

Woodward-Clyde 
Consultants

Engineering & sciences applied to the earth & its environment

1553916

May 19, 1994
4E02153A-1

21

Mr. S. Andrew Sochanski
U.S. Environmental Protection Agency
Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Re: Notification of Subcontractors and
Submittal of Current PEs for the Selected Laboratories
Administrative Consent Order, Docket No. III-91-16-DC
Former Koppers Company, Inc., Newport Site
Newport, Delaware

Dear Mr. Sochanski:

On behalf of Beazer East, Inc. (Beazer) and E. I. DuPont de Nemours and Company, Inc. (DuPont), and in accordance with Section VIII (B)(1) of the referenced Consent Order, Woodward-Clyde Consultants (WCC) has prepared this letter to provide written notification of the identity and qualifications of the drilling company selected to provide drilling services and the laboratory selected to perform pesticide and PCB analyses for this project. In addition, in response to EPA's concerns regarding the performance evaluation for Enseco Wadsworth/Alert's Pittsburgh lab, current performance evaluations for Wadsworth Alert's Pittsburgh and Canton labs are provided with this letter.

James C. Anderson Associates (JCA) of Mt. Laurel, New Jersey has been selected to provide drilling services for the installation of monitoring wells and soil borings at the site. JCA has provided these services to numerous environmental and superfund sites in the area. Information regarding the qualifications of JCA to perform work for this project is provided with this letter (Attachment A).

Wadsworth-Alert in Canton, Ohio has been selected as the laboratory to provide services for the performance of pesticide and PCB analyses of samples collected from the site. This laboratory has been selected for this suite of analyses due to potential scheduling conflicts with other programs at the Pittsburgh lab during performance of this program. The qualifications of Wadsworth-Alert has been provided in the Project Plans submitted to the EPA on February 1, 1994. A performance evaluation (PE) including pesticide/PCBs for the Canton lab has been provided with this letter as Attachment B.

**Woodward-Clyde
Consultants**

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Upon review of the PEs submitted to EPA on February 14, 1994, the EPA raised concern over pesticide/PCBs and four specific compounds: benzo(a)pyrene, bromodichloromethane, chloromethane, and alkalinity. The concerns regarding the results of the PE for pesticide/PCBs are addressed in Attachment B; the results of this PE are within acceptance limits. Current PEs for the Pittsburgh lab are provided as Attachment C; this group of PEs addresses EPA's concerns for bromodichloromethane, alkalinity, and benzo(a)pyrene (see the New York State PE for benzo(a)pyrene results). Because chloromethane was the only parameter in the volatile organic fraction that failed the PE, submitted to EPA during February 1994, it did not require reevaluation at that time. In addition, a PE for the Enseco California lab selected for PCDD/PCDF analysis has been included in Attachment C.

JCA is located at:

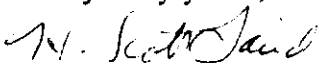
James C. Anderson Associates, Inc.
907 Pleasant Valley Avenue
Mount Laurel, New Jersey 08054

Enseco Wadsworth-Alert's Canton lab is located at:

Wadsworth-Alert Laboratories
4101 Shuffel Road
North Canton, Ohio 44720

We trust you will find this information satisfactory.

Very truly yours,



H. Scott Laird, P.G.
Project Manager

cc: Peter Ludzia, EPA
Walter Graham, EPA
Samantha Philips-Fairchild, EPA
Margie Zhang, DNREC
Jane Patarcity, Beazer
Brandt Butler, DuPont
Joel Karmazyn, DuPont
T. Faye, Esq., Beazer

Michele Gutman, Esq., BCCZ
Norm Griffiths, Esq., DuPont
Susan Colman

Attachment A

AR303623

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL
DRILLING SERVICES**

James C. Anderson Associates, Inc. maintains a fully qualified drilling department. Our drillers are all licensed in the States of New Jersey, Delaware, Pennsylvania, and Maryland. They have completed the OSHA 40 Hour Hazardous Site Worker course and are versed in all facets of the drilling industry.

Our drilling equipment has the capability to drill with hollow stem augers, mud rotary, and driven casing methods. Our sampling capabilities include split-spoon, Shelby Tube, and stationary piston. If rock coring is needed, we have an NX Christensen Core Barrel and also a 6-inch concrete barrel mainly used for bridge coring.

DRILLING SERVICES

- Soil Test Borings
- Rock Coring
- Groundwater Monitoring Well Installations
- Methane Gas Monitoring Well Installations
- Methane Gas Recovery and Vent System Installations
- Piezometer Installations
- Sealing of Abandoned Wells
- Recovery and Injection Wells

EQUIPMENT

- Truck Mounted Failing F-7
- ATV Mounted Failing F-2
- Truck Mounted Mobile Model B40L
- Truck Mounted Mobile B-57
- Truck Mounted Failing 1500
- Acker Tripod Rig
- Welding Machines
- Water Trucks
- Air Compressors
- Steam Cleaners

Our hollow stem auger capabilities extend to depths of 150 feet. With mud rotary, our rigs are capable of reaching up to 600 feet. We also own construction augers with varied sizes of cutter heads from one foot to three feet in diameter. JCA Associates owns accessory equipment such as submersible and centrifugal pumps, steam cleaners, jack hammers, and air compressors which assist us in the Environmental and Geotechnical Drilling Industry. JCA Associates also makes our licensed drillers available on an hourly charge basis to assist you in your own shallow subsurface investigations not otherwise requiring drilling services.

AR303624

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: Dan Raviv Associates

PROJECT NAME: East Rutherford Monitoring wells

PERIOD OF PERFORMANCE: July 1990

JCA Associates was the drilling contractor selected to install twenty (20) ground water monitoring wells. JCA Associates obtained well permits and constructed the wells in accordance with NJDEP standard specifications for monitoring wells in unconsolidated materials. Test borings were performed at each location in accordance with ASTM D 1586-84. The drilling rig and tools were decontaminated with a steam cleaner between well locations to prevent possible cross contamination. The drilling spoils were contained in 55 gallon drums and transported to a central location on site.

Seventeen (17) of the wells were installed by the hollow stem auger drilling method, with an average depth being fifteen (15) feet. The wells were constructed of 2 or 4 inch flush joint P.V.C. casing and screen. Three (3) wells were installed as double-cased wells. The outer casing consisted of 8-inch carbon steel pipe installed to an average depth of twenty feet. The inner casing consisted of 4-inch flush joint P.V.C. casing and screen, installed to an average depth of forty (40) feet. Each well was developed until a clear, sand and silt free discharge of water was obtained. JCA Associates provided all labor and materials to complete this project.

AR303625

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: E.I. Du Pont De Nemours and Company, Inc.

PROJECT NAME: Carneys Point Monitoring Wells

PERIOD OF PERFORMANCE: June 1990

JCA Associates was the selected drilling contractor by E.I. du Pont to perform the installation of eighteen (18) ground water monitoring wells at the Chambers Works Facility. JCA Associates obtained well permits and constructed the wells in accordance with New Jersey Department of Environmental Protection (NJDEP) standard specifications for monitoring wells in unconsolidated materials.

The wells were installed by the mud rotary drilling method, with depths ranging from forty to one-hundred and fifty feet. The wells were constructed of four inch flush joint stainless steel screen and riser pipe. Each well was developed until a clear, sand and silt free discharge of water was attained.

CLIENT NAME: Bechtel Power Corporation

PROJECT NAME: Delmarva Power and Light Company
Hay Road Geotechnical Investigation

PERIOD OF PERFORMANCE: January 1990

JCA Associates was the selected drilling contractor by Bechtel Power Corporation to perform a subsurface geotechnical investigation at Delmarva Power and Light Company - Hay Road Facility. JCA Associates performed 2400 linear feet of soil borings in accordance with ASTM D 1586-84, installed three observation wells and obtained fifteen undisturbed samples to confirm subsurface conditions and obtain the necessary data for building foundation designs. In addition to drilling, JCA Associates surveyed boring locations establishing local coordinates and elevations.

AR303626

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: Standard Chlorine of Delaware, Inc.

PROJECT NAME: Monitoring Well Installations

PERIOD OF PERFORMANCE: February 1990

JCA Associates was the drilling contractor selected to install ten (10) ground water monitoring wells. JCA Associates obtained well permits and constructed the wells in accordance with Delaware Department of Natural Resources and Environmental Control standard specifications for monitoring wells in unconsolidated materials. Test borings were performed at each location in accordance with ASTM D 1586-84. The drilling rig and tools were decontaminated with a steam cleaner between well locations to prevent possible cross contamination. The drilling spoils were contained in 55 gallon drums and transported to a central location on site.

Eleven of the wells were installed by the hollow stem auger drilling method into the Columbia Formation with an average depth being seventy (70) feet. These wells were constructed of four inch stainless steel screen and four inch welded black carbon steel pipe. Two wells were installed by the mud rotary drilling method in the Potomac Formation. The well was constructed as double cased. The outer casing consisted of eight inch black carbon thread and coupled steel casing installed to a depth of seventy-eight (78) feet. The inner casing consisted of four inch stainless steel screen and four inch black carbon thread and coupled steel casing installed to a depth of one hundred thirty-eight (138) feet. Each well was developed with a submersible pump until a clear, sand and silt free discharge of water was attained. JCA Associates provided all labor and materials to complete this project.

AR303627

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: Waste Technology, Inc.
PROJECT NAME: Tabernacle Waste Drum Dump Site
PERIOD OF PERFORMANCE: July 1991

JCA Associates was the drilling contractor selected to install twenty-two (22) groundwater monitoring wells. JCA Associates obtained well permits and constructed the wells in accordance with New Jersey Department of Environmental Protection (NJDEP) standard specifications for monitoring wells in unconsolidated materials. Test borings were performed at each location in accordance with ASTM D 1586-84. The drilling rig and tools were decontaminated with a steam cleaner between well locations to prevent possible cross contamination. The drilling spoils were contained in 55 gallon drums and transported to a central location on site.

The wells were installed by the mud rotary drilling method, with an average depth being one hundred twenty-five (125) feet. The wells were constructed of four (4) inch Schedule 40 stainless steel screen and riser pipe. Each well was developed until a clear, sand and silt free discharge of water was attained. JCA Associates provided all labor and materials to complete this project.

AR303628

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: Standard Chlorine of Delaware, Inc.

PROJECT NAME: S.C. Kearny, N.J. Monitoring Wells

PERIOD OF PERFORMANCE: December 1990

JCA Associates was the drilling contractor selected to install twenty (20) groundwater monitoring wells at Standard Chlorine Kearny, N.J. facility. JCA Associates obtained well permits and constructed the wells in accordance with New Jersey Department of Environmental Protection (NJDEP) standard specifications for monitoring wells in unconsolidated materials.

The wells were installed by the hollow stem auger drilling method, with an average depth being twenty feet. The wells were constructed of four-inch flush joint stainless steel screen and riser pipe. Each well was developed until a clear, sand and silt free discharge of water was attained.

AR303629

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: G.S.M. Inc.

PROJECT NAME: Monitoring Well Installations

PERIOD OF PERFORMANCE: October 1990

JCA Associates was the drilling contractor selected to install thirteen (13) ground water monitoring wells. JCA Associates obtained well permits and constructed the wells in accordance with New Jersey Department of Environmental Protection standard specifications for monitoring wells in unconsolidated materials. Test borings were performed at each location in accordance with ASTM D 1586 - 84. The drilling rig and tools were decontaminated with a steam cleaner between well locations to prevent possible cross contamination. The drilling spoils were contained in 55 gallons drums and transported to a central location on site.

Nine of the wells were installed by the hollow stem auger drilling method with an average depth being thirty eight (38) feet. These wells were constructed of four inch flush joint P.V.C. casing and screens. Four wells were installed by the mud rotary drilling method and constructed as double cased. The outer casing consisted of eight inch black carbon thread and coupled steel casing installed to a depth of forty (40) feet. The inner casing consisted of four inch flush join P.V.C. casing and screens installed to an average depth of one hundred sixty-five (65) feet. Each well was developed with a submersible pump until a clear, sand and silt free discharge of water was attained. JCA Associates provided all labor and materials to complete this project.

AR303630

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: McLaren / Hart
PROJECT NAME: Ausimont Co. Monitoring Wells
PERIOD OF PERFORMANCE: July 1991

JCA Associates was the drilling contractor selected to perform the following task:

● *Soil Borings*

Twenty (20) soil borings were drilled to an average depth of twenty five (25) feet each. The borings were performed in accordance with ASTM D 1586-84 with a hollow stem auger drilling rig. The borings were tremie grouted from total depth drilled to surface with a cement - bentonite grout.

● *Monitoring Wells*

Six (6) wells were installed with a hollow stem auger drilling rig to an average depth of twenty-five feet.

Four (4) wells were installed with a mud rotary drilling rig to depths of 111, 186, 255 and 290 feet each respectively. Test borings were performed in accordance with ASTM D 1586-84 at each location. The wells were constructed of four inch Schedule 40 PVC screen and riser pipe. Installation of the wells were in accordance with NJDEP standard specifications for monitoring wells in unconsolidated materials.

● *Well Abandonment*

JCA Associates abandoned two (2) test wells in accordance with NJDEP specifications. One (1) well was eight (8) inches in diameter extending to a depth of 288 feet. The second well was four (4) inches in diameter extending to a depth of 261 feet.

● *Pump Test*

JCA Associates performed a 24-hour pump test to determine aquifer characteristics. Water levels were taken with an electric tape (water level indicator) and the capacity was determined utilizing a flow meter.

● *Well Development*

JCA Associates re-developed four (4) existing test wells and prepared the same for well televising. The re-development technique utilized was simple air-lifting. JCA introduced potable water to each televised well 24 hours prior, which enabled a clear picture to be observed.

AR303631

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: McLaren - Hart

PROJECT NAME: Delaware Sand and Gravel

PERIOD OF PERFORMANCE: June 1991

JCA Associates was the drilling contractor selected to install three (3) monitoring wells and nineteen (19) soil borings. JCA Associates obtained well permits and constructed the wells in accordance with Delaware Department of Natural Resources and Environmental Control standard specifications for monitoring wells in unconsolidated materials. Test borings were performed at each location in accordance with ASTM D 1586-84. The drilling rig and tools were decontaminated with a steam cleaner between well locations to prevent possible cross contamination. The drilling spoils were contained in 55 gallon drums and transported to a central location on site.

The wells were installed in triplet with the shallow well constructed as single cased, (4" stainless steel) the intermediate as double cased, (8" carbon steel & 4" stainless steel) and the deep as triple cased (12" carbon steel, 8" carbon steel, 4" stainless steel) eleven (11) of the soil borings were cased off with 6" carbon steel to first confining layer, advanced to total depth and tremie grouted upon completion. The mud rotary drilling method was utilized for these tasks.

Eight (8) of the soil borings were drilled with and all-terrain vehicle drill rig utilizing the hollow stem auger drilling method.

AR303632

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

CLIENT NAME: Federal Aviation Admin. Tech. Center

PROJECT NAME: Federal Aviation Admin. Tech. Center

PERIOD OF PERFORMANCE: December 1991 to January 1992

Description of Services:

JCA Associates was the drilling contractor selected to perform the following tasks:

- **Monitoring Wells**

Three (3) wells were installed utilizing the mud rotary method to average depths of thirty-eight (38) feet. The wells were constructed of four (4) inch diameter Schedule 40 PVC casings and screens.

Three (3) wells were installed utilizing the mud rotary method; and constructed as double cased. The outer steel casing consisted of eight (8) inch diameter schedule 40 Carbon Steel, installed to an average depth of forty one (41) feet. The inner casing consisted of four (4) inch diameter schedule 40 PVC casing and screen installed to average depths of one hundred (100) feet.

Test borings were performed at each well location in accordance with ASTM D 1586-84. The installation procedures were in conformance with NJDEPE standard specifications for monitoring wells in unconsolidated materials. The wells were developed by pumping with a submersible pump until a clear, sand and silt free discharge of water was attained.

- **Recovery Well and Pump Installations**

Three (3) wells were installed utilizing the mud rotary method; and constructed as double cased. The outer steel casing consisted of fourteen (14) inch diameter schedule 40 carbon steel, installed to an average depth of forty-one (41) feet. The inner casing consisted of eight (8) inch diameter Schedule 5 PVC casings and screen to an average depth of one hundred (100) feet. Sieve analysis were performed to determine the appropriate slot size of the screen.

Test borings were performed at each well location in accordance with ASTM D 1586-84. The installation procedures were in conformance with NJDEPE standard specifications for monitoring wells in unconsolidated materials. The wells were developed by pumping with a submersible pump until a clear, sand and silt free discharge of water was attained.

AR303633

**JAMES C. ANDERSON ASSOCIATES, INC.
ENVIRONMENTAL / GEOTECHNICAL DRILLING
RELEVANT EXPERIENCE**

RE: Federal Aviation (Cont.)

JCA installed the permanent pumping equipment (submersible pumps) and pitless adapter units.

- **Pump and Aquifer Tests**

JCA performed the following tests on each recovery well to obtain data needed to interpret pump and aquifer characteristics:

- 8-hour Step Drawdown Test
- 48-hour Background Readings
- 72-hour Pump Test
- 36-hour Recovery Test

JCA supplied all needed materials and labor to complete this project

AR303634

Attachment B

AR303635

REGION 5
ORGANIC PERFORMANCE EVALUATION SAMPLE
INDIVIDUAL LABORATORY SUMMARY REPORT
FOR Q3 FY 93

6-9-93

LABORATORY: Wadsworth / Alert Labs (OH)
PERFORMANCE: ACCEPTABLE - No Response Required
RANK: Above = 0 Same = 9 Below = 24

% SCORE: 100
REPORT DATE: 06/
MATRIX: WAT

| COMPOUND | PREDICTION INTERVALS | | | | LABORATORY DATA | | #LABS MIS-QNT | PROGRAM #LABS NOT-ID | DATA #LABS ID-CPO | TOT #L |
|------------------------------------|----------------------|---------------|--------------|--------------|-----------------|----|---------------|----------------------|-------------------|--------|
| | WARNING LOWER | WARNING UPPER | ACTION LOWER | ACTION UPPER | CONC | Q | | | | |
| TCL VOLATILE | | | | | | | | | | |
| BROMOMETHANE | 23 | 38 | 21 | 46 | 45 | S | 1 | 0 | 34 | |
| VINYL CHLORIDE | 46 | 80 | 41 | 99 | 77 | | 2 | 0 | 34 | |
| ACETONE | 46 | 200 | 24 | 220 | 120 | | 3 | 1 | 33 | |
| CHLOROFORM | 10 | 13 | 10 | 13 | 12 | | 2 | 0 | 34 | |
| CARBON TETRACHLORIDE | 56 | 76 | 53 | 80 | 66 | | 2 | 0 | 34 | |
| BROMODICHLOROMETHANE | 120 | 150 | 120 | 150 | 150 | | 3 | 0 | 34 | |
| DIBROMOCHLOROMETHANE | 50 | 59 | 49 | 60 | 53 | | 5 | 0 | 34 | |
| 1,1,2-TRICHLOROETHANE | 51 | 61 | 50 | 62 | 55 | | 1 | 0 | 34 | |
| BROMOFORM | 12 | 15 | 11 | 16 | 14 | | 1 | 0 | 34 | |
| 1,1,2,2-TETRACHLOROETHANE | 120 | 150 | 110 | 150 | 150 | | 3 | 0 | 34 | |
| ETHYL BENZENE | MU | MU | MU | MU | 9 | | 0 | 0 | 34 | |
| STYRENE | 170 | 220 | 160 | 230 | 200 | | 5 | 0 | 34 | |
| TCL SEMIVOLATILE | | | | | | | | | | |
| 2,2'-OXYBIS(1-CHLOROPROPANE) | 38 | 56 | 36 | 66 | 45 | | 2 | 0 | 34 | |
| NAPHTHALENE | 17 | 26 | 15 | 31 | 20 | | 1 | 0 | 34 | |
| ACENAPHTHENE | 44 | 65 | 40 | 76 | 50 | | 0 | 0 | 34 | |
| HEXACHLOROBENZENE | 22 | 31 | 21 | 35 | 27 | | 2 | 0 | 34 | |
| FLUORANTHENE | 17 | 25 | 16 | 28 | 18 | | 0 | 0 | 34 | |
| PYRENE | 53 | 74 | 50 | 86 | 63 | | 3 | 0 | 34 | |
| DIBENZ(A,H)ANTHRACENE | 11 | 20 | 10 | 22 | 13 | | 1 | 0 | 34 | |
| TCL PESTICIDES | | | | | | | | | | |
| DELTA-BHC | 0.076 | 0.1 | 0.073 | 0.1 | 0.081 | | 3 | 0 | 34 | |
| ALDRIN | 0.12 | 0.2 | 0.11 | 0.21 | 0.15 | | 3 | 0 | 34 | |
| DIELDRIN | 0.36 | 0.43 | 0.34 | 0.44 | 0.39 | | 4 | 0 | 34 | |
| ENDRIN | 0.67 | 0.92 | 0.63 | 0.96 | 0.82 | | 3 | 0 | 34 | |
| ENDOSULFAN II | MU | MU | MU | MU | 0.08 | | 0 | 1 | 33 | |
| 4,4'-DDT | 0.26 | 0.34 | 0.24 | 0.35 | 0.31 | | 5 | 0 | 34 | |
| ENDRIN KETONE | 0.27 | 0.36 | 0.25 | 0.38 | 0.29 | | 1 | 0 | 34 | |
| ENDRIN ALDEHYDE | 0.13 | 0.26 | 0.11 | 0.28 | 0.16 | | 2 | 1 | 33 | |
| NON-TCL VOLATILE | | | | | | | | | | |
| BENZENE, N-PROPYL- | | | | | 35 | | | 5 | 29 | |
| 2-PROPENITRILE | | | | | 33 | | | 2 | 32 | |
| VINYL ACETATE | | | | | 0 | NR | | 34 | 0 | |
| NON-TCL SEMIVOLATILE | | | | | | | | | | |
| ANILINE | | | | | 0 | NR | | 20 | 14 | |
| BENZYL ALCOHOL | | | | | 69 | | | 4 | 30 | |
| TCL VOLATILE (Contaminants) | | | | | | | | | | |
| 2-BUTANONE | | | | | 11 | | | 15 | 19 | |

AR303636

REGION 5
 ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR QS 3 FY 93

6-9-93

LABORATORY: Wadsworth / Alert Labs (OH)
 PERFORMANCE: ACCEPTABLE - No Response Required
 RANK: Above = 0 Same = 9 Below = 24

% SCORE: 100
 REPORT DATE: 06/
 MATRIX: WAT

| COMPOUND | PREDICTION INTERVALS | | | | LABORATORY DATA | | #LABS MIS-QNT | PROGRAM #LABS NOT-ID | DATA #LABS ID-CPO | TOT #LA |
|--|----------------------|---------------|--------------|--------------|-----------------|---|---------------|----------------------|-------------------|---------|
| | WARNING LOWER | WARNING UPPER | ACTION LOWER | ACTION UPPER | CONC | Q | | | | |
| TCL SEMIVOLATILE (Contaminants) | | | | | | | | | | |
| PHENOL | | | | | 3 | | | 13 | 21 | 1 |
| BIS(2-CHLOROETHOXY)METHANE | | | | | 0.9 | | | 17 | 17 | 1 |
| 1,2,4-TRICHLOROBENZENE | | | | | 2 | | | 12 | 22 | 1 |
| HEXACHLOROCYCLOPENTADIENE | | | | | 1 | | | 22 | 12 | 1 |
| 2,4,6-TRICHLOROPHENOL | | | | | 1 | | | 13 | 21 | 1 |
| NON-TCL VOLATILE (Contaminants) | | | | | | | | | | |
| UNKNOWN | | | | | 7 | | | 22 | 12 | 1 |
| 2-PROPANOL (ACN) | | | | | 86 | | | 31 | 3 | 1 |
| NON-TCL SEMIVOLATILE (Contaminants) | | | | | | | | | | |
| ALDOL CONDENSATION PRODUCT | | | | | 3 | | | 33 | 1 | |
| ALDOL CONDENSATION PRODUCT | | | | | 40 | | | 33 | 1 | |
| UNKNOWN | | | | | 2 | | | 19 | 15 | |
| UNKNOWN | | | | | 3 | | | 25 | 9 | |
| UNKNOWN | | | | | 4 | | | 27 | 7 | |
| UNKNOWN | | | | | 3 | | | 29 | 5 | |
| ETHANOL,2-(2-ETHOXYETHOXY)- | | | | | 3 | | | 32 | 2 | |

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 0
 # OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF NON-TCL CONTAMINANTS: 0

AR303637

REGION 5
 ORGANIC PERFORMANCE EVALUATION SAMPLE
 INDIVIDUAL LABORATORY SUMMARY REPORT
 FOR CB 4 FY 93

LABORATORY: Wadsworth / Alert Labs (04)
 PERFORMANCE: UNACCEPTABLE - Response Explaining Deficiency(ies) Required
 RANK: Above = 30 Same = 2 Below = 3

% SCORE: 71.0
 REPORT DATE: 09/03/93
 MATRIX: WATER

| COMPOUND | PREDICTION INTERVALS | | | | LABORATORY DATA | | # LABS MIS-INT | PROGRAM # LABS NOT-ID | DATA # LABS ID-CPD | TOTAL # LABS |
|--------------------------------------|----------------------|---------------|--------------|--------------|-----------------|---|----------------|-----------------------|--------------------|--------------|
| | WARNING LOWER | WARNING UPPER | ACTION LOWER | ACTION UPPER | CONC | Q | | | | |
| DIBENZOTRIFOPHENE | | | | | 28 | | | 0 | 40 | 40 |
| TCL VOLATILE (Contaminants) | | | | | | | | | | |
| TRICHLOROETHENE | | | | | 3 | | | 4 | 36 | 40 |
| TCL PESTICIDES (Contaminants) | | | | | | | | | | |
| 4,4'-DDO | | | | | 0.007 | | | 36 | 4 | 40 |
| NON-TCL SEMI-VOLATILE (Contaminants) | | | | | | | | | | |
| UNKNOWN | | | | | 3 | | | 23 | 17 | 40 |
| BENZOIC ACID, SILVER (1+) SAL | | | | | 18 | | | 39 | 1 | 40 |

OF TCL COMPOUNDS NOT-IDENTIFIED: 0
 # OF TCL COMPOUNDS MIS-QUANTIFIED: 6
 # OF TCL CONTAMINANTS: 0

OF NON-TCL COMPOUNDS NOT-IDENTIFIED: 1
 # OF NON-TCL CONTAMINANTS: 0



ENSECO-WADSWORTH/ALERT Laboratories
Division of Corning Lab Services, Inc.

October 27, 1993

Corporate and Laboratory:

4101 Shuttle Drive NW
North Canton, OH 44720

216-497-3386
FAX 216-497-0772

USEPA Office of Administration and Resources Management
Office of Administration and Resources Management
Research Triangle Park, North Carolina 27711

Subject: Cure Notice, Contract No. 68-D1-0085

Attn: Dana G. Lloyd, Contracting Officer

This letter is in response to the recent Cure Notice received by Enseco-Wadsworth/ALERT Laboratories, October 18, 1993. The low score for the fourth quarter Performance Evaluation Sample (QB4/PY93) can be attributed to recoveries of TCL semivolatile analytes. Recoveries for several compounds exceeded the acceptance limits on the low end. The volatile and pesticide/PCB scores were within the acceptable limits.

In order to implement appropriate corrective action, an investigation as to the probable cause(s) was broken down into three categories. The first category consists of a technical review. This includes a thorough review of all supporting data associated with the reported results. The second category is a procedural review which includes proper technique in performing the extraction and general good laboratory practices. The third category is a historical review which includes a review of previous data with the intent to identify possible trends or anomalies which may have led to biased recoveries for semivolatile analytes.

1. **Technical Review:** All compounds were correctly identified, but with low recoveries. Of a total of 15 compounds, 8 exceeded acceptance limits on the low end of the scale. Low recoveries were reported for each of the identified BNA analytes. Recoveries were either just barely in range, or just barely out of range, all on the low end. All calculations and integrations have been reviewed and eliminated as possible sources of error. This reduces the technical review to accuracy of associated standards. Surrogate and internal standards were well within an acceptable range. Forms II and VIII from the case are included in Attachment A. The internal standards (IS) were higher than average, which may have biased the quantitation low. However, since surrogate recoveries were not low, such a conclusion is still questionable.

Laboratories:

Pittsburgh, PA
412-326-5477

Tampa, FL
813-621-0784

CLP standards are purchased from Restek with the appropriate certifications. The initial calibration standards (5-point) were prepared and run on 7/23/93. The continuing calibration for the PES was run on 7/26/93. The following is a comparison of response factors for the calibration standards for the initial 5-point, a previous performance evaluation sample, and independent standards (Supelco).

TABLE 1:

| Compound | (7/26) | vs. | (7/23) | %D |
|------------------------------|---------------|-----|-----------------|-----|
| | Failed PES RF | | Initial Avg. RF | |
| 1) Dimethyl Phthalate | 1.156 | | 1.099 | 5.2 |
| 2) Acenaphthene | 1.180 | | 1.173 | 0.6 |
| 3) 4-Bromophenylphenyl ether | 0.237 | | 0.249 | 4.8 |
| 4) Hexachlorobenzene | 0.275 | | 0.273 | 0.7 |
| 5) Phenanthrene | 1.078 | | 1.126 | 4.3 |
| 6) Fluoroanthene | 0.760 | | 0.792 | 4.0 |
| 7) Benzo(b) fluoranthene | 1.282 | | 1.198 | 7.0 |
| 8) Dibenz(a,h)anthracene | 1.213 | | 1.207 | 0.5 |

TABLE 2:

| Compound | (7/26) | vs. | Initial RRF (6/13) | %D |
|------------------------------|---------------|-----|--------------------|------|
| | Failed PES RF | | Prev. CLP Std. | |
| 1) Dimethyl Phthalate | 1.156 | | 1.031 | 12.1 |
| 2) Acenaphthene | 1.180 | | 1.069 | 10.4 |
| 3) 4-Bromophenylphenyl ether | 0.237 | | 0.203 | 16.7 |
| 4) Hexachlorobenzene | 0.275 | | 0.210 | 31.0 |
| 5) Phenanthrene | 1.078 | | 1.134 | 4.9 |
| 6) Fluoroanthene | 0.760 | | 0.865 | 12.1 |
| 7) Benzo(b) fluoranthene | 1.282 | | 1.237 | 3.6 |
| 8) Dibenz(a,h)anthracene | 1.213 | | 1.167 | 3.8 |

TABLE 3:

| Compound | (7/26) | vs. | (9/14) | %D |
|------------------------------|---------------|-----|--|------|
| | Failed PES RF | | Independent Std (Supelco) Initial Calib. | |
| 1) Dimethyl Phthalate | 1.156 | | 1.062 | 8.9 |
| 2) Acenaphthene | 1.180 | | 1.033 | 14.2 |
| 3) 4-Bromophenylphenyl ether | 0.237 | | 0.261 | 9.2 |
| 4) Hexachlorobenzene | 0.275 | | 0.266 | 3.4 |
| 5) Phenanthrene | 1.078 | | 1.180 | 9.5 |
| 6) Fluoroanthene | 0.760 | | 0.788 | 3.6 |
| 7) Benzo(b) fluoranthene | 1.282 | | 0.967 | 32.6 |
| 8) Dibenz(a,h)anthracene | 1.213 | | 1.163 | 4.3 |

By review of the above information it does not appear that the integration, calculations, or standards are a source of significant error. A closer look of the IS areas is necessary. Establishing warning limits, tighter than what is required by the SOW may be necessary. (See Attachment A for current criteria) As previously mentioned, since surrogate

and/or IS recoveries do not indicate any problems, trend analysis through control charts will need to be evaluated for more subtle sources of error or bias.

2. **Procedural Review:** The extraction procedure was evaluated to identify a possible cause for the low recoveries on the Performance Evaluation Sample (PES). As indicated by the instructions received with the PES, the ampules for BNA analysis were stored at room temperature and not refrigerated. Glassware was pre-rinsed with methylene chloride to remove possible contaminants. 1.0 mL of the BNA sample was added by syringe to the extraction flask containing 1.0 liter of reagent water. The sample was mixed by stirring with a glass pipet. The pH was adjusted with 1:1 H₂SO₄ and allowed to stand for 10 minutes. If the sample was not thoroughly mixed, the addition of the acid to adjust the pH could adversely effect the recoveries of the target analytes. The extraction then proceeded as described in the CLP SOW.

After the extraction was complete, any remaining methylene chloride was allowed to drain into the boiling flask. The extract is then quantitatively transferred to a Kuderna-Danish (K-D) apparatus and placed on a steam bath. The steam bath temperature is typically maintained at 80° to 85°C to ensure concentration is performed within the appropriate time limits. During the procedural review it was indicated that the steam bath may have been too hot, possibly affecting the extract. However, since the surrogates did not show similar bias, this does not appear to be of critical concern.

The extract is concentrated down to 3-4 mL and removed from the steam bath. The Snyder columns are allowed to drain as the apparatus is cooling. The extract is then gently blown down with nitrogen to less than 1 mL in the concentrator tubes (CTs). The extract is then transferred into a glass vial using methylene chloride to rinse the sides of the CT. The extract is brought to final volume by visually comparing to a calibrated vial. The error in the final extract volume could be a source of error in the final analytical results. Since each of the target analytes were low (both in or out of acceptable limits) this issue may be of critical concern. Again, since the surrogates did not show the same bias this is still a questionable cause.

3. **Historical Review:** Several items were reviewed to evaluate any deficiencies which could be identified by looking at data over time. The past five quarters of Performance Evaluation Samples were reviewed with the percent recoveries estimated for each of the TCL semivolatile analytes identified. A summary of this information is attached (Attachment B) to this correspondence and no significant findings are apparent. Generally, the percent recoveries are well within the

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acceptance limits with the exception of the QB4 PES. As previously mentioned, the recoveries were low with the lowest being approximately 61%.

Although check spike samples are not reported for CLP analysis, control charts were evaluated for several analytes identified in the PES. These charts (Attachment C) are of several analytes analyzed by GC/MS (methods 8270 and 625) and on the same instrument as the PES. There are no obvious shifts or trends illustrated by these charts, however at the time of the PES analysis (late July) several of the compounds show recoveries below the average, which is generally around 80%. In addition, several compounds show slight trends in which there are several consecutive points on one side of the mean although within the warning limits. Further evaluation may be necessary.

An additional concern is the evaluation of the surrogates. Since the surrogates did not seem to have the same error as the PES target analytes, much of the potential sources of error mentioned are questionable. The recoveries of the surrogates were randomly reviewed for the following time intervals:

Interval 1: 9/3/93 - present
Interval 2: 7/19/93 - 9/2/93
Interval 3: 4/20/93 - 7/18/93

These time intervals represent when new spiking solutions were prepared and in use to verify if there were any obvious errors in preparation which could possibly attribute to low recovery for the target analytes, but normal to high recovery for the surrogates. Although this review is not a thorough statistical sampling, there does not seem to be immediately apparent discrepancies between spiking solutions (See Attachment D).

Conclusion

Although no single deficiency could readily be identified, the combination of several concerns could possibly result in the PES performance. In summary the following conclusions and suggested corrective actions are made:

Internal Standard: Since the IS recovery directly affects the final calculation a closer evaluation of potential trends or discrepancies needs to be performed. This may be done through the use of control charts to possibly establish warning limits and enable review for trends or shifts in data. To do this further automation of data collection needs to be investigated.

Extraction Procedure: Two items were identified in which cumulatively may show an effect on the PES recoveries. If the sample is not thoroughly mixed prior to adjusting the pH

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(acidifying) the spiking solutions could be adversely affected resulting in poor performance. This needs to be addressed when reviewing proper technique and/or any addition training.

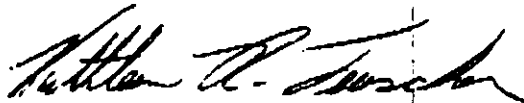
The final extract volume is transferred and measured by visual comparison to a calibrated vial. This is performed since the displacement of the boiling bead contributes error in the final measurement in the CT. However, if the error between the glass vials is significant, this may contribute to the poor recoveries. The laboratory is actively seeking pre-calibrated vials for the final extract which would be a more accurate volume measurement than use of the CTs.

Trend Analysis: The use of trend analysis through control charting could prove to be very useful. This is especially critical when errors or discrepancies are not so obvious as a calculation or transcription error, but occur over time due to technique or procedure. Errors such as standard degradation, poor technique, instrument performance, etc. can be illustrated into an identifiable form. The laboratory is looking into ways to automate such information to have readily available for evaluation. Additional software has been purchased which has improved the ability for data to be uploaded from our LIMS for statistical evaluation. Initially the laboratory will investigate the possibility of charting key parameters, starting with BNAs, for evaluation on a routine basis. This may further be expanded to include other tests.

Enseco-Wadsworth/ALERT Laboratories is committed to providing quality data and will continue to monitor for any current or potential problems to ensure acceptable performance on future Performance Evaluation Samples. Ideally, the laboratory would prefer the opportunity to demonstrate proficiency on a remedial Performance Evaluation Sample. However, it is our understanding, that since our current contract is near expiration (1/94), a remedial PES is not available. However, if you require additional information regarding this issue or have any questions or comments, please feel free to contact me at (216)497-9396.

Sincerely,

Enseco-Wadsworth/ALERT Laboratories



Kathleen R. Teuscher
Facility Quality Assurance Officer

c. Angelo Carasea, AOB
Karen Bankert, AOB
Pat Churilla, TPO
Tina Rodgers, SMO
Larry Butler, EMSL-LV
Bob George, EWAL

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Attachment C

AR303645



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

Post Office Box 1467
Harrisburg, Pennsylvania 17105-1467
April 1, 1994

Bureau of Laboratories

John Flaherty, Laboratory Director
Enseco-Wadsworth/ALERT Laboratories
450 William Pitt Way
Pittsburgh, PA 15238

RE: Laboratory Certification Status
DER# 02-416, EPA# PA00164

Dear Mr. Flaherty:

Recently, a set of chemical Performance Evaluation samples were sent to you for analysis through EPA's Quality Assurance Program. The results of your analyses, the true values, and acceptance limits are provided on the attached data report. Based on this report, your current status in the Laboratory Certification Program in Pennsylvania is as shown below:

Category of Analysis

Certification Status

TM1, TM2, TM3, N/N, F
CN, SO, C, TTHM, VOC1
VOC2, P1, H1

Classified as "Certified"

Information on approved methods, data reporting instructions, and a laboratory identification number, if applicable, will be forwarded.

VOC3

Classified as "Provisionally Certified"

You must follow the procedures in Appendix A of the "Critical Elements of Chemistry" and/or correct the deviations listed on your laboratory's on-site report in order to be upgraded to "Certified".

P3

Classified as "Not Certified"

No drinking water analysis data will be accepted by the Department or its Designee in the category listed until satisfactory Performance Evaluation results have been achieved.

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April 1, 1994

Inorganic: A=Asbestos, TM1=Trace Metals Group 1, TM2=Trace Metals Group 2, TM3=Trace Metals Group 3, N/N=Nitrate/Nitrite, F=Fluoride, (SO)=Sulfate, CN=Cyanide and C=Corrosivity.

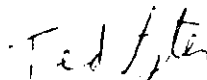
Organics: TTHM=Trihalomethanes, VOC1-Volatile Organic Chemicals Group 1, VOC2=Volatile Organic Chemicals Group 2, VOC3=Volatile Organic Chemicals Group 3, H1=Herbicides Group 1, H2=Herbicides Group 2, H3=Herbicides Group 3, H4=Herbicides Group 4, H5=Herbicides Group 5, H6=Herbicides Group 6, P1=Pesticides Group 1, P2=Pesticides Group 2, P3=Pesticides Group 3, P4=Pesticides Group 4, PCB=Polychlorinated Biphenyls, SOCl1=Synthetic Organic Chemicals Group 1, SOCl2=Synthetic Organic Chemicals Group 2, SOCl3=Synthetic Organic Chemical Group 3 and SOCl4=Synthetic Organic Chemicals Group 4.

Other Comments:

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Market Street State Office P.O. Box 8457, Harrisburg, PA 17105-8457, (717) 787-3483. TDD users may contact the Board through the Pennsylvania Relay Service (800) 654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedures may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at (717) 787-3483. This paragraph does, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

If you have any questions regarding your laboratory certification status, please contact James Yoder at (717) 783-7150.

Sincerely,



P. Ted Lyter, Chief
Laboratory Accreditation
Bureau of Laboratories

PERFORMANCE EVALUATION REPORT

DATE: 2/11/74

WATER SUPPLY STUDY NUMBER WS033

LABORATORY PRINT

| ANALYTES | SAMPLE NUMBER | REPORTED VALUE | TRUE VALUE* | ACCEPTANCE LIMITS | PERFORMANCE EVALUATIONS |
|---|---------------|----------------|-------------|-------------------|-------------------------|
| INSECTICIDES IN MICROGRAMS PER LITER: | | | | | |
| EMPHIN | 1 | 2.50 | 2.63 | 1.84- 3.42 | ACCEPTABLE |
| HEXACHLOROCYCLOPENTADIENE | | 1.99 ** | 2.92 | 2.116- 3.44 | ACCEPTABLE |
| TRIALKYL-ETHANES IN MICROGRAMS PER LITER: | | | | | |
| BROMODICHLOROETHANE | 1 | 18.0 | 15.8 | 12.6- 19.0 | ACCEPTABLE ← |
| VOLATILE ORGANIC COMPOUNDS IN MICROGRAMS PER LITER: | | | | | |
| BENZENE | 1 | 11.1 | 12.0 | 9.60- 14.4 | ACCEPTABLE |
| CARBON TETRACHLORIDE | 1 | 12.1 | 13.4 | 10.7- 16.1 | ACCEPTABLE |
| 1,4-DICHLOROBENZENE | 1 | 13.3 | 15.1 | 12.1- 18.1 | ACCEPTABLE |
| 1,2-DICHLOROETHANE | 1 | 16.9 | 16.9 | 13.5- 20.3 | ACCEPTABLE |
| 1,1-DICHLOROETHYLENE | 1 | 12.1 | 12.9 | 10.3- 15.5 | ACCEPTABLE |
| 1,1,1-TRICHLOROETHANE | 1 | 12.7 | 14.6 | 11.7- 17.5 | ACCEPTABLE |
| TRICHLOROETHYLENE | 1 | 14.1 | 14.9 | 11.9- 17.9 | ACCEPTABLE |

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.
 ** SIGNIFICANT BIAS IS ANTICIPATED FOR THIS RESULT.

PERFORMANCE EVALUATION REPORT
WATER SUPPLY STUDY NUMBER 49033

DATE: 1/1/7

LABORATORY PA154

| ANALYTES | SAMPLE NUMBER | REPORTED VALUE | TRUE VALUE* | ACCEPTANCE LIMITS | PERFORMANCE EVALUATION |
|---|---------------|----------------|-------------|-------------------|------------------------|
| VOLATILE ORGANIC COMPOUNDS IN MICROGRAMS PER LITER: | | | | | |
| VINYL CHLORIDE | 1 | 7.63 | 7.35 | 4.41- 10.3 | ACCEPTABLE |

* MISCELLANEOUS ANALYTES:

| | | | | | |
|--|---|------|------|------------|--------------|
| ALKALINITY (MG. CA _{CO} 3/L) | 1 | 43.0 | 41.0 | 37.3- 46.4 | ACCEPTABLE ← |
|--|---|------|------|------------|--------------|

* BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

PAGE 2 (LAST PAGE)

AR303649

COMMONWEALTH OF PENNSYLVANIA
Department of Environmental Resources
March 10, 1994
717-783-7150

SUBJECT: Performance Sample Evaluation Criteria for Chemistry
TO: Laboratory Directors
FROM: P. Ted Lyter, Chief *Ted Lyter*
Laboratory Certification Section

The following is a summary of the criteria.

General Rules:

Laboratories must correctly analyze all parameters within a sub-category group per calendar year to maintain or achieve certification. Date of analysis is the date considered. Therefore a calendar year is an even numbered study followed by an odd numbered study.

On even-numbered studies, such as WS 34, labs must analyze all parameters for which they are certified or attempting to get certification.

On odd-numbered studies, such as WS 35, only parameters that were missed on WS 34 need to be run. However, VOC3 sub-category must be run on all studies to maintain certification in that sub-category. The following is a sub-category description of the process and lists any exceptions to the General Rules that may exist.

Trace Metals Groups 1 to 3
Nitrate/Nitrite
Fluoride
Sulfate
Cyanide

Herbicides Groups 1 to 6
Pesticides Groups 1 to 4
Polychlorinated Biphenyls
Synthetic Organic Chemicals Groups 1 to 4

Whichever parameter is incorrectly analyzed on WS 34 must be analyzed correctly on WS 35. Parameters correct on WS 34 do not need to be analyzed on WS 35. For certified laboratories, if the same parameter is incorrectly analyzed on WS 34 and WS 35, then the lab will be decertified for that sub-category. Incorrectly analyzing a parameter for the first time will generate a "Provisional" certification for that sub-category. Incorrectly analyzing the same parameter on two consecutive studies will cause the lab to be decertified for that sub-category. PCB certification is contingent on Pesticide certification using either method 505 or 508.

Corrosivity sub-category

Corrosivity is a calculated value based on the analytical results for the four individual parameters. If corrosivity is not acceptable on WS 34, then all four parameters must be analyzed on WS 35 as well as the calculated corrosivity. If corrosivity is correct on WS 34, then only the unacceptable parameters must be analyzed on WS 35. Unacceptable results in corrosivity or any of the parameters will generate a "Provisional" certification for a lab certified in that sub-category. If the same parameter or calculated corrosivity is incorrectly analyzed on two consecutive studies, then the lab will be decertified for corrosivity.

AR303650

General Comments:

The WS 34 and WS 35 were used to represent all even and odd-numbered studies.

Certification status obtained by P-E study results can be effected by on-site evaluations.

If you are submitting results for an odd-numbered P-E study but do not want them all to be submitted for Pa. certification purposes, you will need to submit two sets of result sheets (WATER SUPPLY LABORATORY PERFORMANCE EVALUATION STUDY sheets, EPA form OMB#2080-0021, referred to as P-E study results sheets). One set, which will be forwarded to EPA, should contain all the results you want to submit. The second set should be clearly marked "PA. ONLY", and contain only those results that you want DER to evaluate in regard to maintaining your PA certification. If a separate set of results is not submitted for PA use only, then all of the results submitted will be evaluated by DER. Submitting an incorrect result, even though you were not required to submit that result, may result in a "Provisional" certification.

DER will need a copy of the P-E study results sheets, containing method codes and results, in order to do a complete evaluation. For those labs who are instructed to send their result sheets to another location, we will need a copy sent to us. These copies should be addressed to:

Pa. DER - Bureau of Laboratories
Certification Section
P.O. Box 1467
Harrisburg, Pa. 17105-1467

If you are instructed to send your original set of result sheets to DER, then an additional copy is needed.

When filling out the P-E result sheets, please use your seven character EPA Lab number, not your PA DER Lab certification number. Failure to use the proper EPA number may result in your P.E. study not being evaluated.

If you are certified or attempting to gain certification in a sub-category and you analyze one of the parameters by more than one method, use the code of your primary method on the original P-E study results sheets. You will need to send in an additional set of sheets with results and method codes using your secondary method codes. Alternatively, the second set of results can be sent on the companies' letterhead as long as the specific parameter(s) and accompanying method code(s) are included. Once certification is obtained for a secondary method, you will still need to send in a results sheet for both methods for the even P-E studies. Secondary method certification based on P-E samples is the same as has been described in this memo.

If you have any questions regarding this memo, please do not hesitate to contact your laboratory's certification officer.

AR303651



STATE OF NEW YORK DEPARTMENT OF HEALTH

The Governor Nelson A. Rockefeller Empire State Plaza P.O. Box 509 Albany, New York 12201-0509

Mark R. Chassin, M.D., M.P.P., M.P.H.
Commissioner

Paula Wilson
Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Sue Kelly
Executive Deputy Director

WADSWORTH CENTER FOR
LABORATORIES AND RESEARCH
Lawrence S. Sturman, M.D., Ph.D.
Director

June 10, 1993

LAB ID #11182

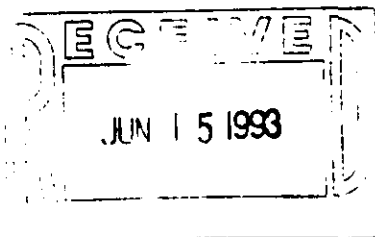
MR. JOHN FLAHERTY
ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH
450 WILLIAM PITT WAY - BLDG 6
PITTSBURGH PA 15238

DEAR MR. FLAHERTY:

The following are the scores of the CLP proficiency test data package your laboratory submitted on or about March 5, 1993. Each analytical fraction consists of four scores; two for the analytical results, and two for the quality of the data package. The passing score for each is 75%. Please refer to the enclosed copies of the Performance Sample Review Scoring Package pages, on which points were deducted, for the criteria used.

Accreditation for any CLP analytical fraction can be withdrawn for either the loss of the underlying ELAP accreditation for a particular analyte (i.e. two successive poor proficiency test scores for one or more analytes in a subcategory), or two successive failing scores for the CLP analytical results or data package.

You are required to submit to the Program Office, within 30 days of the above date, a written statement of the reasons why your laboratory's accreditation should not be terminated for the analytical fraction(s) which did not meet the required score of 75% in two successive performance evaluations. Your statement should include your ELAP ID Number, the reasons for the unsatisfactory performance and the corrective actions taken.



AR303652

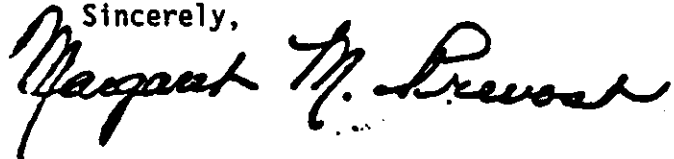
| | <u>Ident.</u> | <u>Quant.</u> | <u>O.C.</u> | <u>Report & Deliverables</u> | <u>Explanations</u> |
|----------------|---------------|---------------|-------------|----------------------------------|---------------------|
| Volatiles | 100 | 100 | 100 | 100 | |
| Semi-volatiles | 100 | 85 | 100 | 100 | |
| Pesticides/PCB | <u>73</u> | <u>8</u> | <u>73</u> | 100 | |
| Inorganics | 100 | 100 | 95 | 100 | |

The diskette deliverable for the pesticide fraction was not in the Agency format as required by the ASP.

If you fail to respond within 30 days or your statement does not indicate that the problem has been corrected, your accreditation for the fraction(s) may be revoked.

If you have any questions, please do not hesitate to call the ELAP Office at (518) 474-8519.

Sincerely,



Margaret M. Prevost
Administrator
Environmental Laboratory
Approval Program

MMP

AR303653

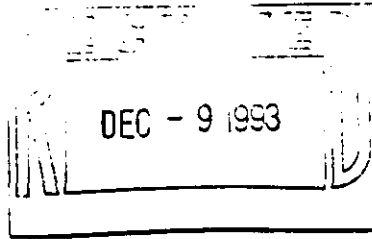


STATE OF NEW YORK
DEPARTMENT OF HEALTH

The Governor Nelson A. Rockefeller Empire State Plaza P.O. Box 509 Albany, New York 12201-0509

Mark R. Chassin, M.D., M.P.P., M.P.H.
Commissioner

Paula Wilson
Executive Deputy Commissioner



OFFICE OF PUBLIC HEALTH
Lloyd F. Novick, M.D., M.P.H.
Director
Diana Jones Ritter
Executive Deputy Director

WADSWORTH CENTER FOR
LABORATORIES AND RESEARCH
Lawrence S. Sturman, M.D., Ph.D.
Director

December 7, 1993

Dear laboratory director:

Enclosed is a revised test report for proficiency test #97. It reflects the removal of the result for benzidine.

If you have any questions, please do not hesitate to call the Program Office at (518) 474-8519.

Sincerely,

Jay Hirschfield
Environmental Laboratory Consultant
Environmental Laboratory
Approval Program

JH

AR303654

WADSWORTH CENTER FOR LABORATORIES AND RESEARCH
 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

Page 1

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|-----------------------------|--------|-------------|----------|---------------------|-------------------|-------|
| Demand | | | | | | |
| Biochemical Oxygen Demand | 9701 | 16.900 | 13.3000 | 10.700 - 23.100 | 8.780 - 25.000 | 4 |
| Biochemical Oxygen Demand | 9702 | 51.400 | 47.0000 | 36.200 - 66.600 | 31.400 - 71.300 | 4 |
| Chemical Oxygen Demand | 9701 | 25.500 | 15.2000 | 18.500 - 32.500 | 16.300 - 34.700 | 0 |
| Chemical Oxygen Demand | 9702 | 78.100 | 76.9000 | 65.800 - 90.300 | 62.000 - 94.100 | 4 |
| Organic Carbon, Total | 9701 | 10.200 | 10.8000 | 8.870 - 11.500 | 8.450 - 11.900 | 4 |
| Organic Carbon, Total | 9702 | 31.600 | 32.5000 | 28.300 - 35.000 | 27.200 - 36.000 | 4 |
| Residue | | | | | | |
| Solids, Total | 9703 | 365.000 | 352.0000 | 342.000 - 387.000 | 335.000 - 394.000 | 4 |
| Solids, Total | 9704 | 229.000 | 209.0000 | 205.000 - 252.000 | 198.000 - 260.000 | 4 |
| Solids, Total Dissolved | 9703 | 344.000 | 337.0000 | 323.000 - 364.000 | 317.000 - 371.000 | 4 |
| Solids, Total Dissolved | 9704 | 150.000 | 134.0000 | 131.000 - 170.000 | 125.000 - 176.000 | 4 |
| Solids, Total Suspended | 9703 | 18.600 | 16.0000 | 15.600 - 21.600 | 14.700 - 22.600 | 4 |
| Solids, Total Suspended | 9704 | 76.800 | 76.0000 | 71.300 - 82.400 | 69.600 - 84.100 | 4 |
| MM Hydrogen Ion (pH) | | | | | | |
| Hydrogen Ion (pH) | 9705 | 2.570 | 2.5600 | 2.470 - 2.660 | 2.440 - 2.690 | 4 |
| Hydrogen Ion (pH) | 9706 | 7.420 | 7.4200 | 7.340 - 7.500 | 7.310 - 7.530 | 4 |
| Total Hardness | | | | | | |
| Hardness, Total | 9709 | 128.000 | 129.0000 | 121.000 - 135.000 | 119.000 - 138.000 | 4 |
| Hardness, Total | 9710 | 180.000 | 183.0000 | 171.000 - 189.000 | 168.000 - 192.000 | 4 |
| Total Alkalinity | | | | | | |
| Alkalinity | 9711 | 119.000 | 120.0000 | 112.000 - 125.000 | 110.000 - 127.000 | 4 |
| Alkalinity | 9712 | 278.000 | 280.0000 | 265.000 - 290.000 | 261.000 - 294.000 | 4 |

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 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|------------------------------|--------|-------------|----------|---------------------|-------------------|-------|
| Inorganic Nutrients | | | | | | |
| Ammonia (as N) | 9713 | 1.720 | 1.7900 | 1.460 - 1.990 | 1.360 - 2.070 | 4 |
| Ammonia (as N) | 9714 | 3.930 | 4.0000 | 3.410 - 4.450 | 3.250 - 4.610 | 4 |
| Nitrate (as N) | 9713 | 2.250 | 2.1100 | 1.990 - 2.500 | 1.920 - 2.580 | 4 |
| Nitrate (as N) | 9714 | 8.390 | 7.9300 | 7.480 - 9.290 | 7.200 - 9.570 | 4 |
| Orthophosphate (as P) | 9713 | 2.510 | 2.5000 | 2.230 - 2.790 | 2.140 - 2.880 | 4 |
| Orthophosphate (as P) | 9714 | 3.770 | 3.6900 | 3.420 - 4.130 | 3.310 - 4.240 | 4 |
| MM Minerals | | | | | | |
| Chloride | 9715 | 270.000 | 260.0000 | 250.000 - 290.000 | 244.000 - 297.000 | 4 |
| Chloride | 9716 | 79.800 | 77.0000 | 74.300 - 85.300 | 72.600 - 87.100 | 4 |
| Fluoride, Total | 9715 | 5.980 | 5.9000 | 5.340 - 6.620 | 5.140 - 6.820 | 4 |
| Fluoride, Total | 9716 | 2.400 | 2.3200 | 2.160 - 2.650 | 2.080 - 2.730 | 4 |
| Sulfate (as SO4) | 9715 | 348.000 | 329.0000 | 309.000 - 386.000 | 297.000 - 399.000 | 4 |
| Sulfate (as SO4) | 9716 | 149.000 | 142.0000 | 131.000 - 167.000 | 125.000 - 173.000 | 4 |
| Phenols | | | | | | |
| Phenols | 9717 | 0.202 | 0.1900 | 0.159 - 0.245 | 0.145 - 0.259 | 4 |
| Phenols | 9718 | 0.390 | 0.3700 | 0.323 - 0.457 | 0.302 - 0.478 | 4 |
| Oil and Grease | | | | | | |
| Oil & Grease Total Recove | 9719 | 133.000 | 137.0000 | 114.000 - 152.000 | 108.000 - 158.000 | 4 |
| Oil & Grease Total Recove | 9720 | 38.200 | 39.0000 | 32.600 - 43.900 | 30.800 - 45.600 | 4 |
| Water Metals I and II | | | | | | |
| Aluminum, Total | 9721 | 458.000 | 429.0000 | 396.000 - 521.000 | 377.000 - 548.000 | 4 |
| Aluminum, Total | 9722 | 276.000 | 248.0000 | 228.000 - 324.000 | 213.000 - 339.000 | 4 |

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 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0037.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|------------------|--------|-------------|------------|-----------------------|-----------------------|-------|
| Antimony, Total | 9721 | 382.000 | 369.0000 | 277.000 - 487.000 | 244.000 - 520.000 | 4 |
| Antimony, Total | 9722 | 476.000 | 480.0000 | 392.000 - 561.000 | 365.000 - 587.000 | 4 |
| Arsenic, Total | 9721 | 136.000 | 137.0000 | 112.000 - 161.000 | 104.000 - 168.000 | 4 |
| Arsenic, Total | 9722 | 440.000 | 477.0000 | 382.000 - 498.000 | 364.000 - 516.000 | 4 |
| Barium, Total | 9721 | 748.000 | 718.0000 | 684.000 - 812.000 | 664.000 - 832.000 | 4 |
| Barium, Total | 9722 | 250.000 | 239.0000 | 225.000 - 274.000 | 218.000 - 281.000 | 4 |
| Beryllium, Total | 9721 | 49.200 | 43.2000 | 43.300 - 55.100 | 41.400 - 56.900 | 3 |
| Beryllium, Total | 9722 | 19.600 | 17.3000 | 17.000 - 22.200 | 16.200 - 23.000 | 4 |
| Cadmium, Total | 9721 | 49.700 | 42.0000 | 43.400 - 56.000 | 41.400 - 58.000 | 3 |
| Cadmium, Total | 9722 | 79.100 | 76.5000 | 69.500 - 88.700 | 66.400 - 91.700 | 4 |
| Calcium, Total | 9721 | 40100.000 | 37400.0000 | 36300.000 - 43900.000 | 35100.000 - 45100.000 | 4 |
| Calcium, Total | 9722 | 25000.000 | 23600.0000 | 22600.000 - 27400.000 | 21900.000 - 28200.000 | 4 |
| Chromium, Total | 9721 | 79.000 | 81.2000 | 66.200 - 91.800 | 62.200 - 95.800 | 4 |
| Chromium, Total | 9722 | 445.000 | 436.0000 | 389.000 - 500.000 | 372.000 - 517.000 | 4 |
| Cobalt, Total | 9721 | 347.000 | 339.0000 | 313.000 - 380.000 | 302.000 - 391.000 | 4 |
| Cobalt, Total | 9722 | 881.000 | 869.0000 | 792.000 - 970.000 | 764.000 - 998.000 | 4 |
| Copper, Total | 9721 | 245.000 | 246.0000 | 224.000 - 266.000 | 217.000 - 273.000 | 4 |
| Copper, Total | 9722 | 444.000 | 431.0000 | 408.000 - 481.000 | 396.000 - 492.000 | 4 |
| Iron, Total | 9721 | 345.000 | 332.0000 | 307.000 - 384.000 | 295.000 - 396.000 | 4 |
| Iron, Total | 9722 | 148.000 | 145.0000 | 126.000 - 170.000 | 119.000 - 177.000 | 4 |
| Lead, Total | 9721 | 298.000 | 304.0000 | 259.000 - 337.000 | 246.000 - 350.000 | 4 |
| Lead, Total | 9722 | 152.000 | 145.0000 | 124.000 - 180.000 | 115.000 - 189.000 | 4 |

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 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID: 11182

LAB NAME: ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|------------------|--------|-------------|------------|-----------------------|-----------------------|-------|
| Magnesium, Total | 9721 | 10000.000 | 9610.0000 | 9080.000 - 10900.000 | 8790.000 - 11200.000 | 4 |
| Magnesium, Total | 9722 | 8010.000 | 7630.0000 | 7240.000 - 8780.000 | 6990.000 - 9030.000 | 4 |
| Manganese, Total | 9721 | 450.000 | 430.0000 | 406.000 - 493.000 | 392.000 - 507.000 | 4 |
| Manganese, Total | 9722 | 120.000 | 116.0000 | 108.000 - 133.000 | 104.000 - 137.000 | 4 |
| Nickel, Total | 9721 | 445.000 | 419.0000 | 402.000 - 487.000 | 389.000 - 500.000 | 4 |
| Nickel, Total | 9722 | 199.000 | 200.0000 | 178.000 - 219.000 | 171.000 - 226.000 | 4 |
| Potassium, Total | 9721 | 15000.000 | 14300.0000 | 13300.000 - 16700.000 | 12700.000 - 17200.000 | 4 |
| Potassium, Total | 9722 | 7680.000 | 7200.0000 | 6650.000 - 8700.000 | 6330.000 - 9020.000 | 4 |
| Selenium, Total | 9721 | 96.400 | 94.3000 | 81.500 - 111.000 | 76.900 - 116.000 | 4 |
| Selenium, Total | 9722 | 58.100 | 53.0000 | 46.700 - 69.600 | 43.100 - 73.200 | 4 |
| Silver, Total | 9721 | 339.000 | 305.0000 | 304.000 - 374.000 | 293.000 - 385.000 | 4 |
| Silver, Total | 9722 | 97.700 | 88.7000 | 85.200 - 110.000 | 81.300 - 114.000 | 4 |
| Sodium, Total | 9721 | 10100.000 | 9440.0000 | 9120.000 - 11000.000 | 8820.000 - 11300.000 | 4 |
| Sodium, Total | 9722 | 70200.000 | 65900.0000 | 64300.000 - 76200.000 | 62500.000 - 78000.000 | 4 |
| Thallium, Total | 9721 | 294.000 | 325.0000 | 246.000 - 343.000 | 231.000 - 358.000 | 4 |
| Thallium, Total | 9722 | 657.000 | 657.0000 | 550.000 - 764.000 | 517.000 - 798.000 | 4 |
| Vanadium, Total | 9721 | 748.000 | 735.0000 | 681.000 - 815.000 | 659.000 - 836.000 | 4 |
| Vanadium, Total | 9722 | 272.000 | 273.0000 | 241.000 - 302.000 | 232.000 - 312.000 | 4 |
| Zinc, Total | 9721 | 544.000 | 516.0000 | 498.000 - 590.000 | 484.000 - 604.000 | 4 |
| Zinc, Total | 9722 | 1960.000 | 1870.0000 | 1790.000 - 2130.000 | 1740.000 - 2190.000 | 4 |
| Mercury, Total | 9721 | 18.600 | 20.0000 | 14.500 - 22.700 | 13.200 - 24.000 | 4 |
| Mercury, Total | 9722 | 9.950 | 9.0000 | 7.680 - 12.200 | 6.970 - 12.900 | 4 |

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NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11192

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1990

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|------------------------------|--------|-------------|-----------|---------------------|---------------------|-------|
| Total Cyanide | | | | | | |
| Cyanide, Total | 9721 | 1.700 | 1.8300 | 1.260 - 2.130 | 1.150 - 2.260 | 4 |
| Cyanide, Total | 9722 | 3.760 | 3.9700 | 3.010 - 4.510 | 2.760 - 4.750 | 4 |
| Wastewater Metals III | | | | | | |
| Molybdenum, Total | 9721 | 384.000 | 383.0000 | 338.000 - 429.000 | 324.000 - 444.000 | 4 |
| Molybdenum, Total | 9722 | 755.000 | 750.0000 | 674.000 - 836.000 | 649.000 - 861.000 | 4 |
| Tin, Total | 9721 | 987.000 | 1000.0000 | 848.000 - 1130.000 | 804.000 - 1170.000 | 4 |
| Tin, Total | 9722 | 1650.000 | 1670.0000 | 1420.000 - 1880.000 | 1350.000 - 1960.000 | 4 |
| Titanium, Total | 9721 | 284.000 | 277.0000 | 254.000 - 314.000 | 244.000 - 323.000 | 4 |
| Titanium, Total | 9722 | 534.000 | 534.0000 | 483.000 - 584.000 | 467.000 - 600.000 | 4 |
| Purgeable Aromatics | | | | | | |
| Benzene | 9723 | 29.500 | 34.0000 | 23.700 - 35.300 | 21.900 - 37.100 | 4 |
| Benzene | 9724 | 45.600 | 55.0000 | 36.400 - 54.800 | 33.500 - 57.600 | 3 |
| 1,3-Dichlorobenzene | 9723 | 28.400 | 26.0000 | 17.400 - 39.400 | 13.900 - 42.900 | 4 |
| 1,3-Dichlorobenzene | 9724 | 42.800 | 56.0000 | 23.200 - 62.400 | 17.100 - 68.500 | 4 |
| Toluene | 9723 | 22.400 | 26.0000 | 17.800 - 27.100 | 16.300 - 28.600 | 4 |
| Toluene | 9724 | 32.600 | 37.0000 | 26.200 - 39.000 | 24.200 - 41.000 | 4 |
| Total Xylenes | 9723 | 35.900 | 39.0000 | 27.900 - 43.900 | 25.300 - 46.500 | 4 |
| Total Xylenes | 9724 | 50.100 | 54.0000 | 39.600 - 60.600 | 36.300 - 63.900 | 4 |
| Purgeable Halocarbons | | | | | | |
| Bromoform | 9723 | 48.000 | 53.0000 | 35.000 - 61.000 | 30.900 - 65.100 | 4 |
| Bromoform | 9724 | 75.500 | 85.0000 | 56.600 - 94.500 | 50.600 - 100.000 | 4 |

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 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

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NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|--------------------------------------|--------|-------------|---------|---------------------|-----------------|-------|
| Carbon tetrachloride | 9723 | 25.900 | 32.0000 | 18.800 - 32.900 | 16.600 - 35.100 | 4 |
| Carbon tetrachloride | 9724 | 38.400 | 47.0000 | 27.700 - 49.100 | 24.400 - 52.400 | 4 |
| 1,1-Dichloroethene | 9723 | 28.500 | 33.0000 | 18.600 - 38.400 | 15.500 - 41.500 | 4 |
| 1,1-Dichloroethene | 9724 | 35.700 | 41.0000 | 23.400 - 47.900 | 19.600 - 51.700 | 4 |
| 1,2-Dichloropropane | 9723 | 20.200 | 21.0000 | 15.700 - 24.800 | 14.300 - 26.200 | 4 |
| 1,2-Dichloropropane | 9724 | 56.200 | 60.0000 | 43.700 - 68.800 | 39.700 - 72.800 | 4 |
| Methylene chloride | 9723 | 26.100 | 30.0000 | 18.300 - 34.000 | 15.800 - 36.400 | 4 |
| Methylene chloride | 9724 | 33.900 | 39.0000 | 24.200 - 43.600 | 21.200 - 46.700 | 4 |
| Trichloroethene | 9723 | 37.000 | 46.0000 | 29.600 - 44.300 | 27.300 - 46.600 | 3 |
| Trichloroethene | 9724 | 47.400 | 62.0000 | 37.700 - 57.200 | 34.700 - 60.200 | 0 |
| Nitrosoamines | | | | | | |
| N-Nitrosodimethylamine | 9725 | 21.900 | 19.6000 | 7.320 - 40.300 | 2.740 - 46.100 | 4 |
| N-Nitrosodimethylamine | 9726 | 8.660 | 10.0000 | 2.890 - 16.600 | 1.080 - 19.100 | 4 |
| N-Nitrosodi-n-propylamine | 9725 | 11.600 | 8.0000 | 5.930 - 17.200 | 4.160 - 19.000 | 4 |
| N-Nitrosodi-n-propylamine | 9726 | 40.000 | 21.7000 | 19.900 - 60.000 | 13.600 - 66.300 | 4 |
| Nitroaromatics and Isophorone | | | | | | |
| 2,6-Dinitrotoluene | 9727 | 45.200 | 35.0000 | 29.000 - 61.400 | 23.900 - 66.500 | 4 |
| 2,6-Dinitrotoluene | 9728 | 65.800 | 69.0000 | 44.000 - 87.600 | 37.200 - 94.400 | 4 |
| Isophorone | 9727 | 17.800 | 13.0000 | 11.200 - 24.400 | 9.100 - 26.400 | 4 |
| Isophorone | 9728 | 58.700 | 65.0000 | 41.600 - 75.800 | 36.300 - 81.200 | 4 |
| Chlorinated Hydrocarbons | | | | | | |
| 2-Chloronaphthalene | 9727 | 43.600 | 36.0000 | 27.600 - 59.600 | 22.600 - 64.600 | 4 |
| 2-Chloronaphthalene | 9728 | 61.500 | 73.0000 | 41.300 - 81.800 | 34.900 - 88.100 | 4 |

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 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

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NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11132

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|------------------------|--------|-------------|----------|---------------------|------------------|-------|
| Hexachlorobutadiene | 9727 | 55.500 | 40.0000 | 22.900 - 88.300 | 12.500 - 98.600 | 4 |
| Hexachlorobutadiene | 9728 | 108.000 | 120.0000 | 48.400 - 168.000 | 29.600 - 197.000 | 4 |
| Hexachloroethane | 9727 | 58.800 | 43.0000 | 24.700 - 92.900 | 14.100 - 104.000 | 4 |
| Hexachloroethane | 9728 | 44.700 | 49.0000 | 21.300 - 68.000 | 14.000 - 75.400 | 4 |
| 1,2,4-Trichlorobenzene | 9727 | 53.200 | 41.0000 | 27.900 - 78.600 | 19.900 - 86.500 | 4 |
| 1,2,4-Trichlorobenzene | 9728 | 102.000 | 120.0000 | 58.500 - 146.000 | 44.700 - 160.000 | 4 |

Polynuclear Aromatic Hydrocarbons

| | | | | | | |
|----------------|------|--------|---------|------------------|------------------|---|
| Acenaphthene | 9727 | 45.800 | 38.0000 | 31.400 - 60.300 | 26.900 - 64.800 | 4 |
| Acenaphthene | 9728 | 63.200 | 79.0000 | 44.000 - 82.400 | 38.000 - 88.400 | 4 |
| Benzo(a)pyrene | 9727 | 70.400 | 41.0000 | 39.500 - 101.000 | 29.700 - 111.000 | 4 |
| Benzo(a)pyrene | 9728 | 51.900 | 47.0000 | 30.000 - 73.900 | 23.100 - 80.800 | 4 |
| Fluorene | 9727 | 46.700 | 39.0000 | 30.400 - 63.000 | 25.200 - 68.100 | 4 |
| Fluorene | 9728 | 64.500 | 80.0000 | 42.200 - 86.800 | 35.200 - 93.800 | 4 |
| Naphthalene | 9727 | 66.600 | 57.0000 | 48.400 - 92.800 | 32.200 - 101.000 | 4 |
| Naphthalene | 9728 | 52.000 | 65.0000 | 33.100 - 70.900 | 27.100 - 76.800 | 4 |

Haloethers

| | | | | | | |
|---------------------------|------|--------|----------|------------------|------------------|---|
| Bis(2-chloroethyl)ether | 9727 | 20.600 | 15.0000 | 12.400 - 28.700 | 9.810 - 31.300 | 4 |
| Bis(2-chloroethyl)ether | 9728 | 66.300 | 67.0000 | 41.200 - 91.500 | 33.300 - 99.400 | 4 |
| 4-Chlorophenylphenyl ethe | 9727 | 47.500 | 39.0000 | 30.400 - 64.600 | 25.100 - 70.000 | 4 |
| 4-Chlorophenylphenyl ethe | 9728 | 93.000 | 120.0000 | 58.700 - 127.000 | 47.900 - 138.000 | 4 |

Priority Pollutant Phenols

| | | | | | | |
|-------------------------|------|--------|---------|-----------------|-----------------|---|
| 4-Chloro-3-methylphenol | 9727 | 45.800 | 35.0000 | 29.300 - 62.300 | 24.200 - 67.400 | 4 |
| 4-Chloro-3-methylphenol | 9728 | 64.800 | 78.0000 | 42.800 - 86.900 | 35.900 - 93.800 | 4 |

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 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097 0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|-----------------------|--------|-------------|---------|---------------------|------------------|-------|
| 2,4-Dinethylphenol | 9727 | 16.900 | 7.0000 | 6.280 - 27.200 | 2.990 - 30.500 | 4 |
| 2,4-Dinethylphenol | 9728 | 57.000 | 53.0000 | 30.800 - 83.200 | 22.600 - 91.400 | 4 |
| 4-Nitrophenol | 9727 | 47.700 | 64.0000 | 15.900 - 96.500 | 5.960 - 112.000 | 4 |
| 4-Nitrophenol | 9728 | 35.400 | 68.0000 | 11.800 - 76.700 | 4.430 - 89.700 | 4 |
| 2,4,6-Trichlorophenol | 9727 | 70.800 | 64.0000 | 43.600 - 98.000 | 35.000 - 107.000 | 4 |
| 2,4,6-Trichlorophenol | 9728 | 53.000 | 71.0000 | 33.000 - 73.000 | 26.800 - 79.300 | 4 |

Phthalate Esters

| | | | | | | |
|---------------------------|------|--------|----------|------------------|------------------|---|
| Benzyl butyl phthalate | 9727 | 27.200 | 11.0000 | 9.090 - 46.500 | 3.400 - 52.500 | 4 |
| Benzyl butyl phthalate | 9728 | 65.100 | 100.0000 | 21.800 - 110.000 | 8.140 - 124.000 | 4 |
| Bis(2-ethylhexyl) phthala | 9727 | 26.800 | 16.0000 | 12.600 - 41.100 | 8.080 - 45.600 | 4 |
| Bis(2-ethylhexyl) phthala | 9728 | 59.900 | 75.0000 | 29.900 - 89.800 | 20.500 - 99.200 | 4 |
| Dimethyl phthalate | 9727 | 42.200 | 36.0000 | 14.100 - 75.700 | 5.280 - 86.200 | 4 |
| Dimethyl phthalate | 9728 | 81.500 | 120.0000 | 27.200 - 147.000 | 10.200 - 167.000 | 4 |
| Di-n-butyl phthalate | 9727 | 44.700 | 33.0000 | 18.000 - 71.400 | 9.680 - 79.800 | 4 |
| Di-n-butyl phthalate | 9728 | 79.300 | 110.0000 | 31.800 - 127.000 | 16.900 - 142.000 | 4 |

Polychlorinated Biphenyls

| | | | | | | |
|----------|------|-------|----------|---------------|---------------|---|
| PCB-1221 | 9729 | 1.610 | < 1.0000 | 0.854 - 2.360 | 0.618 - 2.600 | 0 |
| PCB-1221 | 9730 | 0.793 | < 1.0000 | 0.342 - 1.240 | 0.201 - 1.390 | 0 |
| PCB-1248 | 9729 | 1.900 | 2.2000 | 1.180 - 2.630 | 0.953 - 2.850 | 4 |
| PCB-1248 | 9730 | 2.390 | 0.4200 | 1.340 - 3.440 | 1.010 - 3.770 | 0 |

Chlorinated Hydrocarbon Pesticides

| | | | | | | |
|--------|------|-------|---------|----------------|----------------|---|
| Aldrin | 9729 | 3.700 | 6.6000 | 2.080 - 5.320 | 1.580 - 5.820 | 0 |
| Aldrin | 9730 | 7.560 | 15.0000 | 4.110 - 11.000 | 3.030 - 12.100 | 0 |

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 NEW YORK STATE DEPARTMENT OF HEALTH
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NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0037.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|----------------------------|--------|-------------|----------|---------------------|------------------|-------|
| alpha-BHC | 9729 | 7.060 | 14.0000 | 4.690 - 9.420 | 3.950 - 10.200 | 0 |
| alpha-BHC | 9730 | 10.700 | 23.0000 | 6.580 - 14.900 | 5.270 - 16.200 | 0 |
| 4,4'-DDE | 9729 | 8.070 | 15.0000 | 5.240 - 10.900 | 4.360 - 11.900 | 0 |
| 4,4'-DDE | 9730 | 16.100 | 33.0000 | 9.330 - 23.000 | 7.190 - 25.100 | 0 |
| Endosulfan sulfate | 9729 | 8.950 | 18.0000 | 5.660 - 12.200 | 4.630 - 13.300 | 0 |
| Endosulfan sulfate | 9730 | 13.600 | 26.0000 | 8.610 - 18.600 | 7.050 - 20.200 | 0 |
| Heptachlor | 9729 | 4.520 | 8.2000 | 2.760 - 6.290 | 2.200 - 6.850 | 0 |
| Heptachlor | 9730 | 9.090 | 18.0000 | 5.180 - 13.000 | 3.950 - 14.200 | 0 |
| Benzidines | | | | | | |
| 3,3'-dichlorobenzidine | 9737 | 26.000 | 3.0000 | 8.690 - 47.300 | 3.250 - 54.000 | 0 |
| 3,3'-dichlorobenzidine | 9738 | 49.300 | 23.0000 | 16.500 - 87.100 | 6.160 - 98.900 | 4 |
| Herbicides | | | | | | |
| 2,4-D | 9731 | 2.110 | 2.1400 | 0.705 - 3.660 | 0.264 - 4.150 | 4 |
| 2,4-D | 9732 | 7.680 | 7.0600 | 2.560 - 13.600 | 0.959 - 15.500 | 4 |
| 2,4,5-T | 9731 | 0.970 | 0.8140 | 0.324 - 1.670 | 0.121 - 1.880 | 4 |
| 2,4,5-T | 9732 | 4.270 | 3.9600 | 1.430 - 7.590 | 0.533 - 8.640 | 4 |
| 2,4,5-TP (Silvex) | 9731 | 1.230 | 1.2800 | 0.411 - 2.080 | 0.154 - 2.340 | 4 |
| 2,4,5-TP (Silvex) | 9732 | 2.720 | 2.4200 | 0.909 - 4.590 | 0.340 - 5.170 | 4 |
| SW Phthalate Esters | | | | | | |
| Benzyl butyl phtha (SW) | 9734 | 190.000 | 290.0000 | 63.680 - 322.000 | 23.800 - 363.000 | 4 |

AR303663

WADSWORTH CENTER FOR LABORATORIES AND RESEARCH
 NEW YORK STATE DEPARTMENT OF HEALTH
 ENVIRONMENTAL LABORATORY APPROVAL PROGRAM

NON-POTABLE WATER CHEMISTRY PROFICIENCY TEST REPORT

LABID : 11182

LAB NAME : ENSECO-WADSWORTH/ALERT LABS - PITTSBURGH

TEST NUMBER: 0097.0
 TEST DATE: 19-Jul-1993

| Analyte | Sample | Mean/Target | Result | Satisfactory Limits | Marginal Limits | Score |
|--------------------|-----------|-------------|----------|---------------------|-------------------|-------|
| Bis(2-ethylhexyl) | (SW) 9734 | 108.000 | 120.0000 | 39.900 - 177.000 | 18.500 - 198.000 | 4 |
| Diethyl phthalate | (SW) 9734 | 134.000 | 190.0000 | 48.100 - 220.000 | 21.200 - 247.000 | 4 |
| Dimethyl phthalate | (SW) 9734 | 147.000 | 210.0000 | 60.600 - 233.000 | 33.500 - 260.000 | 4 |
| Di-n-butyl phthala | (SW) 9734 | 116.000 | 150.0000 | 38.700 - 201.000 | 14.500 - 228.000 | 4 |
| Di-n-octyl phthala | (SW) 9734 | 149.000 | 210.0000 | 49.800 - 259.000 | 18.700 - 294.000 | 4 |
| SW ls | | | | | | |
| Antimony, Total | (SW) 9736 | 114.000 | 102.0000 | 47.000 - 181.000 | 25.900 - 203.000 | 4 |
| Arsenic, Total | (SW) 9736 | 94.000 | 96.6000 | 63.800 - 124.000 | 54.300 - 134.000 | 4 |
| Barium, Total | (SW) 9736 | 614.000 | 620.0000 | 480.000 - 748.000 | 438.000 - 790.000 | 4 |
| Cadmium, Total | (SW) 9736 | 48.300 | 44.2000 | 37.700 - 58.900 | 34.400 - 62.200 | 4 |
| Chromium, Total | (SW) 9736 | 132.000 | 133.0000 | 99.500 - 165.000 | 89.200 - 175.000 | 4 |
| Lead, Total | (SW) 9736 | 136.000 | 162.0000 | 95.800 - 176.000 | 83.200 - 189.000 | 4 |
| Nickel, Total | (SW) 9736 | 469.000 | 459.0000 | 371.000 - 568.000 | 348.000 - 599.000 | 4 |
| Selenium, Total | (SW) 9736 | 24.300 | 20.4000 | 11.400 - 37.300 | 7.280 - 41.400 | 4 |
| Silver, Total | (SW) 9736 | 87.900 | 86.2000 | 53.000 - 123.000 | 42.100 - 134.000 | 4 |

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PREAWARD PERFORMANCE EVALUATION
SAMPLE SCORE SHEET

The Preaward Performance Evaluation includes the analysis of one or more performance evaluation samples supplied to the laboratory by EPA. Each sample is evaluated separately, according to the following scoring scheme. Each sample analyzed by the laboratory must receive a passing score in order for the laboratory to pass the Preaward Performance Evaluation.

LABORATORY: ENSECO-CAL

IFB: D101105R1 DATE: 1-9-92

SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

| CATEGORY | POINTS POSSIBLE | POINTS DEDUCTED | POINTS RECEIVED |
|--------------------------------|--------------------|--------------------|--------------------|
| I. IDENTIFICATION | 400 | <u>0</u> | <u>400</u> |
| II. QUANTIFICATION | 300 | <u>118</u> | <u>182</u> |
| III. QUALITY CONTROL | 200 | <u>10</u> | <u>190</u> |
| IV. REPORTING AND DELIVERABLES | 100 | <u>0</u> | <u>100</u> |

PRELIMINARY SCORE

Total of I and II 582

FINAL SCORE

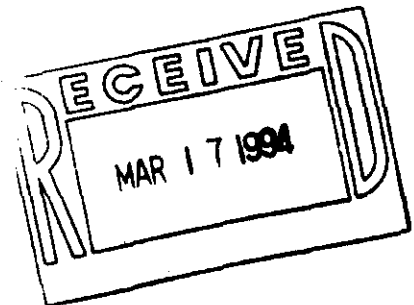
Total of I, II, III and IV 872

Number of Days Late: 0

Minimum Passing Scores:

1) for I and II 525

2) for I, II, III and IV 750



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SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

Number of points deducted

I. IDENTIFICATION (Max. 400 points)

A. PCDD/PCDF Identification (Max. 300 points)

Number of PCDD/PCDF compounds not identified - 0

(Y)(1500)/(X) - 0 points deducted

B. PCDD/PCDF False Positives (Max. 100 points)

Number of False Positives - 0

(W)(50) - 0 points deducted

I. Total 0

II. QUANTIFICATION (Max. 300 points)

Number of PCDD/PCDF compounds misquantified - 2

(Z)(1000)/(X-Y) - 118 points deducted

II. Total 118

Where:

X - number of PCDD/PCDF compounds included in the study, including those analytes with no acceptance windows.

Y - number of PCDD/PCDF compounds in the study that were not identified.

Z - number of PCDD/PCDF compounds misquantified.

W - number of PCDD/PCDF false positives.

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SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

Number of points deducted

III. QUALITY CONTROL (Max. 200 points)

(Failure to perform QC analysis will result in the maximum point deduction for the appropriate QC.)

NOTE: For the purposes of the preaward PE samples, the analyses of spiked samples of duplicate samples specified on Exhibit D will not be required.

A. Window Defining Mix (Max. 30 points)

Failure to analyze window defining mix at the required frequency, deduct 30 points.

0

B. Initial Calibration (Max. 70 points)

1. Failure to perform initial calibration at the required frequency, deduct 70 points.

0

2. Failure to meet the GC resolution, ion abundance ratios, retention times, signal-to-noise ratio, and response factor criteria, deduct 10 points per criterion per failure to a maximum of 60 points.

0

C. Continuing Calibration (Max. 30 points)

NOTE: If all samples are analyzed within the 12-hour time period containing the initial calibration, no continuing calibration may be necessary (see Exhibit D), in which case, the points assigned to the continuing calibration will be added to those for the initial calibration.

1. Failure to perform continuing calibration at the required frequency, deduct 10 points.

0

2. Failure to meet the GC resolution, ion abundance ratios, retention times, signal-to-noise ratio, and response factor criteria, deduct 10 points per criterion per failure to a maximum of 20 points.

10

SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

Number of points
deducted

D. Instrument Sensitivity Check (Max. 30 points)

- | | |
|--|----------|
| 1. Failure to perform instrument sensitivity check at the required frequency, deduct 10 points. | <u>0</u> |
| 2. Failure to meet the retention time, ion abundance ratio, signal-to-noise ratio, deduct 10 points per criterion per failure to a maximum of 20 points. | <u>0</u> |

E. Method Blank Analyses (Max. 40 points)

- | | |
|--|----------|
| 1. Failure to perform method blank analyses at the required frequency, deduct 10 points. | <u>0</u> |
| 2. Failure to meet the following method blank criteria: | |
| a. All signals for unlabeled PCDD/PCDF ions must be < 5% of the signal of the closest internal standard. | |
| b. No peaks meeting identification criteria have signals that are > 2% of the signal of the closest internal standard. | |

| | |
|---|----------|
| Deduct 10 points per criterion per failure to a maximum of 30 points. | <u>0</u> |
|---|----------|

III. Total 10

IV. REPORTING AND DELIVERABLES (Max. 100 points)

A. Contractual Forms I-VI (Max. 60 points)

NOTE: As spiked sample and duplicate sample analyses are not required, Form III is not required.

| | |
|---|----------|
| Failure to submit the required deliverables in accordance with the Statement of Work, deduct 10 points for each missing form for a maximum deduction of 60 points. Deduct 5 points for each illegible or incomplete form to a maximum of 30 points. | <u>0</u> |
|---|----------|

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SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

Number of points
deducted

B. Selected Ion Current Profile (SICP) (Max. 40 points)

Failure to submit SICPs for all samples, calibration standards, blanks, window defining mixes, etc. in accordance with the Statement of Work, deduct 10 points for each missing SICP for a maximum deduction of 40 points.

0

IV. Total

0

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SAMPLE ID: PCDD/PCDF 11/91 MATRIX: SOIL

COMMENTS

1. The CC3 standard analysis for the percent valley determination on 12/04/91 at 13:45 using the DB5 column was at 97% for the 123478-HxCDD/123667 HxCDD. The QC limits for the percent valley between the HxCDD isomers must be less than or equal to 50%.

Ten points were deducted. See Exhibit D, Section F.3.2.1.

Review:

Secondary Review:



H. Buhle
Principal Scientist



J. Armour
Senior Scientist