



07/28/05

**Technical Report for**

**Tetra Tech NUS**

**Former American Beryllium, Sarasota, FL**

**N1075**

**Accutest Job Number: F33504**


**Sampling Date: 07/25/05**

**Report to:**

**Total number of pages in report: 44**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

  
**Harry Behzadi, Ph.D.**  
**Laboratory Director**

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK  
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## Sample Summary

Tetra Tech NUS

Job No: F33504

Former American Beryllium, Sarasota, FL  
Project No: N1075

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F33504-1	07/25/05	10:45	SRM	07/26/05	AQ Ground Water	TT-MW-125

## Report of Analysis

Client Sample ID:	TT-MW-125	Date Sampled:	07/25/05
Lab Sample ID:	F33504-1	Date Received:	07/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former American Beryllium, Sarasota, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J016894.D	1	07/27/05	MM	n/a	n/a	VJ704
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone <sup>a</sup>	24.1	25	5.0	ug/l	I
71-43-2	Benzene	0.50 U	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	0.50 U	1.0	0.50	ug/l	
75-25-2	Bromoform	0.50 U	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	0.50 U	1.0	0.50	ug/l	
75-00-3	Chloroethane	1.0 U	2.0	1.0	ug/l	
67-66-3	Chloroform	1.8	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	1.0 U	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	0.50 U	1.0	0.50	ug/l	
110-82-7	Cyclohexane	0.50 U	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	0.50 U	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	0.50 U	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	1.0 U	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	0.50 U	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	0.50 U	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	0.50 U	1.0	0.50	ug/l	
354-23-4	1,2-Dichlorotrifluoroethane	0.50 U	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	0.40 U	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	0.50 U	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.50 U	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.30 U	1.0	0.30	ug/l	
541-73-1	m-Dichlorobenzene	0.50 U	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	0.50 U	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	0.50 U	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.50 U	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.30 U	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	0.50 U	1.0	0.50	ug/l	
76-13-1	Freon 113	0.50 U	1.0	0.50	ug/l	
591-78-6	2-Hexanone	2.5 U	5.0	2.5	ug/l	
98-82-8	Isopropylbenzene	0.50 U	1.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	2.5 U	5.0	2.5	ug/l	
79-20-9	Methyl Acetate	5.0 U	10	5.0	ug/l	

U = Not detected MDL - Method Detection Limit

RL = Reporting Limit

L = Indicates value exceeds calibration range

I = Result &gt; = MDL but &lt; RL J = Estimated value

V = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

# Report of Analysis

Client Sample ID:	TT-MW-125	Date Sampled:	07/25/05
Lab Sample ID:	F33504-1	Date Received:	07/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Former American Beryllium, Sarasota, FL		

VOA TCL 4.2 List

CAS No.	Compound	Result	RL	MDL	Units	Q
74-83-9	Methyl bromide	1.0 U	2.0	1.0	ug/l	
74-87-3	Methyl chloride	1.0 U	2.0	1.0	ug/l	
108-87-2	Methylcyclohexane	0.50 U	1.0	0.50	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	2.5 U	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.50 U	1.0	0.50	ug/l	
100-42-5	Styrene	0.50 U	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	0.50 U	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.30 U	1.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	0.50 U	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	0.50 U	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.50 U	1.0	0.50	ug/l	
108-88-3	Toluene	0.50 U	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	0.50 U	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	0.60 U	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	0.50 U	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	1.0 U	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		86-115%
17060-07-0	1,2-Dichloroethane-D4	110%		73-126%
2037-26-5	Toluene-D8	100%		86-112%
460-00-4	4-Bromofluorobenzene	104%		83-119%

CAS No.	Tentatively Identified Compounds <sup>b</sup>	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) CCV outside of control limits; results may be biased low.  
 (b) No TICs detected.

U = Not detected      MDL - Method Detection Limit      I = Result > = MDL but < RL      J = Estimated value  
 RL = Reporting Limit      V = Indicates analyte found in associated method blank  
 L = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

Client Sample ID:	TT-MW-125	Date Sampled:	07/25/05
Lab Sample ID:	F33504-1	Date Received:	07/26/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	Former American Beryllium, Sarasota, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F010528.D	1	07/27/05	NJ	07/26/05	OP13957	SF589
Run #2							

Run #	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	2.1 U	5.3	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	37%		19-90%
4165-62-2	Phenol-d5	23%		10-68%
118-79-6	2,4,6-Tribromophenol	82%		36-137%
4165-60-0	Nitrobenzene-d5	61%		49-119%
321-60-8	2-Fluorobiphenyl	64%		45-118%
1718-51-0	Terphenyl-d14	79%		46-135%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 L = Indicates value exceeds calibration range

I = Result > = MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Misc. Forms

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### Custody Documents and Other Forms

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**Includes the following where applicable:**

- Chain of Custody

# CHAIN OF CUSTODY

4405 VINELAND ROAD • SUITE C-15  
ORLANDO, FL 32811  
TEL: 407-425-8700 • FAX: 407-425-0707

ACCUTEST JOB #: **F33504**  
ACCUTEST QUOTE #:

CLIENT INFORMATION		FACILITY INFORMATION				ANALYTICAL INFORMATION										MATRIX CODES	
NAME: <u>Tetra Tech</u> ADDRESS: <u>5421 Beaumont Center Blvd #66W</u> CITY: <u>Tampa</u> STATE: <u>FL</u> ZIP: <u>33634</u> SEND REPORT TO: _____ PHONE #: <u>813-806-0202 / Paul Calligan</u>		PROJECT NAME: <u>Former American Beryllium</u> LOCATION: <u>Sarasota, FL</u> PROJECT NO.: <u>N1075</u> FAX #: <u>813-806-0405</u>				8260 - Include Freezer Tacs 8220 1-4 Dioxene Only										DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID	
ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION			PRESERVATION											LAB USE ONLY	
1	TT-MW-125	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	HCl	NO <sub>2</sub>	NO <sub>3</sub>	NO <sub>2</sub> SO <sub>4</sub>	NO <sub>3</sub> SO <sub>4</sub>	NO <sub>2</sub> SO <sub>3</sub>	NO <sub>3</sub> SO <sub>3</sub>	NO <sub>2</sub> SO <sub>2</sub>	NO <sub>3</sub> SO <sub>2</sub>	LAB USE ONLY	
		7-25-05	1045	SLM	GW	5	X										
DATA TURNAROUND INFORMATION <input type="checkbox"/> STANDARD <input checked="" type="checkbox"/> 48 HOUR RUSH <input checked="" type="checkbox"/> 24 HOUR EMERGENCY <input type="checkbox"/> OTHER APPROVED BY: <u>Sue Bell</u> EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED		DATA DELIVERABLE INFORMATION <input type="checkbox"/> STANDARD <input type="checkbox"/> COMMERCIAL "B" <input type="checkbox"/> DISK DELIVERABLE <input type="checkbox"/> STATE FORMS <input type="checkbox"/> OTHER (SPECIFY)				COMMENTS/REMARKS <u>TAT Rush ASAP!</u>											
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
RELINQUISHED BY: <u>S. McNamee</u>	DATE TIME: <u>7/25/05/1405</u>	RECEIVED BY: <u>1. N. V. M. 7/25/05 1405</u>	RELINQUISHED BY: <u>2. N. V. M. 7/25/05</u>	DATE TIME: <u>7-26-05</u>	RECEIVED BY: <u>2. Susan Coonan</u>												
RELINQUISHED BY: <u>3.</u>	DATE TIME:	RECEIVED BY: <u>3.</u>	RELINQUISHED BY: <u>4.</u>	DATE TIME:	RECEIVED BY: <u>4.</u>												
RELINQUISHED BY: <u>5.</u>	DATE TIME:	RECEIVED BY: <u>5.</u>	SEAL #	PRESERVE WHERE APPLICABLE	ON ICE	TEMPERATURE											
										<input type="checkbox"/> <input type="checkbox"/> <u>24</u> C							

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F33504: Chain of Custody

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ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F33504 CLIENT: tetra tech PROJECT: Form. American Berellium  
DATE/TIME RECEIVED: 7-25-05/ 14:40 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 2.4  
METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER  
AIRBILL NUMBERS:

COOLER INFORMATION

- CUSTODY SEAL NOT PRESENT OR NOT INTACT
- NO COC RECEIVED
- ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- TRIP BLANK NOT PROVIDED
- TRIP BLANK NOT ON COC
- TRIP BLANK INTACT
- TRIP BLANK NOT INTACT
- RECEIVED WATER TRIP BLANK
- RECEIVED SOIL TRIP BLANK

SOIL INFORMATION

NUMBER OF ENCORES ? 12  
NUMBER OF 5035 FIELD KITS ? 12

SAMPLE INFORMATION

- SAMPLE LABELS PRESENT ON ALL BOTTLES
- CORRECT NUMBER OF CONTAINERS USED
- SAMPLE RECEIVED IMPROPERLY PRESERVED
- INSUFFICIENT VOLUME FOR ANALYSIS
- TIMES ON COC DON'T MATCH LABEL
- ID'S ON COC DON'T MATCH LABEL
- VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- UNCLEAR FILTERING INSTRUCTIONS
- UNCLEAR COMPOSITING INSTRUCTIONS
- SAMPLE(S) RECEIVED BROKEN
- % SOLIDS JAR NOT RECEIVED

SUMMARY OF COMMENTS:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TECHNICIAN SIGNATURE/DATE [Signature] 7-25-05 TECHNICIAN SIGNATURE/DATE \_\_\_\_\_

ASBD06/22/05

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## GC/MS Volatiles

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### QC Data Summaries

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#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

# Method Blank Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ704-MB	J016878.D	1	07/27/05	MM	n/a	n/a	VJ704

The QC reported here applies to the following samples:

Method: SW846 8260B

F33504-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
110-82-7	Cyclohexane	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
354-23-4	1,2-Dichlorotrifluoroethane	ND	1.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
76-13-1	Freon 113	ND	1.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
79-20-9	Methyl Acetate	ND	10	5.0	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
108-87-2	Methylcyclohexane	ND	1.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	

# Method Blank Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ704-MB	J016878.D	1	07/27/05	MM	n/a	n/a	VJ704

The QC reported here applies to the following samples:

Method: SW846 8260B

F33504-1

CAS No.	Compound	Result	RL	MDL	Units	Q
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.60	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	3.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	103% 86-115%
17060-07-0	1,2-Dichloroethane-D4	102% 73-126%
2037-26-5	Toluene-D8	99% 86-112%
460-00-4	4-Bromofluorobenzene	105% 83-119%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

# Blank Spike Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ704-BS	J016877.D	1	07/27/05	MM	n/a	n/a	VJ704

The QC reported here applies to the following samples:

Method: SW846 8260B

F33504-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	107	86	44-142
71-43-2	Benzene	25	25.6	102	80-120
75-27-4	Bromodichloromethane	25	25.9	104	75-120
75-25-2	Bromoform	25	22.3	89	60-129
108-90-7	Chlorobenzene	25	25.8	103	82-112
75-00-3	Chloroethane	25	31.6	126	67-148
67-66-3	Chloroform	25	26.4	106	78-118
75-15-0	Carbon disulfide	25	14.7	59*	65-147
56-23-5	Carbon tetrachloride	25	27.4	110	69-137
110-82-7	Cyclohexane	25	25.2	101	77-140
75-34-3	1,1-Dichloroethane	25	26.3	105	75-117
75-35-4	1,1-Dichloroethylene	25	25.4	102	67-134
96-12-8	1,2-Dibromo-3-chloropropane	25	19.8	79	54-125
106-93-4	1,2-Dibromoethane	25	22.8	91	68-116
107-06-2	1,2-Dichloroethane	25	24.9	100	68-121
78-87-5	1,2-Dichloropropane	25	25.5	102	78-122
354-23-4	1,2-Dichlorotrifluoroethane	25	28.1	112	62-132
124-48-1	Dibromochloromethane	25	24.3	97	68-118
75-71-8	Dichlorodifluoromethane	25	30.5	122	43-173
156-59-2	cis-1,2-Dichloroethylene	25	25.1	100	81-120
10061-01-5	cis-1,3-Dichloropropene	25	25.3	101	73-115
541-73-1	m-Dichlorobenzene	25	25.5	102	78-116
95-50-1	o-Dichlorobenzene	25	25.0	100	77-115
106-46-7	p-Dichlorobenzene	25	25.2	101	77-113
156-60-5	trans-1,2-Dichloroethylene	25	25.8	103	74-125
10061-02-6	trans-1,3-Dichloropropene	25	27.0	108	69-115
100-41-4	Ethylbenzene	25	25.6	102	82-115
76-13-1	Freon 113	25	21.6	86	72-148
591-78-6	2-Hexanone	125	112	90	60-125
98-82-8	Isopropylbenzene	25	29.5	118	83-129
108-10-1	4-Methyl-2-pentanone	125	109	87	61-128
79-20-9	Methyl Acetate	125	101	81	58-135
74-83-9	Methyl bromide	25	30.7	123	60-165
74-87-3	Methyl chloride	25	29.4	118	58-152
108-87-2	Methylcyclohexane	25	26.3	105	84-135
75-09-2	Methylene chloride	25	24.7	99	66-125

# Blank Spike Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ704-BS	J016877.D	1	07/27/05	MM	n/a	n/a	VJ704

The QC reported here applies to the following samples:

Method: SW846 8260B

F33504-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
78-93-3	Methyl ethyl ketone	125	104	83	58-127
1634-04-4	Methyl Tert Butyl Ether	25	25.3	101	67-127
100-42-5	Styrene	25	24.9	100	58-125
71-55-6	1,1,1-Trichloroethane	25	27.5	110	78-132
79-34-5	1,1,2,2-Tetrachloroethane	25	23.4	94	67-119
79-00-5	1,1,2-Trichloroethane	25	23.4	94	74-115
120-82-1	1,2,4-Trichlorobenzene	25	21.8	87	66-122
127-18-4	Tetrachloroethylene	25	26.1	104	75-126
108-88-3	Toluene	25	26.0	104	81-114
79-01-6	Trichloroethylene	25	26.0	104	80-115
75-69-4	Trichlorofluoromethane	25	29.5	118	65-163
75-01-4	Vinyl chloride	25	31.7	127	70-151
1330-20-7	Xylene (total)	75	78.6	105	81-118

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	86-115%
17060-07-0	1,2-Dichloroethane-D4	104%	73-126%
2037-26-5	Toluene-D8	99%	86-112%
460-00-4	4-Bromofluorobenzene	100%	83-119%

4.2  
4

# Instrument Performance Check (BFB)

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-BFB	Injection Date: 07/26/05
Lab File ID: J016855.D	Injection Time: 16:13
Instrument ID: GCMSJ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	16375	20.8	Pass
75	30.0 - 60.0% of mass 95	38568	48.9	Pass
95	Base peak, 100% relative abundance	78896	100.0	Pass
96	5.0 - 9.0% of mass 95	5444	6.9	Pass
173	Less than 2.0% of mass 174	322	0.41 (0.53) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	61328	77.7	Pass
175	5.0 - 9.0% of mass 174	4238	5.4 (6.9) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	59493	75.4 (97.0) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	3834	4.9 (6.4) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ703-IC703	J016856.D	07/26/05	16:39	00:26	Initial cal 1
VJ703-IC703	J016857.D	07/26/05	17:07	00:54	Initial cal 2
VJ703-IC703	J016858.D	07/26/05	17:35	01:22	Initial cal 3
VJ703-ICC703	J016859.D	07/26/05	18:03	01:50	Initial cal 4
VJ703-IC703	J016860.D	07/26/05	18:31	02:18	Initial cal 5
VJ703-IC703	J016861.D	07/26/05	19:00	02:47	Initial cal 6
VJ703-ICV703	J016862.D	07/26/05	19:28	03:15	Initial cal verification 4
VJ703-BS	J016863.D	07/26/05	19:56	03:43	Blank Spike
VJ703-MB	J016864.D	07/26/05	20:24	04:11	Method Blank
ZZZZZZ	J016865.D	07/26/05	20:52	04:39	(unrelated sample)
F33343-4	J016866.D	07/26/05	21:20	05:07	(used for QC only; not part of job F33504)
F33343-4MS	J016867.D	07/26/05	21:48	05:35	Matrix Spike
F33343-4MSD	J016868.D	07/26/05	22:16	06:03	Matrix Spike Duplicate
ZZZZZZ	J016869.D	07/26/05	22:44	06:31	(unrelated sample)
ZZZZZZ	J016870.D	07/26/05	23:12	06:59	(unrelated sample)

# Instrument Performance Check (BFB)

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ704-BFB	Injection Date: 07/27/05
Lab File ID: J016875.D	Injection Time: 08:03
Instrument ID: GCMSJ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	13045	21.0	Pass
75	30.0 - 60.0% of mass 95	30144	48.5	Pass
95	Base peak, 100% relative abundance	62178	100.0	Pass
96	5.0 - 9.0% of mass 95	4222	6.8	Pass
173	Less than 2.0% of mass 174	187	0.3 (0.41) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	46152	74.2	Pass
175	5.0 - 9.0% of mass 174	3328	5.4 (7.2) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	45093	72.5 (97.7) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	3096	5.0 (6.9) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ704-CC703	J016876.D	07/27/05	08:29	00:26	Continuing cal 4
VJ704-BS	J016877.D	07/27/05	08:57	00:54	Blank Spike
VJ704-MB	J016878.D	07/27/05	09:25	01:22	Method Blank
ZZZZZZ	J016879.D	07/27/05	09:54	01:51	(unrelated sample)
F33504-1	J016894.D	07/27/05	16:57	08:54	TT-MW-125



# Volatile Internal Standard Area Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Check Std:	VJ704-CC703	Injection Date:	07/27/05
Lab File ID:	J016876.D	Injection Time:	08:29
Instrument ID:	GCMSJ	Method:	SW846 8260B

	IS 1		IS 2		IS 3		IS 4	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	1061448	11.15	824322	14.73	453101	17.27	101268	8.05
Upper Limit <sup>a</sup>	2122896	11.65	1648644	15.23	906202	17.77	202536	8.55
Lower Limit <sup>b</sup>	530724	10.65	412161	14.23	226551	16.77	50634	7.55

Lab Sample ID	IS 1		IS 2		IS 3		IS 4	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VJ704-BS	1065351	11.15	816035	14.73	446081	17.27	100858	8.05
VJ704-MB	1081020	11.15	825382	14.73	412622	17.27	101333	8.05
ZZZZZZ	1023875	11.15	786699	14.73	402493	17.27	100943	8.05
F33504-1	840756	11.15	640235	14.73	327626	17.27	93729	8.06

- IS 1 = Fluorobenzene
- IS 2 = Chlorobenzene-D5
- IS 3 = 1,4-Dichlorobenzene-d4
- IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Surrogate Recovery Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Method: SW846 8260B	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F33504-1	J016894.D	108.0	110.0	100.0	104.0
VJ704-BS	J016877.D	102.0	104.0	99.0	100.0
VJ704-MB	J016878.D	103.0	102.0	99.0	105.0

Surrogate Compounds                      Recovery Limits

S1 = Dibromofluoromethane	86-115%
S2 = 1,2-Dichloroethane-D4	73-126%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	83-119%

4.5  
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# Initial Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICC703  
 Lab FileID: J016859.D

## Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\MSJ0626A.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Wed Jul 27 08:26:53 2005  
 Response via : Initial Calibration

### Calibration Files

1 =J016856.D 2 =J016857.D 3 =J016858.D 4 =J016859.D  
 5 =J016860.D 6 =J016861.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) I Fluorobenzene	-----I STD-----							
2) Di chlorodi fluoromet	0.171	0.163	0.225	0.215	0.207	0.194	0.196	12.53
3) P Chloromethane	0.316	0.305	0.390	0.385	0.376	0.357	0.355	10.17
4) C Vinyl Chloride	0.238	0.224	0.313	0.301	0.300	0.286	0.277	13.26
5) Bromomethane	0.131	0.130	0.147	0.127	0.112	0.101	0.125	12.98
6) Chloroethane	0.123	0.122	0.156	0.149	0.143	0.132	0.138	10.21
7) Tri chlorofluorometh	0.308	0.281	0.388	0.367	0.363	0.353	0.344	11.75
8) Ethyl Ether	0.190	0.202	0.214	0.215	0.219	0.212	0.209	5.27
9) 1,2-Di chlorotri fluo	0.244	0.247	0.335	0.317	0.319	0.305	0.295	13.29
10) C 1,1-Di chloroethene	0.339	0.312	0.423	0.410	0.408	0.399	0.382	11.87
11) Freon 113	0.215	0.190	0.260	0.241	0.236	0.230	0.229	10.50
12) Carbon Di sulfide	0.799	0.691	0.934	0.895	0.891	0.873	0.847	10.46
13) Iodomethane	0.282	0.284	0.348	0.344	0.343	0.345	0.324	9.84
14) Acrolein		0.020	0.023	0.024	0.024	0.024	0.023	7.07
15) Methylene Chloride	0.395	0.357	0.396	0.398	0.392	0.383	0.387	4.00
16) Acetone	0.120	0.106	0.129	0.119	0.111	0.102	0.115	8.74
17) Methyl acetate	0.139	0.154	0.159	0.165	0.167	0.160	0.158	6.41
18) trans-1,2-Di chloroe	0.392	0.318	0.402	0.393	0.391	0.382	0.380	8.19
19) Hexane	0.305	0.212	0.272	0.262	0.256	0.248	0.259	11.71
20) Methyl Tert Butyl E	0.513	0.538	0.581	0.589	0.592	0.580	0.566	5.73
21) Di-isopropyl ether	0.759	0.781	0.911	0.926	0.930	0.913	0.870	8.97
22) P 1,1-Di chloroethane	0.403	0.383	0.477	0.470	0.471	0.464	0.445	9.13
23) Acrylonitrile	0.070	0.077	0.083	0.088	0.088	0.086	0.082	8.72
24) ETBE	0.642	0.691	0.775	0.801	0.806	0.798	0.752	9.15
25) Vinyl acetate	0.209	0.228	0.236	0.257	0.239	0.214	0.231	7.57
26) cis-1,2-Di chloroeth	0.220	0.214	0.255	0.255	0.255	0.255	0.242	8.16
27) 2,2-Di chloropropane	0.291	0.282	0.366	0.358	0.354	0.343	0.332	10.91
28) Bromochloromethane	0.086	0.091	0.101	0.102	0.100	0.099	0.097	6.65
29) Cyclohexane	0.391	0.338	0.479	0.464	0.469	0.456	0.433	12.92
30) C Chloroform	0.394	0.393	0.464	0.462	0.461	0.453	0.438	7.93
31) Ethyl Acetate	0.201	0.201	0.210	0.215	0.218	0.212	0.209	3.43
32) Tetrahydrofuran	0.060	0.066	0.062	0.063	0.065	0.061	0.063	3.72
33) S Dibromofluoromethan	0.253	0.254	0.254	0.250	0.250	0.245	0.251	1.34
34) Carbon Tetrachlorid	0.289	0.286	0.377	0.366	0.363	0.359	0.340	12.00
35) 1,1,1-Tri chloroetha	0.290	0.303	0.397	0.385	0.384	0.379	0.356	13.21
36) 2-Butanone	0.141	0.125	0.149	0.142	0.137	0.129	0.137	6.38
37) 1,1-Di chloropropene	0.273	0.240	0.329	0.318	0.318	0.313	0.299	11.63
38) Benzene	0.900	0.807	0.984	0.972	0.974	0.972	0.935	7.44
39) TAME	0.561	0.622	0.701	0.724	0.736	0.733	0.679	10.60
40) S 1,2-Di chloroethane-	0.333	0.339	0.342	0.337	0.335	0.324	0.335	1.84
41) 1,2-Di chloroethane	0.321	0.327	0.353	0.357	0.355	0.343	0.343	4.50
42) Tri chloroethene	0.221	0.195	0.252	0.245	0.248	0.246	0.234	9.51
43) Methyl cyclohexane	0.379	0.299	0.431	0.412	0.412	0.404	0.390	12.15
44) Dibromomethane	0.127	0.129	0.146	0.147	0.146	0.145	0.140	6.73
45) C 1,2-Di chloropropane	0.239	0.227	0.273	0.271	0.276	0.271	0.259	7.98
46) Bromodi chloromethan	0.279	0.297	0.346	0.353	0.356	0.351	0.331	10.10

4.6  
4

# Initial Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICC703  
 Lab FileID: J016859.D

47)	2-Chl oroethyl vi nyl	0.075	0.092	0.106	0.109	0.111	0.108	0.100	14.00
48)	ci s-1, 3-Di chl oropro	0.312	0.338	0.397	0.400	0.402	0.399	0.375	10.51
49) I	Chl orobenzene-d5	-----I STD-----							
50) S	Tol uene-d8	1.290	1.297	1.281	1.294	1.327	1.346	1.306	1.95
51) C	Tol uene	1.220	1.081	1.307	1.292	1.330	1.347	1.263	7.85
52)	2-Ni tropropane	0.057	0.067	0.074	0.078	0.080	0.077	0.072	11.91
53)	4-Methyl -2-pentanon	0.265	0.298	0.323	0.331	0.338	0.329	0.314	8.75
54)	trans-1, 3-Di chl orop	0.346	0.390	0.439	0.451	0.464	0.465	0.426	11.24
55)	Tetrachl oroethene	0.283	0.246	0.314	0.308	0.313	0.322	0.298	9.64
56)	1, 1, 2-Tri chl oroetha	0.212	0.224	0.243	0.248	0.254	0.254	0.239	7.31
57)	Di bromochl oromethan	0.240	0.265	0.305	0.313	0.322	0.330	0.296	11.97
58)	1, 3-Di chl oropropane	0.422	0.446	0.476	0.486	0.498	0.500	0.471	6.62
59)	1, 2-Di bromoethane	0.217	0.256	0.277	0.287	0.293	0.300	0.272	11.40
60)	2-hexanone	0.195	0.230	0.283	0.273	0.273	0.263	0.253	13.37
61)	1-Chl orohexane	0.283	0.298	0.425	0.422	0.423	0.432	0.380	18.39
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.40839 *A + 0.01163 *A^2									
62) C	Ethyl benzene	1.414	1.241	1.508	1.497	1.531	1.544	1.456	7.87
63) P	Chl orobenzene	0.767	0.706	0.816	0.811	0.820	0.823	0.790	5.84
64)	1, 1, 1, 2-Tetrachl oro	0.245	0.253	0.297	0.300	0.304	0.310	0.285	9.89
65)	m, p-Xyl ene	1.040	0.969	1.184	1.192	1.223	1.229	1.139	9.52
66)	o-Xyl ene	1.014	1.011	1.232	1.241	1.274	1.291	1.177	10.99
67)	Styrene	0.734	0.764	0.954	0.981	1.012	1.029	0.912	14.20
68) P	Bromoform	0.153	0.174	0.209	0.224	0.234	0.243	0.206	17.18
69)	I sopropyl benzene	1.114	1.033	1.351	1.329	1.371	1.388	1.264	11.98
70) I	1, 4-Di chl orobenzene-d	-----I STD-----							
71) S	4-Bromofl uorobenzen	1.064	1.060	1.070	1.071	1.081	1.091	1.073	1.05
72)	n-Propyl benzene	3.059	2.719	3.471	3.423	3.458	3.459	3.265	9.52
73)	Bromobenzene	0.651	0.603	0.699	0.697	0.697	0.701	0.674	5.95
74) P	1, 1, 2, 2-Tetrachl oro	0.634	0.663	0.686	0.697	0.684	0.665	0.672	3.34
75)	1, 3, 5-Tri methyl benz	1.959	1.875	2.350	2.345	2.351	2.353	2.206	10.21
76)	2-Chl orotol uene	1.963	1.797	2.131	2.099	2.104	2.098	2.032	6.38
77)	trans-1, 4-Di chl oro-	0.147	0.181	0.190	0.201	0.198	0.184	0.184	11.90
78)	1, 2, 3-Tri chl oroprop	0.157	0.178	0.187	0.190	0.190	0.187	0.182	7.02
79)	Cycl ohexanone	0.064	0.016	0.018	0.019	0.020	0.020	0.026	70.47
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.01830 *A + 0.00022 *A^2									
80)	4-Chl orotol uene	1.923	1.795	2.145	2.124	2.147	2.138	2.045	7.35
81)	tert-Butyl benzene	1.221	1.130	1.420	1.387	1.399	1.395	1.325	9.07
82)	1, 2, 4-Tri methyl benz	2.165	1.945	2.391	2.383	2.410	2.404	2.283	8.32
83)	sec-Butyl benzene	2.683	2.385	3.140	3.050	3.059	3.052	2.895	10.26
84)	4-I sopropyl tol uene	2.058	1.818	2.338	2.267	2.283	2.267	2.172	9.12
85)	1, 3-Di chl orobenzene	1.268	1.098	1.285	1.272	1.279	1.290	1.249	5.96
86)	1, 4-Di chl orobenzene	1.268	1.098	1.332	1.303	1.309	1.311	1.270	6.85
87)	n-Butyl benzene	1.298	1.164	1.507	1.475	1.484	1.465	1.399	9.81
88)	Benzyl Chl ori de	0.128	0.174	0.216	0.223	0.226	0.222	0.198	19.79
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
Response Ratio = 0.00000 + 0.22381 *A + -0.00045 *A^2									
89)	1, 2-Di chl orobenzene	1.204	1.081	1.234	1.213	1.208	1.215	1.193	4.67
90)	1, 2-Di bromo-3-Chl or	0.134	0.105	0.118	0.122	0.121	0.124	0.121	7.92
91)	Hexachl orobutadi ene	0.565	0.356	0.470	0.457	0.463	0.477	0.465	14.31
92)	1, 2, 4-Tri chl orobenz	1.069	0.728	0.833	0.839	0.835	0.856	0.860	13.03
93)	Naphthal ene	2.546	1.525	1.714	1.746	1.760	1.749	1.840	19.40
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 1.74389 *A + 0.00403 *A^2									

# Initial Calibration Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICC703  
Lab FileID: J016859.D

94) 1, 2, 3-Trichlorobenz 1.147 0.645 0.703 0.705 0.696 0.695 0.765 24.63  
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999  
Response Ratio = 0.00000 + 0.70640 \*A + -0.00605 \*A^2

95) I Tert Butyl Alcohol -d1 -----I STD-----  
96) Tert Butyl Alcohol 0.953 0.883 0.898 0.897 0.904 0.910 0.908 2.64  
97) tert Amyl alcohol 0.126 0.050 0.066 0.070 0.069 0.071 0.075 34.83  
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996  
Response Ratio = 0.00000 + 0.06657 \*A + 0.00100 \*A^2

98) 1, 4-Di oxane 0.067 0.080 0.087 0.094 0.095 0.096 0.087 13.14

-----  
(#) = Out of Range

MSJ0626A.M

Wed Jul 27 09:26:11 2005

4.6  
4

# Initial Calibration Verification

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICV703  
Lab FileID: J016862.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\072605\J016862.D  
Acq On : 26 Jul 2005 7:28 pm  
Sample : icv703-4  
Misc : MS4782, VJ703, , , , , 1  
MS Integration Params: Rteint.p

Vial : 16  
Operator: MunaM  
Inst : MSVOA6  
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\MSJ0626A.M (RTE Integrator)  
Title : SW-846 Method 5030B/8260B & EPA 624  
Last Update : Wed Jul 27 08:26:53 2005  
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(mi n)	R. T.
1 I	Fluorobenzene	1.000	1.000	0.0	107	0.00	11.15
2	Dichlorodifluoromethane	0.196	0.197	-0.5	98	0.00	4.25
3 P	Chloromethane	0.355	0.377	-6.2	105	0.00	4.60
4 C	Vinyl Chloride	0.277	0.310	-11.9	110	0.00	4.80
5	Bromomethane	0.125	0.119	4.8	99	0.00	5.46
6	Chloroethane	0.138	0.150	-8.7	108	0.00	5.70
7	Trichlorofluoromethane	0.344	0.345	-0.3	100	0.00	5.98
8	Ethyl Ether	0.209	0.172	17.7	86	0.00	6.45
9	1,2-Dichlorotrifluoroethane	0.295	0.309	-4.7	104	0.00	6.76
10 C	1,1-Dichloroethene	0.382	0.366	4.2	95	0.00	6.84
11	Freon 113	0.229	0.179	21.8#	79	0.00	6.89
12	Carbon Disulfide	0.847	0.468	44.7#	56	0.00	6.94
13	Iodomethane	0.324	0.263	18.8	82	0.00	7.10
14	Acrolein	0.023	0.005	78.3#	22#	0.00	7.35
15	Methylene Chloride	0.387	0.372	3.9	100	0.00	7.72
16	Acetone	0.115	0.106	7.8	95	0.00	7.76
17	Methyl acetate	0.158	0.145	8.2	94	0.00	7.92
18	trans-1,2-Dichloroethene	0.380	0.376	1.1	102	0.00	7.97
19	Hexane	0.259	0.198	23.6#	81	0.00	8.05
20	Methyl Tert Butyl Ether	0.566	0.627	-10.8	114	0.00	8.09
21	Diisopropyl ether	0.870	0.918	-5.5	106	0.00	8.57
22 P	1,1-Dichloroethane	0.445	0.463	-4.0	105	0.00	8.84
23	Acrylonitrile	0.082	0.029	64.6#	35#	0.00	8.88
24	ETBE	0.752	0.832	-10.6	111	0.00	9.08
25	Vinyl acetate	0.231	0.198	14.3	82	0.00	9.09
26	cis-1,2-Dichloroethene	0.242	0.244	-0.8	102	0.00	9.57
27	2,2-Dichloropropane	0.332	0.316	4.8	94	0.00	9.72
28	Bromochloromethane	0.097	0.107	-10.3	112	0.00	9.84
29	Cyclohexane	0.433	0.419	3.2	96	0.00	9.88
30 C	Chloroform	0.438	0.446	-1.8	103	0.00	9.89
31	Ethyl Acetate	0.209	0.200	4.3	100	0.00	9.96
32	Tetrahydrofuran	0.063	0.065	-3.2	109	0.00	10.13
33 S	Dibromofluoromethane	0.251	0.247	1.6	106	0.00	10.13
34	Carbon Tetrachloride	0.340	0.349	-2.6	102	0.00	10.13
35	1,1,1-Tri chloroethane	0.356	0.369	-3.7	102	0.00	10.21
36	2-Butanone	0.137	0.128	6.6	96	0.00	10.25
37	1,1-Dichloropropene	0.299	0.311	-4.0	104	0.00	10.35
38	Benzene	0.935	0.952	-1.8	105	0.00	10.67
39	TAME	0.679	0.670	1.3	99	0.00	10.73
40 S	1,2-Dichloroethane-d4	0.335	0.330	1.5	104	0.00	10.82
41	1,2-Dichloroethane	0.343	0.341	0.6	102	0.00	10.90
42	Trichloroethene	0.234	0.246	-5.1	107	0.00	11.36

# Initial Calibration Verification

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICV703  
 Lab FileID: J016862.D

43	Methyl cycl ohexane	0.390	0.392	-0.5	102	0.00	11.38
44	Di bromomethane	0.140	0.142	-1.4	103	0.00	11.88
45 C	1, 2-Di chl oropropane	0.259	0.269	-3.9	106	0.00	11.98
46	Bromodi chl oromethane	0.331	0.344	-3.9	104	0.00	12.02
47	2-Chl oroethyl vinyl ether	0.100	0.138	-38.0#	136	0.00	12.61
48	ci s-1, 3-Di chl oropropene	0.375	0.386	-2.9	103	0.00	12.74
49 I	Chl orobenzene-d5	1.000	1.000	0.0	105	0.00	14.73
50 S	Tol uene-d8	1.306	1.310	-0.3	107	0.00	12.96
51 C	Tol uene	1.263	1.303	-3.2	106	0.00	13.02
52	2-Ni tropropane	0.072	0.076	-5.6	103	0.00	13.27
53	4-Methyl -2-pentanone	0.314	0.317	-1.0	101	0.00	13.38
54	trans-1, 3-Di chl oropropene	0.426	0.486	-14.1	114	0.00	13.46
55	Tetrachl oroethene	0.298	0.315	-5.7	108	0.00	13.49
56	1, 1, 2-Tri chl oroethane	0.239	0.245	-2.5	104	0.00	13.65
57	Di bromochl oromethane	0.296	0.310	-4.7	104	0.00	13.89
58	1, 3-Di chl oropropane	0.471	0.474	-0.6	103	0.00	13.98
59	1, 2-Di bromoethane	0.272	0.282	-3.7	104	0.00	14.20
60	2-hexanone	0.253	0.253	0.0	98	0.00	14.30
		----- Amount	Cal c.	%Dri ft	-----		
61	1-Chl orohexane	40.000	42.611	-6.5	111	0.00	14.63
		----- AvgRF	CCRF	%Dev	-----		
62 C	Ethyl benzene	1.456	1.490	-2.3	105	0.00	14.72
63 P	Chl orobenzene	0.790	0.819	-3.7	107	0.00	14.75
64	1, 1, 1, 2-Tetrachl oroethane	0.285	0.284	0.4	100	0.00	14.79
65	m, p-Xyl ene	1.139	1.188	-4.3	105	0.00	14.87
66	o-Xyl ene	1.177	1.243	-5.6	106	0.00	15.36
67	Styrene	0.912	0.950	-4.2	102	0.00	15.41
68 P	Bromoform	0.206	0.215	-4.4	101	0.00	15.50
69	I sopropyl benzene	1.264	1.479	-17.0	117	0.00	15.68
70 I	1, 4-Di chl orobenzene-d4	1.000	1.000	0.0	103	0.00	17.27
71 S	4-Bromofl uorobenzene	1.073	1.089	-1.5	105	0.00	16.05
72	n-Propyl benzene	3.265	3.463	-6.1	104	0.00	16.14
73	Bromobenzene	0.674	0.689	-2.2	102	0.00	16.20
74 P	1, 1, 2, 2-Tetrachl oroethane	0.672	0.664	1.2	98	0.00	16.20
75	1, 3, 5-Tri methyl benzene	2.206	2.310	-4.7	102	0.00	16.32
76	2-Chl orotol uene	2.032	2.085	-2.6	102	0.00	16.36
77	trans-1, 4-Di chl oro-2-Bute	0.184	0.216	-17.4	117	0.00	16.40
78	1, 2, 3-Tri chl oropropane	0.182	0.184	-1.1	100	0.00	16.40
		----- Amount	Cal c.	%Dri ft	-----		
79	Cycl ohexanone	200.000	161.566	19.2	82	0.00	16.49
		----- AvgRF	CCRF	%Dev	-----		
80	4-Chl orotol uene	2.045	2.158	-5.5	105	0.00	16.54
81	tert-Butyl benzene	1.325	1.393	-5.1	104	0.00	16.70
82	1, 2, 4-Tri methyl benzene	2.283	2.335	-2.3	101	0.00	16.76
83	sec-Butyl benzene	2.895	2.972	-2.7	101	0.00	16.88
84	4-I sopropyl tol uene	2.172	2.358	-8.6	107	0.00	17.01
85	1, 3-Di chl orobenzene	1.249	1.288	-3.1	104	0.00	17.20
86	1, 4-Di chl orobenzene	1.270	1.307	-2.9	103	0.00	17.29
87	n-Butyl benzene	1.399	1.457	-4.1	102	0.00	17.49
		----- Amount	Cal c.	%Dri ft	-----		
88	Benzyl chl ori de	40.000	41.814	-4.5	108	0.00	17.54
		----- AvgRF	CCRF	%Dev	-----		

# Initial Calibration Verification

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ703-ICV703  
 Lab FileID: J016862.D

89	1, 2-Di chl orobenzene	1.193	1.240	-3.9	105	0.00	17.77
90	1, 2-Di bromo-3-Chl oropropa	0.121	0.117	3.3	99	0.00	18.61
91	Hexachl orobutadi ene	0.465	0.442	4.9	100	0.00	19.26
92	1, 2, 4-Tri chl orobenzene	0.860	0.817	5.0	100	0.00	19.35
	----- Amount	Cal c.	%Dri ft	-----			
93	Naphthal ene	40.000	38.927	2.7	100	0.00	19.74
94	1, 2, 3-Tri chl orobenzene	40.000	38.822	2.9	100	0.00	19.98
	----- AvgRF	CCRF	%Dev	-----			
95 I	Tert Butyl Al cohol -d10	1.000	1.000	0.0	103	0.00	8.05
96	Tert Butyl Al cohol	0.908	0.924	-1.8	106	0.00	8.15
	----- Amount	Cal c.	%Dri ft	-----			
97	tert Amyl al cohol	400.000	377.072	5.7	95	0.00	10.73
	----- AvgRF	CCRF	%Dev	-----			
98	1, 4-Di oxane	0.087	0.094	-8.0	103	0.00	12.24

(#) = Out of Range  
 J016859.D MSJ0626A.M

SPCC's out = 0 CCC's out = 0  
 Wed Jul 27 09:25:45 2005

4.6  
4



# Continuing Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ704-CC703  
 Lab FileID: J016876.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\072705\J016876.D Vial : 1  
 Acq On : 27 Jul 2005 8:29 am Operator: MunaM  
 Sample : cc703-4 Inst : MSVOA6  
 Misc : MS4636, VJ704,,,,,1 Multiplr: 1.00  
 MS Integration Params: Rteint.p

Method : C:\MSDCHEM\1\METHODS\MSJ0626A.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Wed Jul 27 08:26:53 2005  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(mi n)	R. T.
1 I	Fluorobenzene	1.000	1.000	0.0	84	0.00	11.15
2	Dichlorodifluoromethane	0.196	0.234	-19.4	92	0.00	4.26
3 P	Chloromethane	0.355	0.401	-13.0	88	0.01	4.61
4 C	Vinyl Chloride	0.277	0.315	-13.7	88	0.00	4.81
5	Bromomethane	0.125	0.146	-16.8	96	0.01	5.47
6	Chloroethane	0.138	0.168	-21.7#	95	0.00	5.71
7	Trichlorofluoromethane	0.344	0.417	-21.2#	96	0.00	5.98
8	Ethyl Ether	0.209	0.204	2.4	80	0.00	6.45
9	1,2-Dichlorotrifluoroethane	0.295	0.333	-12.9	88	0.00	6.76
10 C	1,1-Dichloroethene	0.382	0.418	-9.4	86	0.00	6.84
11	Freon 113	0.229	0.253	-10.5	88	0.00	6.90
12	Carbon Disulfide	0.847	0.914	-7.9	86	0.00	6.95
13	Iodomethane	0.324	0.344	-6.2	84	0.00	7.11
14	Acrolein	0.023	0.020	13.0	72	0.00	7.35
15	Methylene Chloride	0.387	0.404	-4.4	85	0.00	7.73
16	Acetone	0.115	0.056	51.3#	40#	0.00	7.77
17	Methyl acetate	0.158	0.149	5.7	76	0.00	7.92
18	trans-1,2-Dichloroethene	0.380	0.402	-5.8	86	0.00	7.97
19	Hexane	0.259	0.266	-2.7	85	0.00	8.05
20	Methyl Tert Butyl Ether	0.566	0.548	3.2	78	0.00	8.09
21	Diisopropyl ether	0.870	0.930	-6.9	85	0.00	8.57
22 P	1,1-Dichloroethane	0.445	0.477	-7.2	85	0.00	8.84
23	Acrylonitrile	0.082	0.077	6.1	74	0.00	8.88
24	ETBE	0.752	0.779	-3.6	82	0.00	9.08
25	Vinyl acetate	0.231	0.264	-14.3	86	0.00	9.09
26	cis-1,2-Dichloroethene	0.242	0.256	-5.8	84	0.00	9.57
27	2,2-Dichloropropane	0.332	0.384	-15.7	90	0.00	9.72
28	Bromochloromethane	0.097	0.102	-5.2	84	0.00	9.84
29	Cyclohexane	0.433	0.468	-8.1	85	0.00	9.88
30 C	Chloroform	0.438	0.478	-9.1	87	0.00	9.89
31	Ethyl Acetate	0.209	0.189	9.6	74	0.00	9.96
32	Tetrahydrofuran	0.063	0.051	19.0	68	0.01	10.14
33 S	Dibromodifluoromethane	0.251	0.258	-2.8	87	0.00	10.13
34	Carbon Tetrachloride	0.340	0.386	-13.5	89	0.00	10.14
35	1,1,1-Trichloroethane	0.356	0.401	-12.6	88	0.00	10.22
36	2-Butanone	0.137	0.093	32.1#	55	0.00	10.25
37	1,1-Dichloropropene	0.299	0.327	-9.4	86	0.00	10.35
38	Benzene	0.935	0.972	-4.0	84	0.00	10.67
39	TAME	0.679	0.683	-0.6	79	0.00	10.73
40 S	1,2-Dichloroethane-d4	0.335	0.338	-0.9	84	0.00	10.82
41	1,2-Dichloroethane	0.343	0.356	-3.8	84	0.00	10.90
42	Trichloroethene	0.234	0.248	-6.0	85	0.00	11.36

4.6  
4

# Continuing Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ704-CC703  
 Lab FileID: J016876.D

43	Methyl cycl ohexane	0.390	0.419	-7.4	86	0.00	11.38
44	Di bromomethane	0.140	0.143	-2.1	82	0.00	11.88
45 C	1, 2-Di chl oropropane	0.259	0.274	-5.8	85	0.00	11.98
46	Bromodi chl oromethane	0.331	0.362	-9.4	86	0.00	12.03
47	2-Chl oroethyl vinyl ether	0.100	0.092	8.0	71	0.00	12.61
48	ci s-1, 3-Di chl oropropene	0.375	0.409	-9.1	86	0.00	12.74
49 I	Chl orobenzene-d5	1.000	1.000	0.0	86	0.00	14.73
50 S	Tol uene-d8	1.306	1.289	1.3	86	0.00	12.96
51 C	Tol uene	1.263	1.314	-4.0	88	0.00	13.02
52	2-Ni tropropane	0.072	0.072	0.0	80	0.00	13.27
53	4-Methyl -2-pentanone	0.314	0.291	7.3	76	0.00	13.38
54	trans-1, 3-Di chl oropropene	0.426	0.446	-4.7	85	0.00	13.46
55	Tetrachl oroethene	0.298	0.308	-3.4	86	0.00	13.49
56	1, 1, 2-Tri chl oroethane	0.239	0.238	0.4	83	0.00	13.66
57	Di bromochl oromethane	0.296	0.310	-4.7	86	0.00	13.89
58	1, 3-Di chl oropropane	0.471	0.469	0.4	83	0.00	13.98
59	1, 2-Di bromoethane	0.272	0.270	0.7	81	0.00	14.20
60	2-hexanone	0.253	0.196	22.5#	62	0.00	14.30
		----- Amount	Cal c.	%Dri ft	-----		
61	1-Chl orohexane	40.000	40.236	-0.6	86	0.00	14.64
		----- AvgRF	CCRF	%Dev	-----		
62 C	Ethyl benzene	1.456	1.522	-4.5	88	0.00	14.73
63 P	Chl orobenzene	0.790	0.831	-5.2	88	0.00	14.75
64	1, 1, 1, 2-Tetrachl oroethane	0.285	0.307	-7.7	88	0.00	14.80
65	m, p-Xyl ene	1.139	1.225	-7.6	89	0.00	14.87
66	o-Xyl ene	1.177	1.270	-7.9	88	0.00	15.36
67	Styrene	0.912	0.997	-9.3	88	0.00	15.41
68 P	Bromoform	0.206	0.209	-1.5	80	0.00	15.51
69	I sopropyl benzene	1.264	1.383	-9.4	90	0.00	15.68
70 I	1, 4-Di chl orobenzene-d4	1.000	1.000	0.0	86	0.00	17.27
71 S	4-Bromofl uorobenzene	1.073	1.075	-0.2	87	0.00	16.05
72	n-Propyl benzene	3.265	3.535	-8.3	89	0.00	16.14
73	Bromobenzene	0.674	0.703	-4.3	87	0.00	16.20
74 P	1, 1, 2, 2-Tetrachl oroethane	0.672	0.657	2.2	81	0.00	16.21
75	1, 3, 5-Tri methyl benzene	2.206	2.398	-8.7	88	0.00	16.32
76	2-Chl orotol uene	2.032	2.192	-7.9	90	0.00	16.36
77	trans-1, 4-Di chl oro-2-Bute	0.184	0.182	1.1	83	0.00	16.40
78	1, 2, 3-Tri chl oropropane	0.182	0.178	2.2	81	0.00	16.40
		----- Amount	Cal c.	%Dri ft	-----		
79	Cycl ohexanone	200.000	164.395	17.8	70	0.00	16.49
		----- AvgRF	CCRF	%Dev	-----		
80	4-Chl orotol uene	2.045	2.215	-8.3	90	0.00	16.54
81	tert-Butyl benzene	1.325	1.455	-9.8	91	0.00	16.70
82	1, 2, 4-Tri methyl benzene	2.283	2.466	-8.0	89	0.00	16.76
83	sec-Butyl benzene	2.895	3.167	-9.4	90	0.00	16.89
84	4-I sopropyl tol uene	2.172	2.359	-8.6	90	0.00	17.02
85	1, 3-Di chl orobenzene	1.249	1.310	-4.9	89	0.00	17.21
86	1, 4-Di chl orobenzene	1.270	1.336	-5.2	89	0.00	17.29
87	n-Butyl benzene	1.399	1.523	-8.9	89	0.00	17.49
		----- Amount	Cal c.	%Dri ft	-----		
88	Benzyl chl ori de	40.000	39.068	2.3	85	0.00	17.54
		----- AvgRF	CCRF	%Dev	-----		

4.6  
4

# Continuing Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: VJ704-CC703  
 Lab FileID: J016876.D

89	1, 2-Di chl orobenzene	1.193	1.226	-2.8	87	0.00	17.77
90	1, 2-Di bromo-3-Chl oropropa	0.121	0.105	13.2	75	0.00	18.61
91	Hexachl orobutadi ene	0.465	0.434	6.7	82	0.00	19.26
92	1, 2, 4-Tri chl orobenzene	0.860	0.780	9.3	80	0.00	19.35
		----- Amount	Cal c.	%Dri ft	-----		
93	Naphthal ene	40.000	33.814	15.5	73	0.00	19.74
94	1, 2, 3-Tri chl orobenzene	40.000	33.875	15.3	73	0.00	19.98
		----- AvgRF	CCRF	%Dev	-----		
95 I	Tert Butyl Al cohol -d10	1.000	1.000	0.0	68	0.00	8.05
96	Tert Butyl Al cohol	0.908	0.904	0.4	68	0.00	8.15
		----- Amount	Cal c.	%Dri ft	-----		
97	tert Amyl al cohol	400.000	484.978	-21.2#	81	0.00	10.73
		----- AvgRF	CCRF	%Dev	-----		
98	1, 4-Di oxane	0.087	0.099	-13.8	71	0.00	12.24

(#) = Out of Range  
 J016859.D MSJ0626A.M

SPCC's out = 0 CCC's out = 0  
 Wed Jul 27 10:21:46 2005

4.6  
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## GC/MS Semi-volatiles

### QC Data Summaries

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#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

# Method Blank Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13957-MB	F010527.D	1	07/27/05	NJ	07/26/05	OP13957	SF589

The QC reported here applies to the following samples:

Method: SW846 8270C

F33504-1

CAS No.	Compound	Result	RL	MDL	Units	Q
123-91-1	1,4-Dioxane	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits	
4165-60-0	Nitrobenzene-d5	83%	49-119%
321-60-8	2-Fluorobiphenyl	87%	45-118%
1718-51-0	Terphenyl-d14	90%	46-135%

5.1  
5

# Blank Spike Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP13957-BS	F010526.D	1	07/27/05	NJ	07/26/05	OP13957	SF589

The QC reported here applies to the following samples:

Method: SW846 8270C

F33504-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
123-91-1	1,4-Dioxane	50	28.2	56	9-70

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	49-119%
321-60-8	2-Fluorobiphenyl	88%	45-118%
1718-51-0	Terphenyl-d14	86%	46-135%

# Instrument Performance Check (DFTPP)

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample:	SF580-DFTPP	Injection Date:	07/14/05
Lab File ID:	F010288.D	Injection Time:	09:25
Instrument ID:	GCMSF		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	98608	38.0	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	103916	40.0	Pass
70	Less than 2.0% of mass 69	624	0.24 (0.6) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	122213	47.1	Pass
197	Less than 1.0% of mass 198	202	0.08	Pass
198	Base peak, 100% relative abundance	259544	100.0	Pass
199	5.0 - 9.0% of mass 198	17139	6.6	Pass
275	10.0 - 30.0% of mass 198	54352	20.9	Pass
365	1.0 - 100.0% of mass 198	4846	1.9	Pass
441	Present, but less than mass 443	24130	9.3 (72.7) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	165544	63.8	Pass
443	17.0 - 23.0% of mass 442	33205	12.8 (20.1) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SF580-IC580	F010289.D	07/14/05	09:44	00:19	Initial cal 5
SF580-IC580	F010290.D	07/14/05	10:15	00:50	Initial cal 25
SF580-IC580	F010291.D	07/14/05	10:45	01:20	Initial cal 50
SF580-ICC580	F010292.D	07/14/05	11:15	01:50	Initial cal 75
SF580-IC580	F010293.D	07/14/05	11:46	02:21	Initial cal 100
SF580-IC580	F010294.D	07/14/05	12:17	02:52	Initial cal 125
SF580-ICV580	F010295.D	07/14/05	12:53	03:28	Initial cal verification 50
OP13806-BS	F010299.D	07/14/05	14:58	05:33	Blank Spike
OP13806-MB	F010300.D	07/14/05	15:29	06:04	Method Blank
ZZZZZZ	F010301.D	07/14/05	16:01	06:36	(unrelated sample)
F33029-1	F010302.D	07/14/05	16:32	07:07	(used for QC only; not part of job F33504)
OP13806-MS	F010303.D	07/14/05	17:03	07:38	Matrix Spike
OP13806-MSD	F010304.D	07/14/05	17:34	08:09	Matrix Spike Duplicate
ZZZZZZ	F010305.D	07/14/05	18:04	08:39	(unrelated sample)
ZZZZZZ	F010306.D	07/14/05	18:34	09:09	(unrelated sample)

# Instrument Performance Check (DFTPP)

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample:	SF589-DFTPP	Injection Date:	07/27/05
Lab File ID:	F010524.D	Injection Time:	09:14
Instrument ID:	GCMSF		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	61083	39.2	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	63609	40.8	Pass
70	Less than 2.0% of mass 69	267	0.17 (0.42) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	73637	47.2	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	156018	100.0	Pass
199	5.0 - 9.0% of mass 198	10596	6.8	Pass
275	10.0 - 30.0% of mass 198	31733	20.3	Pass
365	1.0 - 100.0% of mass 198	2926	1.9	Pass
441	Present, but less than mass 443	13184	8.5 (71.3) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	95797	61.4	Pass
443	17.0 - 23.0% of mass 442	18487	11.8 (19.3) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SF589-CC580	F010525.D	07/27/05	09:33	00:19	Continuing cal 75
OP13957-BS	F010526.D	07/27/05	10:03	00:49	Blank Spike
OP13957-MB	F010527.D	07/27/05	10:32	01:18	Method Blank
F33504-1	F010528.D	07/27/05	11:02	01:48	TT-MW-125
OP13947-LBS	F010529.D	07/27/05	11:31	02:17	Blank Spike
OP13947-LB	F010530.D	07/27/05	12:01	02:47	Leachate Blank
F33373-4	F010531.D	07/27/05	12:31	03:17	(used for QC only; not part of job F33504)
F33378-1	F010534.D	07/27/05	14:02	04:48	(used for QC only; not part of job F33504)
OP13947-MS	F010535.D	07/27/05	14:32	05:18	Matrix Spike
OP13947-MSD	F010536.D	07/27/05	15:03	05:49	Matrix Spike Duplicate
OP13947-DUP	F010537.D	07/27/05	15:33	06:19	Duplicate
OP13942-MB	F010538.D	07/27/05	16:04	06:50	Method Blank
ZZZZZZ	F010539.D	07/27/05	16:35	07:21	(unrelated sample)
ZZZZZZ	F010540.D	07/27/05	17:06	07:52	(unrelated sample)
ZZZZZZ	F010541.D	07/27/05	17:36	08:22	(unrelated sample)
ZZZZZZ	F010542.D	07/27/05	18:07	08:53	(unrelated sample)
ZZZZZZ	F010543.D	07/27/05	18:37	09:23	(unrelated sample)
ZZZZZZ	F010544.D	07/27/05	19:08	09:54	(unrelated sample)
ZZZZZZ	F010545.D	07/27/05	19:38	10:24	(unrelated sample)

5.3  
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# Instrument Performance Check (DFTPP)

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample:	SF589-DFTPP	Injection Date:	07/27/05
Lab File ID:	F010524.D	Injection Time:	09:14
Instrument ID:	GCMSE		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	F010546.D	07/27/05	20:08	10:54	(unrelated sample)

5.3  
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# Semivolatiles Internal Standard Area Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Check Std:	SF589-CC580	Injection Date:	07/27/05
Lab File ID:	F010525.D	Injection Time:	09:33
Instrument ID:	GCMSF	Method:	SW846 8270C

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	224788	4.50	866660	5.55	531395	7.69	979101	10.13	804424	15.04	707629	17.53
Upper Limit <sup>a</sup>	449576	5.00	1733320	6.05	1062790	8.19	1958202	10.63	1608848	15.54	1415258	18.03
Lower Limit <sup>b</sup>	112394	4.00	433330	5.05	265698	7.19	489551	9.63	402212	14.54	353815	17.03

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP13957-BS	211342	4.50	809452	5.55	474644	7.68	854907	10.13	723802	15.03	626776	17.53
OP13957-MB	190290	4.50	710006	5.55	405613	7.68	722122	10.13	617382	15.02	550651	17.52
F33504-1	198454	4.50	753590	5.55	443107	7.68	790801	10.13	673084	15.02	585217	17.52
OP13947-LBS	198772	4.50	760058	5.55	446314	7.68	785677	10.13	664937	15.03	576365	17.52
OP13947-LB	207207	4.50	769122	5.55	446167	7.68	788226	10.12	683736	15.02	606939	17.52
F33373-4	195822	4.50	727787	5.55	419542	7.68	735560	10.12	616906	15.02	547883	17.52
F33378-1	208593	4.50	776973	5.55	447209	7.68	808551	10.12	690108	15.02	605476	17.52
OP13947-MS	216302	4.50	823359	5.55	497145	7.68	877289	10.13	733281	15.03	627429	17.52
OP13947-MSD	215275	4.50	815359	5.55	477689	7.68	856914	10.13	704928	15.03	611310	17.52
OP13947-DUP	197458	4.50	742921	5.55	431949	7.68	765853	10.12	671895	15.02	588903	17.52
OP13942-MB	217512	4.50	818522	5.55	490547	7.68	872622	10.12	754951	15.02	649004	17.52
ZZZZZZ	228300	4.50	889336	5.55	528038	7.69	879925	10.15	706357	15.03	607534	17.52
ZZZZZZ	239959	4.50	941137	5.55	559781	7.69	935439	10.15	748211	15.03	647166	17.52
ZZZZZZ	198362	4.50	755913	5.55	450719	7.68	796077	10.13	690337	15.02	594579	17.52
ZZZZZZ	231992	4.50	889652	5.55	520626	7.68	918613	10.13	770848	15.03	676120	17.52
ZZZZZZ	202303	4.50	772690	5.55	452042	7.68	808663	10.13	700471	15.02	612427	17.52
ZZZZZZ	191530	4.50	734273	5.55	430940	7.68	753976	10.12	641286	15.02	565714	17.52
ZZZZZZ	197721	4.50	767865	5.55	451156	7.68	800973	10.12	688762	15.02	597891	17.52
ZZZZZZ	195294	4.50	742227	5.55	434403	7.68	768597	10.12	661859	15.02	573023	17.52

- IS 1 = 1,4-Dichlorobenzene-d4
- IS 2 = Naphthalene-d8
- IS 3 = Acenaphthene-D10
- IS 4 = Phenanthrene-d10
- IS 5 = Chrysene-d12
- IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.  
 (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

5.4  
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# Semivolatile Surrogate Recovery Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Method: SW846 8270C	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
F33504-1	F010528.D	37.0	23.0	82.0	61.0	64.0	79.0
OP13957-BS	F010526.D				86.0	88.0	86.0
OP13957-MB	F010527.D				83.0	87.0	90.0

**Surrogate Compounds**                      **Recovery Limits**

S1 = 2-Fluorophenol	19-90%
S2 = Phenol-d5	10-68%
S3 = 2,4,6-Tribromophenol	36-137%
S4 = Nitrobenzene-d5	49-119%
S5 = 2-Fluorobiphenyl	45-118%
S6 = Terphenyl-d14	46-135%

5.5  
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# Initial Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICC580  
 Lab FileID: F010292.D

## Response Factor Report MS-F

Method : C:\MSDCHEM\1\METHODS\8270C.M (RTE Integrator)  
 Title : SW846 8270C OR EPA 625  
 Last Update : Thu Jul 14 13:35:24 2005  
 Response via : Initial Calibration

### Calibration Files

5 =F010289.D 25 =F010290.D 50 =F010291.D 75 =F010292.D  
 100 =F010293.D 125 =F010294.D i cv =F010295.D

Compound	5	25	50	75	100	125	i cv	Avg	%RSD
-----  STD -----									
1) I 1,4-Di chlorobenzene-d									
2) 1,4-Di oxane	0.344	0.363	0.429	0.410	0.416	0.421		0.397	8.77
3) N-ni trosodi methyl	0.550	0.559	0.640	0.657	0.642	0.652		0.617	7.86
4) Pyri di ne	1.031	0.968	1.166	1.105	1.141	1.227		1.106	8.49
5) Benzal dehyde	0.905	0.905	0.673	0.480	0.758			0.744	23.90
6) Ani li ne	1.724	1.909	1.918	1.984	1.985	2.017		1.923	5.51
7)S 2-Fl uorophenol	1.061	1.159	1.217	1.246	1.228	1.235		1.191	5.95
8) bi s(2-Chl oroethyl	0.957	1.036	1.093	1.123	1.125	1.116		1.075	6.19
9)S Phenol -d5	1.392	1.540	1.621	1.626	1.634	1.625		1.573	6.06
10)C Phenol	1.469	1.525	1.613	1.594	1.614	1.781		1.599	6.63
11) 2-Chl orophenol	1.245	1.320	1.384	1.392	1.390	1.398		1.355	4.50
12) 1,3-Di chl orobenze	1.444	1.484	1.544	1.547	1.530	1.520		1.512	2.66
13)C 1,4-Di chl orobenze	1.493	1.543	1.592	1.600	1.566	1.550		1.557	2.50
14) 1,2-Di chl orobenze	1.381	1.427	1.466	1.442	1.430	1.415		1.427	1.97
15) Benzyl al cohoh	0.705	0.809	0.888	0.897	0.889	0.910		0.850	9.34
16) bi s(2-chl oroi sopr	1.489	1.535	1.619	1.621	1.621	1.642		1.588	3.85
17) 2-Methyl phenol	1.044	1.157	1.229	1.238	1.246	1.253		1.195	6.80
18) Acetophenone	1.658	1.672	1.788	1.861	1.822	1.884		1.781	5.37
19) Hexachl oroethane	0.549	0.568	0.590	0.593	0.587	0.585		0.579	2.89
20)P N-Ni troso-di -n-pr	0.830	0.916	0.949	0.971	0.975	1.004		0.941	6.58
21) 3&4-Methyl phenol	1.140	1.242	1.292	1.328	1.321	1.348		1.278	6.02
-----  STD -----									
22) I Naphthal ene-d8									
23)S Ni trobenzene-d5	0.355	0.375	0.389	0.387	0.396	0.390		0.382	3.91
24) Ni trobenzene	0.338	0.363	0.373	0.370	0.380	0.378		0.367	4.22
25) Isophorone	0.570	0.610	0.624	0.617	0.637	0.638		0.616	4.02
26)C 2-Ni trophenol	0.188	0.203	0.212	0.208	0.212	0.207		0.205	4.51
27) 2,4-Di methyl pheno	0.333	0.366	0.378	0.375	0.385	0.377		0.369	5.06
28) bi s(2-Chl oroethox	0.341	0.362	0.380	0.369	0.384	0.383		0.370	4.46
29) Benzoi c Acid		0.226	0.259	0.273	0.280	0.281		0.264	8.76
30)C 2,4-Di chl oropheno	0.278	0.316	0.326	0.312	0.320	0.313		0.311	5.40
31) 1,2,4-Tri chl orobe	0.329	0.338	0.341	0.332	0.337	0.331		0.335	1.31
32) Naphthal ene	1.000	1.067	1.094	1.077	1.106	1.077		1.070	3.48
33) 4-Chl oroani li ne	0.418	0.450	0.456	0.450	0.458	0.447		0.447	3.23
34) 2,6-Di chl oropheno	0.276	0.296	0.298	0.288	0.296	0.285		0.290	2.95
35)C Hexachl orobutadi e	0.177	0.185	0.191	0.179	0.185	0.176		0.182	3.23
36) Caprol actam	0.118	0.139	0.139	0.143	0.147	0.145		0.139	7.69
37)C 4-Chl oro-3-methyl	0.293	0.317	0.330	0.327	0.334	0.335		0.323	4.91
38) 2-Methyl naphthal e	0.663	0.709	0.731	0.711	0.729	0.712		0.709	3.44
39) 1-Methyl naphthal e	0.649	0.688	0.693	0.679	0.703	0.676		0.681	2.70
40) 1,2,4,5-Tetrachl o	0.328	0.345	0.342	0.331	0.340	0.328		0.336	2.16
-----  STD -----									
41) I Acenaphthene-d10									
42)P Hexachl orocycl ope	0.120	0.216	0.303	0.322	0.326	0.337		0.271	31.67
---- Linear regr., Force(0,0) ---- Coeffi cient = 0.9978									
Response Ratio = 0.0000 + 0.32655 *A									

5.6  
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# Initial Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICC580  
 Lab FileID: F010292.D

43)C	2, 4, 6-Tri chl oroph	0.347	0.388	0.403	0.400	0.402	0.398	0.389	5.53
44)	2, 4, 5-Tri chl oroph	0.365	0.405	0.427	0.427	0.426	0.426	0.413	6.00
45)S	2-Fl uorobi phenyl	1.346	1.394	1.447	1.401	1.412	1.382	1.397	2.40
46)	1, 1' -Bi phenyl	1.416	1.479	1.544	1.561	1.521	1.551	1.512	3.66
47)	2-Chl oronaphthal e	1.112	1.181	1.207	1.191	1.196	1.197	1.181	2.94
48)	2-Ni troani line	0.323	0.360	0.383	0.381	0.392	0.393	0.372	7.13
49)	Acenaphthyl ene	1.853	1.975	2.038	2.028	2.031	2.020	1.991	3.56
50)	Di methyl phthal ate	1.328	1.393	1.404	1.405	1.425	1.420	1.396	2.53
51)	2, 6-Di ni trotol uen	0.299	0.325	0.335	0.328	0.335	0.332	0.326	4.22
52)C	Acenaphthene	1.119	1.205	1.235	1.205	1.217	1.206	1.198	3.36
53)	3-Ni troani line	0.315	0.357	0.368	0.362	0.370	0.371	0.357	5.97
54)P	2, 4-Di ni trophenol	0.072	0.129	0.176	0.188	0.207	0.218	0.165	33.29
---- Quadratic regr., Force(0,0) ---- Coeffi cient = 0.9990									
Response Ratio = 0.00000 + 0.13865 *A + 0.02606 *A^2									
55)	Di benzofuran	1.639	1.709	1.734	1.723	1.730	1.701	1.706	2.05
56)	2, 4-Di ni trotol uen	0.361	0.436	0.437	0.429	0.444	0.437	0.424	7.36
57)P	4-Ni trophenol	0.146	0.169	0.181	0.184	0.186	0.189	0.176	9.17
58)	2, 3, 4, 6-Tetrachl o	0.247	0.286	0.310	0.316	0.311	0.320	0.298	9.27
59)	Fl uorene	1.291	1.417	1.422	1.404	1.412	1.393	1.390	3.55
60)	4-Chl orophenyl -ph	0.627	0.661	0.664	0.658	0.659	0.654	0.654	2.09
61)	Di ethyl phthal ate	1.285	1.370	1.405	1.380	1.403	1.400	1.374	3.32
62)	4-Ni troani line	0.308	0.357	0.366	0.365	0.370	0.370	0.356	6.76
63) I	Phenanthrene-d10	-----  STD-----							
64)	4, 6-Di ni tro-2-met	0.139	0.162	0.168	0.169	0.172		0.162	8.21
65)C	n-Ni trosodi phenyl	0.543	0.572	0.590	0.580	0.587	0.582	0.576	2.97
66)	1, 2-Di phenyl hydra	0.666	0.725	0.749	0.741	0.759	0.732	0.729	4.54
67)S	2, 4, 6-Tri bromophe	0.070	0.078	0.079	0.078	0.079	0.077	0.077	4.59
68)	4-Bromophenyl -phe	0.191	0.193	0.199	0.195	0.200	0.198	0.196	1.78
69)	Hexachl orobenzene	0.172	0.182	0.184	0.180	0.184	0.181	0.180	2.54
70)	Atrazine	0.198	0.217	0.222	0.223	0.222	0.222	0.217	4.48
71)C	Pentachl orophenol	0.057	0.078	0.082	0.086	0.089		0.079	16.19
---- Li near regr., Force(0,0) ---- Coeffi cient = 0.9997									
Response Ratio = 0.00000 + 0.08588 *A									
72)	Phenanthrene	1.135	1.168	1.186	1.154	1.172	1.154	1.161	1.50
73)	Anthracene	1.093	1.173	1.213	1.184	1.197	1.175	1.172	3.56
74)	Carbazol e	0.994	1.075	1.099	1.076	1.091	1.073	1.068	3.53
75)	Di -n-butyl phthal a	1.123	1.273	1.328	1.307	1.331	1.312	1.279	6.19
76)C	Fl uoranthene	1.083	1.166	1.193	1.165	1.174	1.157	1.156	3.28
77) I	Chrysene-d12	-----  STD-----							
78)	Benzi di ne	0.967	0.940	0.891	1.002	0.958		0.952	4.29
79)	Pyrene	1.502	1.597	1.658	1.611	1.611	1.601	1.597	3.20
80)S	Terphenyl -d14	0.880	0.938	0.990	0.962	0.972	0.960	0.950	4.04
81)	Butyl benzyl phthal	0.569	0.681	0.744	0.734	0.752	0.741	0.703	10.06
82)	3, 3' -Di chl orobenz	0.428	0.495	0.504	0.470	0.495	0.485	0.479	5.83
83)	Benzo[a]anthracen	1.262	1.364	1.421	1.394	1.426	1.419	1.381	4.54
84)	Chrysene	1.260	1.309	1.349	1.303	1.309	1.292	1.304	2.20
85)	bi s(2-Ethyl hexyl )	0.756	0.912	0.996	0.996	1.008	0.993	0.944	10.41
86) I	Perylene-d12	-----  STD-----							
87)C	Di -n-octyl phthal a	1.344	1.760	1.946	1.952	1.937	1.916	1.809	13.22
88)	Benzo[b]fl uoranth	1.289	1.436	1.475	1.500	1.512	1.575	1.464	6.65
89)	Benzo[k]fl uoranth	1.289	1.435	1.479	1.446	1.397	1.348	1.399	5.01
90)C	Benzo[a]pyrene	1.218	1.363	1.420	1.403	1.418	1.413	1.373	5.72
91)	Indeno[1, 2, 3-cd]p	0.981	1.118	1.158	1.177	1.203	1.252	1.148	8.14
92)	Di benz[a, h]anthra	0.929	1.063	1.125	1.187	1.189	1.198	1.115	9.40

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# Initial Calibration Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICC580  
Lab FileID: F010292.D

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93)	Benzo[g, h, i ]peryl	1. 133	1. 260	1. 265	1. 280	1. 296	1. 317	1. 258	5. 14
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(#) = Out of Range

8270C.M

Thu Jul 14 14: 42: 39 2005

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# Initial Calibration Verification

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICV580  
 Lab FileID: F010295.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\071405\F010295.D Vial : 8  
 Acq On : 14 Jul 2005 12:53 pm Operator: nareshj  
 Sample : icv580-50 Inst : MS-F  
 Misc : op13711, sf580, 1000, , , 1, 1, water Multiplr: 1.00  
 MS Integration Params: Rteint.p

Method : C:\MSDCHEM\1\METHODS\8270C.M (RTE Integrator)  
 Title : SW846 8270C OR EPA 625  
 Last Update : Thu Jul 14 13:35:24 2005  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	R.T.
1 I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	90	0.00	4.58
2	1,4-Dioxane	50.000	55.696	-11.4	0	0.02	2.11
3	N-nitrosodimethylamine	50.000	45.987	8.0	0	0.01	2.43
4	Pyridine	50.000	46.323	7.4	0	0.01	2.45
5	Benzaldehyde	50.000	61.723	-23.4#	0	0.00	4.26
6	Aniline	50.000	43.142	13.7	0	0.00	4.34
7 S	2-Fluorophenol			-----NA-----			
8	bis(2-Chloroethyl)ether	50.000	55.564	-11.1	0	0.00	4.39
9 S	Phenol-d5			-----NA-----			
10 C	Phenol	50.000	50.691	-1.4	0	0.00	4.36
11	2-Chlorophenol	50.000	51.931	-3.9	0	0.00	4.43
12	1,3-Dichlorobenzene	50.000	51.302	-2.6	0	0.00	4.53
13 C	1,4-Dichlorobenzene	50.000	51.161	-2.3	0	0.00	4.59
14	1,2-Dichlorobenzene	50.000	52.181	-4.4	0	0.00	4.70
15	Benzyl alcohol	50.000	50.234	-0.5	0	0.00	4.70
16	bis(2-chloroisopropyl)eth	50.000	51.483	-3.0	0	0.00	4.79
17	2-Methylphenol	50.000	51.754	-3.5	0	0.00	4.80
18	Acetophenone	50.000	51.803	-3.6	0	0.00	4.89
19	Hexachloroethane	50.000	51.677	-3.4	0	0.00	4.96
20 P	N-Nitrosodimethylamine	50.000	51.464	-2.9	0	0.00	4.90
21	3&4-Methylphenol	100.000	102.663	-2.7	0	0.00	4.92
22 I	Naphthalene-d8	40.000	40.000	0.0	89	0.00	5.64
23 S	Nitrobenzene-d5			-----NA-----			
24	Nitrobenzene	50.000	51.266	-2.5	0	0.00	5.03
25	Isophorone	50.000	53.643	-7.3	0	0.00	5.23
26 C	2-Nitrophenol	50.000	51.967	-3.9	0	0.00	5.30
27	2,4-Dimethylphenol	50.000	51.303	-2.6	0	0.00	5.36
28	bis(2-Chloroethoxy)methan	50.000	50.217	-0.4	0	0.00	5.43
29	Benzoic Acid	100.000	110.250	-10.3	0	0.00	5.54
30 C	2,4-Dichlorophenol	50.000	52.482	-5.0	0	0.00	5.53
31	1,2,4-Trichlorobenzene	50.000	51.577	-3.2	0	0.00	5.59
32	Naphthalene	50.000	50.918	-1.8	0	0.00	5.67
33	4-Chloroaniline	50.000	27.985	44.0#	0	0.00	5.74
34	2,6-Dichlorophenol	50.000	53.387	-6.8	0	0.00	5.74
35 C	Hexachlorobutadiene	50.000	51.749	-3.5	0	0.00	5.78
36	Caprolactam	50.000	51.637	-3.3	0	0.00	6.14
37 C	4-Chloro-3-methylphenol	50.000	50.548	-1.1	0	0.00	6.29
38	2-Methylnaphthalene	50.000	49.251	1.5	0	0.00	6.41
39	1-Methylnaphthalene	50.000	50.790	-1.6	0	0.00	6.53
40	1,2,4,5-Tetrachlorobenzene	50.000	49.774	0.5	0	0.00	6.62

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# Initial Calibration Verification

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICV580  
 Lab FileID: F010295.D

Sample ID	Compound Name	Amount	Cal c.	%Dri ft	90	0.00	7.81
41 I	Acenaphthene-d10	40.000	40.000	0.0	90	0.00	7.81
----- Amount Cal c. %Dri ft -----							
42 P	Hexachl orocycl opentadi ene	50.000	45.956	8.1	0	0.00	6.60
----- Amount Cal c. %Dri ft -----							
43 C	2, 4, 6-Tri chl orophenol	50.000	51.560	-3.1	0	0.00	6.78
44	2, 4, 5-Tri chl orophenol	50.000	50.913	-1.8	0	0.00	6.84
45 S	2-Fl uorobi phenyl			-----NA-----			
46	1, 1' -Bi phenyl	50.000	51.266	-2.5	0	0.00	7.01
47	2-Chl oronaphthal ene	50.000	50.225	-0.5	0	0.00	7.03
48	2-Ni troani line	50.000	47.962	4.1	0	0.00	7.20
49	Acenaphthyl ene	50.000	50.112	-0.2	0	0.00	7.60
50	Di methyl phthal ate	50.000	52.069	-4.1	0	-0.01	7.48
51	2, 6-Di ni trotol uene	50.000	49.785	0.4	0	0.00	7.56
52 C	Acenaphthene	50.000	50.520	-1.0	0	0.00	7.86
53	3-Ni troani line	50.000	26.575	46.9#	0	0.00	7.80
----- Amount Cal c. %Dri ft -----							
54 P	2, 4-Di ni trophenol	100.000	94.826	5.2	0	0.00	7.98
----- Amount Cal c. %Dri ft -----							
55	Di benzofuran	50.000	48.039	3.9	0	0.00	8.13
56	2, 4-Di ni trotol uene	50.000	51.372	-2.7	0	0.00	8.18
57 P	4-Ni trophenol	100.000	100.715	-0.7	0	0.00	8.18
58	2, 3, 4, 6-Tetrachl orophenol	50.000	47.411	5.2	0	0.00	8.36
59	Fl uorene	50.000	50.437	-0.9	0	0.00	8.68
60	4-Chl orophenyl -phenyl ethe	50.000	52.684	-5.4	0	0.00	8.72
61	Di ethyl phthal ate	50.000	52.195	-4.4	0	0.00	8.60
62	4-Ni troani line	50.000	43.973	12.1	0	0.00	8.80
----- Amount Cal c. %Dri ft -----							
63 I	Phenanthrene-d10	40.000	40.000	0.0	90	0.00	10.28
64	4, 6-Di ni tro-2-methyl pheno	100.000	108.701	-8.7	0	0.00	8.85
65 C	n-Ni trosodi phenyl ami ne	50.000	51.509	-3.0	0	0.00	8.94
66	1, 2-Di phenyl hydrazi ne	50.000	52.620	-5.2	0	0.00	8.99
67 S	2, 4, 6-Tri bromophenol			-----NA-----			
68	4-Bromophenyl -phenyl ether	50.000	52.003	-4.0	0	0.00	9.54
69	Hexachl orobenzene	50.000	51.441	-2.9	0	0.00	9.59
70	Atrazi ne	50.000	52.269	-4.5	0	0.00	9.96
----- Amount Cal c. %Dri ft -----							
71 C	Pentachl orophenol	100.000	102.061	-2.1	0	0.00	9.99
----- Amount Cal c. %Dri ft -----							
72	Phenanthrene	50.000	51.386	-2.8	0	0.00	10.32
73	Anthracene	50.000	49.569	0.9	0	0.00	10.41
74	Carbazol e	50.000	47.366	5.3	0	0.00	10.76
75	Di -n-butyl phthal ate	50.000	51.853	-3.7	0	0.00	11.55
76 C	Fl uoranthene	50.000	52.062	-4.1	0	0.00	12.48
----- Amount Cal c. %Dri ft -----							
77 I	Chrysene-d12	40.000	40.000	0.0	88	0.00	15.19
78	Benzi di ne			-----NA-----			
79	Pyrene	50.000	52.071	-4.1	0	0.00	12.88
80 S	Terphenyl -d14			-----NA-----			
81	Butyl benzyl phthal ate	50.000	53.149	-6.3	0	0.00	14.35
82	3, 3' -Di chl orobenzi di ne	50.000	1.596	96.8#	0	0.00	15.22
83	Benzo[a]anthracene	50.000	51.606	-3.2	0	0.00	15.16
84	Chrysene	50.000	53.016	-6.0	0	0.00	15.23
85	bi s(2-Ethyl hexyl )phthal at	50.000	54.316	-8.6	0	0.00	15.54

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# Initial Calibration Verification

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample: SF580-ICV580  
Lab FileID: F010295.D

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86 I	Perylene-d12	40.000	40.000	0.0	87	0.00	17.68
87 C	Di-n-octyl phthalate	50.000	56.471	-12.9	0	0.00	16.73
88	Benzo[b]fluoranthene	50.000	51.057	-2.1	0	0.00	17.07
89	Benzo[k]fluoranthene	50.000	53.773	-7.5	0	0.00	17.12
90 C	Benzo[a]pyrene	50.000	49.758	0.5	0	0.00	17.58
91	Indeno[1,2,3-cd]pyrene	50.000	52.753	-5.5	0	0.00	19.26
92	Di benz[a,h]anthracene	50.000	50.257	-0.5	0	0.00	19.32
93	Benzo[g,h,i]perylene	50.000	50.746	-1.5	0	0.00	19.61

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(#) = Out of Range  
F010295.D 8270C.M

SPCC's out = 0 CCC's out = 0  
Thu Jul 14 14:44:55 2005

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# Continuing Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF589-CC580  
 Lab FileID: F010525.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\072705\F010525.D Vial : 2  
 Acq On : 27 Jul 2005 9:33 am Operator: nareshj  
 Sample : cc580-75 Inst : MS-F  
 Misc : op13884, sf589, 30.8, , , 1, 1, soi l Multiplr: 1.00  
 MS Integration Params: Rteint.p

Method : C:\MSDCHEM\1\METHODS\8270C.M (RTE Integrator)  
 Title : SW846 8270C OR EPA 625  
 Last Update : Tue Jul 26 14:28:24 2005  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(mi n)	R. T.
1 I	1,4-Di chl orobenzene-d4	1.000	1.000	0.0	79	0.00	4.50
2	1,4-Di oxane	0.397	0.424	-6.8	82	-0.08	1.98
3	N-ni trosodi methyl ami ne	0.617	0.660	-7.0	80	-0.06	2.32
4	Pyri di ne	1.106	1.150	-4.0	82	-0.05	2.36
5	Benzal dehyde	0.744	0.552	25.8#	91	0.00	4.18
6	Ani li ne	1.923	1.981	-3.0	79	-0.01	4.27
7 S	2-Fl uorophenol	1.191	1.251	-5.0	79	-0.02	3.54
8	bi s(2-Chl oroethyl )ether	1.075	1.123	-4.5	79	0.00	4.32
9 S	Phenol -d5	1.573	1.690	-7.4	82	-0.03	4.29
10 C	Phenol	1.599	1.647	-3.0	82	0.00	4.29
11	2-Chl orophenol	1.355	1.430	-5.5	81	0.00	4.36
12	1,3-Di chl orobenzene	1.512	1.566	-3.6	80	-0.01	4.46
13 C	1,4-Di chl orobenzene	1.557	1.619	-4.0	80	0.00	4.51
14	1,2-Di chl orobenzene	1.427	1.482	-3.9	81	0.00	4.62
15	Benzyl al coh ol	0.850	0.961	-13.1	85	0.00	4.63
16	bi s(2-chl oroi sopropyl )eth	1.588	1.722	-8.4	84	0.00	4.71
17	2-Methyl phenol	1.195	1.303	-9.0	83	0.00	4.72
18	Acetophenone	1.781	1.920	-7.8	82	0.00	4.82
19	Hexachl oroethane	0.579	0.609	-5.2	81	-0.01	4.88
20 P	N-Ni troso-di -n-propyl ami n	0.941	1.068	-13.5	87	0.00	4.82
21	3&4-Methyl phenol	1.278	1.398	-9.4	83	0.00	4.85
22 I	Naphthal ene-d8	1.000	1.000	0.0	80	0.00	5.55
23 S	Ni trobenzene-d5	0.382	0.400	-4.7	82	0.00	4.94
24	Ni trobenzene	0.367	0.385	-4.9	83	0.00	4.95
25	I sophorone	0.616	0.687	-11.5	89	0.00	5.16
26 C	2-Ni trophenol	0.205	0.218	-6.3	83	0.00	5.21
27	2,4-Di methyl phenol	0.369	0.401	-8.7	85	0.00	5.27
28	bi s(2-Chl oroethoxy)methan	0.370	0.397	-7.3	86	0.00	5.34
29	Benzi c Aci d	0.264	0.314	-18.9	92	-0.01	5.43
30 C	2,4-Di chl orophenol	0.311	0.336	-8.0	86	0.00	5.44
31	1,2,4-Tri chl orobenzene	0.335	0.346	-3.3	83	0.00	5.50
32	Naphthal ene	1.070	1.129	-5.5	84	0.00	5.57
33	4-Chl oroani li ne	0.447	0.486	-8.7	86	0.00	5.64
34	2,6-Di chl orophenol	0.290	0.312	-7.6	86	0.00	5.65
35 C	Hexachl orobutadi ene	0.182	0.187	-2.7	83	0.00	5.69
36	Caprol actam	0.139	0.175	-25.9#	97	0.00	6.05
37 C	4-Chl oro-3-methyl phenol	0.323	0.362	-12.1	88	0.00	6.19
38	2-Methyl naphthal ene	0.709	0.775	-9.3	87	0.00	6.30
39	1-Methyl naphthal ene	0.681	0.744	-9.3	87	0.00	6.42
40	1,2,4,5-Tetrachl orobenzen	0.336	0.359	-6.8	86	0.00	6.51

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# Continuing Calibration Summary

Job Number: F33504  
 Account: TETFLTAM Tetra Tech NUS  
 Project: Former American Beryllium, Sarasota, FL

Sample: SF589-CC580  
 Lab FileID: F010525.D

41	I	Acenaphthene-d10	1.000	1.000	0.0	87	-0.01	7.69
42	P	Hexachlorocyclopentadiene	75.000	70.053	6.6	83	0.00	6.49
43	C	2,4,6-Trichlorophenol	0.389	0.416	-6.9	91	-0.01	6.67
44		2,4,5-Trichlorophenol	0.413	0.447	-8.2	91	0.00	6.73
45	S	2-Fluorophenyl	1.397	1.414	-1.2	88	0.00	6.77
46		1,1'-Bi-phenyl	1.512	1.521	-0.6	85	-0.01	6.90
47		2-Chloronaphthalene	1.181	1.212	-2.6	89	-0.01	6.91
48		2-Nitroaniline	0.372	0.421	-13.2	96	-0.01	7.08
49		Acenaphthylene	1.991	2.121	-6.5	91	0.00	7.49
50		Dimethyl phthalate	1.396	1.539	-10.2	96	0.00	7.38
51		2,6-Dinitrotoluene	0.326	0.362	-11.0	96	0.00	7.45
52	C	Acenaphthene	1.198	1.274	-6.3	92	0.00	7.74
53		3-Nitroaniline	0.357	0.401	-12.3	97	0.00	7.70
54	P	2,4-Dinitrophenol	75.000	82.850	-10.5	99	0.00	7.86
55		Dibenzofuran	1.706	1.805	-5.8	92	0.00	8.01
56		2,4-Dinitrotoluene	0.424	0.485	-14.4	99	0.00	8.07
57	P	4-Nitrophenol	0.176	0.222	-26.1#	106	0.00	8.07
58		2,3,4,6-Tetrachlorophenol	0.298	0.348	-16.8	96	0.00	8.24
59		Fluorene	1.390	1.515	-9.0	94	0.00	8.55
60		4-Chlorophenyl-phenylether	0.654	0.701	-7.2	93	0.00	8.60
61		Diethyl phthalate	1.374	1.569	-14.2	99	0.00	8.49
62		4-Nitroaniline	0.356	0.414	-16.3	99	0.00	8.68
63	I	Phenanthrene-d10	1.000	1.000	0.0	95	-0.01	10.13
64		4,6-Dinitro-2-methylphenol	0.162	0.173	-6.8	98	-0.01	8.73
65	C	n-Nitrosodiphenylamine	0.576	0.587	-1.9	97	-0.01	8.82
66		1,2-Diphenylhydrazine	0.729	0.765	-4.9	99	-0.02	8.86
67	S	2,4,6-Tribromophenol	0.077	0.079	-2.6	97	-0.02	8.97
68		4-Bromophenyl-phenylether	0.196	0.197	-0.5	97	0.00	9.42
69		Hexachlorobenzene	0.180	0.185	-2.8	98	-0.01	9.46
70		Atrazine	0.217	0.243	-12.0	104	0.00	9.83
71	C	Pentachlorophenol	75.000	84.983	-13.3	113	0.00	9.86
72		Phenanthrene	1.161	1.200	-3.4	99	0.00	10.18
73		Anthracene	1.172	1.236	-5.5	100	0.00	10.27
74		Carbazole	1.068	1.151	-7.8	102	0.00	10.63
75		Di-n-butyl phthalate	1.279	1.448	-13.2	106	0.02	11.43
76	C	Fluoranthene	1.156	1.258	-8.8	103	0.01	12.34
77	I	Chrysene-d12	1.000	1.000	0.0	102	0.00	15.04
78		Benzo[a]pyrene	0.952	0.918	3.6	105	-0.02	12.72
79		Pyrene	1.597	1.634	-2.3	103	-0.03	12.74
80	S	Terphenyl-d14	0.950	0.982	-3.4	104	-0.01	13.17
81		Butyl benzyl phthalate	0.703	0.789	-12.2	109	0.00	14.22
82		3,3'-Dichlorobenzidine	0.479	0.520	-8.6	112	0.00	15.09
83		Benzo[a]anthracene	1.381	1.469	-6.4	107	0.00	15.03
84		Chrysene	1.304	1.369	-5.0	107	0.00	15.10
85		bis(2-Ethylhexyl)phthalate	0.944	1.074	-13.8	110	0.01	15.42

5.6  
5

# Continuing Calibration Summary

Job Number: F33504  
Account: TETFLTAM Tetra Tech NUS  
Project: Former American Beryllium, Sarasota, FL

Sample: SF589-CC580  
Lab FileID: F010525.D

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86 I	Perylene-d12	1.000	1.000	0.0	105	0.00	17.53
87 C	Di-n-octyl phthalate	1.809	2.113	-16.8	113	0.00	16.61
88	Benzo[b]fluoranthene	1.464	1.558	-6.4	109	-0.01	16.93
89	Benzo[k]fluoranthene	1.399	1.479	-5.7	107	0.00	16.99
90 C	Benzo[a]pyrene	1.373	1.467	-6.8	110	0.00	17.45
91	Indeno[1,2,3-cd]pyrene	1.148	1.234	-7.5	110	0.00	19.12
92	Di benz[a,h]anthracene	1.115	1.227	-10.0	108	0.00	19.17
93	Benzo[g,h,i]perylene	1.258	1.338	-6.4	109	0.00	19.47

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(#) = Out of Range  
F010292.D 8270C.M

SPCC's out = 0 CCC's out = 0  
Wed Jul 27 13:00:35 2005