AGRICULTURE & PRIORITY POLLUTANTS LABORATORIES, INC.
4203 West Swift ▼ Fresno, California 93722 ▼ Phone 559.275-2175 ▼ Fax 559.275-4422

November 11, 1999

Parsons Engineering Science
8000 Centre Park Drive, Suite 200
Austin, TX 78754
Attn: Tammy Chang

Dear Ms. Chang:

Enclosed are the remaining items requested as outlined in your fax received on October 25, 1999.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

Sincerely,

Paula Young

Paula Young, QA Director
APPL, Inc.

cc: Diane Anderson

SW 846 method 8260B - Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS)

Corrective Action Items

1. Enclosed is the revised SOP ANA001 with the changes highlighted. The AFCEE QAPP states the result from the primary column will be reported. This is not required by the methods therefore this statement has also been added to the SOP; "If an individual project has its own QAPP with client specific requirements that are different than the SOP, the QAPP overrides the SOP."

5. Enclosed is the revised SOP PRE010 with the changes highlighted.

7. Enclosed are the revised SOPs ROU001 and SHR032 with the changes highlighted.

9. Enclosed is a copy of the Multilevel Quality Control Sign Off which documents the name of the analyst and the peer reviewer. This form was reviewed during the audit.

SW 846 method 6010B - Inductively Coupled Plasma-Atomic Emission Spectrometry

2. Enclosed is a copy of the maintenance log book.

3. Enclosed is a copy of the maintenance log book.

4. Enclosed is a copy of the maintenance log book.

5. Enclosed are the manufacturers instructions describing the procedure of soaking the burner head with soap. Dilute nitric acid would be less likely to contaminate the burner head, however since dilute nitric acid is already continually running over the head it would not adequately clean it as described in the manufacturers instructions. We don't need to perform Section C before and after each run, we do it to ensure the instrument is clean.

6. Enclosed are the verification results of the standard. All results were within 10%.

9. All SOPs for metal analyses state the lab will perform dilution tests per extraction batch that contain 20 or fewer samples. The SOPs do not specifically state the AFCEE requirement since the SOPs state "If an individual project has its own QAPP with client specific requirements that are different than the SOP, the QAPP overrides the SOP."

10. Enclosed is a new copy of the digestion log book. The technician drew the line down to include all standards and samples that were digested together and will continue to do this in the future. The time documented in the digestion log book is the beginning and ending of the 30min. digestion time by 7471A. Also enclosed is a copy of the digestion log for a 3010A digestion to be analyzed by 6010B.

11. The corrections were made in the thermometer calibration log book. Enclosed is a new copy. The refrigerator temperature log books were also reviewed to make sure the proper correction factor was applied to the temperatures. (I have also highlighted the calibration of the thermometer for the drying oven.)

SW-846 method 7470A/7471A - Mercury in Liquid Waste/Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique)

2. Enclosed is the revised SOP describing the procedure of zeroing the instrument with the PB. The RPD section is describing in general the calculation for RPD for spikes and duplicates. This section was revised to be more clear in its purpose.

SW-846 method 8270C - Semi-volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

1. Enclosed is the revised SOP ANA001 with the changes highlighted.

4. Enclosed is a copy of the maintenance log book.

8. Enclosed is a copy of the summary sheet which was observed during the audit.

SW-846 method 8081A - Organochlorine Pesticides by Gas Chromatography (GC)

1. Enclosed is the revised SOP ANA001 with the changes highlighted.

3. The temperature listed in the instructions section is not necessarily incorrect. The desired result is to cool the oven. There are many ways this can be accomplished one of which is to enter 2°. The description of the primer solution in SOP# INS004 is on page 1, section A.1.d.

5. Enclosed is the revised SOP ANA8081 with the changes highlighted. SW-846 method 8000B section 7.9 states "Confirmation may not be necessary if the composition of the sample matrix is well established by prior analysis,..." therefore the AFCEE requirement is not described in the SOP. In addition the SOP states "If an individual project has its own QAPP with client specific requirements that are different than the SOP, the QAPP overrides the SOP."

8. Enclosed is the revised SOP ANA8081 with the changes highlighted.

Sample Receipt, Storage, Preservation, Custody & Disposal

3. Enclosed are the revised SOPs ROU001 and SHR032 with the changes highlighted.

8. The portable hood in the GC/MS VOA room has been moved to the receiving area until the installation of the custom hood is complete.

9. Enclosed is a copy of the revised SOP with the changes highlighted.

12. According to the manufacturer the minimum flow rate for the portable hoods should be 40 ft/min.

Instrument Maintenance and Equipment Monitoring/Calibration

2. The minimum flow rate for the portable hoods is 40 ft/min. The limits for all the hoods have been documented in the front of the appropriate log books. Enclosed is a copy of the outside cover and inside cover of the log book. A copy of the documentation of the monthly measurement of the flow rates was previously sent to you. All hood log books have the location of the hood on the outside cover, the acceptance limits listed on the inside cover and are kept near the appropriate hood.

3. The mean and the standard deviation is calculated from the 10 initial measurements. A criterion is established for each syringe by calculating ±1 standard deviation. For example a 10µl syringe has 10 aliquots of water that measures 0.0099g, 0.0100g, 0.0100g, 0.0099g, 0.0099g, 0.0099g, 0.0099g, 0.0099g, 0.0100g and 0.0100g. The standard deviation is 0.0001. The average is 0.0099. The acceptance criteria for that particular syringe is 0.0098g to 0.0100g.

4. Since the other two measurements for the pipette were within the limits it was suspected that lack of technique was the cause for the outage. The pipette was recalibrated and was within the limits at 101.3%.

5. The software we have installed on all the computers to monitor the clocks was obtained through the Internet and is distributed as 'CareWare'. Our systems analysts have installed it on all the computers. Enclosed is the information we obtained from the Internet.

6. Yes. De-ionized water is not completely void of ionization.

9. Enclosed is the copy of the invoice for the NIST certified thermometer. Also enclosed is the copy of the thermometer calibration log book documenting the calibration of the thermometer for the drying oven.

Corporate Safety Program

1. The first annual internal audit of the safety program will occur on December 16, 1999.

MultiLevel Quality Control Sign Off

ARF or QCG: 31332 Rev:5

Sample Preparation

Extraction/Digestion/Preparation according to SOP#: GCM8260

Sample preservation checked:	Yes: ✓	✓ No:	NA:	
Sample preservation acceptable:	Yes: ✓	✓ No:	NA:	
Proper number of QC samples performed:	Yes: ✓	✓ No:	NA:	
Proper number of blanks performed:	Yes: ✓	✓ No:	NA:	
Specific QC requirements of client performed:	Yes: ✓	✓ No:	NA:	
Client ID's transcribed correctly from chain to ARF:	Yes: ✓	✓ No:	NA:	
Correct analyses requested entered on ARF:	Yes: ✓	✓ No:	NA:	
Holding times met:	Yes: ✓	✓ No:	NA:	
Sample container labels checked at all stages:	Yes: ✓	✓ No:	NA:	
Brought to final volume and labeled properly:	Yes: ✓	✓ No:	NA:	
Entered information into proper lab notebooks:	Yes: ✓	✓ No:	NA:	
Are there any deviations to any of the above items:	Yes:	No: ✓	✓ NA:	

Reason/explanation for deviation & supervisors init:

Name of technician(s)/Date: 10-28-99

Name of reviewer/Date: 10/28/99

Comments:

Instrumentation Laboratory

Samples analyzed according to SOP #: GCM 8260

All pertinent QC is available as per project manager:	Yes: ✓	✓ No:	NA:	
Checked for client specific requirements:	Yes: ✓	✓ No:	NA:	
Initial calibration in control:	Yes: ✓	✓ No:	NA:	
Calibrations include all pertinent analytes:	Yes: ✓	✓ No:	NA:	
Continuing calibrations in control:	Yes: ✓	✓ No:	NA:	
Second source calibrations in control:	Yes: ✓	✓ No:	NA:	
Method blank/calibration blank passes:	Yes: ✓	✓ No:	NA:	
Matrix Duplicate passes: (2)	Yes:	No:	✓ NA: ✓	
Surrogate(s) passes:	Yes: ✓	✓ No:	NA:	
LCS(/LCSD) passes:	Yes: ✓	✓ No:	NA:	
MS/MSD passes: (2)	Yes:	No: ✓	✓ NA:	
Spikes entered into control chart:	Yes: ✓	✓ No:	NA:	
Results transcribed correctly from raw data:	Yes: ✓	✓ No:	NA:	
Algorithm checked: Data File: (1)	Yes: ✓	✓ No:	NA:	
Quantitation performed according to method:	Yes: ✓	✓ No:	NA:	
Manual integration 2nd level review:	Yes: ✓	✓ No:	NA:	
Are there any deviations to any of the above items:	Yes:	No: ✓	✓ NA:	

Reason/explanation for deviation & supervisors init:

Results rejected based on deviations and action taken:

Name of analyst(s)/Date: 10/24/99

Name of reviewer/Date: 10/28/99

Comments: (1) 1023C04W.D, 1025M02W.D

(2) SEE QCER (ATTACHED)

ICP Service Log.

(68)

9/23/99 PS. Backflushed nebulizer, cleaned spray chamber w/ DI flush.
New sample uptake pump winding installed.

9/30/99 PS Back flushed nebulizer w/ DI. Cleaned off autosampler arms, and re-greased w/ teflon grease.

10/2/99 PS Backflushed nebulizer w/ DI.

10/6/99 PS Backflushed nebulizer w/DI.
Turned pump winding on sample uptake.

10/8/99 PS Backflushed nebulizer w/ DI.

---

* Record all instrument maintenance using SOP DOC 002

10/12/99 PS Nebulizer backflushed w/ DI
Put on new pump winding for sample uptake
Filters on ICP cleaned
See Analysis run on 101299 for calibration data + instrument compliance.

10/13/99 PS Backflushed nebulizer w/ DI before starting run.

10/15/99 PS Backflushed nebulizer w/DI.

10/18/99 PS - Low end noise on As - blank is not w/in ± 2ug/L.
- Turned the pump winding for sample uptake.
- Aligned the POP tube according to TJA specs.
- Calibrated and analyzed samples - See Data file: 101899 for compliance.

10/22/99 PS Calibration failing high on CCV. (>±10%)
Suspect nebulizer clogged. Shut down ICP, backflush w/ DI H_2O.
Rewarm and recalibrate ICP. Problem still persists (CCV >±10%).
Suspect matrix interference. Backflush nebulizer again, recalibrate and run samples at dilution. See Datafile 102299 for compliance.

ICP Service Log

(69)

10/28/99 PS Backflushed nebulizer in morning.
CCV 5 - some analytes >± 10%
Suspect nebulizer blockage. Backflushed nebulizer w/DI.
Rewarm + recalibrate - See Datafile 102899 for compliance.

This problem occured 2 more times in the run - same procedure followed.

AAnalyst 100/300 Atomic Absorption Spectrometer

Hardware Guide

PERKIN ELMER

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Release Information

Manual Part No.	Release	Release Date
0993-6088	Rev. E	June 1998

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Cleaning the Burner Head

Frequency

The nature of the samples aspirated determines the burner head cleaning interval. In ordinary operation, the burner head will need infrequent cleaning.

The burner head should provide an even flame over the length of the burner slot. An uneven flame may indicate the slot needs cleaning.

Quick Cleaning Procedure

If the instrument is running, extinguish the flame, turn off the gases, and let the burner head cool. Open the burner door. Carefully work along and between the burner head slot using the burner head cleaning tool (P/N 0303-1573) provided in the Spares Kit. Be sure not to nick the edges of the burner slot. (It is strongly recommended that you use the cleaning tool provided. It looks like a piece of shim stock and is shipped with the Spares Kit. Other cleaning items may have burrs that could nick the burner.)

Complete Cleaning Procedure

Cleaning stubborn deposits from the burner head slot may require that you first remove the burner head from the burner chamber, and then clean it.

1. If the instrument is running, extinguish the flame, turn off the gases, and **power down the instrument.** Let the burner head cool. Open the burner door.
2. Remove the burner head. To do so, press the safety latch tab on the ignitor box while gently pulling and twisting the burner head until it comes off the chamber (see procedure above).
3. Once the head is removed, carefully work through the slot with the burner head cleaning tool provided. (Again, it is strongly recommended that you use the cleaning tool shipped with the instrument to clean the burner head slot.) Do not nick the edges of the slot. Remove scrapings from inside and outside of the burner head.

4. If more cleaning is necessary, the burner head can also be soaked overnight in a detergent solution and then rinsed with deionized water and blown dry with a clean air supply.

5. Put the burner head back onto the burner chamber while pressing the safety latch tab. Position the magnetic strip on the burner head ring around the back of the assembly - it should face the ignitor box. Release the safety latch. Be sure the burner head is fully seated on the chamber. A gentle twisting and pushing may be necessary. You will know that the burner head is fully seated because the ignitor will swing over the burner.

6. Close the burner door.

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # K287-12

Date: 10/29/99

APPL, Inc
4203 W. Swift Ave
Fresno CA 93722

Project: Stock Verification

PO#

Date Rec'd: 10/14/99
Date Started: 10/14/99
Date Completed: 10/29/99

Date Sampled: 10/13/99
Time:
Sampler: Parminder Singh

Sample ID: ICP-ICAL Solutions
Lab ID: K36207

Method	PQL	MDL	Analyte	Expected Result	Results	% Rec.	Units
6010		0.01	Antimony	1.0	0.98	98.0	mg/L
6010		0.01	Arsenic	1.0	0.95	95.0	mg/L
6010		0.1	Aluminum	20	19.5	97.5	mg/L
6010		0.1	Barium	1.0	1.0	100	mg/L
6010		0.01	Beryllium	1.0	1.0	100	mg/L
6010		0.1	Boron	1.0	1.0	100	mg/L
6010		0.001	Cadmium	1.0	1.0	100	mg/L
6010		1.0	Calcium	50	50	≠100	mg/L
6010		0.01	Chromium	1.0	0.99	99.0	mg/L
6010		0.05	Cobalt	1.0	0.99	99.0	mg/L
6010		0.05	Copper	1.0	0.98	98.0	mg/L
6010		0.1	Iron	20	20.7	104	mg/L
6010		0.01	Lead	1.0	1.0	100	mg/L
6010		1.0	Magnesium	50	49	98.0	mg/L
6010		0.01	Molybdenum	1.0	0.98	98.0	mg/L
6010		0.05	Nickel	1.0	1.0	100	mg/L
6010		1.0	Phosphorous	10	9.8	98.0	mg/L
6010		0.01	Selenium	1.0	0.97	97.0	mg/L
6010		0.01	Silver	0.5	0.49	98.0	mg/L
6010		1.0	Sodium	50	47	94.0	mg/L
6010		0.1	Strontium	1.0	1.1	110	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Labor

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # K287-12

Date: 10/29/99

APPL, Inc
4203 W. Swift Ave
Fresno CA 93722

Project: Stock Verification

PO#

Date Rec'd: 10/14/99
Date Started: 11/09/99
Date Completed: 11/09/99

Date Sampled: 10/13/99
Time:
Sampler: Parminder Singh

Sample ID: ICP-ICAL Solutions
Lab ID: K36207

Method	PQL	MDL	Analyte	Expected Result	Results	% Rec	Units
6010		1.0	Potassium	10	10	100	mg/L

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# K287-12

QC REPORT

APPL, Inc
4203 W. Swift Ave
Fresno CA 93722

Dates Analyzed 10/14/99-10/29/99

Analyte	Batch #	Method	MS % Recovery	MSD % Recovery	RPD	Blank
Antimony	I04490	6010	96.0	98.0	2.1	ND
Arsenic	I04478	6010	102.0	104.0	1.9	ND
Aluminum	I04477	6010	120.0	122.0	1.7	ND
Barium	I04479	6010	104.0	104.0	0.0	ND
Beryllium	I04480	6010	104.0	104.0	0.0	ND
Boron	I04559	6010	114.0	114.0	0.0	ND
Cadmium	I04481	6010	102.0	102.0	0.0	ND
Calcium	I04171	6010	103.9	104.4	0.5	ND
Chromium	I04483	6010	104.0	104.0	0.0	ND
Cobalt	I04482	6010	102.0	102.0	0.0	ND
C :	I04484	6010	100.0	100.0	0.0	ND
Iron	I04485	6010	94.0	96.0	2.1	ND
Lead	I04489	6010	96.0	94.0	2.1	ND
Magnesium	I04172	6010	97.7	98.4	0.7	ND
Molybdenum	I04487	6010	102.0	102.0	0.0	ND
Nickel	I04488	6010	104.0	104.0	0.0	ND
Phosphorous	I04556	6010	107.4	93.4	13.9	ND
Selenium	I04491	6010	100.0	100.0	0.0	ND
Silver	I04476	6010	100.0	100.0	0.0	ND
Sodium	I04174	6010	----	----	0.8	ND
Strontium	I04522	6010	114.0	112.0	1.8	ND

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

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Report# K287-12

QC REPORT

APPL, Inc
4203 W. Swift Ave
Fresno CA 93722

Dates Analyzed 11/9/99

Analyte	Batch #	Method	MS % Recovery	MSD % Recovery	RPD	Blank
Potassium	I04820	6010	117.8	117.4	0.4	ND

Ramiro Salgado
Chemist

Certification # 1157

Donna Keller
Laboratory Director

Initial	Y-N PH<2	Initial Wt-Vol	Final Vol.	SPK Sol'n	Digestion	Analysis	Date	Comment
99100BA-7471A 0gm								
84410s		3x.20g	96ml's		7471A	7471A	10/8/99	*new sample (84696s)
82264s *		3x.20g						(84697s)
82265s		3x.20g						
99100BB-7471A 0gm								
0			96ml's		7471A	7471A	10/8/99	95°C
0 Dup								
0.2				0.05ppm Hg working std 0.4 ml's				START TIME: 6:00pm
0.5				1ml "				STOP: 6:30pm
1.0				2ml "				
2.0				4ml "				
5.0				10ml "				
5.0 Dup				10ml "				
0.0				20ml "				
~~99100BB-7471A 0gm~~								
99100BB-ICV				0.05ppm Hg working std 8ml 2a 10/8/99				
99100BB-BLK								
99100BB-LCS				0.05ppm Hg working STD 8ml 10/8/99				
84121s		3x.20g						
84122s		3x.20g						
84123s		3x.20g						
84124s		3x.20g						
84125s		3x.20g						
84126s		3x.20g						
84126s Dup		3x.20g						
84126s S1		3x.20g		8ml "				
84126s S2		3x.20g		8ml "				
84127s		3x.20g						
84128s		3x.20g						
84129s		3x.20g						
84130s		3x.20g						
84131s		3x.20g						
84132s		3x.20g						
84133s		3x.20g						
84134s		3x.20g						
84135s		3x.20g						

cont. pg 50

DCC# / INITIAL	Y-N PH<2	INITIAL WT-VOL.	FINAL VOL.	SPK SOLN	DIGESTION	ANALYSIS	DATE	COMMENT
991101C-7470A 245.11								
10.0		100mL	144.5mL	0.05ppm Hg working STD 20mL 11/1/99 gm	245.11 7470A	7470A	11/1/99	95°C
991101C-ICV				0.05ppm Hg working ICV 8mL 11/1/99 gm				
991101C-BLK								
991101C-LCS				0.05ppm Hg working STD 8mL 11/1/99 gm				
991101C-LCSD				8mL "				
83571w								Limited sample vol. No Dup or Spike
83571w S1				8mL "				
991101D-7470A 245.11								
0		100mL	144.5mL		246.11 7470A	7470A	11/1/99	TCLP extracted 10/26/99 Fluid 2 Filtered mix 95°C
0 Dup								
0.2				0.05ppm Hg working STD 0.4mL 11/1/99 gm				
0.5				1mL "				
1.0				2mL "				
2.0				4mL "				
5.0				10mL "				
5.0 Dup				10mL "				
10.0				20mL "				
991101D-ICV				0.05ppm Hg working ICV 8mL 11/1/99 gm				
991101D-BLK		10mL/100mL						
991101D-LCS				0.05ppm Hg working STD 8mL 11/1/99 gm				
991101D-LCSD				8mL "				
83571w								
83571w Dup								
83571w S1				8mL "				
83571w S2				8mL "				
991102A-3010A								
991102A-BLK		100mL	100mL	1000mL LCSW 11/1/99 RB	3010A	6010B	11/2/99	93°C
991102A-LCS								
85145w								
85146w								
85236w								
85237w								
85239w								
85240w								

cont Pg 74

INITIAL	Y-N pH<2	INITIAL WT-VOL.	FINAL VOL.	SPK SOL'N	DIGESTION	ANALYSIS	DATE	COMMENT
991102A-3010A gm								
85282w	Y	100ML'S	100ML'S		3010A	6010B	11/2/99	93°c
85283w								
85285w								
85286w								
85389w								
85390w								
85391w								
85393w								
85394w								
85405w								
85406w								
85406w Dup								
85406w S1				1000 ml LCSW 11/11/99 RB				
85406w S2				1000 ml LCSW 11/11/99 RB				
991102B-3010B gm								
991102B-BLK		100ML	100ML		3010A	6010B	11/2/99	93°c
991102B-LCS				1000 ml LCSW 11/11/99 RB				
85168w	Y							
85169w								
85172w								
85173w								
85174w								
85175w								
85176w								
85177w								
85178w								
85538w								
85538w Dup								
85538w S1				"				
85538w S2				"				
85539w								
85539w Dup								
85539w S1				"				
85539w S2				"				
85540w								

Hands Consequence # 39CXC 11/19/99 gm

cont. pg 75

Thermometer Calibration

Date	Initials	Nist Thermometer Serial #	Nist Thermometer Reading	Thermometer Serial #	Thermometer Reading	Correction factor	Freezer/ Refrigerator
4-14-99	NSR	V59773	-16	~~7347~~ 9280 NSR 4-14-99	-~~14~~ 16 NSR	-~~2~~ 2.0 NSR	Orange-Purple
4-14-99	NSR	V59773	-20	8111	-20	∅	A Freezer
4-14-99	NSR	V59773	~~5~~ 4.0 NSR	7474	4.0	∅	A Refrig
4-14-99	NSR	V59773	5.0	F19783	5.0	∅	Montauk
6-1-99	CK	443349	3.0	2356	3.0	∅	MS-1
6-1-99	CK	443349	-18.0	8912	-17.0	~~-1~~ PM 11/1/99	MS-1
6-1-99	CK	443349	-20.0	9522	-20.0	∅	MS-3
6-1-99	CK	443349	4.0	6504	4.0°	∅	MS-2
6-7-99	UF	443349	4.0	6389	4.5°	-0.5°C	Kelvinator Refrig
6-7-99	UF	443349	-16.0	8262	-16.0	∅	Kelvinator Freezer
6-7-99	UF	443349	7.0	6529	7.5	-0.5°C	Marvel Refrigerator
6-7-99	UF	443349	-17.0	8362	-18.0	UF 10/29/99 ~~-1.0°C~~ +1.0°C	Whirlpool freezer
6-7-99	UF	443349	3.0	F 19895	4.0	-1.0°C	Whirlpool refrigerator
7-15-99	AL	443349	35	WATERBATH #1	34°	+1.0°C ~~-1.0°C~~ AL 11-1-99	ROTOVAP BATH #1
7-15-99	AL	443349	37	WATERBATH #2	37°	∅	ROTOVAP BATH #2
7-15-99	AL	443349	35	WATERBATH #3	36°	-1.0°C	ROTOVAP BATH #3
7-27-99	USJ	443349	4.0°	F 25074	3.5°	+0.5°	GC-B
7-27-99	USJ	443349	4.5°	3168	6.0°	-1.5°	GC-F
7-27-99	USJ	443349	7.0°	7873	7.0°	∅	MS-2
7-27-99	USJ	443349	4.0°	1124	5.0°	-1.0°	GC-E
7-27-99	USJ	443349	7.0°	6605	5.5°	+1.5°	GC-D
8-2-99	CK	44349	4.5°	8013	4.5°	∅	ORGANIC LAB EXPLOSION PROOF REFRIGERATOR #2
1-28-99	USJ	443349	-12.0°	F12080	-9.0°	-3.0°	MS-3
7-9-99	USJ	443349	-12.0°	8957	-17.0°	+5.0°	GCB(Freezer)
10/11/99	GM	HB/B34596	93°C	2M4205	93°C	0	WATER BATH
10/11/99	GM	HB/B34596	93°C	1406	93°C	0	HOT PLATES
10/21/99	BJW	HB/C 443349	0.0°C	HB/C 443349	0.0°C	0.0	Ice Bath
10/21/99	BJW	HB/C 443343	0.0°C	HB/C 443343	0.0°C	0.0	Ice Bath
10/22/99	TM	~~DRYING OVEN~~ 92-14106 TM	179.0°C	DRYING OVEN ~~92-14106~~ TM	180°C	-1.0°C ~~+1.0°C~~ TM	DRYING OVEN
10/22/99	TM	92-14106	104.8°C	DRYING OVEN	105°C	∅	DRYING OVEN
10-23-99	NSR	HB/B 34596	5.5	1160	6.0	-0.5	Hobart #1
10-28-99	UF	443343	-18.0°C	8362	-19.0°C	+1.0°C	whirlpool Freezer

9-29-99 Vxl Replaced septum and liner See Note C.

10-1-99 Vxl Replaced septum and liner See Note C.

10-4-99 Vxl Replaced septum and liner See Note C.

10-11-99 Vxl Replaced septum and liner See Note C

10-12-99 Vxl Replaced septum and liner See Note C.

10-13-99 Vxl Replaced septum and liner See Note C.

10-15-99 Vxl Replaced split seal
Removed one loop of column from injector end
— due to high tailing Instrument back in operation on 10-16-99
Changed helium tank. (~2500 psi).

10-18-99 Vxl Replaced septum and liner. See Note C.

10-19-99 Vxl Replaced septum and liner
Replaced split seal.
Replaced column. Back in operation on 10-20-99
- due to high tailing in tune standard

```
==========================================================================
TEST REPORT     HEWLETT-PACKARD FUSED SILICA CAPILLARY COLUMN     JAN 20, 1998
            *** HP-5 CROSS-LINKED 5% PHENYL METHYL SILOXANE ***      01:34:01

PART#    19091J-233          COLUMN ID:      0.25 MM        FILM THICKNESS: 1.00 um
SERIAL# 57336918R            COLUMN LENGTH: 30.0 METER      PHASE RATIO:    63
==========================================================================

SETPOINTS:  INJ TEMP = 275 C   OVEN TEMP    = 163 C   CHART SPEED = 1.00 CM/MIN
            DET TEMP = 330 C   AREA REJECT =  3000    ATTENUATION =  2^2

START PENDING
RUN #    2     JAN 20, 1998  01:35:33
START
```

IF

Data File Name 907002.D
Data File Path C:\SWEETPEA\DATA\990907\
Operator SXS
Date Acquired 09/ 7/99 13:55
Method File DFTPP
Sample Name SV TUNE: 8-31-99A
Vial Number 2
Instrument Name Sweetpea

#	Name	Ret Time	Target Response
1)	DDT	24.21	3040955
2)	DDD	23.42	120381
3)	DDE	22.60	82847
		Breakdown	6.26

$$\text{DDT Breakdown} = \frac{DDD + DDE}{DDT + DDD + DDE} \times 100$$

$$= \frac{120381 + 82847}{3040955 + 120381 + 82847} \times 100$$

$$= \frac{203228}{3244183} \times 100$$

$$= 6.26\%$$

GC Lab - location
measurement - monthly

Minimum flow rate is 40. If the measurement is <40 the safety director is to be contacted immediately an corrective action taken & documented.

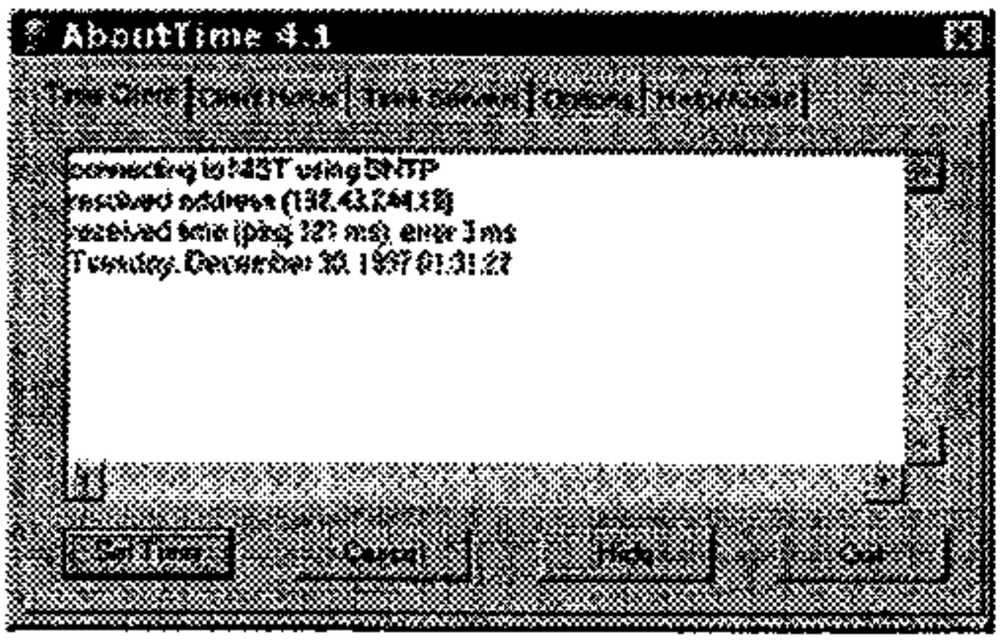
APPL, INC.

Running On Server ~~PII 333~~

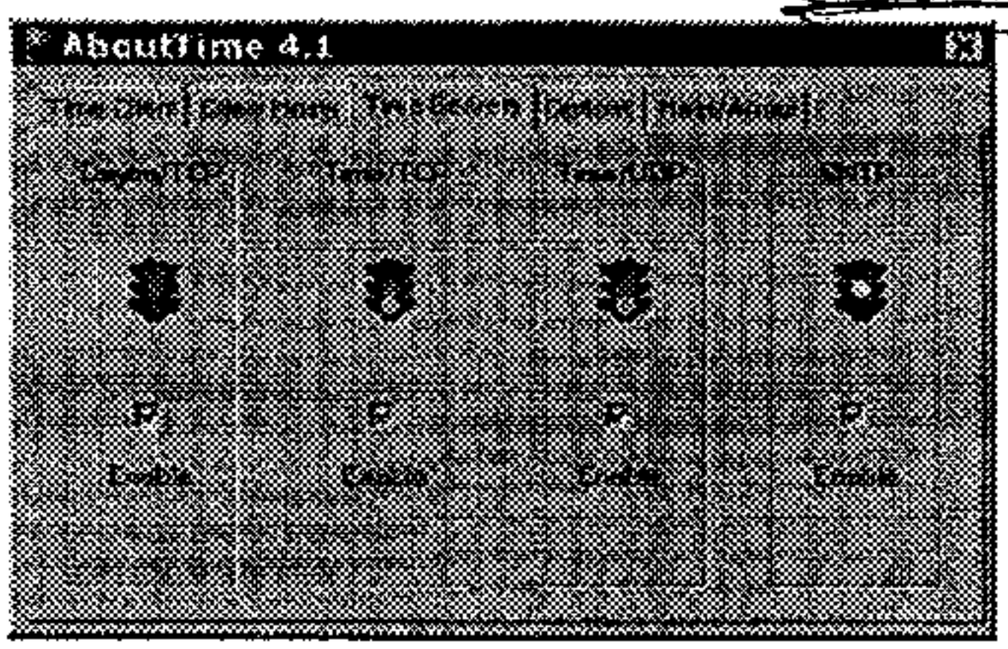
AboutTime Home Page

→ Note that you can minimize it to just a systray icon...

Current Version: 4.8 (10/23/1998)



Here is a typical client session. In this example, AboutTime reports a 3 millisecond difference between the local computer's clock and the network time server.



Here is AboutTime's own four-server "traffic" display. It shows that one of the server protocols is unavailable (red), and another is responding to a request (yellow).

⇒ Forced as a NT service, see attached documentation

What is AboutTime?

AboutTime is a superior source of time for your computer. As a time client, it will acquire time from the Internet with great accuracy, and as a server it will provide four kinds of time signals to other computers on your local network.

AboutTime uses advanced signal-processing techniques to correct for network delays, making high accuracy possible even over a slow modem connection.

In a local network with a copy of AboutTime installed on each machine, one can achieve + - 50 millisecond typical synchronization accuracies.

AboutTime can be instructed to perform its tasks automatically, at startup or at chosen time intervals. It is a small program that can be run in the background without requiring many resources.

- AboutTime is fully Y2K compliant.

Oh, I almost forgot the **other** good news. AboutTime is CareWare -- that means no money, now or ever. You just have to care.

⇒ Have to have msie 4.0 installed

Dimension 4 Version 4.3

Dimension 4 is the best time synchronization utility available today. It's outstanding features and ease of use prompted one user to state "It's so easy to use, I forgot it was running!"

It's also free!! Thinking Man Software distributes this application as freeware as part of a "give back to the Internet" program. All Internet users get something for free from the 'net, via www or ftp sites, so why not free applications like this one?

Using Dimension 4
System requirements
The "under the hood" details

We'd also just get a kick out of hearing from you. After all, since we're not asking for any money for Dimension 4, email is our only possible payment for all the hard work we put into the design and implementation of this outstanding piece of software. Let us know what you think.

Thanks,
Rob Chambers
robc@thinkman.com
http://www.thinkman.com/~thinkman/

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- o Client
- o minimizable in the systray only
- o set to 'load dimension 4 at startup'
- o can specify which ntp server to talk to
- o for 'aboutime' use Time/tcp protocol

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