Lockheed
Environmental Systems & Technologies Co.

Environmental Services Assistance Teams
Region 3
1419 Forest Drive, Suite 104
Annapolis, Maryland 21403

Phone: (410) 268-7705
Fax: (410) 268-8472

DATE: December 06, 1995

SUBJECT: Organic Data Validation for DAS R3075
Site: Keystone Sanitation

FROM: Byron L. Munro BM — Organic Data Reviewer
Mahboobeh Mecanic MM — Senior Oversight Chemist

TO: Cynthia E. Caporale
ESAT Regional Project Officer

THRU: Dale S. Boshart DB
ESAT Team Manager

OVERVIEW

DAS R3075 consisted of nine (9) aqueous samples submitted to Chemtech Consulting Group (CHEM) for pesticide/PCB analyses according to the Superfund Analytical Method for Low Concentration Organic Analysis, 10/92. The case included one (1) field blank and one field duplicate pair. The samples were analyzed through the Delivery of Analytical Services (DAS) Program.

SUMMARY

All samples were successfully analyzed for all target compounds. All instrument and method sensitivities were according to the specified protocol.

NOTES

- No positive results were detected in any of the samples analyzed in this DAS.
- The DAS required QC limits of 50 - 120% for surrogate recoveries were exceeded for tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) on the same column for sample 0750313MD8. No action was taken. The advisory QC limits were corrected to reflect the DAS required QC limits. See Form II Pest in Appendix D.

- The laboratory deviated from the DAS request QC limits for the Laboratory Control Sample (LCS). The LCS recovery Form (Form III) was corrected by the reviewer to reflect the DAS required QC limits. All recoveries were within the required limits. The review of LCS Form I suggests that all single component pesticide compounds were spiked. Only the required compounds were evaluated.

All data for DAS R3075 were reviewed in accordance with the National Functional Guidelines for Evaluating Organic Analyses with Modification for use within Region III. The text of the report addresses only those problems affecting usability.

ATTACHMENTS

1) Appendix A - Glossary of Data Qualifiers
2) Appendix B - Data Summary. These include:
   (a) All positive results for target compounds with qualifier codes where applicable.
   (b) All unusable detection limits (qualified "R").
3) Appendix C - Results as Reported by the Laboratory for All Target Compounds
4) Appendix D - Support Documentation

DCN:BM511A06.KS

Appendix A

Glossary of Data Qualifiers

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: P E S T I C I D E S A N D P C B S

Site Name: KEYSTONE SANITATION

WATER SAMPLES
(ug/L)

To calculate sample quantitation limits:
(CRDL * Dilution Factor)

Case #: R3075 Sampling Date(s): 3/13 - 16/95

	Sample No.	0750313MD9	0750313MD8	0750314MD7	0750315MD1	0750315MIS	0750315MII	0750315MID	0750315ISD	0750316IIB
	Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Location	K-MD-9	K-MD-8	K-MD-7	K-MD-1	MW-IS DUPLICATE OF 0750315ISD	MW-II	MW-ID	MW-IS-D DUPLICATE OF 0750315MIS	MW-II-FB FIELD BLANK
CRQL	COMPOUND									
0.01	alpha-BHC									
0.01	beta-BHC									
0.01	delta-BHC									
0.01	*gamma-BHC (Lindane)									
0.01	*Heptachlor									
0.01	Aldrin									
0.01	Heptachlor Epoxide									
0.01	Endosulfan I									
0.02	Dieldrin									
0.02	4,4'-DDE									
0.02	*Endrin									
0.02	Endosulfan II									
0.02	4,4'-DDD									
0.02	Endosulfan Sulfate									
0.02	4,4'-DDT									
0.10	*Methoxychlor									
0.02	Endrin Ketone									
0.02	Endrin Aldehyde									
0.01	*alpha-Chlordane									
0.01	*gamma-Chlordane									
1.0	*Toxaphene									
0.20	*Aroclor-1016									
0.40	*Aroclor-1221									
0.20	*Aroclor-1232									
0.20	*Aroclor-1242									
0.20	*Aroclor-1248									
0.20	*Aroclor-1254									
0.20	*Aroclor-1260									

RQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 07/90

AR317545

Appendix C

Results as Reported by the Laboratory
for all Target Compounds

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750313MD9

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 39384

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1u10

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750313MD8

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 39385

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/15/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750314MD7

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 39957

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/16/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750315MD1

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 39958

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/16/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750315MIS

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 40028

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM I PEST

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750315MII

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 40029

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750315MID

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 40030

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750315ISD

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 40031

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/20/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

0750316IIB

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: 40032

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/20/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

Appendix D

Support Documentation

3E
LABORATORY CONTROL SAMPLE

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix Spike - EPA SAMPLE NO.: LCS.

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
gamma-BHC (Lindane)	0.02	0.0	0.021	105	~~80-120~~ 56-
Heptachlor epoxide	0.02	0.0	0.019	95	~~80-120~~ 74-
4,4'-DDE	0.04	0.0	0.039	98	~~80-120~~ 50-
Dieldrin	0.04	0.0	0.039	98	~~80-120~~ 33-
Endrin	0.04	0.0	0.040	100	~~80-120~~ 56-
Endosulfan sulfate	0.04	0.0	0.039	98	~~80-120~~ 50-
Gamma-Chlordane	0.04	0.0	0.040	100	~~80-120~~ 33-

MM (DV)
12/4/95

COMMENTS:

CHEMTECH

Report Number: 448 **Case Number:** R3075

a. Number of Samples and Date of Sample Receipt:

9 water samples samples were received intact on **March 15, 16, and 17, 1995**.

b. Parameters:

These samples were analyzed for Pesticides/PCB's.

c. Analytical Techniques:

Samples were extracted and analyzed for Pesticides/PCB's by, Low Concentraction USEPA CLP SOW.

d. QA/QC's:

The surrogate recoveries of each sample is found on Form 2E. The Initial Calibration results and Calibration Verification Summaries are found on Form 6D, 6E, 6F, 7D, and 7E. The Blank Summaries are located on Form 4C's. Along with the samples one LCS is extracted and analyzed. All compounds as specified in SOW are fall in control limits. LCS result is reported on Form I and Form III. Surrogates are added 2 times in LCS sample.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designed, as verified by the following signature.

Signature: _____ Name: Divyajit Mehta

Date: 4/24/95 Title: Lab Manager

0000 3

110 Route 4 • Englewood, New Jersey 07631 Phone: (201) 567-6868 Fax: (201) 567-1333

Since 1967

DAS Number: R3075 RSCC Date: 01/04/95

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
DELIVERY OF ANALYTICAL SERVICES MASTER FORM

Site: Keystone Sanitation Landfill OU-2			Data Validation Level: MIII	
Latitude: 30°43'30" North		Longitude: 77°02'25" West	Altitude: 243.84 meters	
Address: Union Township, Adams County, Pennsylvania 17331				
EPA Program: Superfund			Type of Activity: RI/FS	
EPA Account Number: STBG03N61.9			PRP Lab:	
Prepared by: Russell Sloboda			Phone Number: 610-971-0900	Fax No: 610-971-9715
EPA RPM: Christopher Corbett			Phone Number: 215-597-9800 (3HW24)	Fax No: 215-597-9890
Site Leader: William Wentworth			Phone Number: 610-971-0900	Fax No: 610-971-9715
EPA CO contact: David Sonderling			Phone Number: 215-597-9800	Fax No: 215-597-9890
Contract Type: ARCS		Prime: Halliburton NUS Corporation	Sub:	
Concentration level:	Number of Samples:	Method Number:	Parameter:	Matrix:
LC	41	CLP 10/92 Low Concentration SOW	CLP TCL volatiles + dichlorodifluoromethane	Aq
LC	38	CLP 10/92 Low Concentration SOW	CLP TCL semivolatiles + benzoic acid	Aq
LC	38	CLP 10/92 Low Concentration SOW	CLP TCL pesticides/PCBs	Aq
Additional comments: TCL list is from 10/92 Low Concentration SOW; plus 2 extra compounds				
Required TAT: 35 days			Carrier: Federal Express	
Date Cancelled/Extended:		Reason:		
Sampling Dates	From:Monday, February 6, 1995	To:Thursday, February 9, 1995	Shipping Dates	From: Monday, February 6, 1995 To: Thursday, February 9, 1995

Date forwarded to CRL: 01/05/95	*CRL Response:*	*CRL Initials:*
Date Entered in RSCC database:	*Date Revision Entered:*	*Record Control No:*
Number of Screens:	*Validator:*	*DAS Reviewer:*
Send additional data validation report to: William Wentworth, Halliburton NUS Corporation, 993 Old Eagle School Road, Suite 415, Wayne, PA. 19087		
DAS Contact:	*Method of request:*	*Date RSCC sent to RPOC:*
Date RPOC received from RSCC:	*Date sent to CO:*	*Date received by CO:*
Purchase Order No:	*Date of Solicitation:*	*Date Closed:*
DAS Lab I:	*Cost:*	*Date Awarded:*
DAS Lab II:	*Cost:*	*Date Awarded:*
Total Billable samples:		
Lab assignment forwarded to:		*Date forwarded:*

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

GC Column(1): RTX35 ID: 0.53 (mm) GC Column(2): RTX5 ID: 0.52 (mm

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PIBLK01	101	98	97	95			0
02	PBLK01	102	89	102	94			0
03	LCS	96	101	105	100			~~1~~ 0
04	0750313MD9	103	116	106	120			0
05	0750313MD8	99	124	101	127			0
06	0750314MD7	105	108	97	107			0
07	0750315MD1	104	104	102	99			0
08	0750315MIS	100	96	107	96			0
09	0750315MII	99	94	102	102			0
10	0750315MID	97	113	99	118			0
11	PIBLK02	100	86	93	89			0
12	0750315ISD	100	117	96	113			0
13	0750316IIB	112	103	102	99			0
14	PIBLK03	106	89	99	90			0
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

0 mm 12/4/95 (DV)

ADVISORY QC LIMITS

TCX = Tetrachloro-m-xylene ~~(60-150)~~ 12M 12/4/95 (50 - 120%)
DCB = Decachlorobiphenyl ~~(60-150)~~ (50 - 120%)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.
D Surrogate diluted out

BPA: SPB-011-NASA Call 04001

Special Notes:

1) TCL list is from 10/92 Low Concentration SOW; plus 2 extra compounds

2) All QC requirements and corrective actions as per method, with the exception of the pesticide surrogate and semivolatile and pesticide LCS control limits that are to be modified as given below:

COMPOUND IN LCS	% RECOVERY CONTROL LIMITS
PHENOL	40-120%
BIS(2-CHLOROETHYL)ETHER	50-110%
2-CHLOROPHENOL	50-110%
N-NITROSODI-N-PROPYLAMINE	30-110%
HEXACHLOROETHANE	20-110%
ISOPHORONE	50-110%
1,2,4-TRICHLOROBENZENE	40-100%
NAPHTHALENE	30-110%
4-CHLOROANILINE	10-120%
2,4,6-TRICHLOROPHENOL	40-120%
2,4-DINITROTOLUENE	30-120%
DIETHYL PHTHALATE	50-120%
N-NITROSODIPHENYLAMINE	30-110%
HEXACHLOROBENZENE	40-120%
BENZO(A)PYRENE	50-120%
ENDOSULFAN SULFATE	50-120%

PESTICIDE SURROGATE COMPOUND	% RECOVERY CONTROL LIMITS
TETRACHLORO-M-XYLENE	50-120%
DECACHLOROBIPHENYL	50-120%

THE ABOVE QC LIMITS MUST BE MET. IF QC LIMITS ARE EXCEEDED FOLLOW ACTIONS AS DIRECTED BY THE SOW.

1. Special/additional technical instructions: (if outside protocol requirements, specify compound names, CAS numbers, detection limits, etc.)

2. QC requirements: (specify method specific criteria for matrix spikes, duplicates,calibration, dilutions, performance evaluation material laboratory control samples, detection or quantitation limits, method blanks, surrogates, internal standards, etc.) Any additional QC no stipulated in the method requirements are considered to be billable items.

QC TYPE FREQUENCY ACCEPTANCE LIMITS

All QC requirements and corrective actions as per method, with the exception of the pesticide surrogate and semivolatile and pesticide LCS contr limits that are to be modified as given below:

COMPOUND IN LCS	% RECOVERY CONTROL LIMITS
PHENOL	40-120%
BIS(2-CHLOROETHYL)ETHER	50-110%
2-CHLOROPHENOL	50-110%
N-NITROSODI-N-PROPYLAMINE	30-110%
HEXACHLOROETHANE	20-110%
ISOPHORONE	50-110%
1,2,4-TRICHLOROBENZENE	40-100%
NAPHTHALENE	30-110%
4-CHLOROANILINE	10-120%
2,4,6-TRICHLOROPHENOL	40-120%
2,4-DINITROTOLUENE	30-120%
DIETHYL PHTHALATE	50-120%
N-NITROSODIPHENYLAMINE	30-110%
HEXACHLOROBENZENE	40-120%
BENZO(A)PYRENE	50-120%
ENDOSULFAN SULFATE	50-120%

PESTICIDE SURROGATE COMPOUND	% RECOVERY CONTROL LIMITS
TETRACHLORO-M-XYLENE	50-120%
DECACHLOROBIPHENYL	50-120%

THE ABOVE QC LIMITS MUST BE MET. IF QC LIMITS ARE EXCEEDED FOLLOW ACTIONS AS DIRECTED BY THE SOW.

Request reviewer:

(Date)

1 1D EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

LCS

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: LCS

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: 03/17/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.020	
319-85-7	beta-BHC	0.020	
319-86-8	delta-BHC	0.019	
58-89-9	gamma-BHC (Lindane)	0.021	
76-44-8	Heptachlor	0.019	
309-00-2	Aldrin	0.019	
1024-57-3	Heptachlor epoxide	0.019	
959-98-8	Endosulfan I	0.020	
60-57-1	Dieldrin	0.039	
72-55-9	4,4'-DDE	0.039	
72-20-8	Endrin	0.040	
33213-65-9	Endosulfan II	0.039	
72-54-8	4,4'-DDD	0.040	
1031-07-8	Endosulfan sulfate	0.039	
50-29-3	4,4'-DDT	0.039	
72-43-5	Methoxychlor	0.21	
53494-70-5	Endrin ketone	0.039	
7421-36-3	Endrin aldehyde	0.038	
5103-71-9	alpha-Chlordane	0.021	
5103-74-2	gamma-Chlordane	0.040	
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLK01

Lab Name: CHEMTECH CONSULTING GROUP Contract: 68D20041

Lab Code: CHEM Case No.: SAS No.: R3075 SDG No.: 9500448

Matrix: (soil/water) WATER Lab Sample ID: M.BLK448

Sample wt/vol: 1000 (g/ml) ML Lab File ID: _____

% Moisture: decanted: (Y/N) Date received: / /

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/19/95

Concentrated Extract Volume: 2000 (uL) Date analyzed: 04/19/95

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
319-84-6	alpha-BHC	0.010	U
319-85-7	beta-BHC	0.010	U
319-86-8	delta-BHC	0.010	U
58-89-9	gamma-BHC (Lindane)	0.010	U
76-44-8	Heptachlor	0.010	U
309-00-2	Aldrin	0.010	U
1024-57-3	Heptachlor epoxide	0.010	U
959-98-8	Endosulfan I	0.010	U
60-57-1	Dieldrin	0.020	U
72-55-9	4,4'-DDE	0.020	U
72-20-8	Endrin	0.020	U
33213-65-9	Endosulfan II	0.020	U
72-54-8	4,4'-DDD	0.020	U
1031-07-8	Endosulfan sulfate	0.020	U
50-29-3	4,4'-DDT	0.020	U
72-43-5	Methoxychlor	0.10	U
53494-70-5	Endrin ketone	0.020	U
7421-36-3	Endrin aldehyde	0.020	U
5103-71-9	alpha-Chlordane	0.010	U
5103-74-2	gamma-Chlordane	0.010	U
8001-35-2	Toxaphene	1.0	U
12674-11-2	Aroclor-1016	0.20	U
11104-28-2	Aroclor-1221	0.40	U
11141-16-5	Aroclor-1232	0.20	U
53469-21-9	Aroclor-1242	0.20	U
12672-29-6	Aroclor-1248	0.20	U
11097-69-1	Aroclor-1254	0.20	U
11096-82-5	Aroclor-1260	0.20	U

FORM I PEST

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
841 Chestnut St.
Philadelphia, Pennsylvania 19107

CHAIN OF CUSTODY RECORD

PROJ. NO.: 0986
PROJECT NAME: K.S.
SAMPLERS: (Signature) Cynthia Cheatwood

CHEMTECH
110 ROUTE 4
ENGLEWOOD, NJ 07631

REMARKS: CASE # R3075

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA+CH_2Cl_2, Me 40mL	BNA/Pest/PCB+Benzoic Acid					EPA Sample #	TAG #
MD-9	3/13/95	1515		X	K-MD-9	5	3	2					0750313MD9	3-1080947 thru 3-1080951
MD-8	3/13/95	1630		X	K-MD-8	5	3	2					0750313MD8	3-1086354 thru 3-1086358
MD-8	3/14/95	1400		X	K-MD-8-TB	3	3						0750313~~TB1~~ CLC 4TB1	3-1086377 thru 3-1086379

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cynthia Cheatwood	3/14/95 1800				
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	
		B Monroy	3/15/95 0900	LOW DETECTION LIMIT FED EX AIRBILL 2505132070	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AR317565

0046

PAGE 1 OF 2

3 22375

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
841 Chestnut St.
Philadelphia, Pennsylvania 19107

CHAIN OF CUSTODY RECORD

PROJ. NO.: 0986
PROJECT NAME: K.S.
SAMPLERS: (Signature) Cynthia Cheatwood / [illegible]

CHENTECH
110 ROUTE 4
ENGLEWOOD, NJ 07631

REMARKS: Case # R3075

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA + Ug/Fe Mn 40ml	BNA/Pest/PCB+Pentac Acids					EPA Sample #	TAG #
MD-7	3/14/95	1330		X	K-MD-7	5	3	2					0750314MD7	3-1080812 thru 3-1080816
MD-1	3/15/95	0945		X	K-MD-1	5	3	2					0750315MD1	3-1080820 thru 3-1080824
MD-1	3/15/95	1130		X	K-MD-1FB	3	3						0750315FB1	3-1079618 thru 3-1079620

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cynthia Cheatwood	3/15/95 1700				
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	
		B. Monroe	3/16/95 0910	LOW DETECTION LIMIT FED EX AIRBILL 4405016534	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

AR317566

00045

PA 1 OF 2

23380

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

REGION 3
841 Chestnut St.
Philadelphia, Pennsylvania 19107

CHAIN OF CUSTODY RECORD

PROJ. NO.: 0986
PROJECT NAME: K.S.
SAMPLERS: (Signature) Roger Ryan, Cynthia Cheatwood

CHEMTECH
110 ROUTE 4
ENGLEWOOD, NJ 07631

REMARKS: case # R3075

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	VOA+CH2Cl2	40 ml vial	Bal/Pest/PCB/Benzoic Acid-8270					EPA Sample#	TAG#
MW-IS	3/15/95	1410		X	MW-IS	15	9	6						0750315MIS *	3-1080838 thru 3-1080842
MW-II	3/15/95	1630		X	MW-II	5	3	2						0750315MII	3-1080843 thru 3-1080847
MW-ID	3/15/95	1810		X	MW-ID	5	3	2						0750315MID	3-1079708 thru 3-1079712
MW-IS	3/15/95	1410		X	MW-IS-D	5	3	2						0750315ISD	3-1079701 thru 3-1079705
MW-II	3/16/95	1100		X	MW-II-FB	5	3	2						0750316IIB	3-1079630 thru 3-1079634
MW-ID	3/16/95	1130		X	MW-ID-TB	3	3							0750316TB1	3-1086051 thru 3-1086053

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Cynthia Cheatwood	3/16/95 1700				
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	
		B. Moroni	3/17/95 1025	* DO QC 0750315MIS LOW DETECTION LIMIT FED EX AIRBILL 4405016615	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

PAGE 1 OF 2

AR317567

0004B8

3 23385

PAGE 1 OF 1 (1)

EPA SAMPLE SHIPPING LOG

ARC | NUS | SI GANNETT

(REQUIRED FOR ALL SAMPLES SENT THROUGH THE CONTRACT LAB PROGRAM)

PROJECT SITE NAME: KEYSTONE SANITATION II ; EPA PROJ. OFFICER: CHRISTOPHER CORBETT
RAS NO. ; SAS-NO. R3075 ; TASK OR SET NO.
PROJECT SITE LEADER: RAJO BHUMGARA ; PHONE NO. (410) 433-8832
PROJECT SAMPLE COORDINATOR: CHUCK CAMPBELL ; PHONE NO. (410) 433-8832

QC SAMPLE INFORMATION AND/OR COMMENTS	CONC. (LOW/ MED./ HIGH)	SAMPLE PHASE (AQ/ SOL.)	TYPE OF REQUEST (ORG. DIO. OR INOR.) SAS	EPA SAMPLE NO.	ORGANICS OR INORGANICS: LAB NAME	DATE SHIPPED	DATA RECEIVED (XX-OUT ITEMS NOT REQUESTED): VOA	BNA	PEST	TCDD	METALS	CN
(2)	(3)	(4)	(5)	(6)	(7)	(8)	←			(9)		→
	LOW	AQ	ORG.	07S0313MD9								
				07S0313MD8								
Trip Blank				07S0314TB1								
				07S0314MD7								
				07S0315MD1								
Trip Blank				07S0315TB1								
Do QC				07S0315MIS								
				07S0315MII								
				07S0315MID								
Duplicate of 07S0315MIS				07S0315ISD								
Field Blank				07S0316IIB								
Trip Blank				07S0316TB1								

SAS REQUEST (DETAILS REQUIRED) (10)

(1) Full organics + Cl_2F_2 Me + Benzoic Acid

(2) VOA + Cl_2F_2 Me

LAB NAME	SAS REQUEST (ITEMIZE)	DATE SHIPPED	DATA REC'D.	
(11)	(12)	(13)		
CHEMTECH	(1)	3/14/95	✓✓	✓
	(1)		✓✓	✓
	(2)		✓	
	(1)	3/15/95	✓✓	✓
	(1)		✓✓	✓
	(2)		✓	
	(1)	3/16/95	✓✓	✓
	(1)		✓✓	✓
	(1)		✓✓	✓
	(1)		✓✓	✓
	(1)		✓✓	✓
	(2)		✓	Rec'd

MAR 1995 RECEIVED

FINAL SAMPLING: YES ☑ ; NO ☐ ; FINAL SHIPPING DATE: 3/16/95
(14)

REVISION 02/90

AR317568