Method**
1,2,3-TCP	Water	Glass	2 x 40 ml	None	Ascorbic		14 days	GC/MS Isot. Dil.	EPA 524.2SIM
1,4-Dioxane	Water	Amber Glass	2 x 1 L (*)	None	None		14 days	GC/MS Isot. Dil.	EPA 8270M
Alcohols	Water	Glass	1 x 40 ml	None	None		14 days	Dir. Inj./FID	EPA 8015B
Aldehydes	Water	Glass	2 x 40 ml	CuSO4	NH4Cl/CuSO4		7 Days	GC/ECD	EPA 556
Aldehydes	Water	Glass	1 L (*)	None	Thiosulfate		3 days	HPLC-UV	EPA 8315
Aldehydes(1)	Soil/Solid	Glass	4 oz			None	3 days	HPLC-UV	EPA 8315
Alkalinity, Total	Water	Poly	250 ml		None		14 Days	Titration	SM2320B
Anions by IC (F-,Cl-,SO4=)	Water	Poly	250 ml	None	None		28 days	IC	EPA 300.0
Anions by IC (NO2-,NO3-,PO4≡)	Water	Poly	250 ml	None	None		48 hours	IC	EPA 300.0
Arsenic speciation	Water	Poly	250 ml	EDTA/acetic acid	EDTA/acetic acid		14 Days	Resin-ICP/MS	EPA 200.8
Asbestos-Sub	Water	Poly	1 L	None	None		48 Hours	TEM	EPA 100.1/.2-Sub
Bacteria-Coliform - solid/sludge/soil	Soil/solid	Glass-Sterile	4 oz			None	N/A	MTF	SM 9221B
Bacteria-Coliform - Wastewater	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		6 hours	MTF	SM 9221B
Bacteria-Coliform - Drinking Water	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		24 Hours	Colilert P/A or enumeration	SM 9223B
Bacteria-Enterococcus - Wastewater	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		24 Hours	Enumeration Quantitray	Enterolert
Bacteria-Heterotrophic Plate Count	Water	Poly-Sterile	125 ml	Thiosulfate	Thiosulfate		24 Hours	Pour Plate Method	SM 9215B
BOD	Water	Poly	1 L	None	None		48 Hours	DO Probe	SM 5210B
BOD, Carbonaceous	Water	Poly	1 L	None	None		48 Hours	DO Probe	SM 5210
Bromate	Water	Poly	250 ml	EDA	EDA		28 Days	IC	EPA 300.1 romate

Chloride	Water	Poly	250 ml	None	None		28 Days	IC	EPA 300.0
Chlorine Dioxide	Water	Glass	250 ml	None	None		24 Hours	Colorimetric	SM 4500CLO2D
Chlorine Residual	Water	Glass	250 ml	None	None		24 Hours	Colorimetric	SM 4500CL-G
Chlorite	Water	Amber Glass	125 ml	EDA	EDA		14 Days	IC	EPA 300.1
Chlorophyll-a	Water	Amber Poly	2 x 1L	None			48 Hours	Spectrophotometric	SM 10200H
Chromium, Hexavalent	Water	Poly	250 ml	None	None		24 Hours	Spectrophotometric	SM3500CR-D/7196
Chromium, Hexavalent	Soil/solid	Glass	4 oz	None	None		30 days	Spectrophotometric	EPA 3060/7196
Chromium, Hexavalent (low level)	Water	Poly	250 ml	None	None		24 Hours	IC	EPA 218.6
Chromium, Hexavalent (low level)	Soil/solid	Glass	4 oz	None	None		30 days	IC	EPA 3060/7199
Color	Water	Glass	500 ml	None	None		48 Hours	Visual	SM2120B
Conductivity (Specific Conductance)	Water	Poly	250 ml	None	None		28 Days	Electrometric	SM2510B
Cyanide	Water	Poly	500 ml	NaOH	NaOH/ascorbic		14 Days	FIA-Colorimetric	EPA 335.2/335.4
Dioxin-Sub	Water	Glass	2 x 1 L	None	None		1 year	GC/ MS	EPA 1613/8290
Diquat/Paraquat	Water	Amber poly	1L	None	Thiosulfate		7 Days	HPLC	EPA 549.2
Disinfection by-products	Water	Glass	2 x 60 ml	Sulfite/buffer	Sulfite/buffer		14 days	GC/ECD	EPA 551.1
Diuron	Water	Amber Glass	1 i	1 L03072 Tc (p) Tj0.08304 T0.03072 Tc (L0307-Tc (r) Tj77.28 0 CTc (r) T5 9..28 0MTc (r) Tj77.28 0R0.10464 T					

HAAs-Formation Potential	Water	Amber Glass	1L	None	None		14 days	GC/ECD	SM 5710B/EPA 552.2
Herbicides-DW	Water	Amber Glass	250 ml (*)	None	Thiosulfate		14 days	GC/ECD	EPA 515.3
Herbicides-GW	Water	Amber Glass	2 x 1 L (*)	None	Thiosulfate		7 Days	GC/ECD	EPA 8151
Mercury	Water	Glass jar	250 ml	HNO3	HNO3		28 Days	Cold Vapor AAS	EPA 245.1/7470
Methanol	Water	Glass	1 x 40 ml	None	None		14 Days	Dir. Inj./FID	EPA 8015B
Mercury in soil/solid/sludge	Soil/Solid	Glass jar	4 oz.	None	None		28 Days	Cold Vapor AAS	SW 7471
Metals (2)	Water	Poly	250 ml	HNO3	HNO3		6 Months	ICP/MS or ICP-AES	EPA 200.8/200.7
NDMA	Water	Amber Glass	2 x 1 L (*)	None	Ascorbic		7 days	GC/MS/CI SIM	EPA1625M
Nitrate	Water	Poly	250 ml	None	None		48 Hours	IC or FIA	EPA 300.0/353.2
Nitrite	Water	Poly	250 ml	None	None		48 Hours	IC or FIA	EPA 300.0/353.2
Nitrite+Nitrate as N	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA353.2
Nitrogen, Total Kjeldahl (TKN)	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 351.2
Nitrogen-Ammonia	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 350.1
Nitrogen-Ammonia in ww with distillation	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 350.1
Nitrosamines	Water	Amber Glass	2 x 1 L (*)	None	Ascorbic		14 days	GC/MS/CI SIM	EPA 521
Odor	Water	Glass	500 ml	None	None		24 Hours	Odor	SM 2150B
Oil and Grease	Water	Glass	1 L	HCL	HCL		28 Days	Gravimetric	EPA1664
Organotins (tributyltin)	Water	Glass	1 L (*)	None	None		7 Days	GC/MS	GC/MS
Oxygen, Dissolved	Water	Glass	BOD bottle	None	None		24 Hours	O2 Probe	SM 4500-OG
PBDEs	Water	Amber Glass	2 x 1 L (*)	None	None		14 days	GC/MS SIM	EPA 1614M
Perchlorate	Water	Poly	250 ml	None	None		28 Days	IC	EPA 314
Perchlorate - Low Level by LC/MS/MS	Water	Poly Sterile	125 ml	Sterile field filtj-0.03072 Tc (d) Tj6.24 [illegible]					

pH	Water	Poly	250 ml	None	None		3 Days	Electrometric	SM4500H
Phenolics	Water	Amber Glass	500 ml	H2SO4	H2SO4		28 Days	Spectrophotometric	EPA 420.1
Phosphate, Ortho	Water	Poly	250 ml	None	None		48 hours	FIA-Colorimetric	EPA 365.1
Phosphate, Total	Water	Poly	250 ml	H2SO4	H2SO4		28 Days	FIA-Colorimetric	EPA 365.1
Polynuclear Aromatics (PNAs) Low level	Water	Amber Glass	2 x 1L	None	Thiosulfate		7 Days	HPLC or GC/MS	EPA 610/8310 or EPA 8270SIM
Radiological-Gross Alpha	Water	Poly	1 L	HNO3	HNO3		6 Months	GPC	EPA 900.0
Radiological-Gross Alpha high TDS	Water	Poly	1 L	HNO3	HNO3		6 MonO	GPC	

t-Butyl Alcohol	Water	Glass	2 x 40 ml	none	None		14 Days	GC/MS	EPA 524.2	

APPENDIX 7

List of SOPs as of November 2008

Administration - Miscellaneous and administrative SOPs

File Name	Rev No	Rev Date	Method	Title
MIS001	16	**Mar-08**	General	Sample Receiving, Log in, Storage and Disposal
MIS002	4	Jun-04	Sampling	Industrial Wastewater Sampling Instructions
MIS003	3	Jul-05	General	Back Up Procedures for Data Files
MIS004	5	**Apr-08**	General	Chemicals, Receipt, Storage and Preparation of Solutions
MIS005	2	Apr-00	General	Procedures for Start Up and Shut Down the File Servers
MIS006				Discontinued
MIS007	2	**Mar-08**	General	Sample Container Management
MIS008	3	**Mar-08**	General	Laboratory Hazardous Waste Management
MIS009	3	**Feb-08**	General	Handling of Foreign Soil
MIS010	2	**Mar-08**	Sampling	Sampling Instructions for Protected Groundwater S

476 Tc (t) Ti84

Title
Estimating the Uncertainty of Measurements
Development and Maintenance of Test Method SOPs
Health and Safety Thfe180Tc (M) Tj-0.08445.76 6730777 (re f194.64 35852 6

Inorganic Department - Microbiology SOPs

File Name	Rev. No	Rev Date	Method	Title
MIC001				Discontinued
MIC002				Discontinued
MIC003	7	Jul-07	SM9223	Bacteriological Analysis of Water Samples by Presence/Absence and Enumeration, SM9223 (Colilert P/A and Quanti-Tray)
MIC004	5	Jun-04	SM9215B/SimPlate	Heterotrophic Plate Count: Pour Plate Method SM 9215B and SimPlate un-a

File	Rev

File Name	Rev No	Rev Date	Method	Title
WET062	2	Oct-02	420.1M	Analysis of Total Recoverable Phenolics in So

File	Rev.	Rev	Method	Title

File Name	Rev. No	Rev Date	Method	Title
ORG072	2	Mar-02	515.3	Analysis of Chlorinated Acid Herbicides in Water by Microextraction and GC-ECD, EPA Method 515.3
ORG073	3	Sep-01	505	Analysis of Chlorinated Pesticides and PCBs in Drinking Water by Microextraction and GC-ECD, EPA Method 505
ORG074	1	May-00		Establishing Retention Times Windows for Organic Analysis by GC and GC/MS
ORG075	2	Mar-01	552.2	Analysis of Haloacetic Acids by Microextraction and GC-ECD, EPA 552.2
ORG076	2	Mar-02		Instrument Maintenance for Organic Analysis
ORG077	4	**May-08**	218.6	Analysis of Hexavalent Chromium in Water by Ion Chromatography, EPA 218.6
ORG078	1	Apr-01	524.2M	Analysis of tert-butyl alcohol (TBA) in drinking water by EPA 524.2M
ORG079				Discontinued
ORG080	1	Jan-02	528	Analysis of Phenols in Drinking Water by SPE and GC/MS, EPA Method 528
ORG081	1	Jan-02	526	Analysis of Selected SVOA in Drinking Water by SPE and GC/MS, EPA Method 526
ORG082	1	Apr-02	TCP-E	Analysis of Low Levels of 1,2,3-Trichloropropane by L-L extraction and GC/MS SIM mode, SRL Method
ORG083	1	May-02	TCP-PT	Analysis of Low Levels of 1,2,3-Trichloropropane by Purge and Trap and GC/MS SIM mode, SRL Method
ORG084				Discontinued
ORG085	2	Aug-07	556	Analysis of Aldehydes by Microextraction and GC-ECD, EPA Method 556
ORG086	1	Jul-02	3535	Solid Phase Extraction Procedures - M

APPENDIX 8

Acceptance Limits for QC Determinations

The Acceptance Limits for QC determinations are in some cases mandatory limits and in other cases the limits are updated periodically from past results. This process is performed though the LIMS. For current acceptance limits please refer to the LIMS.

APPENDIX 9

DEMONSTR(T) Tj-

Analn

APPENDIX 10
Corrective Action Report

QUALITY ASSURANCE
CORRECTIVE ACTION REPORT

Date: _____ Name of Analyst: _____

Sample ID Number(s) Involved: _____

Corrective action to be implemented (1):

Were samples reanalyzed and acceptable QC obtained: **YES - NO**
Were samples reported with qualifiers: **YES - NO**

Approval of corrective action by Technical Director:

Signed: _____ Date: _____
Technical Director
Comments by TD:

Verification of Implementation of corrective action by QA Officer:

Signed: _____ Date: _____
QA Officer
Comments by QA Officer:

(1): Describe whether the samples were reanalyzed and/or reported with qualifiers, steps taken to ij252 0 TD ( ) Tj36ac ( ) Tj-0.16224 T( ) T

APPENDIX 11

Laboratory Accreditations

- NELAC #04229CA
- State of California ELAP #1132
- USEPA UCMR 2 certification
- State of Nevada Division of Environmental Protection Certificate No. CA211-2004-41
- State of Hawaii
- State of Tennessee, certificate # 04015
- Los Angeles County Sanitation Districts Industrial Wastewater Testing Number 10143
- South Coast Air Quality Management District Ambient air testing Certificate number 93LA107

APPENDIX 12
Flags used for Data Qualifiers

Qualifier code	Description
<	<
>	>
> 1%	> 1 %
>1000	> 1000
>1500	>/= 1500
>2.78	> 2.78
_<2.7	< 2.78
_<fis	< 0.588
_<FL	No free liquids
_<FP	< 65
_>23	>/= 23
_>230	>/= 230
_>FB	> 750
_>fis	> 750
_>FL	Contains free liquids
_>FP	> 200
_0.00	00 00 >F44.8 00.8 6.56 0.48 re f150.72 597.8 6.548 0.48 re f151.2 544.3.8 6.56 0.48 re f1507.84 54.8 6.5.48 0.48 r

Qualifier code	Description
AgBaH	The sample was treated with Silver, Barium and H+ cartridges to minimize chloride and sulfates interferences prior to analysis.
AgH	The sample was treated with silver and H+ cartridges to minimize chloride interferences prior to analysis.
AS-1	None Detected
AS-2	Chrysotile greater than 1 %

Qualifier code	Description
D-03	The result for this hydrocarbon is elevated due to the presence of single analyte peak(s) in the quantitation range.
D-04	The hydrocarbons present are a complex mixture of diesel range and heavy oil range organics.
D-06	The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
D-10	The heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.
D-12	Results in the Gasoline Range are primarily due to overlap from a heavier fuel hydrocarbon product.
D-13	Low boiling point fuel hydrocarbons are present below the requested fuel quantitation range.
D-14	Unidentified Hydrocarbons < C17.
D-15	Diesel
D-16	Gasoline a

Qualifier code	Description
HDSP2	Sample received in container other than VOA with headspace. Transferred at lab to VOA vial.
I-01	Due to matrix interference, the sample cannot be accurately quantified. The reported result is qualitative.
I-02	This result was analyzed outside of the EPA recommended holding time.
I-03	Low internal standard recovery possibly due to matrix interference or leak in system. The result is suspect.
I-04	No internal standard recovery
I-05	Low internal standard recovery possibly due to matrix interference. The result is suspect.
I-06	Contaminated IS spiking solution
I-07	High internal standard recovery possibly due to matrix interference.
J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
J-01	No J value detected.
L-01	The recovery of this analyte in LCS was below control limit. Sample result is suspect.
L-02	The recovery of this analyte in LCS was outside control limits. Sample was accepted based on the remaining LCS, MS and MSD results.
L-03	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
L-04	The recovery of this analyte in QC sample was outside control limits. Sample was justified as ND based on the low level standard at or below the reporting limit.
M	Sample result is matrix suspect.
M-01	Result is not valid due to high sample background
M-02	Due to the nature of matrix interferences, sample was diluted prior to extraction. The reporting limits were raised due to the dilution.
M-03	Due to insufficient sample volume, sample was diluted prior to extraction. The reporting limits were raised due to the dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The reporting limits were raised due to the dilution.
M-05	Due to the nature of matrix interferences, sample was diluted prior to analysis. The reporting limits were raised due to the dilution.
M-06	Due to the high concentration of analyte in the sample, sample extract was diluted prior to analysis. The reporting limit was raised due to this dilution.
M-07	Due to high concentration of solid particles in the sample, a smaller volume was used for analysis. The reporting limit was raised due to this dilution.
M-08	Due to insufficient sample volume, sample was diluted prior to analysis of pH.
MIC-1	All presumptive fermentation tubes did not show any amount of gas, growth or acidity. Therefore, the fecal cwg n

Qualifier code	De

Qualifier code	Description
S-04	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte conce0.24 Tc (n) Tj-04 Tc (o) Tj0.0777Cx9/coe conn r.1555j0 Tc (du) Tj-0.15552 4T6 Tc (il) Tj0 Tc (u srnrr Tj-0.23664 Tc (f) Tj0.24336 Tc (r) Tj-- Tc (f) Tj0.24336 Tc (r) Tj-x1555 Tc (al) -0.15552 Tc (e) Tj5552 Tc (ce0.2

Qualifier code	Description
S-BS	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the target analytes.
S-DUP	Duplicate analysis confirmed surrogate failure due to matrix effects.
S-GC	Surrogate recovery outside of control limits. The data was accepted based on vs accepted based og mat-07

ELAP CERTIFICATIONS