

# Appendix J

## Sample Analysis Results

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A FULL SERVICE ENVIRONMENTAL LABORATORY

November 19, 1996

Mr. Robert Jackson  
CH2M HILL  
99 Cherry Hill Road  
Suite 304  
Parsippany, NJ 07054

PROJECT: TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
Submission #: 9610000197

Dear Mr. Jackson

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 454-6810.

Thank you for letting us provide this service.

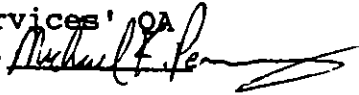
Sincerely,

COLUMBIA ANALYTICAL SERVICES

A handwritten signature in cursive script, appearing to read "Janice Jaeger", is written over the typed name.

Janice Jaeger  
Project Chemist

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal. 

700 Exchange Street • Rochester, NY 14608 • Tele:(716)454-6810 • Fax:(716)454-6825  
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## CASE NARRATIVE

COMPANY: CH2M HILL  
TENNECO Plastics - Macedon - SW/Sediment  
SUBMISSION #: 961000197

CH2M HILL soil and water samples were collected on 10/31/96 and received at CAS on 11/01/96 in good condition.

### INORGANIC ANALYSIS

Three soil samples, three water samples and one field blank were analyzed for RCRA metals by Method 6010A/7470/7471A. No other analytical or QC problems were encountered with these analyses

### VOLATILE ORGANICS

Three soil samples, three water samples, one field blank and one trip blank were analyzed for Target Compound List (TCL) of volatile organics by method 8260 from SW-846.

All tuning criteria for BFB were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within QC acceptance limits.

All laboratory blanks except the blank from 11/12/96 were free of any contamination. Methylene Chloride for samples MA12(soil) and MA13(soil) has been flagged with a "B" as being due to laboratory contamination.

All samples were analyzed within the 14 day holding time as specified in the method.

No other analytical or QC problems were encountered.

**SEMIVOLATILE ORGANICS**

Three water samples, three soil samples and one field blank were analyzed for Target Compound List of semivolatile organics from SW-846.

All Tuning criteria for DFTPP were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate recoveries were within QC acceptance limits.

All samples were extracted and analyzed within the specified holding times.

All laboratory blanks except the blank from 11/12/96 were free of any contamination. Di-n-Butylphthalate for MA11(soil), MA12(soil) and MA13(soil) has been flagged with a "B" as being due to laboratory contamination.

No other analytical or QC problems were encountered.



Effective 04/01/96

**CAS LIST OF QUALIFIERS**

(The basis of this proposal are the EPA-CLP Qualifiers)

- U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. For further explanation see case narrative / cover letter.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- N - Spiked sample recovery not within control limits.  
(Flag the entire batch - Inorganic analysis only)
- \* - Duplicate analysis not within control limits.  
(Flag the entire batch - Inorganic analysis only)
  - Also used to qualify Organics QC data outside limits.
- D - Spike diluted out.
- S - Reported value determined by Method of Standard Additions. (MSA)
- X - As specified in the case narrative.

**CAS Lab ID # for State Certifications**

NY ID # in Rochester: 10145  
CT ID # in Rochester: PH0556  
MA ID # in Rochester: M-NY032

NJ ID # in Rochester: 73004  
RI ID # in Rochester: 158

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY

Reported: 11/19/96

Dry Weight Reported Units = UG/G

CH2M HILL

TENNECO PLASTICS - MACEDON - SW/SEDIMENT

SUBMISSION #: 9610000197

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ORDER NUMBER		108320	108321	108322
SAMPLE ID:		MA11	MA12	MA13
DATE SAMPLED:		10/31/96	10/31/96	10/31/96
DATE RECEIVED:	PQL	11/01/96	11/01/96	11/01/96

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ARSENIC	1.00	1.23 U	2.26	4.18
BARIUM	2.00	35.5	30.2	89.2
CADMIUM	0.500	0.613 U	1.56	0.929 U
CHROMIUM	1.00	7.97	200	24.7
LEAD	5.00	6.53	991	59.7
MERCURY	0.150	0.184 U	0.177	0.699
SELENIUM	0.500	1.99	1.26	4.29
SILVER	1.00	1.23 U	1.14 U	1.86 U
PERCENT SOLIDS	X	81.6	88.0	53.8

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ANALYTICAL REPORT SUMMARY

Reported: 11/19/96

CH2M HILL  
TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
SUBMISSION #: 9610000197

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ORDER NUMBER	108320	108321	108322
SAMPLE ID:	MA11	MA12	MA13
DATE SAMPLED:	10/31/96	10/31/96	10/31/96
DATE RECEIVED:	11/01/96	11/01/96	11/01/96

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ARSENIC	11/13/96	11/13/96	11/13/96
BARIUM	11/13/96	11/13/96	11/13/96
CADMIUM	11/13/96	11/13/96	11/13/96
CHROMIUM	11/13/96	11/13/96	11/13/96
LEAD	11/13/96	11/13/96	11/13/96
MERCURY	11/15/96	11/15/96	11/15/96
SELENIUM	11/13/96	11/13/96	11/13/96
SILVER	11/13/96	11/13/96	11/13/96
PERCENT SOLIDS	% 11/06/96	11/06/96	11/06/96

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COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY

Reported: 11/19/96

Reported Units = MG/L

CH2M HILL

TENNECO PLASTICS - MACEDON - SW/SEDIMENT

SUBMISSION #: 9610000197

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ORDER NUMBER		108324	108325	108327	108328
SAMPLE ID:		MA11	MA12	MA13	FB-2
DATE SAMPLED:		10/31/96	10/31/96	10/31/96	10/31/96
DATE RECEIVED:	PQL	11/01/96	11/01/96	11/01/96	11/01/96

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ARSENIC	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0100 U
BARIUM	0.0200	0.0321	0.0370	0.0350	0.0200 U
CADMIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
CHROMIUM	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0100 U
LEAD	0.00500	0.00500 U	0.00930	0.00500 U	0.00500 U
MERCURY	0.000300	0.000300 U	0.000300 U	0.000300 U	0.000300 U
SELENIUM	0.00500	0.00500 U	0.00500 U	0.00500 U	0.00500 U
SILVER	0.0100	0.0100 U	0.0100 U	0.0100 U	0.0100 U

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COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY

Reported: 11/19/96

CH2M HILL  
TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
SUBMISSION #: 9610000197

ORDER NUMBER	108324	108325	108327	108328
SAMPLE ID:	MA11	MA12	MA13	FB-2
DATE SAMPLED:	10/31/96	10/31/96	10/31/96	10/31/96
DATE RECEIVED:	11/01/96	11/01/96	11/01/96	11/01/96
ARSENIC	11/11/96	11/11/96	11/11/96	11/11/96
BARIUM	11/11/96	11/11/96	11/11/96	11/11/96
CADMIUM	11/11/96	11/11/96	11/11/96	11/11/96
CHROMIUM	11/11/96	11/11/96	11/11/96	11/11/96
LEAD	11/11/96	11/14/96	11/11/96	11/11/96
MERCURY	11/07/96	11/07/96	11/07/96	11/07/96
SELENIUM	11/11/96	11/11/96	11/11/96	11/11/96
SILVER	11/11/96	11/11/96	11/11/96	11/11/96

ANALYTICAL REPORT SUMMARY

METHOD 8260 TCL

DRY WEIGHT REPORTED UNITS: UG/KG

CH2M HILL  
 TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
 SUBMISSION #: 9610000197

ORDER NUMBER	108320	108321	108322
SAMPLE ID:	MA11	MA12	MA13
DATE SAMPLED:	10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL 11/01/1996	11/01/1996	11/01/1996
DATE ANALYZED:	11/11/96	11/12/96	11/12/96
DILUTION:	1.0	1.0	1.0
PERCENT SOLID (%):	81.6	88.0	53.8

ACETONE	20	25 U	23 U	61 →
BENZENE	5.0	6.1 U	5.7 U	9.3 U
BROMODICHLOROMETHANE	5.0	6.1 U	5.7 U	9.3 U
BROMOFORM	5.0	6.1 U	5.7 U	9.3 U
BROMOMETHANE	5.0	6.1 U	5.7 U	9.3 U
2-BUTANONE (MEK)	10	12 U	11 U	19 U
CARBON DISULFIDE	10	12 U	11 U	19 U
CARBON TETRACHLORIDE	5.0	6.1 U	5.7 U	9.3 U
CHLOROBENZENE	5.0	6.1 U	5.7 U	9.3 U
CHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
CHLOROFORM	5.0	6.1 U	5.7 U	9.3 U
CHLOROMETHANE	5.0	6.1 U	5.7 U	9.3 U
DIBROMOCHLOROMETHANE	5.0	6.1 U	5.7 U	9.3 U
1,1-DICHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
1,2-DICHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
1,1-DICHLOROETHENE	5.0	6.1 U	5.7 U	9.3 U
CIS-1,2-DICHLOROETHENE	5.0	6.1 U	5.7 U	9.3 U
TRANS-1,2-DICHLOROETHENE	5.0	6.1 U	5.7 U	9.3 U
1,2-DICHLOROPROPANE	5.0	6.1 U	5.7 U	9.3 U
CIS-1,3-DICHLOROPROPENE	5.0	6.1 U	5.7 U	9.3 U
TRANS-1,3-DICHLOROPROPENE	5.0	6.1 U	5.7 U	9.3 U
ETHYLBENZENE	5.0	6.1 U	5.7 U	9.3 U
2-HEXANONE	10	12 U	11 U	19 U
METHYLENE CHLORIDE	5.0	6.1 U	5.9 B	19 B
4-METHYL-2-PENTANONE (MIBK)	10	12 U	11 U	19 U
STYRENE	5.0	6.1 U	5.7 U	9.3 U
1,1,2,2-TETRACHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
TETRACHLOROETHENE	5.0	6.1 U	5.7 U	9.3 U
TOLUENE	5.0	6.1 U	5.7 U	9.3 U
1,1,1-TRICHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
1,1,2-TRICHLOROETHANE	5.0	6.1 U	5.7 U	9.3 U
TRICHLOROETHENE	5.0	6.1 U	5.7 U	9.3 U
VINYL CHLORIDE	5.0	6.1 U	5.7 U	9.3 U
M+P-XYLENE	5.0	6.1 U	5.7 U	9.3 U
O-XYLENE	5.0	6.1 U	5.7 U	9.3 U

SURROGATE RECOVERIES	LIMITS			
4-BROMOFLUOROBENZENE	74 - 121	86	101	94
TOLUENE-D8	81 - 117	99	104	105
DIBROMOFLUOROMETHANE	80 - 120	111	99	100

ANALYTICAL REPORT SUMMARY

METHOD 8260 TCL

REPORTED UNITS: UG/L

CH2M HILL  
 TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
 SUBMISSION #: 9610000197

ORDER NUMBER		108324	108325	108327	108328
SAMPLE ID:		MA11	MA12	MA13	FB-2
DATE SAMPLED:		10/31/1996	10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL	11/01/1996	11/01/1996	11/01/1996	11/01/1996
DATE ANALYZED:		11/ 9/96	11/ 9/96	11/ 9/96	11/ 8/96
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMODICHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMOFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMOMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CARBON TETRACHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
DIBROMOCHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,2-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,2-DICHLOROPROPANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-HEXANONE	10	10 U	10 U	10 U	10 U
METHYLENE CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.1
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
STYRENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U

SURROGATE RECOVERIES	LIMITS				
4-BROMOFLUOROBENZENE	86 - 115	99	96	93	98
TOLUENE-D8	88 - 110	103	100	101	102
DIBROMOFLUOROMETHANE	86 - 118	96	95	99	95

## ANALYTICAL REPORT SUMMARY

METHOD 8260 TCL

REPORTED UNITS: UG/L

CH2M HILL  
 TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
 SUBMISSION #: 9610000197

ORDER NUMBER		108329
SAMPLE ID:		TRIP BLANK
DATE SAMPLED:		10/31/1996
DATE RECEIVED:	PQL	11/01/1996

DATE ANALYZED:		11/ 8/96
DILUTION:		1.0

ACETONE	20	20 U
BENZENE	5.0	5.0 U
BROMODICHLOROMETHANE	5.0	5.0 U
BROMOFORM	5.0	5.0 U
BROMOMETHANE	5.0	5.0 U
2-BUTANONE (MEK)	10	10 U
CARBON DISULFIDE	10	10 U
CARBON TETRACHLORIDE	5.0	5.0 U
CHLOROBENZENE	5.0	5.0 U
CHLOROETHANE	5.0	5.0 U
CHLOROFORM	5.0	5.0 U
CHLOROMETHANE	5.0	5.0 U
DIBROMOCHLOROMETHANE	5.0	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U
1,2-DICHLOROETHANE	5.0	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U
1,2-DICHLOROPROPANE	5.0	5.0 U
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U
ETHYLBENZENE	5.0	5.0 U
2-HEXANONE	10	10 U
METHYLENE CHLORIDE	5.0	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U
STYRENE	5.0	5.0 U
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U
TETRACHLOROETHENE	5.0	5.0 U
TOLUENE	5.0	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U
1,1,2-TRICHLOROETHANE	5.0	5.0 U
TRICHLOROETHENE	5.0	5.0 U
VINYL CHLORIDE	5.0	5.0 U
M+P-XYLENE	5.0	5.0 U
O-XYLENE	5.0	5.0 U

SURROGATE RECOVERIES	LIMITS	
4-BROMOFLUOROBENZENE	86 - 115	98
TOLUENE-D8	88 - 110	102
DIBROMOFLUOROMETHANE	86 - 118	100

## ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

DRY WEIGHT REPORTED UNITS: UG/KG

CH2M HILL

TENNECO PLASTICS - MACEDON - SW/SEDIMENT

SUBMISSION #: 9610000197

ORDER NUMBER		108320	108321	108322
SAMPLE ID:		MA11	MA12	MA13
DATE SAMPLED:		10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL	11/01/1996	11/01/1996	11/01/1996
DATE EXTRACTED:		11/08/96	11/08/96	11/08/96
DATE ANALYZED:		11/12/96	11/12/96	11/12/96
DILUTION:		1.0	1.0	1.0
PERCENT SOLID (%):		81.6	88.0	53.8
ACENAPHTHENE	330	400 U	380 U	610 U
ACENAPHTHYLENE	330	400 U	380 U	610 U
ANTHRACENE	330	400 U	380 U	610 U
BENZO(A)ANTHRACENE	330	400 U	380 U	610 U
BENZO(A)PYRENE	330	400 U	380 U	610 U
BENZO(B)FLUORANTHENE	330	400 U	400	610 U
BENZO(G,H,I)PERYLENE	330	400 U	380 U	610 U
BENZO(K)FLUORANTHENE	330	400 U	380 U	610 U
BENZYL ALCOHOL	330	400 U	380 U	610 U
BUTYL BENZYL PHTHALATE	330	400 U	380 U	610 U
DI-N-BUTYLPHTHALATE	330	3100 B	3500 B	3200 B
CARBAZOLE	330	400 U	380 U	610 U
INDENO(1,2,3-CD)PYRENE	330	400 U	380 U	610 U
4-CHLOROANILINE	330	400 U	380 U	610 U
BIS(-2-CHLOROETHOXY)METHANE	330	400 U	380 U	610 U
BIS(2-CHLOROETHYL)ETHER	330	400 U	380 U	610 U
2-CHLORONAPHTHALENE	330	400 U	380 U	610 U
2-CHLOROPHENOL	670	820 U	760 U	1200 U
2,2'-OXYBIS(1-CHLOROPROPANE)	330	400 U	380 U	610 U
CHRYSENE	330	400 U	380 U	610 U
DIBENZO(A,H)ANTHRACENE	330	400 U	380 U	610 U
DIBENZOFURAN	330	400 U	380 U	610 U
1,2-DICHLOROBENZENE	330	400 U	380 U	610 U
1,3-DICHLOROBENZENE	330	400 U	380 U	610 U
1,4-DICHLOROBENZENE	330	400 U	380 U	610 U
3,3'-DICHLOROBENZIDINE	330	400 U	380 U	610 U
2,4-DICHLOROPHENOL	670	820 U	760 U	1200 U
DIETHYLPHTHALATE	330	400 U	380 U	610 U
DIMETHYL PHTHALATE	330	400 U	380 U	610 U
2,4-DIMETHYLPHENOL	670	820 U	760 U	1200 U
2,4-DINITROPHENOL	1300	1600 U	1500 U	2400 U
2,4-DINITROTOLUENE	330	400 U	380 U	610 U
2,6-DINITROTOLUENE	330	400 U	380 U	610 U
BIS(2-ETHYLHEXYL)PHTHALATE	330	400 U	1800	610 U
FLUORANTHENE	330	400 U	590	610 U
FLUORENE	330	400 U	380 U	610 U
HEXACHLOROBENZENE	330	400 U	380 U	610 U
HEXACHLOROBUTADIENE	330	400 U	380 U	610 U
HEXACHLOROCYCLOPENTADIENE	330	400 U	380 U	610 U
HEXACHLOROETHANE	330	400 U	380 U	610 U
ISOPHORDNE	330	400 U	380 U	610 U
2-METHYLNAPHTHALENE	670	820 U	760 U	1200 U

## ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

DRY WEIGHT REPORTED UNITS: UG/KG

CH2M HILL

TENNECO PLASTICS - MACEDON - SW/SEDIMENT

SUBMISSION #: 9610000197

ORDER NUMBER		108320	108321	108322
SAMPLE ID:		MA11	MA12	MA13
DATE SAMPLED:		10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL	11/01/1996	11/01/1996	11/01/1996
DATE EXTRACTED:		11/08/96	11/08/96	11/08/96
DATE ANALYZED:		11/12/96	11/12/96	11/12/96
DILUTION:		1.0	1.0	1.0
PERCENT SOLID (%):		81.6	88.0	53.8
2-METHYLPHENOL	670	820 U	760 U	1200 U
4,6-DINITRO-2-METHYLPHENOL	1300	1600 U	1500 U	2400 U
4-CHLORO-3-METHYLPHENOL	670	820 U	760 U	1200 U
4-METHYLPHENOL	670	820 U	760 U	1200 U
NAPHTHALENE	330	400 U	380 U	610 U
2-NITROANILINE	330	400 U	380 U	610 U
3-NITROANILINE	330	400 U	380 U	610 U
4-NITROANILINE	330	400 U	380 U	610 U
NITROBENZENE	330	400 U	380 U	610 U
2-NITROPHENOL	670	820 U	760 U	1200 U
4-NITROPHENOL	1300	1600 U	1500 U	2400 U
N-NITROSODIMETHYLAMINE	330	400 U	380 U	610 U
N-NITROSODIPHENYLAMINE	330	400 U	380 U	610 U
DI-N-OCTYL PHTHALATE	330	400 U	380 U	610 U
PENTACHLOROPHENOL	1300	1600 U	1500 U	2400 U
PHENANTHRENE	330	400 U	380 U	610 U
PHENOL	670	820 U	760 U	1200 U
4-BROMOPHENYL-PHENYLETHER	330	400 U	380 U	610 U
4-CHLOROPHENYL-PHENYLETHER	330	400 U	380 U	610 U
N-NITROSO-DI-N-PROPYLAMINE	330	400 U	380 U	610 U
PYRENE	330	400 U	590	610 U
1,2,4-TRICHLOROBENZENE	330	400 U	380 U	610 U
2,4,5-TRICHLOROPHENOL	670	820 U	760 U	1200 U
2,4,6-TRICHLOROPHENOL	670	820 U	760 U	1200 U

## SURROGATE RECOVERIES

## LIMITS

TERPHENYL-d14	18 - 137	109	115	92
NITROBENZENE-d5	23 - 120	57	59	57
PHENOL-d6	24 - 113	65	69	66
2-FLUOROBIPHENYL	30 - 115	98	108	89
2-FLUOROPHENOL	25 - 121	79	77	80
2,4,6-TRIBROMOPHENOL	19 - 122	82	74	78

## ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

REPORTED UNITS: UG/L

CH2M HILL  
 TENNECO PLASTICS - MACEDON - SW/SEDIMENT  
 SUBMISSION #: 9610000197

ORDER NUMBER		108324	108325	108327	108328
SAMPLE ID:		MA11	MA12	MA13	FB-2
DATE SAMPLED:		10/31/1996	10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL	11/01/1996	11/01/1996	11/01/1996	11/01/1996
DATE EXTRACTED:		11/05/96	11/05/96	11/05/96	11/05/96
DATE ANALYZED:		11/ 7/96	11/ 7/96	11/ 7/96	11/ 7/96
DILUTION:		1.0	1.0	1.1	1.1
ACENAPHTHENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
ACENAPHTHYLENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
ANTHRACENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZO(A)ANTHRACENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZO(A)PYRENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZO(B)FLUORANTHENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZO(G,H,I)PERYLENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZO(K)FLUORANTHENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BENZYL ALCOHOL	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BUTYL BENZYL PHTHALATE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
DI-N-BUTYLPHTHALATE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
CARBAZOLE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
INDENO(1,2,3-CD)PYRENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
4-CHLOROANILINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BIS(-2-CHLOROETHOXY)METHANE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BIS(2-CHLOROETHYL)ETHER	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2-CHLORONAPHTHALENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2-CHLOROPHENOL	10	10 U	10 U	11 U	11 U
2,2'-OXYBIS(1-CHLOROPROPANE)	5.0	5.0 U	5.0 U	5.6 U	5.6 U
CHRYSENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
DIBENZO(A,H)ANTHRACENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
DIBENZOFURAN	5.0	5.0 U	5.0 U	5.6 U	5.6 U
1,2-DICHLOROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
1,3-DICHLOROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
1,4-DICHLOROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
3,3'-DICHLOROBENZIDINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2,4-DICHLOROPHENOL	10	10 U	10 U	11 U	11 U
DIETHYLPHTHALATE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
DIMETHYL PHTHALATE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2,4-DIMETHYLPHENOL	10	10 U	10 U	11 U	11 U
2,4-DINITROPHENOL	20	20 U	20 U	22 U	22 U
2,4-DINITROTOLUENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2,6-DINITROTOLUENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	5.0 U	5.0 U	5.6 U	7.4
FLUORANTHENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
FLUORENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
HEXACHLOROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
HEXACHLOROBUTADIENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
HEXACHLOROCYCLOPENTADIENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
HEXACHLOROETHANE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
ISOPHORONE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2-METHYLNAPHTHALENE	10	10 U	10 U	11 U	11 U
2-METHYLPHENOL	10	10 U	10 U	11 U	11 U

## ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

REPORTED UNITS: UG/L

CH2M HILL

TENNECO PLASTICS - MACEDON - SW/SEDIMENT

SUBMISSION #: 9610000197

ORDER NUMBER		108324	108325	108327	108328
SAMPLE ID:		MA11	MA12	MA13	FB-2
DATE SAMPLED:		10/31/1996	10/31/1996	10/31/1996	10/31/1996
DATE RECEIVED:	PQL	11/01/1996	11/01/1996	11/01/1996	11/01/1996
DATE EXTRACTED:		11/05/96	11/05/96	11/05/96	11/05/96
DATE ANALYZED:		11/ 7/96	11/ 7/96	11/ 7/96	11/ 7/96
DILUTION:		1.0	1.0	1.1	1.1
4,6-DINITRO-2-METHYLPHENOL	20	20 U	20 U	22 U	22 U
4-CHLORO-3-METHYLPHENOL	10	10 U	10 U	11 U	11 U
4-METHYLPHENOL	10	10 U	10 U	11 U	11 U
NAPHTHALENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2-NITROANILINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
3-NITROANILINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
4-NITROANILINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
NITROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2-NITROPHENOL	10	10 U	10 U	11 U	11 U
4-NITROPHENOL	20	20 U	20 U	22 U	22 U
N-NITROSCDIMETHYLAMINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
N-NITROSCDIPHENYLAMINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
DI-N-OCTYL PHTHALATE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
PENTACHLOROPHENOL	20	20 U	20 U	22 U	22 U
PHENANTHRENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
PHENOL	10	10 U	10 U	11 U	11 U
4-BROMOPHENYL-PHENYLETHER	5.0	5.0 U	5.0 U	5.6 U	5.6 U
4-CHLOROPHENYL-PHENYLETHER	5.0	5.0 U	5.0 U	5.6 U	5.6 U
N-NITROSO-DI-N-PROPYLAMINE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
PYRENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
1,2,4-TRICHLOROBENZENE	5.0	5.0 U	5.0 U	5.6 U	5.6 U
2,4,5-TRICHLOROPHENOL	10	10 U	10 U	11 U	11 U
2,4,6-TRICHLOROPHENOL	10	10 U	10 U	11 U	11 U
<b>SURROGATE RECOVERIES</b>	<b>LIMITS</b>				
TERPHENYL-d14	33 - 141	88	76	92	94
NITROBENZENE-d5	35 - 114	92	92	99	82
PHENOL-d6	10 - 94	47	49	55	45
2-FLUOROBIPHENYL	43 - 116	92	93	97	84
2-FLUOROPHENOL	21 - 110	69	69	80	65
2,4,6-TRIBROMOPHENOL	10 - 123	94	91	97	91









**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

**Project Reference:**  
**Client Sample ID : METHOD BLANK**

**Date Sampled :** Order #: 115260 **Sample Matrix: SOIL/SEDIMENT**  
**Date Received:** Submission #: **Percent Solid: 100**

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/08/96			
DATE ANALYZED : 11/12/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	330 U	UG/KG
ACENAPHTHYLENE	330	330 U	UG/KG
ANTHRACENE	330	330 U	UG/KG
BENZO (A) ANTHRACENE	330	330 U	UG/KG
BENZO (A) PYRENE	330	330 U	UG/KG
BENZO (B) FLUORANTHENE	330	330 U	UG/KG
BENZO (G, H, I) PERYLENE	330	330 U	UG/KG
BENZO (K) FLUORANTHENE	330	330 U	UG/KG
BENZYL ALCOHOL	330	330 U	UG/KG
BUTYL BENZYL PHTHALATE	330	330 U	UG/KG
DI-N-BUTYLPHTHALATE	330	1400	UG/KG
CARBAZOLE	330	330 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	330 U	UG/KG
4-CHLOROANILINE	330	330 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	330 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	330 U	UG/KG
2-CHLORONAPHTHALENE	330	330 U	UG/KG
2-CHLOROPHENOL	670	670 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	330 U	UG/KG
CHRYSENE	330	330 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	330 U	UG/KG
DIBENZOFURAN	330	330 U	UG/KG
1, 3-DICHLOROBENZENE	330	330 U	UG/KG
1, 2-DICHLOROBENZENE	330	330 U	UG/KG
1, 4-DICHLOROBENZENE	330	330 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	330 U	UG/KG
2, 4-DICHLOROPHENOL	670	670 U	UG/KG
DIETHYLPHTHALATE	330	330 U	UG/KG
DIMETHYL PHTHALATE	330	330 U	UG/KG
2, 4-DIMETHYLPHENOL	670	670 U	UG/KG
2, 4-DINITROPHENOL	1300	1300 U	UG/KG
2, 4-DINITROTOLUENE	330	330 U	UG/KG
2, 6-DINITROTOLUENE	330	330 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	330 U	UG/KG
FLUORANTHENE	330	330 U	UG/KG
FLUORENE	330	330 U	UG/KG
HEXACHLOROBENZENE	330	330 U	UG/KG
HEXACHLOROBUTADIENE	330	330 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	330 U	UG/KG
HEXACHLOROETHANE	330	330 U	UG/KG
ISOPHORONE	330	330 U	UG/KG
2-METHYLNAPHTHALENE	670	670 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1300 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	670 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8270 SEMIVOLATILES  
Reported: 11/19/96

Project Reference:  
Client Sample ID : METHOD BLANK

Date Sampled : Order #: 115260 Sample Matrix: SOIL/SEDIMENT  
Date Received: Submission #: Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/08/96			
DATE ANALYZED : 11/12/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
2-METHYLPHENOL	670	670 U	UG/KG
4-METHYLPHENOL	670	670 U	UG/KG
NAPHTHALENE	330	330 U	UG/KG
2-NITROANILINE	330	330 U	UG/KG
3-NITROANILINE	330	330 U	UG/KG
4-NITROANILINE	330	330 U	UG/KG
NITROBENZENE	330	330 U	UG/KG
2-NITROPHENOL	670	670 U	UG/KG
4-NITROPHENOL	1300	1300 U	UG/KG
N-NITROSODIMETHYLAMINE	330	330 U	UG/KG
N-NITROSODIPHENYLAMINE	330	330 U	UG/KG
DI-N-OCTYL PHTHALATE	330	330 U	UG/KG
PENTACHLOROPHENOL	1300	1300 U	UG/KG
PHENANTHRENE	330	330 U	UG/KG
PHENOL	670	670 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	330 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	330 U	UG/KG
N-NITroso-DI-N-PROPYLAMINE	330	330 U	UG/KG
PYRENE	330	330 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	330 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	670 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	670 U	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
TERPHENYL-d14	(18 - 137 %)	103	%
NITROBENZENE-d5	(23 - 120 %)	57	%
PHENOL-d6	(24 - 113 %)	62	%
2-FLUOROBIPHENYL	(30 - 115 %)	97	%
2-FLUOROPHENOL	(25 - 121 %)	76	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	76	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

**Project Reference:**  
**Client Sample ID : METHOD BLANK**

**Date Sampled :** Order #: 114482 **Sample Matrix: WATER**  
**Date Received:** Submission #: **Analytical Run 12919**

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.0		
ACENAPHTHENE	5.0	5.0 U	UG/L
ACENAPHTHYLENE	5.0	5.0 U	UG/L
ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) PYRENE	5.0	5.0 U	UG/L
BENZO (B) FLUORANTHENE	5.0	5.0 U	UG/L
BENZO (G, H, I) PERYLENE	5.0	5.0 U	UG/L
BENZO (K) FLUORANTHENE	5.0	5.0 U	UG/L
BENZYL ALCOHOL	5.0	5.0 U	UG/L
BUTYL BENZYL PHTHALATE	5.0	5.0 U	UG/L
DI-N-BUTYLPHTHALATE	5.0	5.0 U	UG/L
CARBAZOLE	5.0	5.0 U	UG/L
INDENO (1, 2, 3-CD) PYRENE	5.0	5.0 U	UG/L
4-CHLOROANILINE	5.0	5.0 U	UG/L
BIS (-2-CHLOROETHOXY) METHANE	5.0	5.0 U	UG/L
BIS (2-CHLOROETHYL) ETHER	5.0	5.0 U	UG/L
2-CHLORONAPHTHALENE	5.0	5.0 U	UG/L
2-CHLOROPHENOL	10	10 U	UG/L
2, 2'-OXYBIS (1-CHLOROPROPANE)	5.0	5.0 U	UG/L
CHRYSENE	5.0	5.0 U	UG/L
DIBENZO (A, H) ANTHRACENE	5.0	5.0 U	UG/L
DIBENZOFURAN	5.0	5.0 U	UG/L
1, 3-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 4-DICHLOROBENZENE	5.0	5.0 U	UG/L
3, 3'-DICHLOROBENZIDINE	5.0	5.0 U	UG/L
2, 4-DICHLOROPHENOL	10	10 U	UG/L
DIETHYLPHTHALATE	5.0	5.0 U	UG/L
DIMETHYL PHTHALATE	5.0	5.0 U	UG/L
2, 4-DIMETHYLPHENOL	10	10 U	UG/L
2, 4-DINITROPHENOL	20	20 U	UG/L
2, 4-DINITROTOLUENE	5.0	5.0 U	UG/L
2, 6-DINITROTOLUENE	5.0	5.0 U	UG/L
BIS (2-ETHYLHEXYL) PHTHALATE	5.0	5.0 U	UG/L
FLUORANTHENE	5.0	5.0 U	UG/L
FLUORENE	5.0	5.0 U	UG/L
HEXACHLOROBENZENE	5.0	5.0 U	UG/L
HEXACHLOROBUTADIENE	5.0	5.0 U	UG/L
HEXACHLOROCYCLOPENTADIENE	5.0	5.0 U	UG/L
HEXACHLOROETHANE	5.0	5.0 U	UG/L
ISOPHORONE	5.0	5.0 U	UG/L
2-METHYLNAPHTHALENE	10	10 U	UG/L
4, 6-DINITRO-2-METHYLPHENOL	20	20 U	UG/L
4-CHLORO-3-METHYLPHENOL	10	10 U	UG/L

Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 114482 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.0		
2-METHYLPHENOL	10	10 U	UG/L
4-METHYLPHENOL	10	10 U	UG/L
NAPHTHALENE	5.0	5.0 U	UG/L
2-NITROANILINE	5.0	5.0 U	UG/L
3-NITROANILINE	5.0	5.0 U	UG/L
4-NITROANILINE	5.0	5.0 U	UG/L
NITROBENZENE	5.0	5.0 U	UG/L
2-NITROPHENOL	10	10 U	UG/L
4-NITROPHENOL	20	20 U	UG/L
N-NITROSODIMETHYLAMINE	5.0	5.0 U	UG/L
N-NITROSODIPHENYLAMINE	5.0	5.0 U	UG/L
DI-N-OCTYL PHTHALATE	5.0	5.0 U	UG/L
PENTACHLOROPHENOL	20	20 U	UG/L
PHENANTHRENE	5.0	5.0 U	UG/L
PHENOL	10	10 U	UG/L
4-BROMOPHENYL-PHENYLEETHER	5.0	5.0 U	UG/L
4-CHLOROPHENYL-PHENYLEETHER	5.0	5.0 U	UG/L
N-NITroso-DI-N-PROPYLAMINE	5.0	5.0 U	UG/L
PYRENE	5.0	5.0 U	UG/L
1, 2, 4-TRICHLOROBENZENE	5.0	5.0 U	UG/L
2, 4, 6-TRICHLOROPHENOL	10	10 U	UG/L
2, 4, 5-TRICHLOROPHENOL	10	10 U	UG/L

## SURROGATE RECOVERIES

## QC LIMITS

TERPHENYL-d14	(33 - 141 %)	87	%
NITROBENZENE-d5	(35 - 114 %)	91	%
PHENOL-d6	(10 - 94 %)	43	%
2-FLUOROBIPHENYL	(43 - 116 %)	87	%
2-FLUOROPHENOL	(21 - 110 %)	60	%
2, 4, 6-TRIBROMOPHENOL	(10 - 123 %)	86	%

(Macedon # 4A) (800) 695-7222

PROJECT NAME Tenneco Packaging  
 PROJECT MANAGER/CONTACT Robert Jackson  
 COMPANY/ADDRESS CHAM Hill, 99 Cherry Hill Rd  
Ste 304 Parsippany, NJ 07054  
 TEL (201) 316-9300 FAX (201) 334-5847  
 SAMPLER'S SIGNATURE Andrew B. Judd

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	G/CMS VOAS 8260 624	G/CMS SVOAS 8270A 625	GC VOAS 8010/8020 601/602	PESTICIDES/PCBs 8080 608	STARS LIST 8021 VOAS TOTAL TCLP	STARS LIST 8270 SVOAS TOTAL TCLP	TCLP METALS VOAS SVOAS H/P	WASTE CHARACTERIZATION React Corros. Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	ANALYSIS REQUESTED		
																PH < 2.0	PH > 12	
FB-2	10/31/96	1120	108328	Aqueous	4	X	X											
Temp Blank	10/31/96			Aqueous	1	X	(AS)											
MA-17-2	10/30/96	1520		Soil	1	X												
Trip Blank	10/31/96		108329	Aqueous	2	X												
MA-11	10/31/96	0710	108324	Aqueous	4	X	X											
MA-11	10/31/96	0715	108320	Soil	3	X	X											
MA-12	10/31/96	0735	108325	Aqueous	4	X	X											
MA-12	10/31/96	0745	108321	Soil	3	X	X											
MA-13	10/31/96	0800	108327	Aqueous	7	X	X											
MA-13	10/31/96	0810	108322	Soil	3	X	X											

TURNAROUND REQUIREMENTS	REPORT REQUIREMENTS	INVOICE INFORMATION:	SAMPLE RECEIPT:
24 hr. 48 hr. 5 day <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results Provide FAX Preliminary Results Requested Report Date _____	1. Routine Report <input checked="" type="checkbox"/> 2. Routine Rep. w/CASE Narrative 3. EPA Level III Validatable Package 4. N.J. Reduced Deliverables Level IV 5. NY ASP/CLP Deliverables 6. Site specific QC.	P.O. #: Bill To: Shipping Via: <u>CAS</u> Shipping #: <u>2.40c</u> Temperature: Submission No: <u>10-197</u>	PH < 2.0 PH > 12 Other ILC 40c

SPECIAL INSTRUCTIONS/COMMENTS:  
 METALS As, Ba, Cd, Cr, Pb, Hg, Se, Ag  
 ORGANICS:  TCL  PPL  AE Only  BN Only  Special List

Temperature Indicator Included

65 RAMAPO VALLEY ROAD MAHWAH, NJ 07430  
 201-512-3292 FAX 201-512-3362  
 435 LAWRENCE BELL DR. AMHERST, NY 14221  
 716-634-0454 FAX 716-634-9019

RECEIVED BY: Tom Hastings  
 Signature  
 Printed Name  
 Firm  
 Date/Time 10/31/96 15:30

RECEIVED BY:  
 Signature  
 Printed Name  
 Firm  
 Date/Time

RELINQUISHED BY:  
 Signature Andrew B. Judd  
 Printed Name  
 Firm CHAM Hill  
 Date/Time 10/31/96 1300

RELINQUISHED BY:  
 Signature  
 Printed Name  
 Firm  
 Date/Time

RELINQUISHED BY:  
 Signature  
 Printed Name  
 Firm  
 Date/Time





A FULL SERVICE ENVIRONMENTAL LABORATORY

November 19, 1996

Mr. Robert Jackson  
CH2M HILL  
99 Cherry Hill Road  
Suite 304  
Parsippany, NJ 07054

PROJECT:TENNECO PLASTICS - MACEDON - GROUNDWATER  
Submission #:9610000161

Dear Mr. Jackson

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 454-6810.

Thank you for letting us provide this service.

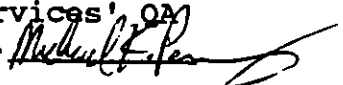
Sincerely,

COLUMBIA ANALYTICAL SERVICES

A handwritten signature in cursive script, appearing to read "Janice Jaeger", is written over the typed name.

Janice Jaeger  
Project Chemist

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal. 

700 Exchange Street • Rochester, NY 14608 • Tele:(716)454-6810 • Fax:(716)454-6825  
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362  
12699 Roll Rd. • Akron, NY 14001 • Tele:(716)542-1264 • Fax:(716)542-3353



## **CASE NARRATIVE**

**COMPANY: CH2M HILL, Inc.  
TENNECO Packaging - Macedon - waters  
SUBMISSION #: 961000161**

CH2M HILL water samples were collected on 10/28/96 and 10/31/96 and received at CAS on 10/29/96 and 11/01/96 in good condition.

### **INORGANIC ANALYSIS**

Four water samples were analyzed for RCRA Metals by methods 6010/7470. No other analytical or QC problems were encountered with these analyses

### **VOLATILE ORGANICS**

Four water samples analyzed for Target Compound List (TCL) of volatile organics by method 8260 from SW-846.

All tuning criteria for BFB were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within QC acceptance limits.

All laboratory blanks were free of any contamination.

All samples were analyzed within the 14 day holding time as specified in the method.

No other analytical or QC problems were encountered.

### **SEMIVOLATILE ORGANICS**

Four water samples were analyzed for the TCL semivolatile organics by method 8270 from SW-846.

All Tuning criteria for DFTPP were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate recoveries were within QC acceptance limits except for sample MA3. This surrogate have been flagged with an "\*" as being outside QC limits.

All samples were extracted and analyzed within the specified holding times.

All laboratory blanks were free of contamination.

No other analytical or QC problems were encountered.



Effective 04/01/96

**CAS LIST OF QUALIFIERS**

(The basis of this proposal are the EPA-CLP Qualifiers)

- U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. For further explanation see case narrative / cover letter.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- N - Spiked sample recovery not within control limits.  
(Flag the entire batch - Inorganic analysis only)
- \* - Duplicate analysis not within control limits.  
(Flag the entire batch - Inorganic analysis only)
- Also used to qualify Organics QC data outside limits.
- D - Spike diluted out.
- S - Reported value determined by Method of Standard Additions. (MSA)
- X - As specified in the case narrative.

**CAS Lab ID # for State Certifications**

NY ID # in Rochester:	10145	NJ ID # in Rochester:	73004
CT ID # in Rochester:	PH0556	RI ID # in Rochester:	158
MA ID # in Rochester:	M-NY032		

COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY

Reported: 11/19/96

Reported Units = MG/L

CH2M HILL  
TENNECO PLASTICS - MACEDON - GROUNDWATER  
SUBMISSION #: 9610000161

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ORDER NUMBER		107890	107891	107892	107893
SAMPLE ID:		MA1	MA2	MA3	MPE
DATE SAMPLED:		10/28/96	10/28/96	10/28/96	10/31/96
DATE RECEIVED:	PQL	10/28/96	10/28/96	10/28/96	11/01/96

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ARSENIC	0.0100	0.217	0.0708	0.0392	0.0100 U
BARIUM	0.0200	5.25	0.926	0.537	0.437
CADMIUM	0.00500	0.0176	0.00673	0.00500 U	0.00548
CHROMIUM	0.0100	0.667	0.403	0.237	0.0984
LEAD	0.00500	0.791	0.973	0.0842	0.376
MERCURY	0.000300	0.000988	0.000610	0.000300 U	0.000300 U
SELENIUM	0.00500	0.381	0.101	0.0400	0.00500 U
SILVER	0.0100	0.0189	0.0100 U	0.0100 U	0.0100 U

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Reported: 11/19/96

CH2M HILL

TENNECO PLASTICS - MACEDON - GROUNDWATER

SUBMISSION #: 9610000161

---

ORDER NUMBER	107890	107891	107892	107893
SAMPLE ID:	MA1	MA2	MA3	MPE
DATE SAMPLED:	10/28/96	10/28/96	10/28/96	10/31/96
DATE RECEIVED:	10/28/96	10/28/96	10/28/96	11/01/96

---

ARSENIC	11/11/96	11/11/96	11/11/96	11/11/96
BARIUM	11/11/96	11/11/96	11/11/96	11/11/96
CADMIUM	11/11/96	11/11/96	11/11/96	11/11/96
CHROMIUM	11/11/96	11/11/96	11/11/96	11/11/96
LEAD	11/14/96	11/14/96	11/14/96	11/14/96
MERCURY	11/07/96	11/07/96	11/07/96	11/07/96
SELENIUM	11/14/96	11/14/96	11/14/96	11/11/96
SILVER	11/11/96	11/11/96	11/11/96	11/11/96

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COLUMBIA ANALYTICAL SERVICES

ANALYTICAL REPORT SUMMARY

METHOD 8260 TCL

REPORTED UNITS: UG/L

CH2M HILL  
 TENNECO PLASTICS - MACEDON - GROUNDWATER  
 SUBMISSION #: 9610000161

ORDER NUMBER		107890	107891	107892	107893
SAMPLE ID:		MA1	MA2	MA3	MPE
DATE SAMPLED:		10/28/1996	10/28/1996	10/28/1996	10/31/1996
DATE RECEIVED:	PQL	10/28/1996	10/28/1996	10/28/1996	11/01/1996
DATE ANALYZED:		11/ 7/96	11/ 7/96	11/ 7/96	11/ 7/96
DILUTION:		1.0	1.0	1.0	1.0
ACETONE	20	20 U	20 U	20 U	20 U
BENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMODICHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMOFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
BROMOMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-BUTANONE (MEK)	10	10 U	10 U	10 U	10 U
CARBON DISULFIDE	10	10 U	10 U	10 U	10 U
CARBON TETRACHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROFORM	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
DIBROMOCHLOROMETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,2-DICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,2-DICHLOROPROPANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
ETHYLBENZENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
2-HEXANONE	10	10 U	10 U	10 U	10 U
METHYLENE CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
4-METHYL-2-PENTANONE (MIBK)	10	10 U	10 U	10 U	10 U
STYRENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TETRACHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TOLUENE	5.0	5.0 U	29	12	5.0 U
1,1,1-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
1,1,2-TRICHLOROETHANE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
TRICHLOROETHENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
VINYL CHLORIDE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
M+P-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
O-XYLENE	5.0	5.0 U	5.0 U	5.0 U	5.0 U
<b>SURROGATE RECOVERIES</b>	<b>LIMITS</b>				
4-BROMOFLUOROBENZENE	86 - 115	99	98	98	99
TOLUENE-D8	88 - 110	99	97	99	100
DIBROMOFLUOROMETHANE	86 - 118	99	98	98	101

## ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

REPORTED UNITS: UG/L

CH2M HILL

TENNECO PLASTICS - MACEDON - GROUNDWATER

SUBMISSION #: 9610000161

ORDER NUMBER		107890	107891	107892	107893
SAMPLE ID:		MA1	MA2	MA3	MPE
DATE SAMPLED:		10/28/1996	10/28/1996	10/28/1996	10/31/1996
DATE RECEIVED:	PQL	10/28/1996	10/28/1996	10/28/1996	11/01/1996
DATE ANALYZED:		11/13/96	11/13/96	11/13/96	11/ 7/96
DATE EXTRACTED:		10/31/96	10/31/96	10/31/96	11/05/96
DILUTION:		1.1	1.1	1.1	1.0
ACENAPHTHENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
ACENAPHTHYLENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
ANTHRACENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BENZO(A)ANTHRACENE	5.0	5.6 U	5.4 U	5.5 U	6.0
BENZO(A)PYRENE	5.0	5.6 U	5.4 U	5.5 U	7.5
BENZO(B)FLUORANTHENE	5.0	5.6 U	5.4 U	5.5 U	11
BENZO(G,H,I)PERYLENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BENZO(K)FLUORANTHENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BENZYL ALCOHOL	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BUTYL BENZYL PHTHALATE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
DI-N-BUTYLPHthalate	5.0	5.6 U	5.4 U	5.5 U	5.0 U
CARBAZOLE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
INDENO(1,2,3-CD)PYRENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
4-CHLOROANILINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BIS(-2-CHLOROETHOXY)METHANE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BIS(2-CHLOROETHYL)ETHER	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2-CHLORONAPHTHALENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2-CHLOROPHENOL	10	11 U	11 U	11 U	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	5.0	5.6 U	5.4 U	5.5 U	5.0 U
CHRYSENE	5.0	5.6 U	5.4 U	5.5 U	8.0
DIBENZO(A,H)ANTHRACENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
DIBENZOFURAN	5.0	5.6 U	5.4 U	5.5 U	5.0 U
1,2-DICHLOROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
1,3-DICHLOROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
1,4-DICHLOROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
3,3'-DICHLOROBENZIDINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2,4-DICHLOROPHENOL	10	11 U	11 U	11 U	10 U
DIETHYLPHthalate	5.0	5.6 U	5.4 U	5.5 U	5.0 U
DIMETHYL PHTHALATE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2,4-DIMETHYLPHENOL	10	11 U	11 U	11 U	10 U
2,4-DINITROPHENOL	20	22 U	22 U	22 U	20 U
2,4-DINITROTOLUENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2,6-DINITROTOLUENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
BIS(2-ETHYLHEXYL)PHTHALATE	5.0	11	7.7	21	9.0
FLUORANTHENE	5.0	5.6 U	5.4 U	5.5 U	14
FLUORENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
HEXACHLOROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
HEXACHLOROBUTADIENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
HEXACHLOROCYCLOPENTADIENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
HEXACHLOROETHANE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
ISOPHORONE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2-METHYLNAPHTHALENE	10	11 U	11 U	11 U	10 U
2-METHYLPHENOL	10	11 U	11 U	11 U	10 U

ANALYTICAL REPORT SUMMARY

METHOD 8270 SEMIVOLATILES

REPORTED UNITS: UG/L

CH2M HILL

TENNECO PLASTICS - MACEDON - GROUNDWATER

SUBMISSION #: 9610000161

ORDER NUMBER		107890	107891	107892	107893
SAMPLE ID:		MA1	MA2	MA3	MPE
DATE SAMPLED:		10/28/1996	10/28/1996	10/28/1996	10/31/1996
DATE RECEIVED:	PQL	10/28/1996	10/28/1996	10/28/1996	11/01/1996
DATE ANALYZED:		11/13/96	11/13/96	11/13/96	11/ 7/96
DATE EXTRACTED:		10/31/96	10/31/96	10/31/96	11/05/96
DILUTION:		1.1	1.1	1.1	1.0
4,6-DINITRO-2-METHYLPHENOL	20	22 U	22 U	22 U	20 U
4-CHLORO-3-METHYLPHENOL	10	11 U	11 U	11 U	10 U
4-METHYLPHENOL	10	11 U	11 U	11 U	10 U
NAPHTHALENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2-NITROANILINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
3-NITROANILINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
4-NITROANILINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
NITROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2-NITROPHENOL	10	11 U	11 U	11 U	10 U
4-NITROPHENOL	20	22 U	22 U	22 U	20 U
N-NITROSDIMETHYLAMINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
N-NITROSDIPHENYLAMINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
DI-N-OCTYL PHTHALATE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
PENTACHLOROPHENOL	20	22 U	22 U	22 U	20 U
PHENANTHRENE	5.0	5.6 U	5.4 U	5.5 U	7.9
PHENOL	10	11 U	11 U	11 U	10 U
4-BROMOPHENYL-PHENYLETHER	5.0	5.6 U	5.4 U	5.5 U	5.0 U
4-CHLOROPHENYL-PHENYLETHER	5.0	5.6 U	5.4 U	5.5 U	5.0 U
N-NITROSO-DI-N-PROPYLAMINE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
PYRENE	5.0	5.6 U	5.4 U	5.5 U	13
1,2,4-TRICHLOROBENZENE	5.0	5.6 U	5.4 U	5.5 U	5.0 U
2,4,5-TRICHLOROPHENOL	10	11 U	11 U	11 U	10 U
2,4,6-TRICHLOROPHENOL	10	11 U	11 U	11 U	10 U
<b>SURROGATE RECOVERIES</b>	<b>LIMITS</b>				
TERPHENYL-d14	33 - 141	44	36	40	75
NITROBENZENE-d5	35 - 114	78	78	73	90
PHENOL-d6	10 - 94	31	41	27	43
2-FLUOROBIPHENYL	43 - 116	85	84	72	86
2-FLUOROPHENOL	21 - 110	40	65	22	55
2,4,6-TRIBROMOPHENOL	10 - 123	54	82	9 *	96





COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8270 SEMIVOLATILES  
Reported: 11/19/96

Project Reference:  
Client Sample ID : METHOD BLANK

Date Sampled : Order #: 114482 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/07/96			
ANALYTICAL DILUTION: 1.0			
ACENAPHTHENE	5.0	5.0 U	UG/L
ACENAPHTHYLENE	5.0	5.0 U	UG/L
ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) PYRENE	5.0	5.0 U	UG/L
BENZO (B) FLUORANTHENE	5.0	5.0 U	UG/L
BENZO (G, H, I) PERYLENE	5.0	5.0 U	UG/L
BENZO (K) FLUORANTHENE	5.0	5.0 U	UG/L
BENZYL ALCOHOL	5.0	5.0 U	UG/L
BUTYL BENZYL PHTHALATE	5.0	5.0 U	UG/L
DI-N-BUTYLPHthalate	5.0	5.0 U	UG/L
CARBAZOLE	5.0	5.0 U	UG/L
INDENO (1, 2, 3-CD) PYRENE	5.0	5.0 U	UG/L
4-CHLOROANILINE	5.0	5.0 U	UG/L
BIS (-2-CHLOROETHOXY) METHANE	5.0	5.0 U	UG/L
BIS (2-CHLOROETHYL) ETHER	5.0	5.0 U	UG/L
2-CHLORONAPHTHALENE	5.0	5.0 U	UG/L
2-CHLOROPHENOL	10	10 U	UG/L
2, 2'-OXYBIS (1-CHLOROPROPANE)	5.0	5.0 U	UG/L
CHRYSENE	5.0	5.0 U	UG/L
DIBENZO (A, H) ANTHRACENE	5.0	5.0 U	UG/L
DIBENZOFURAN	5.0	5.0 U	UG/L
1, 3-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 4-DICHLOROBENZENE	5.0	5.0 U	UG/L
3, 3'-DICHLOROBENZIDINE	5.0	5.0 U	UG/L
2, 4-DICHLOROPHENOL	10	10 U	UG/L
DIETHYLPHthalate	5.0	5.0 U	UG/L
DIMETHYL PHTHALATE	5.0	5.0 U	UG/L
2, 4-DIMETHYLPHENOL	10	10 U	UG/L
2, 4-DINITROPHENOL	20	20 U	UG/L
2, 4-DINITROTOLUENE	5.0	5.0 U	UG/L
2, 6-DINITROTOLUENE	5.0	5.0 U	UG/L
BIS (2-ETHYLHEXYL) PHTHALATE	5.0	5.0 U	UG/L
FLUORANTHENE	5.0	5.0 U	UG/L
FLUORENE	5.0	5.0 U	UG/L
HEXACHLOROBENZENE	5.0	5.0 U	UG/L
HEXACHLOROBUTADIENE	5.0	5.0 U	UG/L
HEXACHLOROCYCLOPENTADIENE	5.0	5.0 U	UG/L
HEXACHLOROETHANE	5.0	5.0 U	UG/L
ISOPHORONE	5.0	5.0 U	UG/L
2-METHYLNAPHTHALENE	10	10 U	UG/L
4, 6-DINITRO-2-METHYLPHENOL	20	20 U	UG/L
4-CHLORO-3-METHYLPHENOL	10	10 U	UG/L

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8270 SEMIVOLATILES  
Reported: 11/19/96

Project Reference:  
Client Sample ID : METHOD BLANK

Date Sampled : Order #: 114482 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/07/96			
ANALYTICAL DILUTION: 1.0			
2-METHYLPHENOL	10	10 U	UG/L
4-METHYLPHENOL	10	10 U	UG/L
NAPHTHALENE	5.0	5.0 U	UG/L
2-NITROANILINE	5.0	5.0 U	UG/L
3-NITROANILINE	5.0	5.0 U	UG/L
4-NITROANILINE	5.0	5.0 U	UG/L
NITROBENZENE	5.0	5.0 U	UG/L
2-NITROPHENOL	10	10 U	UG/L
4-NITROPHENOL	20	20 U	UG/L
N-NITROSODIMETHYLAMINE	5.0	5.0 U	UG/L
N-NITROSODIPHENYLAMINE	5.0	5.0 U	UG/L
DI-N-OCTYL PHTHALATE	5.0	5.0 U	UG/L
PENTACHLOROPHENOL	20	20 U	UG/L
PHENANTHRENE	5.0	5.0 U	UG/L
PHENOL	10	10 U	UG/L
4-BROMOPHENYL-PHENYLETHER	5.0	5.0 U	UG/L
4-CHLOROPHENYL-PHENYLETHER	5.0	5.0 U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	5.0	5.0 U	UG/L
PYRENE	5.0	5.0 U	UG/L
1,2,4-TRICHLOROENZENE	5.0	5.0 U	UG/L
2,4,6-TRICHLOROPHENOL	10	10 U	UG/L
2,4,5-TRICHLOROPHENOL	10	10 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(33 - 141 %)	87	%
NITROBENZENE-d5	(35 - 114 %)	91	%
PHENOL-d6	(10 - 94 %)	43	%
2-FLUOROBIPHENYL	(43 - 116 %)	87	%
2-FLUOROPHENOL	(21 - 110 %)	60	%
2,4,6-TRIBROMOPHENOL	(10 - 123 %)	86	%

**COLUMBIA ANALYTICAL SERVICES, INC.**

700 Exchange Street, Rochester, New York 14608

(716) 454-6810 • FAX (716) 454-6825

**CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM**

(800) 695-7222

DATE 10/28/96 PAGE 1 OF 1

PROJECT INFORMATION				ANALYSIS REQUESTED												PRESERVATION								
PROJECT NAME <u>Tennessee Packaging</u>				<input type="checkbox"/> # OF CONTAINERS <input checked="" type="checkbox"/> GCMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 824 <input checked="" type="checkbox"/> GCMS SVOAs <input type="checkbox"/> 8270A <input type="checkbox"/> 625 <input checked="" type="checkbox"/> GC VOAs <input type="checkbox"/> 8010/8020 <input type="checkbox"/> 601/602 <input type="checkbox"/> PESTICIDES/PCBs <input type="checkbox"/> 8080 <input type="checkbox"/> 608 <input type="checkbox"/> STAR'S LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP <input type="checkbox"/> STAR'S LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP <input type="checkbox"/> VOAs <input type="checkbox"/> SVOAs <input type="checkbox"/> H/P <input type="checkbox"/> WASTE CHARACTERIZATION <input type="checkbox"/> React <input type="checkbox"/> Corros. <input type="checkbox"/> Ignit. <input type="checkbox"/> METALS, TOTAL <input type="checkbox"/> METALS, DISSOLVED (LIST BELOW) <input type="checkbox"/> TCLP <input type="checkbox"/> METALS <input type="checkbox"/> VOAs <input type="checkbox"/> SVOAs <input type="checkbox"/> H/P <input type="checkbox"/> STAR'S LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP <input type="checkbox"/> STAR'S LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP <input type="checkbox"/> PESTICIDES/PCBs <input type="checkbox"/> 8080 <input type="checkbox"/> 608 <input type="checkbox"/> GC VOAs <input type="checkbox"/> 8010/8020 <input type="checkbox"/> 601/602 <input type="checkbox"/> GCMS SVOAs <input type="checkbox"/> 8270A <input type="checkbox"/> 625 <input checked="" type="checkbox"/> GCMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 824												PH < 20			PH > 12			Other <u>RE 40C</u>		
PROJECT MANAGER/CONTACT <u>Robert Jackson</u>				METALS, DISSOLVED (LIST BELOW) <u>TPH 418.1</u> METALS, TOTAL (LIST BELOW) <u>DA 10/29/96</u> METALS, DISSOLVED (LIST BELOW) <u>DA 10/29/96</u> METALS, TOTAL (LIST BELOW) <u>DA 10/29/96</u>																				
COMPANY/ADDRESS <u>Ste 304, Parsippany, NJ 07054</u>				REPORT REQUIREMENTS 1. Routine Report <input checked="" type="checkbox"/> 2. Routine Rep. w/CASE Narrative 3. EPA Level III 4. N.J. Reduced Deliverables Level IV 5. NY ASP/CLP Deliverables 6. Site specific QC.																				
TEL (201) 316-9300 FAX (201) 334-5847				TURNAROUND REQUIREMENTS 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (10-15 working days) Provide Verbal Preliminary Results Provide FAX Preliminary Results Requested Report Date _____																				
SAMPLER'S SIGNATURE <u>Andrew B. Judd</u>				SPECIAL INSTRUCTIONS/COMMENTS: METALS <u>As, Ba, Cd, Cr, Pb, Hg, Se, Ag</u> ORGANICS: <input checked="" type="checkbox"/> TCL <input type="checkbox"/> PPL <input type="checkbox"/> AE Only <input type="checkbox"/> BN Only <input type="checkbox"/> Special List * <u>VOA NOT Preserved w/ HCl</u> <u>For Aqueous Samples Metals preserved w/ HNO3</u>																				
RECEIVED BY: <u>Andrew B. Judd</u> Signature <u>Andrew B. Judd</u> Printed Name <u>Andrew B. Judd</u> Firm <u>TPM Hill</u> Date/Time <u>10/29/96 11:20</u>				RECEIVED BY: <u>Janice Jaeger</u> Signature <u>Janice Jaeger</u> Printed Name <u>Janice Jaeger</u> Firm <u>TPM Hill</u> Date/Time <u>10/29/96 11:20</u>																				
RECEIVED BY: <u>Tom Hartings</u> Signature <u>Tom Hartings</u> Printed Name <u>Tom Hartings</u> Firm <u>TPM Hill</u> Date/Time <u>10/29/96 14:00</u>				RECEIVED BY: _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____																				
RECEIVED BY: _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____				RECEIVED BY: _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____																				

65 RAMAPO VALLEY ROAD MAHWAH, NJ 07430 201-512-3292 FAX 201-512-3362  
 435 LAWRENCE BELL DR. AMHERST, NY 14221 716-634-0454 FAX 716-634-9019





A FULL SERVICE ENVIRONMENTAL LABORATORY

November 19, 1996

Mr. Robert Jackson  
CH2M HILL  
99 Cherry Hill Road  
Suite 304  
Parsippany, NJ 07054

PROJECT:TENNECO PLASTICS - MACEDON - SOIL  
Submission #:9610000162

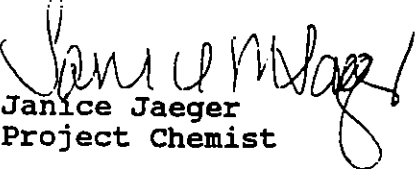
Dear Mr. Jackson

Enclosed are the analytical results of the analyses requested. All data has been reviewed prior to report submission. Should you have any questions please contact me at (716) 454-6810.

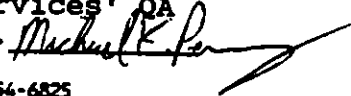
Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director prior to report submittal. 

700 Exchange Street • Rochester, NY 14608 • Tele:(716)454-6810 • Fax:(716)454-6825  
65 Ramapo Valley Rd. • Suite 16 • Mahwah, NJ 07430 • Tele:(201)512-3292 • Fax:(201)512-3362  
12699 Roll Rd. • Akron, NY 14001 • Tele:(716)542-1264 • Fax:(716)542-3353

## CASE NARRATIVE

COMPANY: CH2M HILL, Inc.  
TENNECO Packaging - Macedon - soils  
SUBMISSION #: 961000162

CH2M HILL water samples were collected on 10/28-31/96 and received at CAS on 10/29-11/01/96 in good condition.

### INORGANIC ANALYSIS

Nine soil samples and one field blank were analyzed for RCRA Metals by methods 6010A/7470/7471A and ten soil samples and one field blank were analyzed for Total Petroleum Hydrocarbons by method 418.1. No other analytical or QC problems were encountered with these analyses

### VOLATILE ORGANICS

Eighteen soil samples, one field blank and two trip blanks were analyzed for Target Compound List (TCL) of volatile organics by method 8260 from SW-846.

All tuning criteria for BFB were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within QC acceptance limits.

All laboratory blanks were free of any contamination.

All samples were analyzed within the 14 day holding time as specified in the method.

Sample MA6B-2 had to be analyzed at a 1:5 dilution due to matrix interferences (probably petroleum hydrocarbons).

No other analytical or QC problems were encountered.

### SEMIVOLATILE ORGANICS

Seventeen soil samples and one field blank were analyzed for the TCL semi-volatile organics by method 8270 from SW-846.

All Tuning criteria for DFTPP were met.

The initial and continuing calibration criteria were met for all analytes.

All surrogate recoveries were within QC acceptance limits except for sample MA6B-2. This surrogate has been flagged with an "\*" and is due to matrix interferences (probably petroleum hydrocarbons).

All samples were extracted and analyzed within the specified holding times.

All laboratory blanks were free of contamination except the laboratory blank from 11/08/96. Di-n-butylphthalate for MA7A-3 has been flagged with a "B" as being due to laboratory contamination.

No other analytical or QC problems were encountered.

#### PCB ANALYSIS

One soil sample and field blank were analyzed for PCB's by method 8080 from SW-846.

All initial and continuing calibration criteria were met.

All surrogate standard recoveries were within QC acceptance limits.

All laboratory blanks were free of contamination.

All samples were extracted and analyzed within the specified holding times.

No other analytical or QC problems were encountered.





Effective 04/01/96

**CAS LIST OF QUALIFIERS**

(The basis of this proposal are the EPA-CLP Qualifiers)

- U - Indicates compound was analyzed for but was not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. For further explanation see case narrative / cover letter.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- N - Spiked sample recovery not within control limits.  
(Flag the entire batch - Inorganic analysis only)
- \* - Duplicate analysis not within control limits.  
(Flag the entire batch - Inorganic analysis only)
  - Also used to qualify Organics QC data outside limits.
- D - Spike diluted out.
- S - Reported value determined by Method of Standard Additions. (MSA)
- X - As specified in the case narrative.

**CAS Lab ID # for State Certifications**

NY ID # in Rochester: 10145  
CT ID # in Rochester: PH0556  
MA ID # in Rochester: M-NY032

NJ ID # in Rochester: 73004  
RI ID # in Rochester: 158

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA4-A

Date Sampled : 10/29/96

Order #: 107897

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/29/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	2.95	UG/G	10/31/96	1.0
BARIUM	2.00	23.5	UG/G	10/31/96	1.0
CADMIUM	0.500	0.585 U	UG/G	10/31/96	1.0
CHROMIUM	1.00	8.59	UG/G	10/31/96	1.0
LEAD	5.00	5.85 U	UG/G	10/31/96	1.0
MERCURY	0.150	0.175 U	UG/G	11/15/96	1.0
SELENIUM	0.500	1.68	UG/G	10/31/96	1.0
SILVER	1.00	1.17 U	UG/G	10/31/96	1.0
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	33.0	38.6 U	UG/G	11/05/96	1.0
PERCENT SOLIDS	1.0	85.5	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA4-A

Date Sampled : 10/29/96      Order #: 107897      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.5

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/07/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	94	%
TOLUENE-D8	(81 - 117 %)	99	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	102	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA4-A

Date Sampled : 10/29/96      Order #: 107897      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	390 U	UG/KG
ACENAPHTHYLENE	330	390 U	UG/KG
ANTHRACENE	330	390 U	UG/KG
BENZO (A) ANTHRACENE	330	390 U	UG/KG
BENZO (A) PYRENE	330	390 U	UG/KG
BENZO (B) FLUORANTHENE	330	390 U	UG/KG
BENZO (G, H, I) PERYLENE	330	390 U	UG/KG
BENZO (K) FLUORANTHENE	330	390 U	UG/KG
BENZYL ALCOHOL	330	390 U	UG/KG
BUTYL BENZYL PHTHALATE	330	390 U	UG/KG
DI-N-BUTYLPHthalate	330	390 U	UG/KG
CARBAZOLE	330	390 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	390 U	UG/KG
4-CHLOROANILINE	330	390 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	390 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	390 U	UG/KG
2-CHLORONAPHTHALENE	330	390 U	UG/KG
2-CHLOROPHENOL	670	780 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	390 U	UG/KG
CHRYSENE	330	390 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	390 U	UG/KG
DIBENZOFURAN	330	390 U	UG/KG
1, 3-DICHLOROBENZENE	330	390 U	UG/KG
1, 2-DICHLOROBENZENE	330	390 U	UG/KG
1, 4-DICHLOROBENZENE	330	390 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	390 U	UG/KG
2, 4-DICHLOROPHENOL	670	780 U	UG/KG
DIETHYLPHthalate	330	390 U	UG/KG
DIMETHYL PHTHALATE	330	390 U	UG/KG
2, 4-DIMETHYLPHENOL	670	780 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	390 U	UG/KG
2, 6-DINITROTOLUENE	330	390 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	390 U	UG/KG
FLUORANTHENE	330	390 U	UG/KG
FLUORENE	330	390 U	UG/KG
HEXACHLOROBENZENE	330	390 U	UG/KG
HEXACHLOROBUTADIENE	330	390 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	390 U	UG/KG
HEXACHLOROETHANE	330	390 U	UG/KG
ISOPHORONE	330	390 U	UG/KG
2-METHYLNAPHTHALENE	670	780 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA4-A

Date Sampled : 10/29/96      Order #: 107897      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	780 U	UG/KG
2-METHYLPHENOL	670	780 U	UG/KG
4-METHYLPHENOL	670	780 U	UG/KG
NAPHTHALENE	330	390 U	UG/KG
2-NITROANILINE	330	390 U	UG/KG
3-NITROANILINE	330	390 U	UG/KG
4-NITROANILINE	330	390 U	UG/KG
NITROBENZENE	330	390 U	UG/KG
2-NITROPHENOL	670	780 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	390 U	UG/KG
N-NITROSODIPHENYLAMINE	330	390 U	UG/KG
DI-N-OCTYL PHTHALATE	330	390 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	390 U	UG/KG
PHENOL	670	780 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	390 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	390 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	390 U	UG/KG
PYRENE	330	390 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	390 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	780 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	780 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	90	%
NITROBENZENE-d5	(23 - 120 %)	79	%
PHENOL-d6	(24 - 113 %)	82	%
2-FLUOROBIPHENYL	(30 - 115 %)	99	%
2-FLUOROPHENOL	(25 - 121 %)	89	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	92	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA4-B

Date Sampled : 10/29/96

Order #: 107898

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/29/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	5.19	UG/G	10/31/96	1.0
BARIUM	2.00	43.1	UG/G	10/31/96	1.0
CADMIUM	0.500	0.583 U	UG/G	10/31/96	1.0
CHROMIUM	1.00	14.2	UG/G	10/31/96	1.0
LEAD	5.00	27.4	UG/G	10/31/96	1.0
MERCURY	0.150	0.175 U	UG/G	11/15/96	1.0
SELENIUM	0.500	2.79	UG/G	10/31/96	1.0
SILVER	1.00	1.17 U	UG/G	10/31/96	1.0
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	33.0	38.5 U	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	85.8	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA4-B

Date Sampled : 10/29/96      Order #: 107898      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	7.2	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	87	%
TOLUENE-D8	(81 - 117 %)	101	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	102	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA4-B

Date Sampled : 10/29/96      Order #: 107898      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHTHALATE	330	380 U	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	670	780 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3-DICHLOROBENZENE	330	380 U	UG/KG
1, 2-DICHLOROBENZENE	330	380 U	UG/KG
1, 4-DICHLOROBENZENE	330	380 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4-DICHLOROPHENOL	670	780 U	UG/KG
DIETHYLPHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4-DIMETHYLPHENOL	670	780 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	380 U	UG/KG
2, 6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	380 U	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	330	380 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	670	780 U	UG/KG
	1300	1500 U	UG/KG



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA4-B

Date Sampled : 10/29/96      Order #: 107898      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	780 U	UG/KG
2-METHYLPHENOL	670	780 U	UG/KG
4-METHYLPHENOL	670	780 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	330	380 U	UG/KG
3-NITROANILINE	330	380 U	UG/KG
4-NITROANILINE	330	380 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	670	780 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	670	780 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBNZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	780 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	780 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
TERPHENYL-d14	(18 - 137 %)	90	%
NITROBENZENE-d5	(23 - 120 %)	66	%
PHENOL-d6	(24 - 113 %)	75	%
2-FLUOROBIPHENYL	(30 - 115 %)	91	%
2-FLUOROPHENOL	(25 - 121 %)	79	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	88	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA5-2

Date Sampled : 10/28/96

Order #: 107901

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/29/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	1.17 U	UG/G	11/13/96	1.0
BARIUM	2.00	10.2	UG/G	11/13/96	1.0
CADMIUM	0.500	0.584 U	UG/G	11/13/96	1.0
CHROMIUM	1.00	4.30	UG/G	11/13/96	1.0
LEAD	5.00	5.84 U	UG/G	11/13/96	1.0
MERCURY	0.150	0.175 U	UG/G	11/15/96	1.0
SELENIUM	0.500	0.584 U	UG/G	11/13/96	1.0
SILVER	1.00	1.17 U	UG/G	11/13/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	85.6	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA5-2

Date Sampled : 10/28/96      Order #: 107901      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/06/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	25	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	93	%
TOLUENE-D8	(81 - 117 %)	97	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	94	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA5-2

Date Sampled : 10/28/96      Order #: 107901      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	390 U	UG/KG
ACENAPHTHYLENE	330	390 U	UG/KG
ANTHRACENE	330	390 U	UG/KG
BENZO (A) ANTHRACENE	330	390 U	UG/KG
BENZO (A) PYRENE	330	390 U	UG/KG
BENZO (B) FLUORANTHENE	330	390 U	UG/KG
BENZO (G, H, I) PERYLENE	330	390 U	UG/KG
BENZO (K) FLUORANTHENE	330	390 U	UG/KG
BENZYL ALCOHOL	330	390 U	UG/KG
BUTYL BENZYL PHTHALATE	330	390 U	UG/KG
DI-N-BUTYLPHTHALATE	330	390 U	UG/KG
CARBAZOLE	330	390 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	390 U	UG/KG
4-CHLOROANILINE	330	390 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	390 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	390 U	UG/KG
2-CHLORONAPHTHALENE	330	390 U	UG/KG
2-CHLOROPHENOL	670	780 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	390 U	UG/KG
CHRYSENE	330	390 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	390 U	UG/KG
DIBENZOFURAN	330	390 U	UG/KG
1, 3-DICHLOROBENZENE	330	390 U	UG/KG
1, 2-DICHLOROBENZENE	330	390 U	UG/KG
1, 4-DICHLOROBENZENE	330	390 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	390 U	UG/KG
2, 4-DICHLOROPHENOL	670	780 U	UG/KG
DIETHYLPHTHALATE	330	390 U	UG/KG
DIMETHYL PHTHALATE	330	390 U	UG/KG
2, 4-DIMETHYLPHENOL	670	780 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	390 U	UG/KG
2, 6-DINITROTOLUENE	330	390 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	390 U	UG/KG
FLUORANTHENE	330	390 U	UG/KG
FLUORENE	330	390 U	UG/KG
HEXACHLOROBENZENE	330	390 U	UG/KG
HEXACHLOROBUTADIENE	330	390 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	390 U	UG/KG
HEXACHLOROETHANE	330	390 U	UG/KG
ISOPHORONE	330	390 U	UG/KG
2-METHYLNAPHTHALENE	670	780 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA5-2

Date Sampled : 10/28/96      Order #: 107901      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 85.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	780 U	UG/KG
2-METHYLPHENOL	670	780 U	UG/KG
4-METHYLPHENOL	670	780 U	UG/KG
NAPHTHALENE	330	390 U	UG/KG
2-NITROANILINE	330	390 U	UG/KG
3-NITROANILINE	330	390 U	UG/KG
4-NITROANILINE	330	390 U	UG/KG
NITROBENZENE	330	390 U	UG/KG
2-NITROPHENOL	670	780 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	390 U	UG/KG
N-NITROSODIPHENYLAMINE	330	390 U	UG/KG
DI-N-OCTYL PHTHALATE	330	390 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	390 U	UG/KG
PHENOL	670	780 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	390 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	390 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	390 U	UG/KG
PYRENE	330	390 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	390 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	780 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	780 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	93	%
NITROBENZENE-d5	(23 - 120 %)	65	%
PHENOL-d6	(24 - 113 %)	79	%
2-FLUOROBIPHENYL	(30 - 115 %)	85	%
2-FLUOROPHENOL	(25 - 121 %)	85	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	95	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA6A-2

Date Sampled : 10/29/96

Order #: 107902

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/30/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	33.0	38.5 U	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	85.8	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6A-2

Date Sampled : 10/29/96      Order #: 107902      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/07/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	97	%
TOLUENE-D8	(81 - 117 %)	100	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	107	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6A-2

Date Sampled : 10/29/96      Order #: 107902      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHTHALATE	330	380 U	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	670	780 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3-DICHLOROBENZENE	330	380 U	UG/KG
1, 2-DICHLOROBENZENE	330	380 U	UG/KG
1, 4-DICHLOROBENZENE	330	380 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4-DICHLOROPHENOL	670	780 U	UG/KG
DIETHYLPHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4-DIMETHYLPHENOL	670	780 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	380 U	UG/KG
2, 6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	380 U	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	670	780 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6A-2

Date Sampled : 10/29/96      Order #: 107902      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 85.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	780 U	UG/KG
2-METHYLPHENOL	670	780 U	UG/KG
4-METHYLPHENOL	670	780 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	330	380 U	UG/KG
3-NITROANILINE	330	380 U	UG/KG
4-NITROANILINE	330	380 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	670	780 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	670	780 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	780 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	780 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	91	%
NITROBENZENE-d5	(23 - 120 %)	60	%
PHENOL-d6	(24 - 113 %)	72	%
2-FLUOROBIPHENYL	(30 - 115 %)	79	%
2-FLUOROPHENOL	(25 - 121 %)	79	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	91	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA6B-2

Date Sampled : 10/29/96

Order #: 107903

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/30/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	3780	UG/G	11/13/96	4.0
PERCENT SOLIDS	1.0	84.7	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6B-2

Date Sampled : 10/29/96      Order #: 107903      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 5.0			Dry Weight
ACETONE	20	120 U	UG/KG
BENZENE	5.0	30 U	UG/KG
BROMODICHLOROMETHANE	5.0	30 U	UG/KG
BROMOFORM	5.0	30 U	UG/KG
BROMOMETHANE	5.0	30 U	UG/KG
2-BUTANONE (MEK)	10	59 U	UG/KG
CARBON DISULFIDE	10	59 U	UG/KG
CARBON TETRACHLORIDE	5.0	30 U	UG/KG
CHLOROBENZENE	5.0	30 U	UG/KG
CHLOROETHANE	5.0	30 U	UG/KG
CHLOROFORM	5.0	30 U	UG/KG
CHLOROMETHANE	5.0	30 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	30 U	UG/KG
1,1-DICHLOROETHANE	5.0	30 U	UG/KG
1,2-DICHLOROETHANE	5.0	30 U	UG/KG
1,1-DICHLOROETHENE	5.0	30 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	30 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	30 U	UG/KG
1,2-DICHLOROPROPANE	5.0	30 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	30 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	30 U	UG/KG
ETHYLBENZENE	5.0	30 U	UG/KG
2-HEXANONE	10	59 U	UG/KG
METHYLENE CHLORIDE	5.0	30 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	59 U	UG/KG
STYRENE	5.0	30 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	30 U	UG/KG
TETRACHLOROETHENE	5.0	30 U	UG/KG
TOLUENE	5.0	30 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	30 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	30 U	UG/KG
TRICHLOROETHENE	5.0	30 U	UG/KG
VINYL CHLORIDE	5.0	30 U	UG/KG
O-XYLENE	5.0	30 U	UG/KG
M+P-XYLENE	5.0	30 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	104	%
TOLUENE-D8	(81 - 117 %)	106	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	107	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6B-2

Date Sampled : 10/29/96      Order #: 107903      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	390 U	UG/KG
ACENAPHTHYLENE	330	390 U	UG/KG
ANTHRACENE	330	390 U	UG/KG
BENZO (A) ANTHRACENE	330	390 U	UG/KG
BENZO (A) PYRENE	330	390 U	UG/KG
BENZO (B) FLUORANTHENE	330	390 U	UG/KG
BENZO (G, H, I) PERYLENE	330	390 U	UG/KG
BENZO (K) FLUORANTHENE	330	390 U	UG/KG
BENZYL ALCOHOL	330	390 U	UG/KG
BUTYL BENZYL PHTHALATE	330	390 U	UG/KG
DI-N-BUTYLPHthalate	330	390 U	UG/KG
CARBAZOLE	330	390 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	390 U	UG/KG
4-CHLOROANILINE	330	390 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	390 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	390 U	UG/KG
2-CHLORONAPHTHALENE	330	390 U	UG/KG
2-CHLOROPHENOL	670	790 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	390 U	UG/KG
CHRYSENE	330	390 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	390 U	UG/KG
DIBENZOFURAN	330	390 U	UG/KG
1, 3-DICHLOROBENZENE	330	390 U	UG/KG
1, 2-DICHLOROBENZENE	330	390 U	UG/KG
1, 4-DICHLOROBENZENE	330	390 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	390 U	UG/KG
2, 4-DICHLOROPHENOL	670	790 U	UG/KG
DIETHYLPHthalate	330	390 U	UG/KG
DIMETHYL PHTHALATE	330	390 U	UG/KG
2, 4-DIMETHYLPHENOL	670	790 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	390 U	UG/KG
2, 6-DINITROTOLUENE	330	390 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	390 U	UG/KG
FLUORANTHENE	330	390 U	UG/KG
FLUORENE	330	390 U	UG/KG
HEXACHLOROBENZENE	330	390 U	UG/KG
HEXACHLOROBUTADIENE	330	390 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	390 U	UG/KG
HEXACHLOROETHANE	330	390 U	UG/KG
ISOPHORONE	330	390 U	UG/KG
2-METHYLNAPHTHALENE	670	790 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA6B-2

Date Sampled : 10/29/96      Order #: 107903      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	790 U	UG/KG
2-METHYLPHENOL	670	790 U	UG/KG
4-METHYLPHENOL	670	790 U	UG/KG
NAPHTHALENE	330	390 U	UG/KG
2-NITROANILINE	330	390 U	UG/KG
3-NITROANILINE	330	390 U	UG/KG
4-NITROANILINE	330	390 U	UG/KG
NITROBENZENE	330	390 U	UG/KG
2-NITROPHENOL	670	790 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	390 U	UG/KG
N-NITROSODIPHENYLAMINE	330	390 U	UG/KG
DI-N-OCTYL PHTHALATE	330	390 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	390 U	UG/KG
PHENOL	670	790 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	390 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	390 U	UG/KG
N-NITroso-DI-N-PROPYLAMINE	330	390 U	UG/KG
PYRENE	330	390 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	390 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	790 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	790 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	84	%
NITROBENZENE-d5	(23 - 120 %)	76	%
PHENOL-d6	(24 - 113 %)	73	%
2-FLUOROBIPHENYL	(30 - 115 %)	127 *	%
2-FLUOROPHENOL	(25 - 121 %)	79	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	109	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-1

Date Sampled : 10/29/96

Order #: 107904

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	3.64	UG/G	11/13/96	1.0
BARIUM	2.00	46.3	UG/G	11/13/96	1.0
CADMIUM	0.500	1.87	UG/G	11/13/96	1.0
CHROMIUM	1.00	13.0	UG/G	11/13/96	1.0
LEAD	5.00	81.0	UG/G	11/13/96	1.0
MERCURY	0.150	0.166 U	UG/G	11/15/96	1.0
SELENIUM	0.500	2.11	UG/G	11/13/96	1.0
SILVER	1.00	2.26	UG/G	11/13/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	90.3	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-1

Date Sampled : 10/29/96      Order #: 107904      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 90.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	22 U	UG/KG
BENZENE	5.0	5.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.5 U	UG/KG
BROMOFORM	5.0	5.5 U	UG/KG
BROMOMETHANE	5.0	5.5 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.5 U	UG/KG
CHLOROBENZENE	5.0	5.5 U	UG/KG
CHLOROETHANE	5.0	5.5 U	UG/KG
CHLOROFORM	5.0	5.5 U	UG/KG
CHLOROMETHANE	5.0	5.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
ETHYLBENZENE	5.0	5.5 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	9.0	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.5 U	UG/KG
TETRACHLOROETHENE	5.0	5.5 U	UG/KG
TOLUENE	5.0	5.5 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.5 U	UG/KG
TRICHLOROETHENE	5.0	5.5 U	UG/KG
VINYL CHLORIDE	5.0	5.5 U	UG/KG
O-XYLENE	5.0	5.5 U	UG/KG
M+P-XYLENE	5.0	5.5 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	90	%
TOLUENE-D8	(81 - 117 %)	98	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	103	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA7A-1

Date Sampled : 10/29/96      Order #: 107904      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 90.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	370 U	UG/KG
ACENAPHTHYLENE	330	370 U	UG/KG
ANTHRACENE	330	370 U	UG/KG
BENZO (A) ANTHRACENE	330	370 U	UG/KG
BENZO (A) PYRENE	330	370 U	UG/KG
BENZO (B) FLUORANTHENE	330	370 U	UG/KG
BENZO (G, H, I) PERYLENE	330	370 U	UG/KG
BENZO (K) FLUORANTHENE	330	370 U	UG/KG
BENZYL ALCOHOL	330	370 U	UG/KG
BUTYL BENZYL PHTHALATE	330	370 U	UG/KG
DI-N-BUTYLPHTHALATE	330	370 U	UG/KG
CARBAZOLE	330	370 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	370 U	UG/KG
4-CHLOROANILINE	330	370 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	370 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	370 U	UG/KG
2-CHLORONAPHTHALENE	330	370 U	UG/KG
2-CHLOROPHENOL	670	740 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	370 U	UG/KG
CHRYSENE	330	370 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	370 U	UG/KG
DIBENZOFURAN	330	370 U	UG/KG
1, 3-DICHLOROBENZENE	330	370 U	UG/KG
1, 2-DICHLOROBENZENE	330	370 U	UG/KG
1, 4-DICHLOROBENZENE	330	370 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	370 U	UG/KG
2, 4-DICHLOROPHENOL	670	740 U	UG/KG
DIETHYLPHTHALATE	330	370 U	UG/KG
DIMETHYL PHTHALATE	330	370 U	UG/KG
2, 4-DIMETHYLPHENOL	670	740 U	UG/KG
2, 4-DINITROPHENOL	1300	1400 U	UG/KG
2, 4-DINITROTOLUENE	330	370 U	UG/KG
2, 6-DINITROTOLUENE	330	370 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	750	UG/KG
FLUORANTHENE	330	370 U	UG/KG
FLUORENE	330	370 U	UG/KG
HEXACHLOROBENZENE	330	370 U	UG/KG
HEXACHLOROBUTADIENE	330	370 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	370 U	UG/KG
HEXACHLOROETHANE	330	370 U	UG/KG
ISOPHORONE	330	370 U	UG/KG
2-METHYLNAPHTHALENE	670	740 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG



CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA7A-1Date Sampled : 10/29/96 Order #: 107904 Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96 Submission #: 9610000162 Percent Solid: 90.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	740 U	UG/KG
2-METHYLPHENOL	670	740 U	UG/KG
4-METHYLPHENOL	670	740 U	UG/KG
NAPHTHALENE	330	370 U	UG/KG
2-NITROANILINE	330	370 U	UG/KG
3-NITROANILINE	330	370 U	UG/KG
4-NITROANILINE	330	370 U	UG/KG
NITROBENZENE	330	370 U	UG/KG
2-NITROPHENOL	670	740 U	UG/KG
4-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	370 U	UG/KG
N-NITROSODIPHENYLAMINE	330	370 U	UG/KG
DI-N-OCTYL PHTHALATE	330	370 U	UG/KG
PENTACHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	370 U	UG/KG
PHENOL	670	740 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	370 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	370 U	UG/KG
N-NITroso-DI-N-PROPYLAMINE	330	370 U	UG/KG
PYRENE	330	370 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	370 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	740 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	740 U	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
TERPHENYL-d14	(18 - 137 %)	126	%
NITROBENZENE-d5	(23 - 120 %)	117	%
PHENOL-d6	(24 - 113 %)	101	%
2-FLUOROBIPHENYL	(30 - 115 %)	106	%
2-FLUOROPHENOL	(25 - 121 %)	112	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	117	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7B-2

Date Sampled : 10/30/96

Order #: 107905

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	209	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	83.2	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7B-2

Date Sampled : 10/30/96      Order #: 107905      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 83.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	24 U	UG/KG
BENZENE	5.0	6.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.0 U	UG/KG
BROMOFORM	5.0	6.0 U	UG/KG
BROMOMETHANE	5.0	6.0 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.0 U	UG/KG
CHLOROBENZENE	5.0	6.0 U	UG/KG
CHLOROETHANE	5.0	6.0 U	UG/KG
CHLOROFORM	5.0	6.0 U	UG/KG
CHLOROMETHANE	5.0	6.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.0 U	UG/KG
ETHYLBENZENE	5.0	6.0 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	6.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	6.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.0 U	UG/KG
TETRACHLOROETHENE	5.0	6.0 U	UG/KG
TOLUENE	5.0	6.0 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	6.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.0 U	UG/KG
TRICHLOROETHENE	5.0	6.0 U	UG/KG
VINYL CHLORIDE	5.0	6.0 U	UG/KG
O-XYLENE	5.0	6.0 U	UG/KG
M+P-XYLENE	5.0	6.0 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(74 - 121 %)	86	%
TOLUENE-D8	(81 - 117 %)	105	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	118	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7B-2

Date Sampled : 10/30/96      Order #: 107905      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 83.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	400 U	UG/KG
ACENAPHTHYLENE	330	400 U	UG/KG
ANTHRACENE	330	400 U	UG/KG
BENZO(A) ANTHRACENE	330	400 U	UG/KG
BENZO(A) PYRENE	330	400 U	UG/KG
BENZO(B) FLUORANTHENE	330	400 U	UG/KG
BENZO(G, H, I) PERYLENE	330	400 U	UG/KG
BENZO(K) FLUORANTHENE	330	400 U	UG/KG
BENZYL ALCOHOL	330	400 U	UG/KG
BUTYL BENZYL PHTHALATE	330	400 U	UG/KG
DI-N-BUTYLPHTHALATE	330	400 U	UG/KG
CARBAZOLE	330	400 U	UG/KG
INDENO(1, 2, 3-CD) PYRENE	330	400 U	UG/KG
4-CHLOROANILINE	330	400 U	UG/KG
BIS(-2-CHLOROETHOXY) METHANE	330	400 U	UG/KG
BIS(2-CHLOROETHYL) ETHER	330	400 U	UG/KG
2-CHLORONAPHTHALENE	330	400 U	UG/KG
2-CHLOROPHENOL	670	810 U	UG/KG
2, 2'-OXYBIS(1-CHLOROPROPANE)	330	400 U	UG/KG
CHRYSENE	330	400 U	UG/KG
DIBENZO(A, H) ANTHRACENE	330	400 U	UG/KG
DIBENZOFURAN	330	400 U	UG/KG
1, 3-DICHLOROBENZENE	330	400 U	UG/KG
1, 2-DICHLOROBENZENE	330	400 U	UG/KG
1, 4-DICHLOROBENZENE	330	400 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	400 U	UG/KG
2, 4-DICHLOROPHENOL	670	810 U	UG/KG
DIETHYLPHTHALATE	330	400 U	UG/KG
DIMETHYL PHTHALATE	330	400 U	UG/KG
2, 4-DIMETHYLPHENOL	670	810 U	UG/KG
2, 4-DINITROPHENOL	1300	1600 U	UG/KG
2, 4-DINITROTOLUENE	330	400 U	UG/KG
2, 6-DINITROTOLUENE	330	400 U	UG/KG
BIS(2-ETHYLHEXYL) PHTHALATE	330	400 U	UG/KG
FLUORANTHENE	330	400 U	UG/KG
FLUORENE	330	400 U	UG/KG
HEXACHLOROBENZENE	330	400 U	UG/KG
HEXACHLOROBUTADIENE	330	400 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	400 U	UG/KG
HEXACHLOROETHANE	330	400 U	UG/KG
ISOPHORONE	330	400 U	UG/KG
2-METHYLNAPHTHALENE	670	810 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1600 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA7B-2

Date Sampled : 10/30/96      Order #: 107905      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 83.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	810 U	UG/KG
2-METHYLPHENOL	670	810 U	UG/KG
4-METHYLPHENOL	670	810 U	UG/KG
NAPHTHALENE	330	400 U	UG/KG
2-NITROANILINE	330	400 U	UG/KG
3-NITROANILINE	330	400 U	UG/KG
4-NITROANILINE	330	400 U	UG/KG
NITROBENZENE	330	400 U	UG/KG
2-NITROPHENOL	670	810 U	UG/KG
4-NITROPHENOL	1300	1600 U	UG/KG
N-NITROSODIMETHYLAMINE	330	400 U	UG/KG
N-NITROSODIPHENYLAMINE	330	400 U	UG/KG
DI-N-OCTYL PHTHALATE	330	400 U	UG/KG
PENTACHLOROPHENOL	1300	1600 U	UG/KG
PHENANTHRENE	330	400 U	UG/KG
PHENOL	670	810 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	400 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	400 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	400 U	UG/KG
PYRENE	330	400 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	400 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	810 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	810 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	90	%
NITROBENZENE-d5	(23 - 120 %)	69	%
PHENOL-d6	(24 - 113 %)	81	%
2-FLUOROBIPHENYL	(30 - 115 %)	91	%
2-FLUOROPHENOL	(25 - 121 %)	87	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	98	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MAB-A

Date Sampled : 10/29/96

Order #: 107906

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/30/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	1.28	UG/G	11/05/96	1.0
BARIUM	2.00	11.3	UG/G	11/05/96	1.0
CADMIUM	0.500	0.595 U	UG/G	11/05/96	1.0
CHROMIUM	1.00	4.68	UG/G	11/05/96	1.0
LEAD	5.00	5.95 U	UG/G	11/05/96	1.0
MERCURY	0.150	0.178 U	UG/G	11/15/96	1.0
SELENIUM	0.500	0.686	UG/G	11/05/96	1.0
SILVER	1.00	1.19 U	UG/G	11/05/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	84.1	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
**Reported: 11/19/96**

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL**  
**Client Sample ID : MA8-A**

**Date Sampled : 10/29/96      Order #: 107906      Sample Matrix: SOIL/SEDIMENT**  
**Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.1**

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	24 U	UG/KG
BENZENE	5.0	5.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.9 U	UG/KG
BROMOFORM	5.0	5.9 U	UG/KG
BROMOMETHANE	5.0	5.9 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.9 U	UG/KG
CHLOROBENZENE	5.0	5.9 U	UG/KG
CHLOROETHANE	5.0	5.9 U	UG/KG
CHLOROFORM	5.0	5.9 U	UG/KG
CHLOROMETHANE	5.0	5.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
ETHYLBENZENE	5.0	5.9 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.9 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.9 U	UG/KG
TETRACHLOROETHENE	5.0	5.9 U	UG/KG
TOLUENE	5.0	5.9 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.9 U	UG/KG
TRICHLOROETHENE	5.0	5.9 U	UG/KG
VINYL CHLORIDE	5.0	5.9 U	UG/KG
O-XYLENE	5.0	5.9 U	UG/KG
M+P-XYLENE	5.0	5.9 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(74 - 121 %)	103	%
TOLUENE-D8	(81 - 117 %)	109	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	102	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA8-A

Date Sampled : 10/29/96      Order #: 107906      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	390 U	UG/KG
ACENAPHTHYLENE	330	390 U	UG/KG
ANTHRACENE	330	390 U	UG/KG
BENZO (A) ANTHRACENE	330	390 U	UG/KG
BENZO (A) PYRENE	330	390 U	UG/KG
BENZO (B) FLUORANTHENE	330	390 U	UG/KG
BENZO (G, H, I) PERYLENE	330	390 U	UG/KG
BENZO (K) FLUORANTHENE	330	390 U	UG/KG
BENZYL ALCOHOL	330	390 U	UG/KG
BUTYL BENZYL PHTHALATE	330	390 U	UG/KG
DI-N-BUTYLPHTHALATE	330	390 U	UG/KG
CARBAZOLE	330	390 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	390 U	UG/KG
4-CHLOROANILINE	330	390 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	390 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	390 U	UG/KG
2-CHLORONAPHTHALENE	330	390 U	UG/KG
2-CHLOROPHENOL	670	800 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	390 U	UG/KG
CHRYSENE	330	390 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	390 U	UG/KG
DIBENZOFURAN	330	390 U	UG/KG
1, 3-DICHLOROBENZENE	330	390 U	UG/KG
1, 2-DICHLOROBENZENE	330	390 U	UG/KG
1, 4-DICHLOROBENZENE	330	390 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	390 U	UG/KG
2, 4-DICHLOROPHENOL	670	800 U	UG/KG
DIETHYLPHTHALATE	330	390 U	UG/KG
DIMETHYL PHTHALATE	330	390 U	UG/KG
2, 4-DIMETHYLPHENOL	670	800 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	390 U	UG/KG
2, 6-DINITROTOLUENE	330	390 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	390 U	UG/KG
FLUORANTHENE	330	390 U	UG/KG
FLUORENE	330	390 U	UG/KG
HEXACHLOROBENZENE	330	390 U	UG/KG
HEXACHLOROBUTADIENE	330	390 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	390 U	UG/KG
HEXACHLOROETHANE	330	390 U	UG/KG
ISOPHORONE	330	390 U	UG/KG
2-METHYLNAPHTHALENE	670	800 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA8-A

Date Sampled : 10/29/96      Order #: 107906      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 84.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	800 U	UG/KG
2-METHYLPHENOL	670	800 U	UG/KG
4-METHYLPHENOL	670	800 U	UG/KG
NAPHTHALENE	330	390 U	UG/KG
2-NITROANILINE	330	390 U	UG/KG
3-NITROANILINE	330	390 U	UG/KG
4-NITROANILINE	330	390 U	UG/KG
NITROBENZENE	330	390 U	UG/KG
2-NITROPHENOL	670	800 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	390 U	UG/KG
N-NITROSODIPHENYLAMINE	330	390 U	UG/KG
DI-N-OCTYL PHTHALATE	330	390 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	390 U	UG/KG
PHENOL	670	800 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	390 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	390 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	390 U	UG/KG
PYRENE	330	390 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	390 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	800 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	800 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	91	%
NITROBENZENE-d5	(23 - 120 %)	49	%
PHENOL-d6	(24 - 113 %)	58	%
2-FLUOROBIPHENYL	(30 - 115 %)	71	%
2-FLUOROPHENOL	(25 - 121 %)	60	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	100	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA8-B

Date Sampled : 10/29/96

Order #: 107907

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/30/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	2.78	UG/G	11/05/96	1.0
BARIUM	2.00	27.9	UG/G	11/05/96	1.0
CADMIUM	0.500	0.573 U	UG/G	11/05/96	1.0
CHROMIUM	1.00	9.47	UG/G	11/05/96	1.0
LEAD	5.00	9.27	UG/G	11/05/96	1.0
MERCURY	0.150	0.172 U	UG/G	11/15/96	1.0
SELENIUM	0.500	2.33	UG/G	11/05/96	1.0
SILVER	1.00	1.15 U	UG/G	11/05/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	87.3	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA8-B

Date Sampled : 10/29/96      Order #: 107907      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 87.3

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.7 U	UG/KG
BROMOFORM	5.0	5.7 U	UG/KG
BROMOMETHANE	5.0	5.7 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.7 U	UG/KG
CHLOROBENZENE	5.0	5.7 U	UG/KG
CHLOROETHANE	5.0	5.7 U	UG/KG
CHLOROFORM	5.0	5.7 U	UG/KG
CHLOROMETHANE	5.0	5.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
ETHYLBENZENE	5.0	5.7 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.7 U	UG/KG
TETRACHLOROETHENE	5.0	5.7 U	UG/KG
TOLUENE	5.0	5.7 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.7 U	UG/KG
TRICHLOROETHENE	5.0	5.7 U	UG/KG
VINYL CHLORIDE	5.0	5.7 U	UG/KG
O-XYLENE	5.0	5.7 U	UG/KG
M+P-XYLENE	5.0	5.7 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	109	%
TOLUENE-D8	(81 - 117 %)	104	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	105	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA8-B

Date Sampled : 10/29/96      Order #: 107907      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 87.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHthalate	330	380 U	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	670	770 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3-DICHLOROBENZENE	330	380 U	UG/KG
1, 2-DICHLOROBENZENE	330	380 U	UG/KG
1, 4-DICHLOROBENZENE	330	380 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4-DICHLOROPHENOL	670	770 U	UG/KG
DIETHYLPHthalate	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4-DIMETHYLPHENOL	670	770 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	380 U	UG/KG
2, 6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	600	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	670	770 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA8-B

Date Sampled : 10/29/96      Order #: 107907      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 87.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	770 U	UG/KG
2-METHYLPHENOL	670	770 U	UG/KG
4-METHYLPHENOL	670	770 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	330	380 U	UG/KG
3-NITROANILINE	330	380 U	UG/KG
4-NITROANILINE	330	380 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	670	770 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	670	770 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	770 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	770 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

TERPHENYL-d14	(18 - 137 %)	86	%
NITROBENZENE-d5	(23 - 120 %)	65	%
PHENOL-d6	(24 - 113 %)	74	%
2-FLUOROBIPHENYL	(30 - 115 %)	90	%
2-FLUOROPHENOL	(25 - 121 %)	79	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	90	%

COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA9-1

Date Sampled : 10/30/96

Order #: 107909

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	77.2	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	91.6	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL  
Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA9-2

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Date Sampled : 10/30/96                      Order #: 107910                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96                      Submission #:9610000162

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ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	33.0	77.6	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	80.2	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA10-1

Date Sampled : 10/29/96

Order #: 107911

Sample Matrix: SOIL/SEDIMENT

Date Received: 10/29/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	3.36	UG/G	10/31/96	1.0
BARIUM	2.00	55.0	UG/G	10/31/96	1.0
CADMIUM	0.500	0.595 U	UG/G	10/31/96	1.0
CHROMIUM	1.00	11.2	UG/G	10/31/96	1.0
LEAD	5.00	48.2	UG/G	10/31/96	1.0
MERCURY	0.150	0.178 U	UG/G	11/15/96	1.0
SELENIUM	0.500	1.58	UG/G	10/31/96	1.0
SILVER	1.00	1.19 U	UG/G	10/31/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	84.1	%	11/06/96	1.0



**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS  
METHOD 8260 TCL  
Reported: 11/19/96**

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA10-1

Date Sampled : 10/29/96      Order #: 107911      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 84.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	24 U	UG/KG
BENZENE	5.0	5.9 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.9 U	UG/KG
BROMOFORM	5.0	5.9 U	UG/KG
BROMOMETHANE	5.0	5.9 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.9 U	UG/KG
CHLOROBENZENE	5.0	5.9 U	UG/KG
CHLOROETHANE	5.0	5.9 U	UG/KG
CHLOROFORM	5.0	5.9 U	UG/KG
CHLOROMETHANE	5.0	5.9 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.9 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.9 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.9 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.9 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.9 U	UG/KG
ETHYLBENZENE	5.0	5.9 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.9 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.9 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.9 U	UG/KG
TETRACHLOROETHENE	5.0	5.9 U	UG/KG
TOLUENE	5.0	5.9 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.9 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.9 U	UG/KG
TRICHLOROETHENE	5.0	5.9 U	UG/KG
VINYL CHLORIDE	5.0	5.9 U	UG/KG
O-XYLENE	5.0	5.9 U	UG/KG
M+P-XYLENE	5.0	5.9 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	88	%
TOLUENE-D8	(81 - 117 %)	105	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	109	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270 SEMIVOLATILES  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA10-1

Date Sampled : 10/29/96      Order #: 107911      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 84.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	390 U	UG/KG
ACENAPHTHYLENE	330	390 U	UG/KG
ANTHRACENE	330	390 U	UG/KG
BENZO (A) ANTHRACENE	330	390 U	UG/KG
BENZO (A) PYRENE	330	390 U	UG/KG
BENZO (B) FLUORANTHENE	330	390 U	UG/KG
BENZO (G, H, I) PERYLENE	330	390 U	UG/KG
BENZO (K) FLUORANTHENE	330	390 U	UG/KG
BENZYL ALCOHOL	330	390 U	UG/KG
BUTYL BENZYL PHTHALATE	330	390 U	UG/KG
DI-N-BUTYLPHTHALATE	330	390 U	UG/KG
CARBAZOLE	330	390 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	390 U	UG/KG
4-CHLOROANILINE	330	390 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	390 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	390 U	UG/KG
2-CHLORONAPHTHALENE	330	390 U	UG/KG
2-CHLOROPHENOL	670	800 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	390 U	UG/KG
CHRYSENE	330	390 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	390 U	UG/KG
DIBENZOFURAN	330	390 U	UG/KG
1, 3-DICHLOROBENZENE	330	390 U	UG/KG
1, 2-DICHLOROBENZENE	330	390 U	UG/KG
1, 4-DICHLOROBENZENE	330	390 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	390 U	UG/KG
2, 4-DICHLOROPHENOL	670	800 U	UG/KG
DIETHYLPHTHALATE	330	390 U	UG/KG
DIMETHYL PHTHALATE	330	390 U	UG/KG
2, 4-DIMETHYLPHENOL	670	800 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	390 U	UG/KG
2, 6-DINITROTOLUENE	330	390 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	390 U	UG/KG
FLUORANTHENE	330	390 U	UG/KG
FLUORENE	330	390 U	UG/KG
HEXACHLOROBENZENE	330	390 U	UG/KG
HEXACHLOROBUTADIENE	330	390 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	390 U	UG/KG
HEXACHLOROETHANE	330	390 U	UG/KG
ISOPHORONE	330	390 U	UG/KG
2-METHYLNAPHTHALENE	330	390 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	670	800 U	UG/KG
	1300	1500 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA10-1

Date Sampled : 10/29/96      Order #: 107911      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/29/96      Submission #: 9610000162      Percent Solid: 84.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	800 U	UG/KG
2-METHYLPHENOL	670	800 U	UG/KG
4-METHYLPHENOL	670	800 U	UG/KG
NAPHTHALENE	330	390 U	UG/KG
2-NITROANILINE	330	390 U	UG/KG
3-NITROANILINE	330	390 U	UG/KG
4-NITROANILINE	330	390 U	UG/KG
NITROBENZENE	330	390 U	UG/KG
2-NITROPHENOL	670	800 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	390 U	UG/KG
N-NITROSODIPHENYLAMINE	330	390 U	UG/KG
DI-N-OCTYL PHTHALATE	330	390 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	390 U	UG/KG
PHENOL	670	800 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	390 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	390 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	390 U	UG/KG
PYRENE	330	390 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	390 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	800 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	800 U	UG/KG

## SURROGATE RECOVERIES

## QC LIMITS

TERPHENYL-d14	(18 - 137 %)	86	%
NITROBENZENE-d5	(23 - 120 %)	47	%
PHENOL-d6	(24 - 113 %)	59	%
2-FLUOROBIPHENYL	(30 - 115 %)	73	%
2-FLUOROPHENOL	(25 - 121 %)	61	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	92	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA14-2

Date Sampled : 10/29/96

Order #: 107913

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	1.78	UG/G	11/13/96	1.0
BARIUM	2.00	37.1	UG/G	11/13/96	1.0
CADMIUM	0.500	0.557 U	UG/G	11/13/96	1.0
CHROMIUM	1.00	8.19	UG/G	11/13/96	1.0
LEAD	5.00	11.3	UG/G	11/13/96	1.0
MERCURY	0.150	0.167 U	UG/G	11/15/96	1.0
SELENIUM	0.500	1.81	UG/G	11/13/96	1.0
SILVER	1.00	1.11 U	UG/G	11/13/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	89.8	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA-15-A2

Date Sampled : 10/31/96      Order #: 107914      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 92.2

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/11/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	22 U	UG/KG
BENZENE	5.0	5.4 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.4 U	UG/KG
BROMOFORM	5.0	5.4 U	UG/KG
BROMOMETHANE	5.0	5.4 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.4 U	UG/KG
CHLOROBENZENE	5.0	5.4 U	UG/KG
CHLOROETHANE	5.0	5.4 U	UG/KG
CHLOROFORM	5.0	5.4 U	UG/KG
CHLOROMETHANE	5.0	5.4 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.4 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.4 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.4 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.4 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.4 U	UG/KG
ETHYLBENZENE	5.0	5.4 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.4 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.4 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.4 U	UG/KG
TETRACHLOROETHENE	5.0	5.4 U	UG/KG
TOLUENE	5.0	5.4 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.4 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.4 U	UG/KG
TRICHLOROETHENE	5.0	5.4 U	UG/KG
VINYL CHLORIDE	5.0	5.4 U	UG/KG
O-XYLENE	5.0	5.4 U	UG/KG
M+P-XYLENE	5.0	5.4 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	85	%
TOLUENE-D8	(81 - 117 %)	107	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	102	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA-15-A2Date Sampled : 10/31/96 Order #: 107914 Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96 Submission #: 9610000162 Percent Solid: 92.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	360 U	UG/KG
ACENAPHTHYLENE	330	360 U	UG/KG
ANTHRACENE	330	360 U	UG/KG
BENZO (A) ANTHRACENE	330	360 U	UG/KG
BENZO (A) PYRENE	330	360 U	UG/KG
BENZO (B) FLUORANTHENE	330	360 U	UG/KG
BENZO (G, H, I) PERYLENE	330	360 U	UG/KG
BENZO (K) FLUORANTHENE	330	360 U	UG/KG
BENZYL ALCOHOL	330	360 U	UG/KG
BUTYL BENZYL PHTHALATE	330	360 U	UG/KG
DI-N-BUTYLPHTHALATE	330	360 U	UG/KG
CARBAZOLE	330	360 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	360 U	UG/KG
4-CHLOROANILINE	330	360 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	360 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	360 U	UG/KG
2-CHLORONAPHTHALENE	330	360 U	UG/KG
2-CHLOROPHENOL	670	730 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	360 U	UG/KG
CHRYSENE	330	360 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	360 U	UG/KG
DIBENZOFURAN	330	360 U	UG/KG
1, 3-DICHLOROBENZENE	330	360 U	UG/KG
1, 2-DICHLOROBENZENE	330	360 U	UG/KG
1, 4-DICHLOROBENZENE	330	360 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	360 U	UG/KG
2, 4-DICHLOROPHENOL	670	730 U	UG/KG
DIETHYLPHTHALATE	330	360 U	UG/KG
DIMETHYL PHTHALATE	330	360 U	UG/KG
2, 4-DIMETHYLPHENOL	670	730 U	UG/KG
2, 4-DINITROPHENOL	1300	1400 U	UG/KG
2, 4-DINITROTOLUENE	330	360 U	UG/KG
2, 6-DINITROTOLUENE	330	360 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	360 U	UG/KG
FLUORANTHENE	330	360 U	UG/KG
FLUORENE	330	360 U	UG/KG
HEXACHLOROBENZENE	330	360 U	UG/KG
HEXACHLOROBUTADIENE	330	360 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	360 U	UG/KG
HEXACHLOROETHANE	330	360 U	UG/KG
ISOPHORONE	330	360 U	UG/KG
2-METHYLNAPHTHALENE	670	730 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA-15-A2**

**Date Sampled : 10/31/96      Order #: 107914      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 92.2**

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	730 U	UG/KG
2-METHYLPHENOL	670	730 U	UG/KG
4-METHYLPHENOL	670	730 U	UG/KG
NAPHTHALENE	330	360 U	UG/KG
2-NITROANILINE	330	360 U	UG/KG
3-NITROANILINE	330	360 U	UG/KG
4-NITROANILINE	330	360 U	UG/KG
NITROBENZENE	330	360 U	UG/KG
2-NITROPHENOL	670	730 U	UG/KG
4-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	360 U	UG/KG
N-NITROSODIPHENYLAMINE	330	360 U	UG/KG
DI-N-OCTYL PHTHALATE	330	360 U	UG/KG
PENTACHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	360 U	UG/KG
PHENOL	670	730 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	360 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	360 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	360 U	UG/KG
PYRENE	330	360 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	360 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	730 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	730 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

TERPHENYL-d14	(18 - 137 %)	83	%
NITROBENZENE-d5	(23 - 120 %)	54	%
PHENOL-d6	(24 - 113 %)	64	%
2-FLUOROBIPHENYL	(30 - 115 %)	74	%
2-FLUOROPHENOL	(25 - 121 %)	70	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	76	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-15-B2

Date Sampled : 10/31/96      Order #: 107915      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 91.1

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	22 U	UG/KG
BENZENE	5.0	5.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.5 U	UG/KG
BROMOFORM	5.0	5.5 U	UG/KG
BROMOMETHANE	5.0	5.5 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.5 U	UG/KG
CHLOROBENZENE	5.0	5.5 U	UG/KG
CHLOROETHANE	5.0	5.5 U	UG/KG
CHLOROFORM	5.0	5.5 U	UG/KG
CHLOROMETHANE	5.0	5.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
ETHYLBENZENE	5.0	5.5 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.5 U	UG/KG
TETRACHLOROETHENE	5.0	5.5 U	UG/KG
TOLUENE	5.0	5.5 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.5 U	UG/KG
TRICHLOROETHENE	5.0	5.5 U	UG/KG
VINYL CHLORIDE	5.0	5.5 U	UG/KG
O-XYLENE	5.0	5.5 U	UG/KG
M+P-XYLENE	5.0	5.5 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	94	%
TOLUENE-D8	(81 - 117 %)	101	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	111	%



CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-15-B2

Date Sampled : 10/31/96      Order #: 107915      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 91.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/09/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	360 U	UG/KG
ACENAPHTHYLENE	330	360 U	UG/KG
ANTHRACENE	330	360 U	UG/KG
BENZO (A) ANTHRACENE	330	360 U	UG/KG
BENZO (A) PYRENE	330	360 U	UG/KG
BENZO (B) FLUORANTHENE	330	360 U	UG/KG
BENZO (G, H, I) PERYLENE	330	360 U	UG/KG
BENZO (K) FLUORANTHENE	330	360 U	UG/KG
BENZYL ALCOHOL	330	360 U	UG/KG
BUTYL BENZYL PHTHALATE	330	360 U	UG/KG
DI-N-BUTYLPHthalate	330	360 U	UG/KG
CARBAZOLE	330	360 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	360 U	UG/KG
4-CHLOROANILINE	330	360 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	360 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	360 U	UG/KG
2-CHLORONAPHTHALENE	330	360 U	UG/KG
2-CHLOROPHENOL	670	740 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	360 U	UG/KG
CHRYSENE	330	360 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	360 U	UG/KG
DIBENZOFURAN	330	360 U	UG/KG
1, 3-DICHLOROBENZENE	330	360 U	UG/KG
1, 2-DICHLOROBENZENE	330	360 U	UG/KG
1, 4-DICHLOROBENZENE	330	360 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	360 U	UG/KG
2, 4-DICHLOROPHENOL	670	740 U	UG/KG
DIETHYLPHthalate	330	360 U	UG/KG
DIMETHYL PHTHALATE	330	360 U	UG/KG
2, 4-DIMETHYLPHENOL	670	740 U	UG/KG
2, 4-DINITROPHENOL	1300	1400 U	UG/KG
2, 4-DINITROTOLUENE	330	360 U	UG/KG
2, 6-DINITROTOLUENE	330	360 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	360 U	UG/KG
FLUORANTHENE	330	360 U	UG/KG
FLUORENE	330	360 U	UG/KG
HEXACHLOROBENZENE	330	360 U	UG/KG
HEXACHLOROBUTADIENE	330	360 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	360 U	UG/KG
HEXACHLOROETHANE	330	360 U	UG/KG
ISOPHORONE	330	360 U	UG/KG
2-METHYLNAPHTHALENE	670	740 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-15-B2

Date Sampled : 10/31/96      Order #: 107915      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 91.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/09/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	740 U	UG/KG
2-METHYLPHENOL	670	740 U	UG/KG
4-METHYLPHENOL	670	740 U	UG/KG
NAPHTHALENE	330	360 U	UG/KG
2-NITROANILINE	330	360 U	UG/KG
3-NITROANILINE	330	360 U	UG/KG
4-NITROANILINE	330	360 U	UG/KG
NITROBENZENE	330	360 U	UG/KG
2-NITROPHENOL	670	740 U	UG/KG
4-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	360 U	UG/KG
N-NITROSODIPHENYLAMINE	330	360 U	UG/KG
DI-N-OCTYL PHTHALATE	330	360 U	UG/KG
PENTACHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	360 U	UG/KG
PHENOL	670	740 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	360 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	360 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	360 U	UG/KG
PYRENE	330	360 U	UG/KG
1,2,4-TRICHLOROENZENE	330	360 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	740 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	740 U	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
TERPHENYL-d14	(18 - 137 %)	88	%
NITROBENZENE-d5	(23 - 120 %)	61	%
PHENOL-d6	(24 - 113 %)	73	%
2-FLUOROBIPHENYL	(30 - 115 %)	83	%
2-FLUOROPHENOL	(25 - 121 %)	80	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	89	%

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
**Reported: 11/19/96**

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL**  
**Client Sample ID : MA16A-2**

**Date Sampled : 10/29/96      Order #: 107916      Sample Matrix: SOIL/SEDIMENT**  
**Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 94.2**

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	21 U	UG/KG
BENZENE	5.0	5.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.3 U	UG/KG
BROMOFORM	5.0	5.3 U	UG/KG
BROMOMETHANE	5.0	5.3 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.3 U	UG/KG
CHLOROBENZENE	5.0	5.3 U	UG/KG
CHLOROETHANE	5.0	5.3 U	UG/KG
CHLOROFORM	5.0	5.3 U	UG/KG
CHLOROMETHANE	5.0	5.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.3 U	UG/KG
ETHYLBENZENE	5.0	5.3 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.3 U	UG/KG
TETRACHLOROETHENE	5.0	5.3 U	UG/KG
TOLUENE	5.0	5.3 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.3 U	UG/KG
TRICHLOROETHENE	5.0	5.3 U	UG/KG
VINYL CHLORIDE	5.0	5.3 U	UG/KG
O-XYLENE	5.0	5.3 U	UG/KG
M+P-XYLENE	5.0	5.3 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(74 - 121 %)	98	%
TOLUENE-D8	(81 - 117 %)	105	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	103	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA16A-2

Date Sampled : 10/29/96      Order #: 107916      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 94.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/09/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	350 U	UG/KG
ACENAPHTHYLENE	330	350 U	UG/KG
ANTHRACENE	330	350 U	UG/KG
BENZO(A) ANTHRACENE	330	350 U	UG/KG
BENZO(A) PYRENE	330	350 U	UG/KG
BENZO(B) FLUORANTHENE	330	350 U	UG/KG
BENZO(G,H,I) PERYLENE	330	350 U	UG/KG
BENZO(K) FLUORANTHENE	330	350 U	UG/KG
BENZYL ALCOHOL	330	350 U	UG/KG
BUTYL BENZYL PHTHALATE	330	350 U	UG/KG
DI-N-BUTYLPHTHALATE	330	350 U	UG/KG
CARBAZOLE	330	350 U	UG/KG
INDENO(1,2,3-CD) PYRENE	330	350 U	UG/KG
4-CHLOROANILINE	330	350 U	UG/KG
BIS(-2-CHLOROETHOXY) METHANE	330	350 U	UG/KG
BIS(2-CHLOROETHYL) ETHER	330	350 U	UG/KG
2-CHLORONAPHTHALENE	330	350 U	UG/KG
2-CHLOROPHENOL	670	710 U	UG/KG
2,2'-OXYBIS(1-CHLOROPROPANE)	330	350 U	UG/KG
CHRYSENE	330	350 U	UG/KG
DIBENZO(A,H) ANTHRACENE	330	350 U	UG/KG
DIBENZOFURAN	330	350 U	UG/KG
1,3-DICHLOROBENZENE	330	350 U	UG/KG
1,2-DICHLOROBENZENE	330	350 U	UG/KG
1,4-DICHLOROBENZENE	330	350 U	UG/KG
3,3'-DICHLOROBENZIDINE	330	350 U	UG/KG
2,4-DICHLOROPHENOL	670	710 U	UG/KG
DIETHYLPHTHALATE	330	350 U	UG/KG
DIMETHYL PHTHALATE	330	350 U	UG/KG
2,4-DIMETHYLPHENOL	670	710 U	UG/KG
2,4-DINITROPHENOL	1300	1400 U	UG/KG
2,4-DINITROTOLUENE	330	350 U	UG/KG
2,6-DINITROTOLUENE	330	350 U	UG/KG
BIS(2-ETHYLHEXYL) PHTHALATE	330	350 U	UG/KG
FLUORANTHENE	330	350 U	UG/KG
FLUORENE	330	350 U	UG/KG
HEXACHLOROBENZENE	330	350 U	UG/KG
HEXACHLOROBUTADIENE	330	350 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	350 U	UG/KG
HEXACHLOROETHANE	330	350 U	UG/KG
ISOPHORONE	330	350 U	UG/KG
2-METHYLNAPHTHALENE	670	710 U	UG/KG
4,6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA16A-2

Date Sampled : 10/29/96      Order #: 107916      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 94.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/09/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	710 U	UG/KG
2-METHYLPHENOL	670	710 U	UG/KG
4-METHYLPHENOL	670	710 U	UG/KG
NAPHTHALENE	330	350 U	UG/KG
2-NITROANILINE	330	350 U	UG/KG
3-NITROANILINE	330	350 U	UG/KG
4-NITROANILINE	330	350 U	UG/KG
NITROBENZENE	330	350 U	UG/KG
2-NITROPHENOL	670	710 U	UG/KG
4-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	350 U	UG/KG
N-NITROSODIPHENYLAMINE	330	350 U	UG/KG
DI-N-OCTYL PHTHALATE	330	350 U	UG/KG
PENTACHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	350 U	UG/KG
PHENOL	670	710 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	350 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	350 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	350 U	UG/KG
PYRENE	330	350 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	350 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	710 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	710 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	94	%
NITROBENZENE-d5	(23 - 120 %)	62	%
PHENOL-d6	(24 - 113 %)	70	%
2-FLUOROBIPHENYL	(30 - 115 %)	88	%
2-FLUOROPHENOL	(25 - 121 %)	77	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	93	%

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA16B-2

Date Sampled : 10/29/96      Order #: 107917      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96      Submission #: 9610000162      Percent Solid: 91.7

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	22 U	UG/KG
BENZENE	5.0	5.5 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.5 U	UG/KG
BROMOFORM	5.0	5.5 U	UG/KG
BROMOMETHANE	5.0	5.5 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.5 U	UG/KG
CHLOROBENZENE	5.0	5.5 U	UG/KG
CHLOROETHANE	5.0	5.5 U	UG/KG
CHLOROFORM	5.0	5.5 U	UG/KG
CHLOROMETHANE	5.0	5.5 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.5 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.5 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.5 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.5 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.5 U	UG/KG
ETHYLBENZENE	5.0	5.5 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.5 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.5 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.5 U	UG/KG
TETRACHLOROETHENE	5.0	5.5 U	UG/KG
TOLUENE	5.0	5.5 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.5 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.5 U	UG/KG
TRICHLOROETHENE	5.0	5.5 U	UG/KG
VINYL CHLORIDE	5.0	5.5 U	UG/KG
O-XYLENE	5.0	5.5 U	UG/KG
M+P-XYLENE	5.0	5.5 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	92	%
TOLUENE-D8	(81 - 117 %)	101	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	114	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA16B-2Date Sampled : 10/29/96 Order #: 107917 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/30/96 Submission #: 9610000162 Percent Solid: 91.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/09/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	360 U	UG/KG
ACENAPHTHYLENE	330	360 U	UG/KG
ANTHRACENE	330	360 U	UG/KG
BENZO (A) ANTHRACENE	330	670	UG/KG
BENZO (A) PYRENE	330	550	UG/KG
BENZO (B) FLUORANTHENE	330	830	UG/KG
BENZO (G, H, I) PERYLENE	330	360 U	UG/KG
BENZO (K) FLUORANTHENE	330	360 U	UG/KG
BENZYL ALCOHOL	330	360 U	UG/KG
BUTYL BENZYL PHTHALATE	330	360 U	UG/KG
DI-N-BUTYLPHTHALATE	330	360 U	UG/KG
CARBAZOLE	330	360 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	360 U	UG/KG
4-CHLOROANILINE	330	360 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	360 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	360 U	UG/KG
2-CHLORONAPHTHALENE	330	360 U	UG/KG
2-CHLOROPHENOL	670	730 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	360 U	UG/KG
CHRYSENE	330	630	UG/KG
DIBENZO (A, H) ANTHRACENE	330	360 U	UG/KG
DIBENZOFURAN	330	360 U	UG/KG
1, 3-DICHLOROBENZENE	330	360 U	UG/KG
1, 2-DICHLOROBENZENE	330	360 U	UG/KG
1, 4-DICHLOROBENZENE	330	360 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	360 U	UG/KG
2, 4-DICHLOROPHENOL	670	730 U	UG/KG
DIETHYLPHTHALATE	330	360 U	UG/KG
DIMETHYL PHTHALATE	330	360 U	UG/KG
2, 4-DIMETHYLPHENOL	670	730 U	UG/KG
2, 4-DINITROPHENOL	1300	1400 U	UG/KG
2, 4-DINITROTOLUENE	330	360 U	UG/KG
2, 6-DINITROTOLUENE	330	360 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	360 U	UG/KG
FLUORANTHENE	330	1500	UG/KG
FLUORENE	330	360 U	UG/KG
HEXACHLOROBENZENE	330	360 U	UG/KG
HEXACHLOROBUTADIENE	330	360 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	360 U	UG/KG
HEXACHLOROETHANE	330	360 U	UG/KG
ISOPHORONE	330	360 U	UG/KG
2-METHYLNAPHTHALENE	670	730 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1400 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA16B-2

Date Sampled : 10/29/96                      Order #: 107917                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/30/96                      Submission #: 9610000162                      Percent Solid: 91.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/09/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	730 U	UG/KG
2-METHYLPHENOL	670	730 U	UG/KG
4-METHYLPHENOL	670	730 U	UG/KG
NAPHTHALENE	330	360 U	UG/KG
2-NITROANILINE	330	360 U	UG/KG
3-NITROANILINE	330	360 U	UG/KG
4-NITROANILINE	330	360 U	UG/KG
NITROBENZENE	330	360 U	UG/KG
2-NITROPHENOL	670	730 U	UG/KG
4-NITROPHENOL	1300	1400 U	UG/KG
N-NITROSODIMETHYLAMINE	330	360 U	UG/KG
N-NITROSODIPHENYLAMINE	330	360 U	UG/KG
DI-N-OCTYL PHTHALATE	330	360 U	UG/KG
PENTACHLOROPHENOL	1300	1400 U	UG/KG
PHENANTHRENE	330	970	UG/KG
PHENOL	670	730 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	360 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	360 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	360 U	UG/KG
PYRENE	330	1300	UG/KG
1,2,4-TRICHLOROBENZENE	330	360 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	730 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	730 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
TERPHENYL-d14	(18 - 137 %)	104	%
NITROBENZENE-d5	(23 - 120 %)	68	%
PHENOL-d6	(24 - 113 %)	75	%
2-FLUOROBIPHENYL	(30 - 115 %)	96	%
2-FLUOROPHENOL	(25 - 121 %)	81	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	92	%



COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : FB-1

Date Sampled : 10/30/96  
Date Received: 11/01/96

Order #: 107918  
Submission #: 9610000162

Sample Matrix: WATER

ANALYTE	PQL	RESULT	UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	0.0100	0.0100 U	MG/L	11/11/96	1.0
BARIUM	0.0200	0.0200 U	MG/L	11/11/96	1.0
CADMIUM	0.00500	0.00500 U	MG/L	11/11/96	1.0
CHROMIUM	0.0100	0.0100 U	MG/L	11/11/96	1.0
LEAD	0.0500	0.0500 U	MG/L	11/11/96	1.0
MERCURY	0.000300	0.000300 U	MG/L	11/07/96	1.0
SELENIUM	0.00500	0.00500 U	MG/L	11/11/96	1.0
SILVER	0.0100	0.0100 U	MG/L	11/11/96	1.0
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	0.500	0.500 U	MG/L	11/13/96	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : FB-1

Date Sampled : 10/30/96      Order #: 107918      Sample Matrix: WATER  
 Date Received: 11/01/96      Submission #: 9610000162      Analytical Run 13113

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		
ACETONE	20	25	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.5	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.2	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(86 - 115 %)	97	‡
TOLUENE-D8	(88 - 110 %)	101	‡
DIBROMOFLUOROMETHANE	(86 - 118 %)	94	‡

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : FB-1

Date Sampled : 10/30/96      Order #: 107918      Sample Matrix: WATER  
Date Received: 11/01/96      Submission #: 9610000162      Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.1		
ACENAPHTHENE	5.0	5.5 U	UG/L
ACENAPHTHYLENE	5.0	5.5 U	UG/L
ANTHRACENE	5.0	5.5 U	UG/L
BENZO (A) ANTHRACENE	5.0	5.5 U	UG/L
BENZO (A) PYRENE	5.0	5.5 U	UG/L
BENZO (B) FLUORANTHENE	5.0	5.5 U	UG/L
BENZO (G, H, I) PERYLENE	5.0	5.5 U	UG/L
BENZO (K) FLUORANTHENE	5.0	5.5 U	UG/L
BENZYL ALCOHOL	5.0	5.5 U	UG/L
BUTYL BENZYL PHTHALATE	5.0	5.5 U	UG/L
DI-N-BUTYLPHTHALATE	5.0	5.5 U	UG/L
CARBAZOLE	5.0	5.5 U	UG/L
INDENO (1, 2, 3-CD) PYRENE	5.0	5.5 U	UG/L
4-CHLOROANILINE	5.0	5.5 U	UG/L
BIS (-2-CHLOROETHOXY) METHANE	5.0	5.5 U	UG/L
BIS (2-CHLOROETHYL) ETHER	5.0	5.5 U	UG/L
2-CHLORONAPHTHALENE	5.0	5.5 U	UG/L
2-CHLOROPHENOL	10	11 U	UG/L
2, 2'-OXYBIS (1-CHLOROPROPANE)	5.0	5.5 U	UG/L
CHRYSENE	5.0	5.5 U	UG/L
DIBENZO (A, H) ANTHRACENE	5.0	5.5 U	UG/L
DIBENZOFURAN	5.0	5.5 U	UG/L
1, 3-DICHLOROBENZENE	5.0	5.5 U	UG/L
1, 2-DICHLOROBENZENE	5.0	5.5 U	UG/L
1, 4-DICHLOROBENZENE	5.0	5.5 U	UG/L
3, 3'-DICHLOROBENZIDINE	5.0	5.5 U	UG/L
2, 4-DICHLOROPHENOL	10	11 U	UG/L
DIETHYLPHTHALATE	5.0	5.5 U	UG/L
DIMETHYL PHTHALATE	5.0	5.5 U	UG/L
2, 4-DIMETHYLPHENOL	10	11 U	UG/L
2, 4-DINITROPHENOL	20	22 U	UG/L
2, 4-DINITROTOLUENE	5.0	5.5 U	UG/L
2, 6-DINITROTOLUENE	5.0	5.5 U	UG/L
BIS (2-ETHYLHEXYL) PHTHALATE	5.0	5.5 U	UG/L
FLUORANTHENE	5.0	5.5 U	UG/L
FLUORENE	5.0	5.5 U	UG/L
HEXACHLOROBENZENE	5.0	5.5 U	UG/L
HEXACHLOROBUTADIENE	5.0	5.5 U	UG/L
HEXACHLOROCYCLOPENTADIENE	5.0	5.5 U	UG/L
HEXACHLOROETHANE	5.0	5.5 U	UG/L
ISOPHORONE	5.0	5.5 U	UG/L
2-METHYLNAPHTHALENE	10	11 U	UG/L
4, 6-DINITRO-2-METHYLPHENOL	20	22 U	UG/L

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : FB-1

Date Sampled : 10/30/96      Order #: 107918      Sample Matrix: WATER  
Date Received: 11/01/96      Submission #: 9610000162      Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.1		
4-CHLORO-3-METHYLPHENOL	10	11 U	UG/L
2-METHYLPHENOL	10	11 U	UG/L
4-METHYLPHENOL	10	11 U	UG/L
NAPHTHALENE	5.0	5.5 U	UG/L
2-NITROANILINE	5.0	5.5 U	UG/L
3-NITROANILINE	5.0	5.5 U	UG/L
4-NITROANILINE	5.0	5.5 U	UG/L
NITROBENZENE	5.0	5.5 U	UG/L
2-NITROPHENOL	10	11 U	UG/L
4-NITROPHENOL	20	22 U	UG/L
N-NITROSODIMETHYLAMINE	5.0	5.5 U	UG/L
N-NITROSODIPHENYLAMINE	5.0	5.5 U	UG/L
DI-N-OCTYL PHTHALATE	5.0	5.5 U	UG/L
PENTACHLOROPHENOL	20	22 U	UG/L
PHENANTHRENE	5.0	5.5 U	UG/L
PHENOL	10	11 U	UG/L
4-BROMOPHENYL-PHENYLETHER	5.0	5.5 U	UG/L
4-CHLOROPHENYL-PHENYLETHER	5.0	5.5 U	UG/L
N-NITroso-DI-N-PROPYLAMINE	5.0	5.5 U	UG/L
PYRENE	5.0	5.5 U	UG/L
1,2,4-TRICHLOROBENZENE	5.0	5.5 U	UG/L
2,4,6-TRICHLOROPHENOL	10	11 U	UG/L
2,4,5-TRICHLOROPHENOL	10	11 U	UG/L

## SURROGATE RECOVERIES

## QC LIMITS

TERPHENYL-d14	(33 - 141 %)	99	%
NITROBENZENE-d5	(35 - 114 %)	83	%
PHENOL-d6	(10 - 94 %)	44	%
2-FLUOROBIPHENYL	(43 - 116 %)	80	%
2-FLUOROPHENOL	(21 - 110 %)	62	%
2,4,6-TRIBROMOPHENOL	(10 - 123 %)	94	%

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL**

**Client Sample ID : FB-1**

**Date Sampled : 10/30/96      Order #: 107918      Sample Matrix: WATER  
Date Received: 11/01/96      Submission #: 9610000162      Analytical Run 13017**

<b>ANALYTE</b>	<b>PQL</b>	<b>RESULT</b>	<b>UNITS</b>
DATE EXTRACTED : 11/08/96			
DATE ANALYZED : 11/12/96			
ANALYTICAL DILUTION: 1.1			
PCB 1016	0.50	0.56 U	UG/L
PCB 1221	0.50	0.56 U	UG/L
PCB 1232	0.50	0.56 U	UG/L
PCB 1242	0.50	0.56 U	UG/L
PCB 1248	0.50	0.56 U	UG/L
PCB 1254	0.50	0.56 U	UG/L
PCB 1260	0.50	0.56 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(30 - 150 %)	93	%
TETRACHLORO-META-XYLENE	(30 - 150 %)	109	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : TRIP BLANK

Date Sampled : / / Order #: 107919 Sample Matrix: WATER  
 Date Received: 10/29/96 Submission #: 9610000162 Analytical Run 13113

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(86 - 115 %)	101	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : TRIP BLANK

Date Sampled : 10/29/96      Order #: 112563      Sample Matrix: WATER  
 Date Received: 10/30/96      Submission #: 9610000162      Analytical Run 13113

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(86 - 115 %)	95	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-3

Date Sampled : 10/29/96

Order #: 113642

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>WET CHEMISTRY</b>					
TOTAL PETROLEUM HYDROCARBONS	33.0	103	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	86.0	%	11/06/96	1.0



CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-3

Date Sampled : 10/29/96

Order #: 113642

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #: 9610000162

Percent Solid: 86.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	90	%
TOLUENE-D8	(81 - 117 %)	102	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	109	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-3

Date Sampled : 10/29/96  
Date Received: 11/01/96

Order #: 113642  
Submission #:9610000162

Sample Matrix: SOIL/SEDIMENT

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	103	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	86.0	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS  
METHOD 8270 SEMIVOLATILES  
Reported: 11/21/96**

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-3

Date Sampled : 10/29/96

Order #: 113642

Sample Matrix: SOIL/SEDIMEN

Date Received: 11/01/96

Submission #: 9610000162

Percent Solid: 86.0

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED: 11/13/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHTHALATE	330	2600 B	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	670	780 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3-DICHLOROBENZENE	330	380 U	UG/KG
1, 2-DICHLOROBENZENE	330	380 U	UG/KG
1, 4-DICHLOROBENZENE	330	380 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4-DICHLOROPHENOL	670	780 U	UG/KG
DIETHYLPHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4-DIMETHYLPHENOL	670	780 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	380 U	UG/KG
2, 6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	380 U	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	670	780 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/20/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA7A-3

Date Sampled : 10/29/96      Order #: 113642      Sample Matrix: SOIL/SEDIMEN  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 86.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/08/96		
DATE ANALYZED	: 11/13/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	780 U	UG/KG
2-METHYLPHENOL	670	780 U	UG/KG
4-METHYLPHENOL	670	780 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	330	380 U	UG/KG
3-NITROANILINE	330	380 U	UG/KG
4-NITROANILINE	330	380 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	670	780 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	670	780 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	780 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	780 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

TERPHENYL-d14	(18 - 137 %)	67	%
NITROBENZENE-d5	(23 - 120 %)	32	%
PHENOL-d6	(24 - 113 %)	41	%
2-FLUOROBIPHENYL	(30 - 115 %)	54	%
2-FLUOROPHENOL	(25 - 121 %)	47	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	55	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-19-2

Date Sampled : 10/30/96

Order #: 113643

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	37.6 U	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	87.8	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
**Reported: 11/19/96**

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL**  
**Client Sample ID : MA-19-2**

**Date Sampled : 10/30/96      Order #: 113643      Sample Matrix: SOIL/SEDIMENT**  
**Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 87.8**

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/11/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.7 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.7 U	UG/KG
BROMOFORM	5.0	5.7 U	UG/KG
BROMOMETHANE	5.0	5.7 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.7 U	UG/KG
CHLOROBENZENE	5.0	5.7 U	UG/KG
CHLOROETHANE	5.0	5.7 U	UG/KG
CHLOROFORM	5.0	5.7 U	UG/KG
CHLOROMETHANE	5.0	5.7 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.7 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.7 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.7 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.7 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.7 U	UG/KG
ETHYLBENZENE	5.0	5.7 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.7 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.7 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.7 U	UG/KG
TETRACHLOROETHENE	5.0	5.7 U	UG/KG
TOLUENE	5.0	5.7 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.7 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.7 U	UG/KG
TRICHLOROETHENE	5.0	5.7 U	UG/KG
VINYL CHLORIDE	5.0	5.7 U	UG/KG
O-XYLENE	5.0	5.7 U	UG/KG
M+P-XYLENE	5.0	5.7 U	UG/KG

**SURROGATE RECOVERIES**

**QC LIMITS**

4-BROMOFLUOROBENZENE	(74 - 121 %)	90	%
TOLUENE-D8	(81 - 117 %)	97	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	108	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-19-2

Date Sampled : 10/30/96      Order #: 113643      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 87.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/09/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYL PHTHALATE	330	380 U	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	670	760 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3-DICHLOROBENZENE	330	380 U	UG/KG
1, 2-DICHLOROBENZENE	330	380 U	UG/KG
1, 4-DICHLOROBENZENE	330	380 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4-DICHLOROPHENOL	670	760 U	UG/KG
DIETHYL PHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4-DIMETHYLPHENOL	670	760 U	UG/KG
2, 4-DINITROPHENOL	1300	1500 U	UG/KG
2, 4-DINITROTOLUENE	330	380 U	UG/KG
2, 6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	380 U	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	670	760 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1500 U	UG/KG

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS  
METHOD 8270 SEMIVOLATILES  
Reported: 11/19/96**

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
Client Sample ID : MA-19-2

Date Sampled : 10/30/96      Order #: 113643      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 87.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/09/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
4-CHLORO-3-METHYLPHENOL	670	760 U	UG/KG
2-METHYLPHENOL	670	760 U	UG/KG
4-METHYLPHENOL	670	760 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	330	380 U	UG/KG
3-NITROANILINE	330	380 U	UG/KG
4-NITROANILINE	330	380 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	670	760 U	UG/KG
4-NITROPHENOL	1300	1500 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1300	1500 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	670	760 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	760 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	760 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	92	%
NITROBENZENE-d5	(23 - 120 %)	52	%
PHENOL-d6	(24 - 113 %)	62	%
2-FLUOROBIPHENYL	(30 - 115 %)	76	%
2-FLUOROPHENOL	(25 - 121 %)	63	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	76	%



COLUMBIA ANALYTICAL SERVICES

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-18-2

Date Sampled : 10/30/96

Order #: 113651

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #: 9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
WET CHEMISTRY					
TOTAL PETROLEUM HYDROCARBONS	33.0	49.4	UG/G	11/13/96	1.0
PERCENT SOLIDS	1.0	85.3	%	11/06/96	1.0

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL  
 Client Sample ID : MA-18-2

Date Sampled : 10/30/96      Order #: 113651      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 85.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/11/96			
DATE ANALYZED : 11/11/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
PCB 1016	250	290 U	UG/KG
PCB 1221	250	290 U	UG/KG
PCB 1232	250	290 U	UG/KG
PCB 1242	250	290 U	UG/KG
PCB 1248	250	290 U	UG/KG
PCB 1254	250	290 U	UG/KG
PCB 1260	250	290 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(30 - 150 %)	62	%
TETRACHLORO-META-XYLENE	(30 - 150 %)	90	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-20-2

Date Sampled : 10/31/96

Order #: 113652

Sample Matrix: SOIL/SEDIMENT

Date Received: 11/01/96

Submission #:9610000162

ANALYTE	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	ANALYTICAL DILUTION
<b>METALS</b>					
ARSENIC	1.00	2.75	UG/G	11/13/96	1.0
BARIUM	2.00	89.0	UG/G	11/13/96	1.0
CADMIUM	0.500	0.681 U	UG/G	11/13/96	1.0
CHROMIUM	1.00	13.7	UG/G	11/13/96	1.0
LEAD	5.00	17.1	UG/G	11/13/96	1.0
MERCURY	0.150	0.266	UG/G	11/15/96	1.0
SELENIUM	0.500	3.42	UG/G	11/13/96	1.0
SILVER	1.00	1.36 U	UG/G	11/13/96	1.0
<b>WET CHEMISTRY</b>					
PERCENT SOLIDS	1.0	73.4	%	11/06/96	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
**METHOD 8260 TCL**  
**Reported: 11/19/96**

CH2M HILL

**Project Reference: TENNECO PLASTICS - MACEDON - SOIL**  
**Client Sample ID : MA-20-2**

**Date Sampled : 10/31/96      Order #: 113652      Sample Matrix: SOIL/SEDIMENT**  
**Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 73.4**

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/12/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	35	UG/KG
BENZENE	5.0	6.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	6.8 U	UG/KG
BROMOFORM	5.0	6.8 U	UG/KG
BROMOMETHANE	5.0	6.8 U	UG/KG
2-BUTANONE (MEK)	10	14 U	UG/KG
CARBON DISULFIDE	10	14 U	UG/KG
CARBON TETRACHLORIDE	5.0	6.8 U	UG/KG
CHLOROBENZENE	5.0	6.8 U	UG/KG
CHLOROETHANE	5.0	6.8 U	UG/KG
CHLOROFORM	5.0	6.8 U	UG/KG
CHLOROMETHANE	5.0	6.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	6.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	6.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	6.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	6.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	6.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	6.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	6.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	6.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	6.8 U	UG/KG
ETHYLBENZENE	5.0	6.8 U	UG/KG
2-HEXANONE	10	14 U	UG/KG
METHYLENE CHLORIDE	5.0	6.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	14 U	UG/KG
STYRENE	5.0	6.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	6.8 U	UG/KG
TETRACHLOROETHENE	5.0	6.8 U	UG/KG
TOLUENE	5.0	6.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	6.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	6.8 U	UG/KG
TRICHLOROETHENE	5.0	6.8 U	UG/KG
VINYL CHLORIDE	5.0	6.8 U	UG/KG
O-XYLENE	5.0	6.8 U	UG/KG
M+P-XYLENE	5.0	6.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(74 - 121 %)	96	%
TOLUENE-D8	(81 - 117 %)	105	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	98	%

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-20-2

Date Sampled : 10/31/96      Order #: 113652      Sample Matrix: SOIL/SEDIMENT  
Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 73.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	450 U	UG/KG
ACENAPHTHYLENE	330	450 U	UG/KG
ANTHRACENE	330	450 U	UG/KG
BENZO (A) ANTHRACENE	330	450 U	UG/KG
BENZO (A) PYRENE	330	450 U	UG/KG
BENZO (B) FLUORANTHENE	330	450 U	UG/KG
BENZO (G, H, I) PERYLENE	330	450 U	UG/KG
BENZO (K) FLUORANTHENE	330	450 U	UG/KG
BENZYL ALCOHOL	330	450 U	UG/KG
BUTYL BENZYL PHTHALATE	330	450 U	UG/KG
DI-N-BUTYLPHTHALATE	330	450 U	UG/KG
CARBAZOLE	330	450 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	450 U	UG/KG
4-CHLOROANILINE	330	450 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	450 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	450 U	UG/KG
2-CHLORONAPHTHALENE	330	450 U	UG/KG
2-CHLOROPHENOL	670	910 U	UG/KG
2, 2'-OXYBIS (1-CHLOROPROPANE)	330	450 U	UG/KG
CHRYSENE	330	450 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	450 U	UG/KG
DIBENZOFURAN	330	450 U	UG/KG
1, 3-DICHLOROBENZENE	330	450 U	UG/KG
1, 2-DICHLOROBENZENE	330	450 U	UG/KG
1, 4-DICHLOROBENZENE	330	450 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	450 U	UG/KG
2, 4-DICHLOROPHENOL	670	910 U	UG/KG
DIETHYLPHTHALATE	330	450 U	UG/KG
DIMETHYL PHTHALATE	330	450 U	UG/KG
2, 4-DIMETHYLPHENOL	670	910 U	UG/KG
2, 4-DINITROPHENOL	1300	1800 U	UG/KG
2, 4-DINITROTOLUENE	330	450 U	UG/KG
2, 6-DINITROTOLUENE	330	450 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	450 U	UG/KG
FLUORANTHENE	330	450 U	UG/KG
FLUORENE	330	450 U	UG/KG
HEXACHLOROBENZENE	330	450 U	UG/KG
HEXACHLOROBUTADIENE	330	450 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	450 U	UG/KG
HEXACHLOROETHANE	330	450 U	UG/KG
ISOPHORONE	330	450 U	UG/KG
2-METHYLNAPHTHALENE	670	910 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1800 U	UG/KG

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-20-2

Date Sampled : 10/31/96                      Order #: 113652                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96                      Submission #: 9610000162                      Percent Solid: 73.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
4-CHLORO-3-METHYLPHENOL	670	910 U	UG/KG
2-METHYLPHENOL	670	910 U	UG/KG
4-METHYLPHENOL	670	910 U	UG/KG
NAPHTHALENE	330	450 U	UG/KG
2-NITROANILINE	330	450 U	UG/KG
3-NITROANILINE	330	450 U	UG/KG
4-NITROANILINE	330	450 U	UG/KG
NITROBENZENE	330	450 U	UG/KG
2-NITROPHENOL	670	910 U	UG/KG
4-NITROPHENOL	1300	1800 U	UG/KG
N-NITROSODIMETHYLAMINE	330	450 U	UG/KG
N-NITROSODIPHENYLAMINE	330	450 U	UG/KG
DI-N-OCTYL PHTHALATE	330	450 U	UG/KG
PENTACHLOROPHENOL	1300	1800 U	UG/KG
PHENANTHRENE	330	450 U	UG/KG
PHENOL	670	910 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	450 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	450 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	450 U	UG/KG
PYRENE	330	450 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	450 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	910 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	910 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	84	%
NITROBENZENE-d5	(23 - 120 %)	73	%
PHENOL-d6	(24 - 113 %)	85	%
2-FLUOROBIPHENYL	(30 - 115 %)	86	%
2-FLUOROPHENOL	(25 - 121 %)	93	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	91	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260 TCL  
 Reported: 11/19/96

CH2M HILL

Project Reference: TENNECO PLASTICS - MACEDON - SOIL

Client Sample ID : MA-17-2

Date Sampled : 10/30/96      Order #: 113653      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 11/01/96      Submission #: 9610000162      Percent Solid: 94.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/11/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACETONE	20	22	UG/KG
BENZENE	5.0	5.3 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.3 U	UG/KG
BROMOFORM	5.0	5.3 U	UG/KG
BROMOMETHANE	5.0	5.3 U	UG/KG
2-BUTANONE (MEK)	10	11 U	UG/KG
CARBON DISULFIDE	10	11 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.3 U	UG/KG
CHLOROBENZENE	5.0	5.3 U	UG/KG
CHLOROETHANE	5.0	5.3 U	UG/KG
CHLOROFORM	5.0	5.3 U	UG/KG
CHLOROMETHANE	5.0	5.3 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.3 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.3 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.3 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.3 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.3 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.3 U	UG/KG
ETHYLBENZENE	5.0	5.3 U	UG/KG
2-HEXANONE	10	11 U	UG/KG
METHYLENE CHLORIDE	5.0	5.3 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	11 U	UG/KG
STYRENE	5.0	5.3 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.3 U	UG/KG
TETRACHLOROETHENE	5.0	5.3 U	UG/KG
TOLUENE	5.0	5.3 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.3 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.3 U	UG/KG
TRICHLOROETHENE	5.0	5.3 U	UG/KG
VINYL CHLORIDE	5.0	5.3 U	UG/KG
O-XYLENE	5.0	5.3 U	UG/KG
M+P-XYLENE	5.0	5.3 U	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
4-BROMOFLUOROBENZENE	(74 - 121 %)	93	%
TOLUENE-D8	(81 - 117 %)	104	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	104	%

Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 116039 Sample Matrix: SOIL/SEDIMENT  
Date Received: Submission #: Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/06/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	20 U	UG/KG
BENZENE	5.0	5.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.0 U	UG/KG
BROMOFORM	5.0	5.0 U	UG/KG
BROMOMETHANE	5.0	5.0 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.0 U	UG/KG
CHLOROBENZENE	5.0	5.0 U	UG/KG
CHLOROETHANE	5.0	5.0 U	UG/KG
CHLOROFORM	5.0	5.0 U	UG/KG
CHLOROMETHANE	5.0	5.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
ETHYLBENZENE	5.0	5.0 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
METHYLENE CHLORIDE	5.0	5.0 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/KG
TETRACHLOROETHENE	5.0	5.0 U	UG/KG
TOLUENE	5.0	5.0 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/KG
TRICHLOROETHENE	5.0	5.0 U	UG/KG
VINYL CHLORIDE	5.0	5.0 U	UG/KG
O-XYLENE	5.0	5.0 U	UG/KG
M+P-XYLENE	5.0	5.0 U	UG/KG

## SURROGATE RECOVERIES

## QC LIMITS

4-BROMOFLUOROBENZENE	(74 - 121 %)	99	%
TOLUENE-D8	(81 - 117 %)	95	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	93	%









Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 116035 Sample Matrix: SOIL/SEDIMENT  
Date Received: Submission #: Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 11/12/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACETONE	20	20 U	UG/KG
BENZENE	5.0	5.0 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.0 U	UG/KG
BROMOFORM	5.0	5.0 U	UG/KG
BROMOMETHANE	5.0	5.0 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.0 U	UG/KG
CHLOROBENZENE	5.0	5.0 U	UG/KG
CHLOROETHANE	5.0	5.0 U	UG/KG
CHLOROFORM	5.0	5.0 U	UG/KG
CHLOROMETHANE	5.0	5.0 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.0 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.0 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/KG
ETHYLBENZENE	5.0	5.0 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
METHYLENE CHLORIDE	5.0	7.2	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.0 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/KG
TETRACHLOROETHENE	5.0	5.0 U	UG/KG
TOLUENE	5.0	5.0 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/KG
TRICHLOROETHENE	5.0	5.0 U	UG/KG
VINYL CHLORIDE	5.0	5.0 U	UG/KG
O-XYLENE	5.0	5.0 U	UG/KG
M+P-XYLENE	5.0	5.0 U	UG/KG
<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
4-BROMOFLUOROBENZENE	(74 - 121 %)	100	%
TOLUENE-D8	(81 - 117 %)	102	%
DIBROMOFLUOROMETHANE	(80 - 120 %)	96	%

Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 116050 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 13113

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L
SURROGATE RECOVERIES		QC LIMITS	
4-BROMOFLUOROBENZENE	(86 - 115 %)	95	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	100	%

Project Reference:  
Client Sample ID : METHOD BLANK

Date Sampled :	Order #: 114707	Sample Matrix: SOIL/SEDIMEN
Date Received:	Submission #:	Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/08/96		
ANALYTICAL DILUTION:	1.0		Dry Weight
ACENAPHTHENE	330	330 U	UG/KG
ACENAPHTHYLENE	330	330 U	UG/KG
ANTHRACENE	330	330 U	UG/KG
BENZO(A)ANTHRACENE	330	330 U	UG/KG
BENZO(A)PYRENE	330	330 U	UG/KG
BENZO(B)FLUORANTHENE	330	330 U	UG/KG
BENZO(G,H,I)PERYLENE	330	330 U	UG/KG
BENZO(K)FLUORANTHENE	330	330 U	UG/KG
BENZYL ALCOHOL	330	330 U	UG/KG
BUTYL BENZYL PHTHALATE	330	330 U	UG/KG
DI-N-BUTYLPHTHALATE	330	330 U	UG/KG
CARBAZOLE	330	330 U	UG/KG
INDENO(1,2,3-CD)PYRENE	330	330 U	UG/KG
4-CHLOROANILINE	330	330 U	UG/KG
BIS(-2-CHLOROETHOXY)METHANE	330	330 U	UG/KG
BIS(2-CHLOROETHYL)ETHER	330	330 U	UG/KG
2-CHLORONAPHTHALENE	330	330 U	UG/KG
2-CHLOROPHENOL	670	670 U	UG/KG
2,2'-OXYBIS(1-CHLOROPROPANE)	330	330 U	UG/KG
CHRYSENE	330	330 U	UG/KG
DIBENZO(A,H)ANTHRACENE	330	330 U	UG/KG
DIBENZOFURAN	330	330 U	UG/KG
1,3-DICHLOROBENZENE	330	330 U	UG/KG
1,2-DICHLOROBENZENE	330	330 U	UG/KG
1,4-DICHLOROBENZENE	330	330 U	UG/KG
3,3'-DICHLOROBENZIDINE	330	330 U	UG/KG
2,4-DICHLOROPHENOL	670	670 U	UG/KG
DIETHYLPHTHALATE	330	330 U	UG/KG
DIMETHYL PHTHALATE	330	330 U	UG/KG
2,4-DIMETHYLPHENOL	670	670 U	UG/KG
2,4-DINITROPHENOL	1300	1300 U	UG/KG
2,4-DINITROTOLUENE	330	330 U	UG/KG
2,6-DINITROTOLUENE	330	330 U	UG/KG
BIS(2-ETHYLHEXYL)PHTHALATE	330	330 U	UG/KG
FLUORANTHENE	330	330 U	UG/KG
FLUORENE	330	330 U	UG/KG
HEXACHLOROBENZENE	330	330 U	UG/KG
HEXACHLOROBUTADIENE	330	330 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	330 U	UG/KG
HEXACHLOROETHANE	330	330 U	UG/KG
ISOPHORONE	330	330 U	UG/KG
2-METHYLNAPHTHALENE	670	670 U	UG/KG
4,6-DINITRO-2-METHYLPHENOL	1300	1300 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	670 U	UG/KG

**EXTRACTABLE ORGANICS**  
**METHOD 8270 SEMIVOLATILES**  
 Reported: 11/20/96

Project Reference:  
 Client Sample ID : METHOD BLANK

Date Sampled : Order #: 114707 Sample Matrix: SOIL/SEDIMEN  
 Date Received: Submission #: Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/08/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
2-METHYLPHENOL	670	670 U	UG/KG
4-METHYLPHENOL	670	670 U	UG/KG
NAPHTHALENE	330	330 U	UG/KG
2-NITROANILINE	330	330 U	UG/KG
3-NITROANILINE	330	330 U	UG/KG
4-NITROANILINE	330	330 U	UG/KG
NITROBENZENE	330	330 U	UG/KG
2-NITROPHENOL	670	670 U	UG/KG
4-NITROPHENOL	1300	1300 U	UG/KG
N-NITROSODIMETHYLAMINE	330	330 U	UG/KG
N-NITROSODIPHENYLAMINE	330	330 U	UG/KG
DI-N-OCTYL PHTHALATE	330	330 U	UG/KG
PENTACHLOROPHENOL	1300	1300 U	UG/KG
PHENANTHRENE	330	330 U	UG/KG
PHENOL	670	670 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	330 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	330 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	330 U	UG/KG
PYRENE	330	330 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	330 U	UG/KG
2,4,6-TRICHLOROPHENOL	670	670 U	UG/KG
2,4,5-TRICHLOROPHENOL	670	670 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(18 - 137 %)	67	%
NITROBENZENE-d5	(23 - 120 %)	61	%
PHENOL-d6	(24 - 113 %)	62	%
2-FLUOROBIPHENYL	(30 - 115 %)	71	%
2-FLUOROPHENOL	(25 - 121 %)	68	%
2,4,6-TRIBROMOPHENOL	(19 - 122 %)	66	%

Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 115260 Sample Matrix: SOIL/SEDIMENT  
Date Received: Submission #: Percent Solid: 100

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/08/96			
DATE ANALYZED : 11/12/96			
ANALYTICAL DILUTION: 1.0			Dry Weight
ACENAPHTHENE	330	330 U	UG/KG
ACENAPHTHYLENE	330	330 U	UG/KG
ANTHRACENE	330	330 U	UG/KG
BENZO(A) ANTHRACENE	330	330 U	UG/KG
BENZO(A) PYRENE	330	330 U	UG/KG
BENZO(B) FLUORANTHENE	330	330 U	UG/KG
BENZO(G, H, I) PERYLENE	330	330 U	UG/KG
BENZO(K) FLUORANTHENE	330	330 U	UG/KG
BENZYL ALCOHOL	330	330 U	UG/KG
BUTYL BENZYL PHTHALATE	330	330 U	UG/KG
DI-N-BUTYLPHthalate	330	1400	UG/KG
CARBAZOLE	330	330 U	UG/KG
INDENO(1, 2, 3-CD) PYRENE	330	330 U	UG/KG
4-CHLOROANILINE	330	330 U	UG/KG
BIS(-2-CHLOROETHOXY) METHANE	330	330 U	UG/KG
BIS(2-CHLOROETHYL) ETHER	330	330 U	UG/KG
2-CHLORONAPHTHALENE	330	330 U	UG/KG
2-CHLOROPHENOL	670	670 U	UG/KG
2, 2'-OXYBIS(1-CHLOROPROPANE)	330	330 U	UG/KG
CHRYSENE	330	330 U	UG/KG
DIBENZO(A, H) ANTHRACENE	330	330 U	UG/KG
DIBENZOFURAN	330	330 U	UG/KG
1, 3-DICHLOROBENZENE	330	330 U	UG/KG
1, 2-DICHLOROBENZENE	330	330 U	UG/KG
1, 4-DICHLOROBENZENE	330	330 U	UG/KG
3, 3'-DICHLOROBENZIDINE	330	330 U	UG/KG
2, 4-DICHLOROPHENOL	670	670 U	UG/KG
DIETHYLPHthalate	330	330 U	UG/KG
DIMETHYL PHTHALATE	330	330 U	UG/KG
2, 4-DIMETHYLPHENOL	670	670 U	UG/KG
2, 4-DINITROPHENOL	1300	1300 U	UG/KG
2, 4-DINITROTOLUENE	330	330 U	UG/KG
2, 6-DINITROTOLUENE	330	330 U	UG/KG
BIS(2-ETHYLHEXYL) PHTHALATE	330	330 U	UG/KG
FLUORANTHENE	330	330 U	UG/KG
FLUORENE	330	330 U	UG/KG
HEXACHLOROBENZENE	330	330 U	UG/KG
HEXACHLOROBUTADIENE	330	330 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	330 U	UG/KG
HEXACHLOROETHANE	330	330 U	UG/KG
ISOPHORONE	330	330 U	UG/KG
2-METHYLNAPHTHALENE	670	670 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1300	1300 U	UG/KG
4-CHLORO-3-METHYLPHENOL	670	670 U	UG/KG





Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 114482 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 11/05/96			
DATE ANALYZED : 11/07/96			
ANALYTICAL DILUTION: 1.0			
ACENAPHTHENE	5.0	5.0 U	UG/L
ACENAPHTHYLENE	5.0	5.0 U	UG/L
ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) ANTHRACENE	5.0	5.0 U	UG/L
BENZO (A) PYRENE	5.0	5.0 U	UG/L
BENZO (B) FLUORANTHENE	5.0	5.0 U	UG/L
BENZO (G, H, I) PERYLENE	5.0	5.0 U	UG/L
BENZO (K) FLUORANTHENE	5.0	5.0 U	UG/L
BENZYL ALCOHOL	5.0	5.0 U	UG/L
BUTYL BENZYL PHTHALATE	5.0	5.0 U	UG/L
DI-N-BUTYLPHTHALATE	5.0	5.0 U	UG/L
CARBAZOLE	5.0	5.0 U	UG/L
INDENO (1, 2, 3-CD) PYRENE	5.0	5.0 U	UG/L
4-CHLOROANILINE	5.0	5.0 U	UG/L
BIS (-2-CHLOROETHOXY) METHANE	5.0	5.0 U	UG/L
BIS (2-CHLOROETHYL) ETHER	5.0	5.0 U	UG/L
2-CHLORONAPHTHALENE	5.0	5.0 U	UG/L
2-CHLOROPHENOL	10	10 U	UG/L
2, 2'-OXYBIS (1-CHLOROPROPANE)	5.0	5.0 U	UG/L
CHRYSENE	5.0	5.0 U	UG/L
DIBENZO (A, H) ANTHRACENE	5.0	5.0 U	UG/L
DIBENZOFURAN	5.0	5.0 U	UG/L
1, 3-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 2-DICHLOROBENZENE	5.0	5.0 U	UG/L
1, 4-DICHLOROBENZENE	5.0	5.0 U	UG/L
3, 3'-DICHLOROBENZIDINE	5.0	5.0 U	UG/L
2, 4-DICHLOROPHENOL	10	10 U	UG/L
DIETHYLPHTHALATE	5.0	5.0 U	UG/L
DIMETHYL PHTHALATE	5.0	5.0 U	UG/L
2, 4-DIMETHYLPHENOL	10	10 U	UG/L
2, 4-DINITROPHENOL	20	20 U	UG/L
2, 4-DINITROTOLUENE	5.0	5.0 U	UG/L
2, 6-DINITROTOLUENE	5.0	5.0 U	UG/L
BIS (2-ETHYLHEXYL) PHTHALATE	5.0	5.0 U	UG/L
FLUORANTHENE	5.0	5.0 U	UG/L
FLUORENE	5.0	5.0 U	UG/L
HEXACHLOROBENZENE	5.0	5.0 U	UG/L
HEXACHLOROBUTADIENE	5.0	5.0 U	UG/L
HEXACHLOROCYCLOPENTADIENE	5.0	5.0 U	UG/L
HEXACHLOROETHANE	5.0	5.0 U	UG/L
ISOPHORONE	5.0	5.0 U	UG/L
2-METHYLNAPHTHALENE	10	10 U	UG/L
4, 6-DINITRO-2-METHYLPHENOL	20	20 U	UG/L
4-CHLORO-3-METHYLPHENOL	10	10 U	UG/L

Project Reference:  
Client Sample ID : METHOD BLANKDate Sampled : Order #: 114482 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 12919

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 11/05/96		
DATE ANALYZED	: 11/07/96		
ANALYTICAL DILUTION:	1.0		
2-METHYLPHENOL	10	10 U	UG/L
4-METHYLPHENOL	10	10 U	UG/L
NAPHTHALENE	5.0	5.0 U	UG/L
2-NITROANILINE	5.0	5.0 U	UG/L
3-NITROANILINE	5.0	5.0 U	UG/L
4-NITROANILINE	5.0	5.0 U	UG/L
NITROBENZENE	5.0	5.0 U	UG/L
2-NITROPHENOL	10	10 U	UG/L
4-NITROPHENOL	20	20 U	UG/L
N-NITROSODIMETHYLAMINE	5.0	5.0 U	UG/L
N-NITROSODIPHENYLAMINE	5.0	5.0 U	UG/L
DI-N-OCTYL PHTHALATE	5.0	5.0 U	UG/L
PENTACHLOROPHENOL	20	20 U	UG/L
PHENANTHRENE	5.0	5.0 U	UG/L
PHENOL	10	10 U	UG/L
4-BROMOPHENYL-PHENYLETHER	5.0	5.0 U	UG/L
4-CHLOROPHENYL-PHENYLETHER	5.0	5.0 U	UG/L
N-NITROSO-DI-N-PROPYLAMINE	5.0	5.0 U	UG/L
PYRENE	5.0	5.0 U	UG/L
1,2,4-TRICHLOROBENZENE	5.0	5.0 U	UG/L
2,4,6-TRICHLOROPHENOL	10	10 U	UG/L
2,4,5-TRICHLOROPHENOL	10	10 U	UG/L
SURROGATE RECOVERIES		QC LIMITS	
TERPHENYL-d14	(33 - 141 %)	87	%
NITROBENZENE-d5	(35 - 114 %)	91	%
PHENOL-d6	(10 - 94 %)	43	%
2-FLUOROBIPHENYL	(43 - 116 %)	87	%
2-FLUOROPHENOL	(21 - 110 %)	60	%
2,4,6-TRIBROMOPHENOL	(10 - 123 %)	86	%







COLUMBIA ANALYTICAL SERVICES, INC.  
700 Exchange Street, Rochester, New York 14608  
(716) 454-8810 • FAX (716) 454-8825

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

(Macedon #2) (800) 695-7222

DATE 10/29/96 PAGE 1 OF 1

PROJECT NAME Tennessee Packaging  
PROJECT MANAGER/CONTACT Robert Jackson  
COMPANY/ADDRESS CHAM Hill 99 Cherry Hill Rd  
Ste 304, Parsippany, NJ 07054  
TEL (201) 316-9300 FAX (201) 334-5847  
SAMPLER'S SIGNATURE Andrew B. Judd

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GCMS VOAs		GCMS SVOAs		GC VOAs		PESTICIDES/PCBs		STARS LIST 8021 VOAs		STARS LIST 8270 SVOAs		TCLP METALS		WASTE CHARACTERIZATION		METALS, DISSOLVED (LIST BELOW)		METALS, TOTAL (LIST BELOW)		PRESERVATION		
						8280	824	8270A	625	8010/8020	601/602	8080	608	TOTAL	TCLP	VOAs	HP	React	Corros	Light	PH < 2.0	PH > 12	Other	Temp				
MAB-A	10/29/96	1140	107906	Soil	3	X	X	X	X			X																
MAB-B	10/29/96	1245	107907	Soil	3	X	X	X	X			X																
MA16A-2	10/29/96	1500	107916	Soil	2	X	X	X	X			X																
MA16B-2	10/29/96	1515	107917	Soil	2	X	X	X	X			X																
MA6A-2	10/29/96	1525	107902	Soil	3	X	X	X	X			X																
MA6B-2	10/29/96	1600	107903	Soil	3	X	X	X	X			X																
Temp Blank				Aqueous	1																							
TRIP Blank			112563		2	X																						

TURNAROUND REQUIREMENTS: 24 hr, 48 hr, 5 day, Standard (10-15 working days), Provide Verbal Preliminary Results, Provide FAX Preliminary Results, Requested Report Date

REPORT REQUIREMENTS: 1. Routine Report, 2. Routine Rep. w/CASE Narrative, 3. EPA Level III, 4. N.I. Reduced Deliverables Level IV, 5. NY ASP/CLP Deliverables, 6. Site specific OC.

INVOICE INFORMATION: P.O. #, Bill To, Shipping Via, Shipping #, Temperature, Submission No.

SPECIAL INSTRUCTIONS/COMMENTS: METALS As, Ba, Cd, Cr, Pb, Hg, Se, Ag, ORGANICS: TOL, PPL, BN Only, AE Only, BN Only, Special List

Temperature Indicator included

65 RAMAPO VALLEY ROAD MAHWAH, NJ 07430 201-512-3292 FAX 201-512-3362 435 LAWRENCE BELL DR. AMHERST, NY 14221 716-634-0454 FAX 716-634-9019

RECEIVED BY: Tom Harting Signature, Printed Name, Firm, Date/Time

RELINQUISHED BY: Andrew B. Judd Signature, Printed Name, Firm, Date/Time





**COLUMBIA ANALYTICAL SERVICES, INC.**  
700 Exchange Street, Rochester, New York 14609  
(716) 454-6810 • FAX (716) 454-6825

PROJECT NAME Tenneco Packaging  
PROJECT MANAGER/CONTACT Robert Jackson  
COMPANY/ADDRESS CHAM Hill 99 Cherry Hill Rd  
Ste 304 Parsippany NJ 07054  
TEL (201) 316-9300 FAX (201) 334-5847  
SAMPLER'S SIGNATURE Andrew B. Judd

**CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM**

DATE 10/31/96 PAGE 1 OF 2

SAMPLE I.D.	DATE	TIME	LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GCMS VOAs GCMS SVOAs	PESTICIDES/PCBs GC VOAs	STARS LIST 6021 VOAs TOTAL	STARS LIST 8270 SVOAs TOTAL	WASTE CHARACTERIZATION TCIP METALS VOAs SVOAs H/P	METALS (LIST BELOW) METALS DISSOLVED (LIST BELOW)	ANALYSIS REQUESTED		PH > 12 PH > 20 Other ICF 40c
												GCMS VOAs GCMS SVOAs	PESTICIDES/PCBs GC VOAs	
FB-2	10/31/96	1920		Aqueous	4	X	X							
Temp Blank	10/31/96			Aqueous	1	X	(AS)							
MA-17-2	10/30/96	1520	117653	Soil	1	X								
Temp Blank	10/31/96			Aqueous	2	X								
MA-11	10/31/96	0710		Aqueous	4	X								
MA-11	10/31/96	0715		Soil	3	X								
MA-12	10/31/96	0735		Aqueous	4	X								
MA-12	10/31/96	0745		Soil	3	X								
MA-13	10/31/96	0800		Aqueous	7	X								
MA-13	10/31/96	0810		Soil	3	X								

RECEIVED BY: <u>Andrew B. Judd</u> Signature <u>Andrew B. Judd</u> Printed Name <u>CHAM Hill</u> Firm <u>10/31/96 1300</u> Date/Time	RECEIVED BY: <u>Tom Hastings</u> Signature <u>Tom Hastings</u> Printed Name <u>CHAM Hill</u> Firm <u>10/31/96 15:30</u> Date/Time
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RELINQUISHED BY: <u>Andrew B. Judd</u> Signature <u>Andrew B. Judd</u> Printed Name <u>CHAM Hill</u> Firm <u>10/31/96 1300</u> Date/Time	RELINQUISHED BY: <u>Tom Hastings</u> Signature <u>Tom Hastings</u> Printed Name <u>CHAM Hill</u> Firm <u>10/31/96 15:30</u> Date/Time
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TURNAROUND REQUIREMENTS 24 hr. — 48 hr. — 5 day Standard (10-15 working days) Provide Verbal Preliminary Results Provide FAX Preliminary Results Requested Report Date	REPORT REQUIREMENTS 1. Routine Report 2. Routine Rep. w/CASE Narrative 3. EPA Level III 4. N.J. Reduced Deliverables Level IV 5. NY ASP/CLP Deliverables 6. Site specific OC	INVOICE INFORMATION: PO #: BIL To: Shipping Via: Shipping #: Temperature: Submission No: <u>10-162</u>
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SPECIAL INSTRUCTIONS/COMMENTS:  
METALS As, Ba, Cd, Cr, Pb, Hg, Se, Ag  
ORGANICS:  TCCL  PPL  JAE Only  BBN Only  Special List  
Temperature Indicator Included

