STATE OF CALIFORNIA—HEALTH AND WELFARE AGENCY PETE WILSON, Governor

DEPARTMENT OF HEALTH SERVICES
2151 BERKELEY WAY
BERKELEY, CA 94704-1011
(510)540-2800

December 7, 1995

Edward Morales
Superior Analytical Laboratory
P.O. Box 2648
Martinez, CA 94553

Certificate No.: 1542

Dear Mr. Morales:

This is to advise you that the laboratory named above has been certified/ registered as an environmental testing laboratory pursuant to the provisions of the California Environmental Laboratory Improvement Act of 1988 (Health and Safety Code, Division 1, Part 2, Chapter 7.5, commencing with Section 1010).

The fields of testing for which this laboratory has been certified/registered under this Act are indicated in the enclosed "List of Approved Fields of Testing and Analytes." Certification/registration shall remain in effect until June 30, 1997 unless revoked. This certificate is subject to an annual fee as prescribed by Section 1017(a), Health and Safety Code, on the anniversary date of the certificate.

Please note that your laboratory is required to notify the Environmental Laboratory Accreditation Program of any major changes in the laboratory such as the transfer of ownership, change of laboratory director, change in location, or structural alterations which may affect adversely the quality of analyses (Section 1014(b), California Health & Safety Code).

Please note that the new regulations pertaining to environmental laboratories were adopted on December 5, 1994 and may be found in the California Code of Regulations, Title 22, Division 4, Chapter 19 Sections 64801 through 64827.

Your continued cooperation is essential in order to establish a reputation for the high quality of the data produced by environmental laboratories certified by the State of California.

If you have additional questions, please contact Amanda Vidal at (510) 540-2800.

Sincerely,

George C. Kulasingam

George C. Kulasingam, Ph.D., Manager
Environmental Laboratory
Accreditation Program

Enclosure

ENVIRONMENTAL LABORATORY ACCREDITATION/REGISTRATION
List of Approved Fields of Testing and Analytes

Superior Precision Analytical, Inc.
835 Arnold Drive, Suite 106
Martinez, CA

TELEPHONE No: (510) 313-0850
CALIFORNIA COUNTY: Contra Costa

CERTIFICATE NUMBER:1542
EXPIRATION DATE: 06-30-97

1 Microbiology of Drinking Water and Wastewater (--------)

1.1 Total Coliforms in Drinking Water by Multiple Tube Fermentation ---------- N
1.2 Fecal Coliforms/E. Coli in Drinking Water by MTF ---------- N
1.3 Total Coliforms in Drinking Water by Membrane Filter Technics ---------- N
1.4 Fecal Coliforms/E. Coli in Drinking Water by Membrane Filter Technics ---------- N
1.5 Total Coliforms and E. Coli in Drinking Water by MMO-MUG ---------- N
1.6 Total Coliforms in Drinking Water by Clark's Presence/Absence ---------- N
1.7 Fecal Coliforms/E. Coli in Drinking Water by Clark's Presence/Absence ---------- N
1.8 Heterotrophic Plate Count ---------- N
1.9 Total Coliforms in Wastewater by Multiple Tube Fermentation ---------- N
1.10 Fecal Coliforms in Wastewater by MTF ---------- N
1.11 Total Coliforms in Wastewater by Membrane Filter Technics ---------- N
1.12 Fecal Coliforms in Wastewater by Membrane Filter Technics ---------- N
1.13 Fecal Streptococci or Enterococci by Multiple Tube Technics ---------- N
1.14 Fecal Streptococci or Enterococci by Membrane Filter Technics ---------- N

2 Inorganic Chemistry and Physical Properties of Drinking Water excluding Toxic Chemical Elements (--------)

2.1 Alkalinity ---------- N
2.2 Calcium ---------- N
2.3 Chloride ---------- N
2.4 Corrosivity ---------- N
2.5 Fluoride ---------- N
2.6 Hardness ---------- N
2.7 Magnesium ---------- N
2.8 MBAS ---------- N
2.9 Nitrate ---------- N
2.10 Nitrite ---------- N
2.11 Sodium ---------- N
2.12 Sulfate ---------- N
2.13 Total Filterable Residue and Conductivity ---------- N
2.14 Iron (Colorimetric Methods Only) ------ N
2.15 Manganese (Colorimetric Methods Only) - N
2.16 Phosphate, ortho ---------- N
2.17 Silica (Colorimetric Methods Only) ---- N
2.18 Cyanide ---------- N

3 Analysis of Toxic Chemical Elements in Drinking Water (--------)

3.1 Arsenic ---------- N
3.2 Barium ---------- N
3.3 Cadmium ---------- N
3.4 Chromium, total ---------- N
3.5 Copper ---------- N
3.6 Iron ---------- N
3.7 Lead ---------- N
3.8 Manganese ---------- N
3.9 Mercury ---------- N
3.10 Selenium ---------- N
3.11 Silver ---------- N
3.12 Zinc ---------- N
3.13 Aluminum ---------- N
3.14 Asbestos ---------- N
3.15 EPA Method 200.7 ---------- N
3.16 EPA Method 200.8 (Unregulated Elements and Lead Only) ---------- N
3.17 Antimony ---------- N
3.18 Beryllium ---------- N
3.19 Nickel ---------- N
3.20 Thallium ---------- N

4 Organic Chemistry of Drinking Water (measurement by GC/MS combination) (--------)

4.1 EPA Method 501.3 ---------- N
4.2 EPA Method 524.2 ---------- N
4.3 EPA Method 525 ---------- N
4.4 EPA Method 513 ---------- N

5 Organic Chemistry of Drinking Water (excluding measurements by GC/MS combination) (--------)

5.1 EPA Method 501.1 ---------- N
5.2 EPA Method 501.2 ---------- N
5.3 EPA Method 502.1 ---------- N
5.4 EPA Method 502.2 ---------- N
5.5 EPA Method 503.1 ---------- N
5.6 EPA Method 504 ---------- N
5.7 EPA Method 505 ---------- N
5.8 EPA Method 506 ---------- N
5.9 EPA Method 507 ---------- N
5.10 EPA Method 508 ---------- N
5.11 EPA Method 508A ---------- N
5.12 EPA Method 510.1 ---------- N
5.13 EPA Method 515.1 ---------- N
5.14 EPA Method 531.1 ---------- N
5.15 EPA Method 547 ---------- N
5.16 EPA Method 548 ---------- N
5.17 EPA Method 549 ---------- N
5.18 EPA Method 550 ---------- N
5.19 EPA Method 550.1 ---------- N
5.20 EPA Method 551 ---------- N
5.21 EPA Method 552 ---------- N

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6 Radiochemistry (--------)

6.1 Gross Alpha and Beta Radiation ----- N
6.2 Total Radium ----- N
6.3 Radium 226 ----- N
6.4 Uranium ----- N
6.5 Radon 222 ----- N
6.6 Radioactive Cesium ----- N
6.7 Iodine 131 ----- N
6.8 Radioactive Strontium ----- N
6.9 Tritium ----- N
6.10 Gamma and Photon Emitters ---------- N
6.11 Gross Alpha by Co-precipitation --------- N
6.12 Radium 228 ----- N
6.13 Radioactive Iodine ----- N
6.14 Gross Alpha & Beta in Hazardous Wastes -- N
6.15 Alpha Emitting Radium Isotopes in Haz. Wastes ----- N
6.16 Radium 228 in Hazardous Wastes ---------- N

7 Shellfish Sanitation (--------)

7.1 Shellfish meat Microbiology ----- N
7.2 Paralytic Shellfish Poison ----- N
7.3 Domoic Acid ----- N

8 Aquatic Toxicity Bioassays (--------)

8.1 Hazardous Waste Aquatic Toxicity Bioassay (Title 22, CCR, 66261.24(a)(6)) ----- N
8.2 Wastewater Testing According to Kopperdahl (1976) using Freshwater Fish. ----- N
8.3 Wastewater Testing According to EPA/600/4-85/013 using Freshwater and/or Marine Organisms --------- N
8.4 Wastewater Testing by EPA Method 1000.0 ----- N
8.5 Wastewater Testing by EPA Method 1002.0 ----- N
8.6 Wastewater Testing by EPA Method 1003.0 ----- N
8.7 Wastewater Testing by EPA Method 1006 ----- N
8.8 Wastewater Testing by EPA Method 1007 ----- N
8.9 Wastewater Testing by EPA Method 1009 ----- N
8.10 Wastewater Testing According to Anderson, et. al. (1990) using Giant Kelp (Macrocystis pyrifera) -- N
8.11 Wastewater Testing According to Anderson, et. al. (1990) using Red Abalone (Haliotus rufescens) --- N
8.12 Wastewater Testing According to Dinnel and Stober (1987) using Purple Sea Urchin (Strongylocentrotus purpuratus) ----- N
8.13 Wastewater Testing According to Dinnel and Stober (1987) using Red Sea Urchin (Strongylocentrotus franciscanus) ----- N
8.14 Wastewater Testing According to Dinnel and Stober (1987) using Sand Dollar (Dendraster excentricus) ----- N
8.15 Wastewater Testing According to procedure E 724-89 (ASTM, 1989) using Pacific Oyster (Crassostrea gigas) ----- N
8.16 Wastewater Testing According to procedure E 724-89 (ASTM, 1989) using California Bay Mussel (Mytilus edulis) ----- N
8.17 Wastewater Testing According to Standard Methods (APHA, 1989) using an alga (Skeletonema costatum) ----- N
8.18 Wastewater Testing According to EPA/600/4-90/027 using Freshwater and/or Marine Organisms --------- N

9 Physical Properties Testing of Hazardous Waste (11-29-94)

9.1 Ignitability by Flashpoint determination (Title 22, CCR, 66261.21) ----- Y
9.2 Corrosivity - pH determination (Title 22, CCR, 66261.22) ----- Y
9.3 Corrosivity - Corrosivity towards steel (Title 22, CCR, 66261.22) ----- N
9.4 Reactivity (Title 22, CCR, 66261.23) ----- Y

10 Inorganic Chemistry and Toxic Chemical Elements of Hazardous Waste

10.1 Antimony
7040(06-27-89) ----- Y
7041(--------) ----- N
10.2 Arsenic
7060(08-03-92) ----- Y
7061(--------) ----- N
10.3 Barium
7080(--------) ----- N
7081(--------) ----- N
10.4 Beryllium
7090(--------) ----- N
7091(--------) ----- N
10.5 Cadmium
7130(06-27-89) ----- Y
7131(--------) ----- N
10.6 Chromium, total
7190(06-27-89) ----- Y
7191(--------) ----- N
10.7 Cobalt
7200(06-27-89) ----- Y
7201(--------) ----- N
10.8 Copper
7210(06-27-89) ----- Y
7211(--------) ----- N
10.9 Lead
7420(06-27-89) ----- Y
7421(12-15-92) ----- Y
10.10 Mercury
7470(11-22-91) ----- Y
7471(11-22-91) ----- Y
10.11 Molybdenum
7480(--------) ----- N
7481(--------) ----- N
10.12 Nickel
7520(06-27-89) ----- Y

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10.13 Selenium
- 7740(08-03-92) ---------- Y
- 7741(--------) ---------- N

10.14 Silver
- 7760(06-27-89) ---------- Y
- 7761(--------) ---------- N

10.15 Thallium
- 7840(06-27-89) ---------- Y
- 7841(12-15-92) ---------- Y

10.16 Vanadium
- 7910(--------) ---------- N
- 7911(--------) ---------- N

10.17 Zinc
- 7950(06-27-89) ---------- Y
- 7951(--------) ---------- N

10.18 Chromium (VI)
- 7195(--------) ---------- N
- 7196(03-09-92) ---------- Y
- 7197(--------) ---------- N
- 7198(--------) ---------- N

10.19 Cyanide
- 9010(--------) ---------- N

10.20 Fluoride
- 300.0(--------) ---------- N
- 340.1(--------) ---------- N
- 340.2(--------) ---------- N
- 340.3(--------) ---------- N

10.21 Sulfide
- 9030(--------) ---------- N

10.22 Total Organic Lead
- (03-10-89) ---------- Y

10.23 EPA Method 6010(09-20-91) ---------- Y

10.24 EPA Method 6020(--------) ---------- N

11 Extraction Tests of Hazardous Waste (02-19-91)

11.1 California Waste Extraction Test (WET) (Title 22, CCR, 66261.100, Appendix II) ---------- Y
11.2 Extraction Procedure Toxicity ---------- N
11.3 Toxicity Characteristic Leaching Procedure (TCLP) All Classes ---------- Y
11.4 Toxicity Characteristic Leaching Procedure (TCLP) Inorganics Only ---------- N
11.5 Toxicity Characteristic Leaching Procedure (TCLP) Extractables Only ---------- N
11.6 Toxicity Characteristic Leaching Procedure (TCLP) Volatiles Only ---------- N

12 Organic Chemistry of Hazardous Waste (measurement by GC/MS combination)

12.1 EPA Method 8240(02-16-94) ---------- Y
12.2 EPA Method 8250(--------) ---------- N
12.3 EPA method 8270(12-07-95) ---------- Y
12.4 EPA Method 8280(--------) ---------- N
12.5 EPA Method 8290(--------) ---------- N
12.6 EPA Method 8260(12-07-95) ---------- Y

13 Organic Chemistry of Hazardous Waste (excluding measurements by GC/MS combination)

13.1 EPA Method 8010(02-19-91) ---------- Y
13.2 EPA Method 8015(--------) ---------- N
13.3 EPA Method 8020(07-06-89) ---------- Y
13.4 EPA Method 8030(--------) ---------- N
13.5 EPA Method 8040(--------) ---------- N
13.6 EPA Method 8060(--------) ---------- N
13.7 EPA Method 8080(--------) ---------- N
13.8 EPA Method 8090(--------) ---------- N
13.9 EPA Method 8100(--------) ---------- N
13.10 EPA Method 8120(--------) ---------- N
13.11 EPA Method 8140(--------) ---------- N
13.12 EPA Method 8150(--------) ---------- N
13.13 EPA Method 8310(12-05-95) ---------- Y
13.14 EPA Method 632 (--------) ---------- N
13.15 Total Petroleum Hydrocarbons (LUFT Manual) (03-10-89)---------- Y
13.16 EPA Method 8011(--------) ---------- N
13.17 EPA Method 8021(--------) ---------- N
13.18 EPA Method 8070(--------) ---------- N
13.19 EPA Method 8110(--------) ---------- N
13.20 EPA Method 8141(--------) ---------- N
13.21 EPA Method 8330(12-05-95) ---------- Y
13.22 PCB's by EPA Method 8080 (03-10-89) ---- Y
13.33 Organochlorine Pesticides by EPA Method 8080(12-05-95) ---------- Y

14 Bulk Asbestos Analysis (--------)

14.1 1% or Greater Asbestos Concentrations (Title 22, CCR, 66261.24(a)(2)(A)) ----------N

15 Substances Regulated Under the California Safe Drinking Water and Toxic Enforcement Act (Proposition 65) and Not Included in Other Listed Groups.

16 Wastewater Inorganic Chemistry, Nutrients and Demand (12-01-93)

16.1 Acidity ---------- N
16.2 Alkalinity ---------- N
16.3 Ammonia ---------- N
16.4 Biochemical Oxygen Demand ---------- N
16.5 Boron ---------- Y
16.6 Bromide ---------- N
16.7 Calcium ---------- Y
16.8 cBOD ---------- N
16.9 Chemical Oxygen Demand ---------- N
16.10 Chloride ---------- N
16.11 Chlorine Residual, total ---------- N
16.12 Cyanide ---------- Y
16.13 Cyanide amenable to Chlorination ------- N
16.14 Fluoride ---------- N
16.15 Hardness ---------- Y
16.16 Kjeldahl Nitrogen ---------- N
16.17 Magnesium ---------- Y
16.18 Nitrate ---------- N
16.19 Nitrite ---------- N
16.20 Oil and Grease ---------- Y
16.21 Organic Carbon ---------- N
16.22 Oxygen, Dissolved ---------- N

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16.23 pH ---------- N
16.24 Phenols ---------- N
16.25 Phosphate, ortho- ---------- Y
16.26 Phosphorus, total ---------- Y
16.27 Potassium ---------- N
16.28 Residue, Total ---------- Y
16.29 Residue, Filterable (TDS) ---------- Y
16.30 Residue, Nonfilterable (TSS) ---------- Y
16.31 Residue, Settleable (SS) ---------- Y
16.32 Residue, Volatile ---------- N
16.33 Silica ---------- N
16.34 Sodium ---------- N
16.35 Specific Conductance ---------- N
16.36 Sulfate ---------- Y
16.37 Sulfide (includes total & soluble) - N
16.38 Sulfite ---------- N
16.39 Surfactants (MBAS) ---------- N
16.40 Tannin and Lignin ---------- N
16.41 Turbidity ---------- N
16.42 Iron (Colorimetric Only) ---------- N
16.43 Manganese (Colorimetric Only) ---------- N
16.44 Total Recoverable Petroleum Hydrocarbons ---------- Y
16.45 Total Organic Halides ---------- N

17 Toxic Chemical Elements in Wastewater (--------)

17.1 Aluminum ---------- N
17.2 Antimony ---------- N
17.3 Arsenic ---------- N
17.4 Barium ---------- N
17.5 Beryllium ---------- N
17.6 Cadmium ---------- N
17.7 Chromium (VI) ---------- N
17.8 Chromium, total ---------- N
17.9 Cobalt ---------- N
17.10 Copper ---------- N
17.11 Gold ---------- N
17.12 Iridium ---------- N
17.13 Iron ---------- N
17.14 Lead ---------- N
17.15 Manganese ---------- N
17.16 Mercury ---------- N
17.17 Molybdenum ---------- N
17.18 Nickel ---------- N
17.19 Osmium ---------- N
17.20 Palladium ---------- N
17.21 Platinum ---------- N
17.22 Rhodium ---------- N
17.23 Ruthenium ---------- N
17.24 Selenium ---------- N
17.25 Silver ---------- N
17.26 Strontium ---------- N
17.27 Thallium ---------- N
17.28 Tin ---------- N
17.29 Titanium ---------- N
17.30 Vanadium ---------- N
17.31 Zinc ---------- N
17.32 EPA Method 200.7 ---------- N
17.33 EPA Method 200.8 ---------- N
17.34 DCP ---------- N
17.35 Asbestos ---------- N

18 Organic Chemistry of Wastewater (measurements by GC/MS combination (09-25-90)

18.1 EPA Method 624 ---------- Y
18.2 EPA Method 625 ---------- Y
18.3 EPA Method 1613 ---------- N
18.4 EPA Method 1625 ---------- N
18.5 EPA Method 613 ---------- N

19 Organic Chemistry of Wastewater (excluding measurements by GC/MS combination) (09-25-90)

19.1 EPA Method 601 ---------- N
19.2 EPA Method 602 ---------- Y
19.3 EPA Method 603 ---------- N
19.4 EPA Method 604 ---------- N
19.5 EPA Method 605 ---------- N
19.6 EPA Method 606 ---------- N
19.7 EPA Method 607 ---------- N
19.8 EPA Method 608 ---------- Y
19.9 EPA Method 609 ---------- N
19.10 EPA Method 610 ---------- Y
19.11 EPA Method 611 ---------- N
19.12 EPA Method 632 ---------- N
19.13 EPA Method 619 ---------- N

20 Inorganic Chemistry and Toxic Chemical Elements of Pesticide Residues in Food (--------)

20.1 Processed Foods by One of the Following Methods
Atomic Absorption Spectrophotometry ---------- N
Inductively Coupled Plasma Atomic Emission Spectrophotometry ---------- N
Inductively Coupled Plasma/Mass Spectrometry ---------- N
Colorimetry ---------- N
20.2 Raw Commodities by One of the Following Methods
Atomic Absorption Spectrophotometry ---------- N
Inductively Coupled Plasma Atomic Emission Spectrophotometry ---------- N
Inductively Coupled Plasma/Mass Spectrometry ---------- N
Colorimetric ---------- N
20.3 Dairy Products by One of the Following Methods
Atomic Absorption Spectrophotometry ---------- N
Inductively Coupled Plasma Atomic Emission Spectrophotometry ---------- N
Inductively Coupled Plasma/Mass Spectrometry ---------- N
Colorimetry ---------- N

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20.4 Feed Products by One of the Following Methods
- Atomic Absorption Spectrophotometry ---- N
- Inductively Coupled Plasma Atomic Emission Spectrophotometry ---- N
- Inductively Coupled Plasma/Mass Spectrometry ---- N
- Colorimetry ---- N

21 Organic Chemistry of Pesticide Residues in Food (measurements by GC/MS) (--------)

21.1 Gas Chromatographic/Mass Spectrometric Methods in Processed Foods ---- N
21.2 Gas Chromatographic/Mass Spectrometric Methods in Raw Commodities ---- N
21.3 Gas Chromatographic/Mass Spectrometric Methods in Dairy Products ---- N
21.4 Gas Chromatographic/Mass Spectrometric Methods in Feed Products ---- N

22 Organic Chemistry of Pesticide Residues in Food (Excluding Measurement by GC/MS Combination) (--------)

22.1 Halogenated Compounds in Processed Foods by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.2 Organophosphorous Compounds in Processed Foods by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.3 Carbamates in Processed Foods by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.4 Halogenated Compounds in Raw Commodities by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.5 Organophosphorous Compounds in Raw Commodities by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.6 Carbamates in Raw Commodities by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.7 Halogenated Compounds in Dairy Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.8 Organophosphorous Compounds in Dairy Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.9 Carbamates in Dairy Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.10 Halogenated Compounds in Feed Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.11 Organophosphorous Compounds in Feed Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N

22.12 Carbamates in Feed Products by One of the Following Methods
- Gas Chromatography ---- N
- High Pressure Liquid Chromatography ---- N
- Liquid Chromatography/Mass Spectrometry ---- N