UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
726 MINNESOTA AVENUE
KANSAS CITY, KANSAS 66101

OVERSIGHT SAMPLING PLAN
FOR ACTIVITIES AT THE UNITED TECHNOLOGIES FACILITY
KEOKUK, IOWA
EPA ID # IAD984589085

Approvals:

Brian G. Mitchell 1/30/95
Environmental Engineer/EPA Region VII Work Assignment Manager
Brian Mitchell

EPA Region VII Quality Assurance Manager
Jeffrey A. Wandtke

R00106206
RCRA RECORDS CENTER

RECYCLE
PAPER CONTAINS RECYCLED FIBERS

Representatives of United Technologies will be collecting soil samples during the week of 2-6-95 and groundwater samples during the week of 2-16-95 as part of a RCRA Facility Investigation (RFI). Such samples will be analyzed by representatives of United Technologies. In order to verify the validity of the sampling results obtained by United Technologies' representatives, representatives of EPA will be collecting split/oversight samples. The split/oversight samples will be provided to representatives of EPA by representatives of United Technologies. These split/oversight samples will be delivered by representatives of EPA to the EPA Region VII Lab for in-house analysis or assignment to a contractor laboratory for analysis. United Technologies RFI Work Plan has already been approved by EPA.

Attachment I describes the parameters and analytical requirements for the split/oversight sampling activities and other pertinent information. Sample containerization, labeling, and preservation procedures, for split/oversight samples, will be conducted pursuant to EPA Region VII Standard Operating Procedures (SOPs) numbers 2130.3A, 2130.4A, and 2130.5A while the Chain-Of-Custody and sample transport procedures will be conducted per SOP number 2130.2A.

The analytical methods, laboratory quality control, and data validation will follow the approved operating procedures of the assigned laboratory.

A completed Analytical Services Request Form is attached, Attachment II. A completed Sampling Supplies Request Form is also attached, Attachment III.

Attachments

ATTACHMENT I

Sample Location	# Of Samples	Matrix Type	Constituents	Analytical Method	Container Per Sample	Preser-vatives	Holding Times
Soil Samples	3 [2 samples & 1 dupli-cate]	Soil/ Solid	Report on all constituents listed in analytical method	SW-846 8270	8 oz. glass jar	Cool to 4°C	14 days
				SW-846 8080	8 oz. glass jar	Cool to 4°C	14 days
Water Samples	3 [2 samples & 1 dupli-cate & 1 trip blank for vola-tiles]	Liquid	Report on all constituents listed in analytical method	SW-846 8260	2 40 ml glass vials & carbon thimble & 1 liter plastic cubitainer	2 ml of HCl & cool to 4°C	14 days
				SW-846 6010	1 liter cubitainer	5 ml of HNO & cool to 4°C	14 days

ATTACHMENT [illegible] pg 1 of 4

USEPA Region VII Analytical Services Request (ASR) Form

Activity No.: _____ Date: 1-30-95
Site Name, City, & State: UTAS, Keokuk, Iowa
EPA Project Manager: Brian Mitchell
Section/Branch: Iowa/RCRA Phone No.: 913-551-7633
Contractor Contact: Jim Caldwell
Contractor: USGS Phone No.: 319-358-3622
Projected Sample Delivery Date: ≈2-9-95 for soil samples & ≈2-19-95 for H_2O samples
Funding Program Element: _____

Request Summary:

	No. of Samples	Matrix	Group/Parameter Name	Group/Parameter MGP Code
(2 & 1 dup)	3	soil	SW-846 8270 (semivolatiles) BGM	SS
			SW-846 8080 (PCBs)	SP
(2 & 1 dup)	3	liquid	SW-846 6010 (metals)	WM
			SW-846 8260 (volatiles)	~~WV~~ BGM WU
(Trip blank)	1	liquid	SW-846 8260 (volatiles)	~~WV~~ BGM WU

Use additional pages as needed for clarity.

Levels Of Interest Are ~~Specified (mark one): In The QA Document~~ - ☐ ~~Or On The Back~~ - ☐ in the following pages

Special Requirements or Comments:

NOTE: Submit This Form To RQAM/ENSV 30 Days Before Sample Delivery

Approvals:

Brian G. Mitchell 1/30/95
EPA Project Manager (Date)

~~EPA Branch or Section Chief (Date)~~

The Following Is Completed By ENSV Personnel ONLY

QA Document: ☐-Generic QAPP ☐-Site Specific QAPP ☐-Other: _____

Concurrences:

RQAM: _____ Comment: _____

Chief, LABO: _____ Comment: _____

Laboratory Assignment:

☐-Region VII _____
☐-ESAT _____
☐-CLP _____
☐-RECAP _____
☐-Other _____

Scheduled Completion:

☐-Routine:
- Non-CLP = 4 weeks
- CLP = 8 weeks

☐-Other: _____
Date: _____

Distribution:

■ EPA Project Manager
■ Chief, LABO/ENSV
☐ Chief, GNAN/LABO
☐ Chief, ORGN/LABO
■ Chief, CLPM/LABO
■ Data Coordinator
■ RSCC
☐ Other: _____

(Revised February 1993)

ATTACHMENT II

Volatiles	CAS Number	Ground water ug/L	Low Soil/Sediment ug/Kg
1. Chloromethane	74-87-3	10	10
2. Bromomethane	74-83-9	10	10
3. Vinyl Chloride	75-01-4	10	10
4. Chloroethane	75-00-3	10	10
5. Methylene Chloride	75-09-2	5	5
6. Acetone	67-64-1	100	100
7. Carbon Disulfide	75-15-0	5	5
8. 1,1-Dichloroethene	75-35-4	5	5
9. 1,1-Dichloroethane	75-35-3	5	5
10. trans-1,2-Dichloroethene	156-60-5	5	5
11. Chloroform	67-66-3	5	5
12. 1,2-Dichloroethane	107-06-2	5	5
13. 2-Butanone	78-93-3	100	100
14. 1,1,1-Trichloroethane	71-55-6	5	5
15. Carbon Tetrachloride	56-23-5	5	5
16. Vinyl Acetate	108-05-4	50	50
17. Bromodichloromethane	75-27-4	5	5
18. 1,1,2,2-Tetrachloroethane	79-34-5	5	5
19. 1,2-Dichloropropane	78-87-5	5	5
20. trans-1,3-Dichloropropene	10061-02-6	5	5
21. Trichloroethene	79-01-6	5	5
22. Dibromochloromethane	124-48-1	5	5
23. 1,1,2-Trichloroethane	79-00-5	5	5
24. Benzene	71-43-2	5	5
25. cis-1,3-Dichloropropene	10061-01-5	5	5
26. 2-Chloroethyl Vinyl Ether	110-75-8	10	10
27. Bromoform	75-25-2	5	5
28. 2-Hexanone	591-78-6	50	50
29. 4-Methyl-2-pentanone	108-10-1	50	50
30. Tetrachloroethene	127-18-4	5	5
31. Toluene	108-88-3	5	5
32. Chlorobenzene	108-90-7	5	5
33. Ethyl Benzene	100-41-4	5	5
34. Styrene	100-42-5	5	5
35. Total Xylenes		5	5

Semivolatiles	CAS Number	Ground Water ug/L	Low Soil/Sediment[1] ug/Kg
2-Chloronaphthalene	91-58-7	10	660
2-Nitroaniline	88-74-4	50	3300
Dimethyl phthalate	131-11-3	10	660
Acenaphthylene	208-96-8	10	660
3-Nitroaniline	99-09-2	50	3300
Acenaphthene	83-32-9	10	660
2,4-Dinitrophenol	51-28-5	50	3300
4-Nitrophenol	100-02-7	50	3300
Dibenzofuran	132-64-9	10	660
2,4-Dinitrotoluene	121-14-2	10	660
2,6-Dinitrotoluene	606-20-2	10	660
Diethylphthalate	84-66-2	10	660
4-Chlorophenyl phenyl ether	7005-72-3	10	660
Fluorene	86-73-7	10	660
4-Nitroaniline	100-01-6	50	3300
4,6-Dinitro-2-methylphenol	534-52-1	50	3300
N-Nitrosodiphenylamine	86-30-6	10	660
4-Bromophenyl phenyl ether	101-55-3	10	660
Hexachlorobenzene	118-74-1	10	660
Pentachlorophenol	87-86-5	50	3300
Phenanthrene	85-01-8	10	660
Anthracene	120-12-7	10	660
Di-n-butylphthalate	84-74-2	10	660
Fluoranthene	206-44-0	10	660
Pyrene	129-00-0	10	660
Butyl benzyl phthalate	85-68-7	10	660
3,3'-Dichlorobenzidine	91-94-1	20	1300
Benzo(a)anthracene	56-55-3	10	660
bis(2-ethylhexyl)phthalate	117-81-7	10	660
Chrysene	218-01-9	10	660
Di-n-octyl phthalate	117-84-0	10	660
Benzo(b)fluoranthene	205-99-2	10	660
Benzo(k)fluoranthene	207-08-9	10	660
Benzo(a)pyrene	50-32-8	10	660
Indeno(1,2,3-cd)pyrene	193-39-5	10	660
Dibenz(a,h)anthracene	53-70-3	10	660
Benzo(g,h,i)perylene	191-24-2	10	660

metals

Element	Wavelength[a] (nm)	Estimated Detection Limit[b] (ug/L)
Aluminum	308.215	45
Antimony	206.833	32
Arsenic	193.696	53
Barium	455.403	2
Beryllium	313.042	0.3
Boron	249.773	5
Cadmium	226.502	4*
Calcium	317.933	10
Chromium	267.716	7*
Cobalt	228.616	7
Copper	324.754	6
Iron	259.940	7
Lead	220.353	42*
Magnesium	279.079	30
Manganese	257.610	2
Molybdenum	202.030	8
Nickel	231.604	15
Potassium	766.491	See note c
Selenium	196.026	75
Silicon	288.158	58
Silver	328.068	7
Sodium	588.995	29
Thallium	190.864	40
Vanadium	292.402	8
Zinc	213.856	2

PCBs

PCB	1016	~~2ug/L~~ BGM	soil 2 mg/Kg
"	1221		"
"	1232		"
"	1242		"
"	1248		"
"	1254		"
"	1260		"

ATTACHMENT III

USEPA Region VII Sampling Supplies Request (SSR) Form

Activity No.: _____ Site Name: UTAS

Contact Name: Brian Mitchell Telephone No.: 913-551-7633

Date Equipment to be Picked Up: 2-6-95

Item Description	Amount Needed
Sample Containers:	
4-oz. (100 ml) Plastic Bottle	
1-Liter Plastic Cubitainer	4
4-Liter Plastic Cubitainer	
8-Liter Plastic Cubitainer	
20-Liter Plastic Cubitainer	
40-ml Glass Vials (Routine - 2 ea. in 1-1 cubie with charcoal thimble)	~~4~~ BGM
40-ml Glass Vials (Low DL - 4 ea. in 1-1 cubie with charcoal thimble)	4
8-oz. (250 ml) Wide-Mouth Glass Jar	8
32-oz. (1 Liter) Wide-Mouth Glass Jar	
8-oz. (250 ml) Amber Glass Bottle	
80-oz. (2.5 Liter) Amber Glass Bottle	
4-Liter Amber Glass Bottle	
Sampling Supplies:	
Sampling Spoons	
Aluminum Pans	
1-qt. (1 Liter) Metal Paint Can (with Vermiculite®)	
1-gal. (4 Liter) Metal Paint Can (with Vermiculite®)	
Other: _____	
Other: _____	
Preservatives: (return preservative containers to the laboratory)	
HCl (1:1)	
HNO_3 (1:1)	
H_2SO_4 (Concentrated)	
NaOH (Pellets)	
Other: _____	
Shipping Supplies:	
Large Plastic Bags (ice chest liner)	2
Ice Chests	2
Fiber Tape (by roll)	1
Custody-Seal Tape (by piece, not roll)	6
Chain-Of-Custody Forms	4
Storage Bags for Chain-Of-Custody Forms	3
Packing Foam	
Quality Control Samples:	
Water Trip Blanks (VOA only)	1
Soil Trip Blanks (VOA only)	

Performance Evaluation (PE) Samples:

No. of PE Samples	Matrix	Target Analytes	Desired Concentration Range

(Revised February 1993)