GA

WALSH LANDFILL
SOIL SAMPLES
QA PKG.
133935

WADSWORTH
TESTING
LABORATORIES,
INC.

P.O. Box 208, 1600 Fourth Street, S.E., Canton, Ohio 44701 (216) 454-5809

September 10, 1985

Roy F. Weston
Room #4
5090 Center Hwy.
Pennsauken, NJ 08109

Attn: Bhupi Khona

Please find the enclosed Quality Control Data which you requested for Wadsworth Testing Laboratories sample numbers 86220 thru 86223. The data package includes Tuning Data, Spike/Duplicate Recovery Data, Surrogate Recovery Data, and Spike Recovery Control Charts. The Spike Recovery Control charts cover the parameters on which no spike was made on the samples of interest. The control charts show that the specified methods were in control during the time period in which sample numbers 86220 thru 86223 were analyzed.

Also, in regards to the additional duplicate data which you requested for sample numbers 87202 thru 87206 there is no information available.

Sincerely,

WADSWORTH TESTING LABORATORIES, INC.

Timothy J Lavey/rlm

Timothy J. Lavey
QC Manager

TJL/rlm

ENVIRONME[illegible]L PROTECTION AGENCY
Office of Enforcement

AR400301

REG[illegible]3
Curtis Bldg., 6[illegible] Walnut Sts.
Philadelphia, Pennsylvania 19106

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
	WALSH LANDFILL (CHERRYBROOK, PA)

SAMPLERS: *(Signature)* [illegible] (609-663-7995)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	40 ml GLASS							PO# 2595-E[illegible] REMARKS
[illegible]	4/1/85			✓	BLANK	1								EPA SAMPLE
[illegible]	4/1/85	1130	✓		STAINED SOIL NEAR TRUCK	1	✓							EPA SAMPLE
[illegible]	[illegible]	1135	✓		STAINED SOIL NEAR TRUCK	1	✓							SPLIT WITH BARKMAN
[illegible]	[illegible]	1200	✓		ORANGE SOIL - LOWER	1	✓							SPLIT WITH BARKMAN
[illegible]	[illegible]	1205	✓		LOWER SOIL - 250 FT. WEST OF MONITORING WELL	1	✓							SPLIT WITH BARKMAN

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
	4-10-85				
Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks [illegible] OF MATERIALS [illegible], OHIO ([illegible] RCRA) PA# [illegible]	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

3-11979

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

Case No. O.H. MATERIALS Contractor _____ Contract No. _____

Instrument ID OWA #2 Date 4/28/85 Time 13:22

Lab ID DFTPP 13 Data Release Authorized By: _____

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	37.2
68	less than 2.0% of mass 69	1.9 ( )[1]
69	mass 69 relative abundance	43.1
70	less than 2.0% of mass 69	0.3 ( )[1]
127	40.0 - 60.0% of mass 198	47.3
197	less than 1.0% of mass 198	<1
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	7.3
275	10.0 - 30.0% of mass 198	13.1
365	greater than 1.00% of mass 198	2.6
441	present, but less than mass 443	6.6
442	greater than 40.0% of mass 198	42.6
443	17.0 - 23.0% of mass 442	9.1 ( )[2]

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
DFTPP	DFTPP 13	4/28/85	13:22
86220	BNA 77	4/28/85	20:13
86223	BNA 78	4/28/85	22:21
86221	BNA 85	4/28/85	17:47
86222	BNA 79	4/28/85	23:23

AR400302

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

Case No. O.H. MATERIALS Contractor _____ Contract No. _____

Instrument ID OWA #1 Date 4/18/85 Time 07:38

Lab ID BFB 89 Data Release Authorized By: _____

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	32.7
75	30.0 - 60.0% of the base peak	56.3
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of the base peak	7.2
173	Less than 1.0% of the base peak	<1
174	Greater than 50.0% of the base peak	87.6
175	5.0 - 9.0% of mass 174	6.3 ( )[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	87.1 ( )[1]
177	5.0 - 9.0% of mass 176	5.2 ( )[2]

[1] Value in parenthesis is % mass 174.
[2] Value in parenthesis is % mass 176.

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
BFB	BFB 89	4/18/85	07:38
HSLVOL	VOL3799	4/18/85	08:45
86220	VOL3800	4/18/85	09:41
86220-SPIKE	VOL3801	4/18/85	10:44
86220-SPIKE/DUP	VOL3802	4/18/85	12:01
86221	VOL3803	4/18/85	13:06
86222	VOL3804	4/18/85	14:15
86223	VOL3805	4/18/85	15:19

AR400303

4/18/85

OWA 30B

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. O.H. MATERIALS Contractor WTL Contract No. _____

Low Level _____ Medium Level X

FRACTION	COMPOUND	CONC. SPIKE ADDED (µg) SA	SAMPLE RESULT SR	CONC. MS SSR	% REC	CONC. MSD SSR D1	% REC	RPD SSR D2	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. 86220	1,1-Dichloroethene	25	<0.01µg	26.5	106	25.4	102	3.8	22	59-172
	Trichloroethene	25	0	28.5	114	25.6	102	11	24	62-137
	Chlorobenzene	25	0	23.1	92	22.3	89	3.3	21	60-133
	Toluene	25	0	21.1	84	20.3	81	3.6	21	59-139
	Benzene	25	0	20.5	82	19.0	76	7.6	21	66-142
B/N SMO SAMPLE NO.	1,2,4-Trichlorobenzene								23	38-107
	Acenaphthene								19	31-137
	2,4 Dinitrotoluene								47	28-89
	Di-n-Butylphthalate								47	29-135
	Pyrene								36	35-142
	N Nitrosodi-n-Propylamine								38	41-126
	1,4-Dichlorobenzene								27	28-104
ACID SMO SAMPLE NO.	Pentachlorophenol								47	17-109
	Phenol								35	26-90
	2-Chlorophenol								50	25-102
	4-Chloro-3-Methylphenol								33	26-103
	4-Nitrophenol								50	11-114
PEST SMO SAMPLE NO.	Lindane								50	46-127
	Heptachlor								31	35-130
	Aldrin								43	34-132
	Dieldrin								38	31-134
	Endrin								45	42-139
	4,4'DDT								50	23-134

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

RPD: VOAs 0 out of 5; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

RECOVERY: VOAs 0 out of 10; outside QC limits
B/N ____ out of ____; outside QC limits
ACID ____ out of ____; outside QC limits
PEST ____ out of ____; outside QC limits

Comments: _____

SOIL SURROGATE PERCENT RECOVERY SUMMARY

Case ~~No.~~ O.H. MATERIALS Contract Laboratory WTL Contract No. _____

Low _____ Medium _____

	VOLATILE				SEMI-VOLATILE							PESTIC
SMO TRAFFIC NO.	TOLUENE-D8 (50-160)	BFB (50-160)	1,2 DICHLORO-ETHANE-D4 (50-160)	NITRO-BENZENE-D5 (20-140)	2-FLUORO-BIPHENYL (20-140)	TERPHENYL-D14 (20-150)			PHENOL-D5 (20-140)	2-FLUORO-PHENOL (20-140)	2,4,6 TRIBROMO-PHENOL (10-140)	DIBUT CHLORE (20-1
86220	105		94			104					39	
86221	89		84			95					82	
86222	88		81			72					40	
86223	88		82			48					70	

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

Volatiles: 0 out of 8 ; outside of QC limits

Semi-Volatiles: 0 out of 8 ; outside of QC limits

Pesticides: _____ out of _____ ; outside of QC limits

Comments: _____

AR400305

QC SPIKE DATA FOR HEX-CHROME
MEAN = 96.69 WL = 6.1
04/25/84 THRU 04/16/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |---------------------------*-*-*---
      |
      |   * *   *       *   *   *
MEAN  |-------*-------*-------*-----------
      |
      |                     *
LWL   |-*-----------------------------------
      |
      |            * *
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR SILVER
MEAN = 100 WL = 2.9
11/01/84 THRU 03/07/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |-----------------------------------
      |        *
      |   *
MEAN  |-----*-----*---*-*-*---*-*-*-*-*---
      | *
      |
LWL   |---------*---*-------*-------------
      |
      |
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR SELENIUM
MEAN = 92 WL = 15
12/15/83 THRU 04/12/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |-----------------------------------
      |
      | * *   *   * * * * * * * *
MEAN  |-----------------------------------
      |
      |
LWL   |-----------------------------------
      |
      |
LCL   |-----*---*-------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR MERCURY
MEAN = 98 WL = 11.1
4/26/84/ THRU 04/13/85

```
      |
      |
      |
UCL   |-----------------------------------
      |                    *   *
      |
UWL   |-----------------------------------
      |
      |
MEAN  |-----*-*-*---*-*---*---*-*-*-*-*---
      |   *
      | *          *
LWL   |-----------------------------------
      |
      |
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

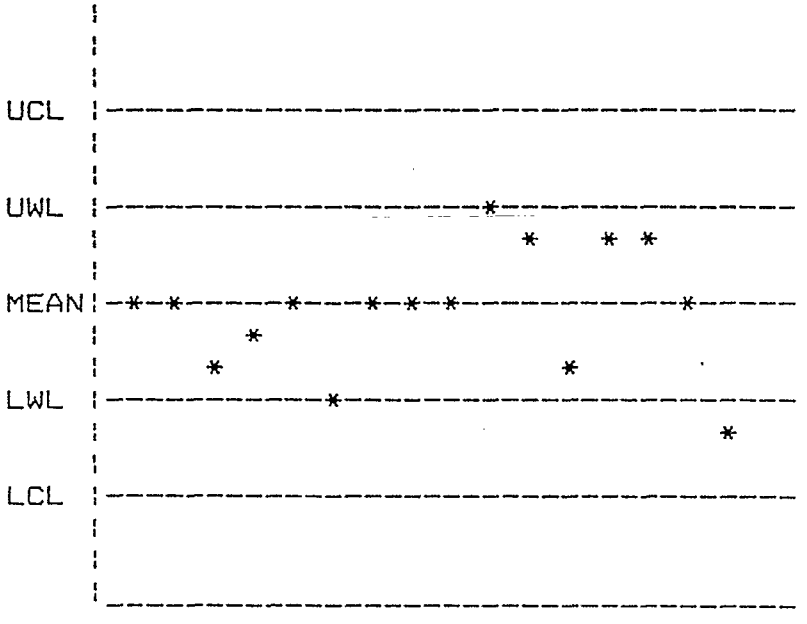
QC SPIKE DATA FOR LEAD
MEAN = 101 WL = 2.58
02/19/85 THRU 04/08/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |-----------------------------------
      |                            * * *
      |      *        *          *
MEAN  |---*-------------------------------
      |
      | *      * * *   * * *            *
LWL   |-----------------------------------
      |                      *
      |
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR CHROMIUM
MEAN = 99.69 WL = 4.7
01/31/85 THRU 04/08/85

```
      |
      |
      |
UCL   |-----------------------------------
      |                                  *
      |          *
UWL   |----------------*-----------------
      |
      |
MEAN  |-*-*-------*-*-----*-*-------------
      |                        *
      |     *          *       *
LWL   |---------------------------*-------
      |
      |
LCL   |-----------------------------*-----
      |
      |
      |-------v---------------------------
```

QC SPIKE DATA FOR CADMIUM
MEAN = 100 WL = 2.88
11/10/84 THRU 04/08/85



AR400312

QC SPIKE DATA FOR BARIUM
MEAN = 100 WL = 4.09
11/20/84 THRU 04/13/85

```
      |
      |
      |
UCL   |-*-------------------------------
      |
      |   *
UWL   |-----------------------*----------
      |
      |               *            * *
MEAN  |------*-*-*-----*-*-*-*---------*---
      |            *
      |                                *
LWL   |--------------------------------
      |
      |
LCL   |--------------------------------
      |
      |
      |--------------------------------
```

QC SPIKE DATA FOR ARSENIC
MEAN = 97 WL = 8.6
03/17/84 THRU 04/12/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |-----------------------------------
      |                  *
      |                *     *     *
MEAN  |---*-----*-*----------*---*-*-------
      |             *
      |     *
LWL   |-------------*-------------*---
      |       *
      | *
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR 2-CHLOROPHENOL
MEAN = 38 WL = 12
03/15/85 THRU 05/16/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |-------*-*-------------------------
      |
      |   *
MEAN  |-----------------------------------
      |     *
      |
LWL   |-----------------------------------
      | *         *
      |
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR PHENOL
MEAN = 23 WL = 9
03/15/85 THRU 05/16/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |            *
UWL   |-----------------------------------
      |
      |   *   *
MEAN  |---------*-------------------------
      |
      |
LWL   |-----*-----------------------------
      |
      | *
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR TRICHLOROBENZENE
MEAN = 47 WL = 5.19
03/15/85 THRU 05/16/85

```
     | ^
     |
     |
UCL  |-----------------------------------
     |
     |
UWL  |-----------------------------------
     |        *
     |   * *
MEAN |-----------------------------------
     |
     |
LWL  |---------*-------------------------
     |
     |             *
LCL  |-----------------------------------
     |
     |
     |-----------------------------------
```

QC SPIKE DATA FOR ACENAPTHENE
MEAN = 67 WL = 14
02/26/85 THRU 05/16/85

```
     :
     :
     :
UCL  :-----------------------------------
     :          *
     :
UWL  :-----------------------------------
     : * *
     :     *
MEAN :-----------------------------------
     :        *     * *
     :
LWL  :-----------------------------------
     :            *     * *
     :
LCL  :-----------------------------------
     :
     :
     :-----------------------------------
```

QC SPIKE DATA FOR PCB/SOLID
MEAN = 84 WL = 11.5
11/20/84 THRU 05/08/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |        *       *     *
UWL   |---------*---*---------------------
      |                      *
      |            *                *
MEAN  |-----------------------------------
      |   *
      |     *              *     *     *
LWL   |-*-------------------------*-------
      |                 *
      |
LCL   |-----------------------------------
      |
      |
      |-----------------------------------
```

QC SPIKE DATA FOR ENDRIN
MEAN = 88 WL = 13
01/11/84 THRU 04/21/85

```
      |
      |
      |
UCL   |-----------------------------------
      |
      |
UWL   |---------------*-------------------
      |                   *
      |               *
MEAN  |-------*-----------------------------
      |           * *
      |
LWL   |-----------------------------------
      | *
      |
LCL   |-----*-------------------------------
      |
      |
      |___v_______________________________
```

QC SPIKE DATA FOR LINDANE
MEAN = 79 WL = 25
05/10/84 THRU 04/21/85

```
     |
     |
     |
UCL  |-------------------------------------
     |
     |  *             *
UWL  |----------------*--------------------
     |
     |
MEAN |------------*-----------------------
     |      *
     |         *
LWL  |---*------*-------------------------
     |
     |
LCL  |-------------------------------------
     |
     |
     |-------------------------------------
```