ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

EPA Region 5 Records Ctr.
316117

CRL Receipt Date 2/13/89 FIT Receipt Date 2/23/89 Review Completed 2/23/89

TO: Doris
FROM: Mary Gzyra
SUBJECT: Fleezer - Greiss
PAN: IL0611SA (1 hour charged for review) Case # 11187

Sample Description

| Organics (VOA, ABN, Pest/PCB) | | Inorganics (Metals, Cyanide) | |
|---|---|---|---|
| # 9 | Low Soil | # | Low Soil |
| | Low Water | | Low Water |
| | Drinking Water | | Drinking Water |
| | Other | | Other |

Project Data Status XXX Completed!!

_____ Incomplete, awaiting _____

FIT Data Review Findings:

K, PAH, detected

***Check Data Sheets for Transcription Errors***

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 1 Page No. _____ Date Sampled 1/5/89

0759:2

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

2/23/89

DATE: February 22, 1989

SUBJECT: Review of Region V CLP Data
Received for Review on 2-13-89

FROM: Curtis Ross, Director (5SCRL)
Central Regional Laboratory Dorothy M. May

TO: Data User: Dit

We have reviewed the data for the following case(s).

SITE NAME: PFleger-Grenas SMO Case No. 11187

EPA Data Set No. SF 5883 No. of Samples: 9 D.U./Activity Numbers 4905/TFA03

CRL No. 89F008581-589

SMO Traffic No. EAF 59-68

CLP Laboratory: ITPA Hrs. Required for Review: 11

Following are our findings:

Nine soil samples were received on 1/6/89 and were analyzed manually at low concentration for VOA, SVOA and Pest/PCB by ITPA alone.
A flag on benzoic acid was noted in SV fraction of EAF 63. It was reanalyzed and reflagged.
CCS Summary Report was not included in this case.
Field blank and duplicate were not designated.

The reviewer's narrative and data qualifiers are found in the following pages.

Jerry N. Gamanchi
WESTON/ESAT, 2/15/89

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications referenced above. See Data Qualifier sheets and Calibration Outlier forms for flags and additional comments.
( ) Data are preliminary - pending verification by Contractor Laboratory. See Case Summary above.
( ) Data are unacceptable.

cc: Carla Dempsey, CLP Quality Assurance Officer, Analytical Operations Branch
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

DATA QUALIFIERS

Contractor: ITPA

Case 11187

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

1. Sample Holding Times:

Soil volatile sample holding times of SDG BAF59, including repeats and MS/MSDs were within the 10 day period from sampling (1/5/89) to analysis (1/11,12/89) except BAF63 and 63MS/MSD which have exceeded by 1 day (1/16/89). The pos and neg aromatic results are estimated 'J' and 'UJ'. In the soil semivolatile sample holding time, BAF59RE and 68RE have exceeded the 10 day period by 9 and 11 days (1/24/89 and 1/26/89), therefore, all the pos and neg results are estimated 'J' and 'UJ'. The soil pesticide holding times were within the 10 day extraction period and 40 day analysis period.

The samples were received on 1/6/89.

2. GC/MS Tuning and GC Performances:

The % Relative Abundances of BFB and DFTPP ion results correlated with the mass list and have complied with the ion abundance criteria.

DDT/Endrin breakdown based on results of Eval Mix B were within ≤ 20% D on DB-5 and DB-608 columns.

RT shifts of DBC in SDG BAF59 and its affiliated standards / Pest/PCB, MS/MSDs and blanks were within ≤ 0.3 and ≤ 1.5% D on DB-5 and DB-608.

RTs of DDT were > 12 min on both columns.

3. Calibrations:

Initial and continuing calibrations of VOA and SVOA results were evaluated for TCL outliers and, any found, were noted in the Outlier Forms.

Reviewed by: Perry N. Gamonski

Phone: (312) 353-2860

Date: 2/15/89

DATA QUALIFIERS

Contractor: ITPA

Case 11187.

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

Linearity checks of pesticides based on CFs of Eval Mix A, B and C were within ±10% RSD.

Quantitation runs on DB-5 columns were within the advised ±15% D.

4. Method Blanks:

VBlks 1 and 2 contained methylene chloride and acetone, and VBlk 3 contained methylene chloride only. In the associated sample fractions, all contained the 2 common contaminants, except EAF 63 contained methylene chloride only. These contaminants were flagged "U" when <10X Blk as nondetects.

SBlks 1, 2, 3 and 4 contained bis(2-ethylhexyl)phthalate, N-nitrosodiphenylamine and/or di-n-butylphthalate. All the associated samples contained bis(2-ethylhexyl)phthalate, except EAF 63, 63DL, 66 and 68 which were free of this compound. EAF 68 contained N-nitroso-diphenylamine. These contaminants were flagged as stated above.

In EAF 63, benzoic acid was off calibration scale. It was diluted and reanalyzed, resulting in on-scale peak and appearance of di-n-butylphthalate in detectable amount. The reanalyzed results are used to assess the contamination.

The PBlks 1 and 2 were free of contaminants.

5. Surrogate % Recs:

In soil volatile surrogate recoveries from SDG EAF 59 and its affiliated reanalysis, MS/MSD and blanks, TOL (toluene-d8) was slightly high (119). In the soil semivolatile recoveries, EAF 68 fraction indicated moderately low recoveries of NBZ

Reviewed by: Perry N. Yamauchi

Phone: (312) 353-2860

Date: 8/15/89

DATA QUALIFIERS

Contractor: ITPA

Case 11187

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

(nitrobenzene-d5, 22), FBP (2-fluorobiphenyl, 21), PHL (phenol-d5, 20) and 2FP (2-fluorophenol, 22). EAF 59 showed low recovery of FBP (17) and TPH (terphenyl, 17). Standard FBP was low in EAF 59 RE (19), 60 (25), 62 (26), 65 (24), 66 (28), 67 (26) and 68 RE (25). In EAF 59 fraction, having results > 10%, the pos and neg quantitative results for that fraction are estimated 'J' and 'UJ'. Despite the multiple low recoveries in EAF 68, its reanalysis gave only one low recovery, therefore, it was not flagged. In the soil pesticide surrogate recoveries, DBC was high in EAF 61 (194), 66 (266) and 66 MS/MSD (280/384) which are attributed to matrix effect or coelution. The neg results are estimated 'UJ'.

6. MS/MSD % Recs and % RPDs:

Soil volatile matrix spike of EAF 63, at Med level, were within the spiking compounds QC limits in MS/MSD and % RPD. At low level spike of EAF 66, % RPD of 1,1-dichloroethene was slightly high (25). The unspiked sample fraction showed this compound to be non-detect, therefore the neg results are estimated 'UJ'.

In the semivolatile matrix spike of EAF 66, at Low level, MS/MSD % Rec of pyrene are marked 'out' (96/95) which are incorrectly flagged - they are 'in'.

In the pest matrix spike of EAF 66, at low level, MS/MSD % Rec of DDT was high (166/160) due to matrix effect. The unspiked sample fraction indicated DDT as non-detect, therefore, the neg results are estimated 'UJ'.

Reviewed by: Perry A. Gramaccioni

Phone: (312) 353-2960

Date: 2/15/89

DATA QUALIFIERS

Contractor: ITPA

Case 11187.

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

7. Field Blank and Duplicate:
They were not included in this case.

8. Internal Standard Performances:
In the volatile standard areas from SDG EAF59 and its associated MS/MSD, repeats and blanks, chlorobenzene (CBZ) was found below the 12 Hr Std's lower area limit in EAF 62 and 65 and, on repeating these fractions, DFB (difluorobenzene and CBZ fell below the lower area limit indicating matrix effect. Therefore, the pos and neg quantitative results of the associated compounds are estimated 'J' and 'UJ'. See associated compounds in Table 4. The RTs were within the 12 Hr Std's RT ranges.
The semivolatile internal standard areas and RTs were within the 12 Hr Stds upper and lower area limit and its RT ranges.

9. Compound Quantitation and Reported Detection Limits:
Detection limits were reported as the adjusted values via dilution to reflect CRQL.

10. Compound ID:
TICs were identified by best-fit spectra compared with MS library spectra.

11. System Performances:
Baselines of RICs and GCs were relatively stable and usable.

Reviewed by: Gary N. Yamauchi
Phone: (312) 353-2960
Date: 8/15/89

DATA QUALIFIERS

Contractor: ITPA

Case 11187

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

12. Case Assessment:

The data in this case have been reviewed and qualifications made where needed.

Reviewed by: Perry N. Yamauchi

Phone: 312/353-8960

Date: 8/15/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # FINN | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 12/14/88 | | | 01/12/89 0938 | | | 1/11/89 0802 | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Chloromethane | | | | | | | | | | | | | | | |
| Bromomethane | | | | | | | | | | | | | | | |
| Vinyl Chloride | | | | | | | | | | | | | | | |
| Chloroethane | | | | | | | | | | | | | | | |
| Methylene Chloride | | | | | | | | | | | | | | | |
| Acetone | .54 | 82.5 | J | .97 | 80.2 | J | .52 | 3.2 | | | | | | | |
| Carbon Disulfide | 3.46 | | | 2.60 | 27.7 | J | 2.23 | 35.7 | J | | | | | | |
| 1,1-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | | | | | | | | | | | | | | | |
| Trans-1,2-Dichloroethene | | | | | | | | | | | | | | | |
| Chloroform | | | | | | | | | | | | | | | |
| 2-Butanone | .04 | 12.4 | R | .03 | 2.9 | R | .03 | 14.3 | R | | | | | | |
| 1,2-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | | | | | | | | | | | | | | | |
| Vinyl Acetate | | | | | | | | | | | | | | | |
| Bromodichloromethane | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | | | | | | | | | | | | | | | |
| Trans-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | | |
| Dibromochloromethane | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | | | | | | | | | |
| Benzene | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| 2-Chloroethylvinylether | | | | | | | | | | | | | | | |
| Bromoform | .62 | | | .41 | 34.4 | J | .37 | 39.7 | J | | | | | | |
| 4-Methyl-2-Pentanone | | | | | | | | | | | | | | | |
| 2-Hexanone | | | | | | | | | | | | | | | |
| Tetrachloroethene | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | | |
| Toluene | | | | | | | | | | | | | | | |
| Chlorobenzene | | | | | | | | | | | | | | | |
| Ethylbenzene | | | | | | | | | | | | | | | |
| Styrene | | | | | | | | | | | | | | | |
| m-Xylene | | | | | | | | | | | | | | | |
| o/p-Xylene | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| | |
|---|---|
| VBLK2 | VBLK1 |
| BAF61 | BAF59 |
| BAF62RE | BAF60 |
| BAF65RE | BAF66 |
| BAF68 | BAF62 |
| | BAF65 |
| | BAF67 |
| | BAF66MS |
| | BAF66MSD |

Reviewer's Initials/Date: [illegible] 2/14/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # FINN | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 1/4/89 | | | 1/4/89 0813 | | | | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Chloromethane | | | | | | | | | | | | | | | |
| Bromomethane | | | | | | | | | | | | | | | |
| Vinyl Chloride | | | | | | | | | | | | | | | |
| Chloroethane | | | | | | | | | | | | | | | |
| Methylene Chloride | 1.26 | | | 2.67 | 51.9 | J | | | | | | | | | |
| Acetone | | | | | | | | | | | | | | | |
| Carbon Disulfide | | | | | | | | | | | | | | | |
| 1,1-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | | | | | | | | | | | | | | | |
| Trans-1,2-Dichloroethene | | | | | | | | | | | | | | | |
| Chloroform | | | | | | | | | | | | | | | |
| 2-Butanone | .02 | 6.3 | R | .02 | 6.3 | R | | | | | | | | | |
| 1,2-Dichloroethane | | | | | | | | | | | | | | | |
| 1,1,1-Trichloroethane | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | | | | | | | | | | | | | | | |
| Vinyl Acetate | | | | | | | | | | | | | | | |
| Bromodichloromethane | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | | | | | | | | | | | | | | | |
| Trans-1,3-Dichloropropene | .38 | | | .28 | 25.9 | J | | | | | | | | | |
| Trichloroethene | | | | | | | | | | | | | | | |
| Dibromochloromethane | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | | | | | | | | | | | | | | | |
| Benzene | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | | | | | | | | | | | | | | | |
| 2-Chloroethylvinylether | | | | | | | | | | | | | | | |
| Bromoform | | | | | | | | | | | | | | | |
| 4-Methyl-2-Pentanone | | | | | | | | | | | | | | | |
| 2-Hexanone | | | | | | | | | | | | | | | |
| Tetrachloroethene | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | | | | | | | | | | | | | | | |
| Toluene | | | | | | | | | | | | | | | |
| Chlorobenzene | | | | | | | | | | | | | | | |
| Ethylbenzene | | | | | | | | | | | | | | | |
| Styrene | | | | | | | | | | | | | | | |
| m-Xylene | 1.22 | | | .56 | 54.2 | J | | | | | | | | | |
| o/p-Xylene | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

VBLK 3
BAF 63
BAF 63MS
BAF 63MSD

Reviewer's Initials/Date: ZCH 2/14/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 1/21/89 | | | 1/23/89 1024 | | | 1/25/89 2239 | | | 1/26/89 1956 | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Phenol | | | | | | | | | | | | | | | |
| Bis(-2-Chloroethyl)Ether | | | | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | | | | |
| Benzyl Alcohol | .96 | | | 1.25 | 30.5 | J | .99 | 3.5 | | 1.07 | 12.1 | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | | | | |
| Bis(2-chloroisopropyl)Ether | | | | | | | | | | | | | | | |
| 4-Methylphenol | | | | | | | | | | | | | | | |
| N-Nitroso-Di-n-Propylamine | | | | | | | | | | | | | | | |
| Hexachloroethane | | | | | | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | | | | |
| Isophorone | | | | | | | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | | | | |
| Benzoic Acid | .15 | | | .08 | 41.8 | J | .03 | 26.7 | R | .17 | 16.4 | | | | |
| Bis(2-Chloroethoxy)Methane | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | | | | |
| 4-Chloroaniline | .38 | | | .13 | 65.0 | J | .14 | 65.1 | | .38 | .30 | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | | | | |
| 4-Chloro-3-Methylphenol | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | .31 | | | .31 | 0.7 | | .35 | 45.7 | | .20 | 35.4 | J | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | | | | |
| 2-Nitroaniline | | | | | | | | | | | | | | | |
| Dimethyl Phthalate | | | | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | | | | |
| 3-Nitroaniline | | | | | | | | | | | | | | | |
| Acenaphthene | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | .12 | | | .11 | 6.0 | | .06 | 46.2 | J | .07 | 38.5 | J | | | |
| 4-Nitrophenol | .19 | | | .19 | 2.1 | | .11 | 42.8 | J | .14 | 27.3 | J | | | |
| Dibenzofuran | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| | | |
|---|---|---|
| SBLK1 | EAF63 | EAF66 |
| EAF59 | EAF68 | |
| EAF60 | | |
| EAF62 | | |
| EAF67 | | |
| EAF65 | | |

Reviewer Initials/Date: ZLG 2/14/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 1/21/89 | | | 1/23/89 2024 | | | 1/25/89 2239 | | | 1/26/89 1956 | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| 2,4-Dinitrotoluene | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | | | | |
| 4-Chlorophenyl-phenylether | | | | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | | | | |
| 4-Nitroaniline | .25 | | | .20 | 19.8 | | .24 | 25.6 | J | .26 | 3.2 | | | | |
| 4,6-Dinitro-2-Methylphenol | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | | | | |
| Hexachlorobenzene | .21 | | | .21 | 1.4 | | .28 | 30.8 | J | .27 | 28.0 | J | | | |
| Pentachlorophenol | | | | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | | | | |
| Di-n-Butylphthalate | | | | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | | | | |
| Pyrene | | | | | | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | | | | |
| Benzo(a)Anthracene | | | | | | | | | | | | | | | |
| bis(2-Ethylhexyl)Phthalate | 1.89 | | | 1.60 | 15.6 | | 1.29 | 32.0 | J | 1.29 | 32.0 | J | | | |
| Chrysene | | | | | | | | | | | | | | | |
| Di-n-Octyl Phthalate | | | | | | | | | | | | | | | |
| Benzo(b)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(k)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(a)Pyrene | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | | | | | | | | | | | | | | | |
| Dibenz(a,h)Anthracene | | | | | | | | | | | | | | | |
| Benzo(g,h,i) Perylene | | | | | | | | | | | | | | | |

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: TG 2/14/89

8/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 12/29/88 | | | 1/27/89 2317 | | | 1/30/89 0846 | | | 1/31/89 0930 | | | 2/2/89 0801 | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Phenol | | | | | | | | | | | | | | | |
| bis(-2-Chloroethyl)Ether | | | | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | | | | |
| Benzyl Alcohol | .92 | | | .94 | 2.2 | | .91 | 0.2 | | .84 | 8.0 | | .67 | 26.3 | J |
| 1,2-Dichlorobenzene | | | | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | | | | |
| bis(2-Chloroisopropyl)Ether | 1.91 | | | 3.15 | 65.3 | J | 3.40 | 78.1 | J | 3.41 | 78.6 | J | 3.19 | 67.3 | J |
| 4-Methylphenol | 1.34 | | | 1.42 | 6.1 | | 1.36 | 2.1 | | 1.69 | 26.6 | J | 1.36 | 1.9 | |
| N-Nitroso-Di-n-Propylamine | .87 | | | 1.07 | 22.8 | | 1.06 | 20.9 | | 1.22 | 39.2 | J | 1.10 | 25.3 | J |
| Hexachloroethane | .57 | | | .60 | 6.5 | | .62 | 8.5 | | .71 | 25.4 | J | .62 | 9.5 | |
| Nitrobenzene | | | | | | | | | | | | | | | |
| Isophorone | .35 | | | .70 | 99.9 | J | .77 | 99.9 | J | .77 | 99.9 | J | .75 | 99.9 | J |
| 2-Nitrophenol | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | | | | |
| Benzoic Acid | .09 | | | .08 | 10.6 | | .08 | 10.6 | | .10 | 5.3 | | .07 | 28.7 | J |
| bis(2-Chloroethoxy)Methane | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | | | | |
| 4-Chloroaniline | .30 | | | .38 | 26.8 | J | .12 | 59.9 | J | .25 | 18.5 | | .29 | 4.3 | |
| Hexachlorobutadiene | | | | | | | | | | | | | | | |
| 4-Chloro-3-Methylphenol | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | .20 | | | .20 | 2.0 | | .14 | 27.9 | J | .12 | 37.8 | J | .13 | 33.8 | J |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | | | | |
| 2-Nitroaniline | .31 | | | .39 | 28.1 | J | .36 | 16.0 | | .40 | 29.1 | J | .39 | 26.8 | J |
| Dimethyl Pnthalate | | | | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | | | | |
| 3-Nitroaniline | .13 | 39.1 | J | .35 | 99.9 | J | .05 | 59.4 | J | .11 | 20.3 | | .15 | 12.8 | |
| Acenaphthene | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | .10 | | | .13 | 27.7 | J | .10 | 4.0 | | .09 | 12.9 | | .07 | 34.7 | J |
| 4-Nitrophenol | .08 | | | | | | | | | | | | .05 | 34.2 | J |
| Dibenzofuran | | | | | | | | | | | | | | | |

AFFECTED SAMPLES:

| | | | |
|---|---|---|---|
| | EAF66MS | SBLK 2 | SBLK 4 | EAF 61 |
| | EAF66MSD | SBLK 3 | | |
| | | EAF63DL | | |
| | | EAF59RE | | |

Reviewer Initials/Date: TCH 2/04/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 12/29/88 | | | 1/27/89 2317 | | | 1/30/89 0846 | | | 1/31/89 0930 | | | 2/2/89 0801 | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| 2,4-Dinitrotoluene | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | | | | |
| 4-Chlorophenyl-phenylether | | | | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | | | | |
| 4-Nitroaniline | .19 | | | .38 | 99.9 | J | .12 | 38.6 | J | .17 | 9.0 | | .10 | 45.5 | J |
| 4,6-Dinitro-2-Methylphenol | | | | .12 | 2.5 | | .11 | 5.0 | | .09 | 21.0 | | .08 | 28.6 | J |
| N-Nitrosodiphenylamine | | | | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | | | | |
| Hexachlorobenzene | | | | | | | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | | | | |
| Di-n-Butylphthalate | | | | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | | | | |
| Pyrene | 1.91 | | | 2.36 | 23.4 | | 2.14 | 11.7 | | 2.63 | 37.6 | J | 2.68 | 39.9 | J |
| Butylbenzylphthalate | | | | | | | | | | | | | | | |
| Benzo(a)Anthracene | | | | | | | | | | | | | | | |
| bis(2-Ethylhexyl)Phthalate | | | | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | | | | |
| Di-n-Octyl Phthalate | | | | | | | | | | | | | | | |
| Benzo(b)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(k)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(a)Pyrene | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | | | | | | | | | | | | | | | |
| Dibenz(a,h)Anthracene | | | | | | | | | | | | | | | |
| Benzo(g,h,i) Perylene | | | | | | | | | | | | | | | |

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: TLG 2/14/89

8/87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 12/29/88 | | | 2/3/89 1456 | | | | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| Phenol | | | | | | | | | | | | | | | |
| Bis(-2-Chloroethyl)Ether | | | | | | | | | | | | | | | |
| 2-Chlorophenol | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | | | | | | | | | | | | | | | |
| Benzyl Alcohol | .92 | | | .93 | 6.7 | | | | | | | | | | |
| 1,2-Dichlorobenzene | | | | | | | | | | | | | | | |
| 2-Methylphenol | | | | | | | | | | | | | | | |
| Bis(2-Chloroisopropyl)Ether | .91 | | | .350 | 83.1 | J | | | | | | | | | |
| 4-Methylphenol | .34 | | | .148 | 10.6 | | | | | | | | | | |
| N-Nitroso-Di-n-Propylamine | .87 | | | .104 | 19.2 | | | | | | | | | | |
| Hexachloroethane | .57 | | | .57 | 0.0 | | | | | | | | | | |
| Nitrobenzene | | | | | | | | | | | | | | | |
| Isophorone | .35 | | | .78 | 99.9 | J | | | | | | | | | |
| 2-Nitrophenol | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | | | | | | | | | | | | | | | |
| Benzoic Acid | .09 | | | .10 | 8.5 | | | | | | | | | | |
| Bis(2-Chloroethoxy)Methane | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | | | | | | | | | | | | | | | |
| Naphthalene | | | | | | | | | | | | | | | |
| 4-Chloroaniline | .30 | | | .30 | 2.0 | | | | | | | | | | |
| Hexachlorobutadiene | | | | | | | | | | | | | | | |
| 4-Chloro-3-Methylphenol | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | .21 | | | .11 | 47.8 | J | | | | | | | | | |
| 2,4,6-Trichlorophenol | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | | | | | | | | | | | | | | | |
| 2-Nitroaniline | .31 | | | .37 | 21.2 | | | | | | | | | | |
| Dimethyl Phthalate | | | | | | | | | | | | | | | |
| Acenaphthylene | | | | | | | | | | | | | | | |
| 3-Nitroaniline | .13 | | | .18 | 33.8 | J | | | | | | | | | |
| Acenaphthene | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | .10 | | | .09 | 11.9 | | | | | | | | | | |
| 4-Nitrophenol | .08 | | | .07 | 17.1 | | | | | | | | | | |
| Dibenzofuran | | | | | | | | | | | | | | | |
| | | | | REAF 68 RB | | | | | | | | | | | |

AFFECTED SAMPLES:

Reviewer Initials/Date: Tcgl 2/14/89

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 11187 CONTRACTOR ITPA

| Instrument # 4501 | Init. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | | Cont. Cal. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE/TIME: | 12/29/88 | | | 2/3/89 1456 | | | | | | | | | | | |
| | RF | %RSD | * | RF | %D | * | RF | %D | * | RF | %D | * | RF | %D | * |
| 2,4-Dinitrotoluene | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | | | | | | | | | | | | | | | |
| Diethylphthalate | | | | | | | | | | | | | | | |
| 4-Chlorophenyl-phenylether | | | | | | | | | | | | | | | |
| Fluorene | | | | | | | | | | | | | | | |
| 4-Nitroaniline | .19 | | | .10 | 47.6 | J | | | | | | | | | |
| 4,6-Dinitro-2-Methylphenol | | | | | | | | | | | | | | | |
| N-Nitrosodiphenylamine | | | | | | | | | | | | | | | |
| 4-Bromophenyl-phenylether | | | | | | | | | | | | | | | |
| Hexachlorobenzene | .22 | | | .16 | 25.5 | J | | | | | | | | | |
| Pentachlorophenol | | | | | | | | | | | | | | | |
| Phenanthrene | | | | | | | | | | | | | | | |
| Anthracene | | | | | | | | | | | | | | | |
| Di-n-Butylphthalate | | | | | | | | | | | | | | | |
| Fluoranthene | | | | | | | | | | | | | | | |
| Pyrene | 1.91 | | | 2.10 | 9.7 | | | | | | | | | | |
| Butylbenzylphthalate | | | | | | | | | | | | | | | |
| Benzo(a)Anthracene | | | | | | | | | | | | | | | |
| bis(2-Ethylhexyl)Phthalate | | | | | | | | | | | | | | | |
| Chrysene | | | | | | | | | | | | | | | |
| Di-n-Octyl Phthalate | | | | | | | | | | | | | | | |
| Benzo(b)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(k)Fluoranthene | | | | | | | | | | | | | | | |
| Benzo(a)Pyrene | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)Pyrene | | | | | | | | | | | | | | | |
| Dibenz(a,h)Anthracene | | | | | | | | | | | | | | | |
| Benzo(g,h,i) Perylene | | | | | | | | | | | | | | | |

SEE PAGE 1 FOR AFFECTED SAMPLES.

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Reviewer's Initials/Date: TCG. 2/24/89