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INSTALLATION RESTORATION PROGRAM
PHASE II - CONFIRMATION/QUANTIFICATION
STAGE 1

FINAL REPORT
FOR
AIR FORCE PLANT 4
FORT WORTH, TEXAS

VOLUME 2. APPENDIX A-1

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HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION
FACILITIES MANAGEMENT DIVISION (ASD/PMDA)
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6503

AND

HEADQUARTERS, AIR FORCE SYSTEMS COMMAND
COMMAND BIOENVIRONMENTAL ENGINEER (AFSC/SGPB)
ANDREWS AIR FORCE BASE, DC 20334-5000

DECEMBER 1987

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NOTICE

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APPENDIX A-1
Groundwater Analytical Data

Methyl ethyl ketone analysis was performed by Radian chromatography laboratory. The results of the analysis are in a memo included in this volume. All other samples for chemical analysis were submitted to Radian Analytical Services Laboratory. The samples were logged in, and the data reported in "batches". Each batch submitted was assigned a RAS work order number. Volume 2, Volume 3, and Volume 4, Appendix A-1 contain the analytical data reports for the various batches of samples. The bulk of data necessitated the results be bound in three volumes. Volume 2, Volume 3, and Volume 4, Appendix A-1 contain Tables A.1-1, A.1-3, and A.1-5, respectively, which are a sequential listing of the reports contained in that volume by batch number and Tables A.1-2, A.1-4, and A.1-6, respectively, which are a sample log and cross-reference table. These tables serve as a sample log and cross-references well numbers, OEHL numbers and the RAS work order numbers under which the results are located.

Pages in Appendix A are numbered by the volume number followed by the page number of that volume. For example, Page 2 001 is the first chemistry data page of Volume 2.

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TABLE A.1-1. INDEX OF ANALYTICAL REPORTS, BY WORK ORDER NUMBER

Volume 2	Volume 3	Volume 4
86-01-239	86-02-067	86-02-169
86-01-240	86-02-070	86-02-176
86-01-242	86-02-075	86-02-179
86-02-001	86-02-078	86-02-197
86-02-004	86-02-079	86-02-198
86-02-015	86-02-087	86-03-002
86-02-016	86-02-091	86-03-003
86-02-019	86-02-100	86-03-004
86-02-030	86-02-109	86-03-018
86-02-031	86-02-113	86-03-021
86-02-038	86-02-120	86-04-069
86-02-041	86-02-122	86-04-070
86-02-044	86-02-123	86-04-084
86-02-047	86-02-132	86-04-085
86-02-058	86-02-138	86-04-135
86-02-060	86-02-139	86-04-164
	86-02-152	86-07-086
	86-02-159	86-07-088
		86-07-095
		86-08-034
		86-08-058
		86-08-078
		86-08-092
		86-08-093
		86-08-094
		86-08-095
		86-08-096

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TABLE A.1-2. GROUNDWATER AND SURFACE WATER SAMPLE LOG AND CROSS-REFERENCE TABLE

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work		
				Order Number	Date Extracted	Date Analyzed
HM-2	860184	2/20/86	Hydrogenated vols. (601)	86-02-138		
			Aromatic vols. (602)	86-02-138		
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86
			B/N & Acid Semi-vols. (625) Metals	86-02-132	2/24/86	3/6/86
HM-5	860152	2/12/86	Hydrogenated vols. (601)	86-02-075		
			Aromatic vols. (602)	86-02-075		
			Pesticides & PCBs (608)	86-02-078	2/13/86	2/27/86
			B/N & Acid Semi-vols. (625) Metals	86-02-078	2/13/86	2/27/86
HM-7	860162	2/13/86	Hydrogenated vols. (601)	86-02-087		
			Aromatic vols. (602)	86-02-087		
			Pesticides & PCBs (608)	86-02-091	2/17/86	3/5/86
			B/N & Acid Semi-vols. (625) Metals	86-02-091	2/17/86	3/5/86
HM-8	860161	2/13/86	Hydrocarbon Fuels	86-02-087		
			Hydrogenated vols. (601)	86-02-197		
			Aromatic vols. (602)	86-02-197		
			Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86
HM-9	860206	2/27/86	B/N & Acid Semi-vols. (625) Metals	86-02-198	3/3/86	3/13/86
			Hydrogenated vols. (601)	86-02-197		
			Aromatic vols. (602)	86-02-047		
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86
HM-10	860137	2/7/86	B/N & Acid Semi-vols. (625) Metals	86-02-044	2/10/86	2/25/86
			Hydrogenated vols. (601)	86-02-047		
			Aromatic vols. (602)	86-02-060		
			Pesticides & PCBs (608)	86-02-058	2/12/86	2/26/86
HM-11	860146	2/10/86	B/N & Acid Semi-vols. (625) Metals	86-02-058	2/12/86	2/26/86
			Hydrogenated vols. (601)	86-02-060		
			Aromatic vols. (602)	86-02-100		
			Pesticides & PCBs (608)	86-02-100		
HM-12	860165	2/14/86	B/N & Acid Semi-vols. (625) Metals	86-02-109	2/18/86	3/5/86
			Hydrogenated vols. (601)	86-02-109	2/18/86	3/5/86
			Aromatic vols. (602)	86-02-100		
			Pesticides & PCBs (608)	86-02-100		
HM-13	860178	2/19/86	B/N & Acid Semi-vols. (625) Metals	86-02-120		
			Hydrogenated vols. (601)	86-02-120		
			Aromatic vols. (602)	86-02-120		
			Pesticides & PCBs (608)	86-02-122	2/20/86	3/5/86
HM-14	860177	2/19/86	B/N & Acid Semi-vols. (625) Metals	86-02-122	2/20/86	3/5/86
			Hydrocarbon Fuels	86-02-120		
			Hydrogenated vols. (601)	86-02-120		
			Aromatic vols. (602)	86-02-159		
HM-15	860193	2/25/86	Hydrocarbon Fuels	86-02-120		
			Hydrogenated vols. (601) Aromatic vols. (602)	86-02-159		

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-16	860147	2/11/86	Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067	2/12/86	2/27/86	
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
HM-17	860149	2/11/86	B/N & Acid Semi-vols. (625)	86-02-070			
			Metals	86-02-067			
			Hydrogenated vols. (601)	86-02-067	2/12/86	2/27/86	
HM-18	860150	2/11/86	Aromatic vols. (602)	86-02-067			
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
			B/N & Acid Semi-vols. (625)	86-02-067	2/12/86	2/27/86	
HM-19	860217	3/1/86	Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067	2/12/86	2/27/86	
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
HM-20	860109	1/31/86	B/N & Acid Semi-vols. (625)	86-02-067			
			Metals	86-02-067			
			Hydrogenated vols. (601)	86-03-003	2/3/86	2/12/86	
HM-21	860138	2/7/86	Aromatic vols. (602)	86-03-003			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004	2/3/86	2/12/86	
HM-22	860181	2/20/86	Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001	2/3/86	2/12/86	
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/12/86	
HM-23	860174	2/18/86	B/N & Acid Semi-vols. (625)	86-02-001			
			Metals	86-02-047			
			Halogenated vols. (601)	86-02-047	2/10/86	2/25/86	
HM-24	860176	2/19/86	Aromatic vols. (602)	86-02-044			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/25/86	
HM-25	860148	2/11/86	Hydrogenated vols. (601)	86-02-047			
			Aromatic vols. (602)	86-02-138	2/24/86	3/6/86	
			Pesticides & PCBs (608)	86-02-132	2/24/86	2/6/86	
HM-26	860174	2/18/86	B/N & Acid Semi-vols. (625)	86-02-132			
			Metals	86-02-132			
			Hydrogenated vols. (601)	86-02-113	2/20/86	3/6/86	
HM-27	860176	2/19/86	Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-120	2/20/86	3/6/86	
			Hydrogenated vols. (601)	86-02-120	2/20/86	3/6/86	
HM-28	860176	2/19/86	Aromatic vols. (602)	86-02-122			
			Pesticides & PCBs (608)	86-02-122	2/20/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-122	2/20/86	3/6/86	
HM-29	860148	2/11/86	Hydrogenated vols. (601)	86-02-120			
			Aromatic vols. (602)	86-02-067	2/12/86	2/27/86	
			Pesticides & PCBs (608)	86-02-067	2/12/86	2/27/86	
HM-30	860148	2/11/86	B/N & Acid Semi-vols. (625)	86-02-070			
			Metals	86-02-070			
			Hydrogenated vols. (601)	86-02-070	2/12/86	2/27/86	

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-26	860112	1/31/86	Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86	Duplicate analysis
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/11/86	Duplicate analysis
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86	
			B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	Duplicate analysis
HM-27	860113	1/31/86	Metals	86-02-001			
			Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
			B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-001			
HM-28	860132	2/6/86	Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/24/86	
			B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/24/86	
			Metals	86-02-041			
			Pesticides and PCBs (608)	86-02-038			Duplicate of 860132
HM-29	860189	2/21/86	B/N & Acid Semi-vols. (625)	86-02-152	2/25/86	3/11/86	
			Hydrogenated vols. (601)	86-02-138	2/25/86	3/11/86	
			Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-152			
			B/N & Acid Semi-vols. (625)	86-02-152			
			Metals	86-02-139			
HM-30	860163	2/13/86	Oil and Grease	86-02-139			
			Hydrocarbon Fuels	86-02-139			
			Hydrogenated vols. (601)	86-02-087			
			Aromatic vols. (602)	86-02-087			
			Pesticides & PCBs (608)	86-02-091	2/17/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-091	2/17/86	3/5/86	
HM-31	860166	2/14/86	Metals	86-02-087			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-100			
			Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
			Metals	86-02-100			
HM-32	860164	2/14/86	Oil and Grease	86-02-100			
			Hydrocarbon Fuels	86-02-100			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-109			
			Pesticides & PCBs (608)	86-02-109			
			B/N & Acid Semi-vols. (625)	86-02-109			
HM-33	860207	2/28/86	Metals	86-02-109	2/18/86	3/5/86	
			Hydrogenated vols. (601)	86-02-109	2/18/86	3/5/86	
			Aromatic vols. (602)	86-03-002			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-33	860208	2/28/86	Hydrogenated vols. (601)	86-03-002			Duplicate of 860207
			Aromatic vols. (602)	86-03-002			
			Oil and Grease	86-03-004			
HM-34	860204	2/27/86	Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-02-197			
			Aromatic vols. (602)	86-02-197			
			Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86	
HM-34	860205	2/27/86	B/N & Acid Semi-vols. (625)	86-02-196	3/3/86	3/13/86	
			Metals	86-02-197			
			Hydrogenated vols. (601)	86-02-197			
			Aromatic vols. (602)	86-02-197			
HM-35	860203	2/27/86	Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86	
			B/N & Acid Semi-vols. (625)	86-02-198	3/3/86	3/13/86	
			Metals	86-02-197			
			Hydrogenated vols. (601)	86-02-197			
HM-36	860202	2/27/86	Aromatic vols. (602)	86-02-197			
			Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86	
			B/N & Acid Semi-vols. (625)	86-02-198	3/3/86	3/13/86	
			Metals	86-02-197			
HM-37	860114	1/31/86	Hydrogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/12/86	
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/12/86	
HM-38	860188	2/21/86	Metals	86-02-001			
			Hydrogenated vols. (601)	86-02-138			
			Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-152	2/25/86	3/10/86	
HM-39	860201	2/27/86	B/N & Acid Semi-vols. (625)	86-02-152	2/25/86	3/10/86	
			Hydrogenated vols. (601)	86-02-197			
			Aromatic vols. (602)	86-02-197			
			Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86	
HM-40	860194	2/25/86	B/N & Acid Semi-vols. (625)	86-02-198	3/3/86	3/13/86	
			Metals	86-02-197			
			Hydrogenated vols. (601)	86-02-159			
			Aromatic vols. (602)	86-02-159			
HM-41	860192	2/25/86	Pesticides & PCBs (608)	86-02-169	2/27/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-169	2/27/86	3/11/86	
			Metals	86-02-159			
			Hydrogenated vols. (601)	86-02-159			
HM-41	860192	2/25/86	Aromatic vols. (602)	86-02-159			
			Pesticides & PCBs (608)	86-02-169	2/27/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-169	2/27/86	3/12/86	
			Metals	86-02-159			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-42	860183	2/20/86	Hydrogenated vols. (601)	86-02-138			
			Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86	
HM-43	860182	2/20/86	B/N & Acid Semi-vols. (625)	86-02-132	2/24/86	3/6/86	
			Metals	86-02-139			
			Hydrogenated vols. (601)	86-02-138			
HM-44	860190	2/25/86	Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-132	2/24/86	3/6/86	
HM-45	860191	2/25/86	Metals	86-02-139			
			Hydrogenated vols. (601)	86-02-159			
			Aromatic vols. (602)	86-02-159			
HM-46	860185	2/20/86	Pesticides & PCBs (608)	86-02-169	2/27/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-169	2/20/86	3/12/86	
			Metals	86-02-159			
HM-47	860130	2/6/86	Hydrogenated vols. (601)	86-02-159			
			Aromatic vols. (602)	86-02-159			
			Pesticides & PCBs (608)	86-02-169	2/27/86	3/12/86	
HM-48	860167	2/14/86	B/N & Acid Semi-vols. (625)	86-02-169	2/27/86	3/12/86	
			Metals	86-02-159			
			Hydrogenated vols. (601)	86-02-138			
HM-49	860156	2/12/86	Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-132	2/24/86	3/6/68	
HM-50	860157	2/12/86	Metals	86-02-139			
			Hydrogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
HM-47	860131	2/6/86	Halogenated vols. (601)	86-02-041			
			Metals	86-02-041			
			Oil and Grease	86-02-041			
HM-47	860131	2/6/86	Hydrocarbon Fuels	86-02-041			
			Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
HM-48	860167	2/14/86	Oil and Grease	86-02-041			
			Hydrocarbon Fuels	86-02-041			
			Hydrogenated vols. (601)	86-02-100			
HM-49	860156	2/12/86	Aromatic vols. (602)	86-02-100			
			Chromium	86-02-100			
			Hydrogenated vols. (601)	86-02-075			
HM-50	860157	2/12/86	Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			
HM-50	860157	2/12/86	Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
HM-50	860157	2/12/86	Hydrocarbon Fuels	86-02-079			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
HM-50	860157	2/12/86	Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			
			Hydrogenated vols. (601)	86-02-075			
HM-50	860157	2/12/86	Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			

Duplicate of 860130

TABLE A.1-2. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work			Comments
				Order Number	Date Extracted	Date Analyzed	
HM-58	860196	2/26/86	Hydrogenated vols. (601)	86-02-176			Duplicate of 860195
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179			
			B/N & Acid Semi-vols. (625)	86-02-179			
			Metals	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-015			
			Aromatic vols. (602)	86-02-015			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
HM-59	860113	2/3/86	B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-015			
			Oil and Grease	86-02-015			
			Hydrocarbon Fuels	86-02-015			
			Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/25/86	
			Metals	86-02-041			
			Oil and Grease	86-02-176			
HM-60	860134	2/6/86	Hydrogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-003			
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Halogenated vols. (601)	86-02-047			
HM-61	860198	2/26/86	Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044			
			B/N & Acid Semi-vols. (625)	86-02-044			
			Metals	86-02-047			
			Hydrogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
HM-62	860216	3/1/86	Pesticides & PCBs (608)	86-02-176			
			B/N & Acid Semi-vols. (625)	86-02-176			
			Metals	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-176			
			B/N & Acid Semi-vols. (625)	86-02-176			
			Metals	86-02-176			
HM-63	860138	2/7/86	Hydrogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-176			
			B/N & Acid Semi-vols. (625)	86-02-176			
			Metals	86-02-176			
			Oil and Grease	86-02-176			
HM-64	860197	2/26/86	Hydrogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-176			
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179	2/28/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-179	2/28/86	3/12/86	
			Metals	86-02-176			
			Oil and Grease	86-02-176			
HM-65	860158	2/12/86	Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			
			Halogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Pesticides & PCBs (608)	86-02-075			
			B/N & Acid Semi-vols. (625)	86-02-075			
			Metals	86-02-075			
			Oil and Grease	86-02-075			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-66	860159	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-087			
				86-02-087			
HM-68	860209	2/28/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-087			
				86-03-002			
				86-03-018	3/6/86	3/24/86	
				86-03-018	3/6/86	3/24/86	
				86-03-004			
				86-03-004			
HM-69	860187	2/21/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-03-004			
				86-02-138			
				86-02-138			
				86-02-139			
HM-70	860179	2/19/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-139			
				86-02-139			
				86-02-120			
				86-02-120			
HM-70	860180	2/19/86	Oil and Grease Hydrocarbon Fuels Purgeables (624) Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-120			
				86-02-120			
				86-02-120			
				86-02-120			
				86-02-120			
				86-02-120			
HM-71	860116	2/3/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-120			
				86-02-120			
				86-02-120			
				86-02-015			
				86-02-016	2/4/86	2/14/86	
				86-02-016	2/4/86	2/14/86	
HM-72	860168	2/14/86	Oil and Grease Hydrocarbon Fuels	86-02-015			
				86-02-015			
HM-73	860199	2/26/86	Oil and Grease Methyl ethyl ketone	86-02-100			
				86-02-100			
HM-74	860129	2/5/86	Oil and Grease Methyl ethyl ketone	9/8/86 memo			
				86-02-176			
HM-75	860173	2/18/86	Oil and Grease Methyl ethyl ketone	9/8/86 memo			
				86-02-031			
				86-02-031			
				9/8/86 memo			
				86-02-113			
				86-02-113			
				9/8/86 memo			

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TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-76	860160	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602)	86-02-087			
				86-02-087			
HM-77	860135	2/6/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-087			
				86-02-041			
				86-02-038			
				86-02-038			
				86-02-041			
HM-78	860127	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-100			
				86-02-100			
				86-02-031			
				86-02-031			
				86-02-031			
HM-79	860117	2/3/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015			
				86-02-015			
				86-02-016			
				86-02-016			
				86-02-015			
HM-80	860128	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015			
				86-02-015			
				86-02-031			
				86-02-031			
				86-02-031			
HM-81	860140	2/7/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047			
				86-02-047			
				86-02-044			
				86-02-044			
				86-02-047			
HM-82	860121	2/4/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047			
				86-02-047			
				86-02-019			
				86-02-019			
				86-02-030			
HM-83	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-019			
				86-02-019			
				86-08-093			
				86-08-093			
				86-08-034			
			Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-08-095			
				86-08-095			
				86-08-095			
				86-08-096			
				86-08-096			
			Alpha Beta Gamma	86-08-096			
				86-08-096			
				86-08-096			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work		Comments
				Order Number	Date Analyzed	
HM-84	860261	8/21/86	Hydrogenated vols. (601)	86-08-093		
			Aromatic vols. (602)	86-08-093		
			Pesticides & PCBs (608)	86-08-034		
			B/N & Acid Semi-vols. (625)	86-08-034		
			Metals	86-08-095		
			Oil and Grease	86-08-095		
			Hydrocarbon Fuels	86-08-096		
			Alpha	86-08-096		
			Beta	86-08-096		
			Gamma	86-08-096		
			Hydrogenated vols. (601)	86-08-093		
			Aromatic vols. (602)	86-08-093		
HM-85	860259	8/21/86	Pesticides & PCBs (608)	86-08-034		
			B/N & Acid Semi-vols. (625)	86-08-034		
			Metals	86-08-095		
			Oil and Grease	86-08-095		
			Hydrocarbon Fuels	86-08-096		
			Alpha	86-08-096		
			Beta	86-08-096		
			Gamma	86-08-096		
			Pesticides & PCBs (608)	86-08-034		
			B/N & Acid Semi-vols. (625)	86-08-034		
			Metals	86-08-095		
			Alpha	86-08-096		
Beta	86-08-096					
Gamma	86-08-096					
HM-85	860260	8/21/86	Pesticides & PCBs (608)	86-08-034		
			B/N & Acid Semi-vols. (625)	86-08-034		
			Metals	86-08-095		
			Alpha	86-08-096		
			Beta	86-08-096		
			Gamma	86-08-096		
			Pesticides & PCBs (608)	86-08-034		
			B/N & Acid Semi-vols. (625)	86-08-034		
			Metals	86-08-095		
			Alpha	86-08-096		
			Beta	86-08-096		
			Gamma	86-08-096		
HM-100	860226	4/11/86	Hydrocarbon Fuels	86-04-084		
			Hydrogenated vols. (601)	86-04-164		
HM-101	860228	4/18/86	Aromatic vols. (602)	86-04-164		
			Pesticides & PCBs (608)	86-04-135		
HM-102	860220	4/9/86	B/N & Acid Semi-vols. (625)	86-04-135	4/23/86	4/28/86
			Metals	86-04-164	4/23/86	4/28/86
HM-103	860224	4/10/86	Hydrogenated vols. (601)	86-04-069		
			Aromatic vols. (602)	86-04-069		
HM-103	860224	4/10/86	Oil and Grease	86-04-069		
			Hydrocarbon Fuels	86-04-069		
HM-103	860224	4/10/86	Hydrogenated vols. (601)	86-04-084		
			Aromatic vols. (602)	86-04-084		
			Chromium	86-04-084		

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(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments	
HM-104	860222	4/10/86	Hydrogenated vols. (601)	86-04-084				
			Aromatic vols. (602)	86-04-084				
			Metals	86-04-084				
			Oil and Grease	86-04-084				
HM-105	860230	8/19/86	Hydrocarbon Fuels	86-04-084				
			Oil and Grease	86-08-078				
HM-107	860229	4/19/86	Hydrocarbon Fuels	86-08-078				
HM-108	860256	8/20/86	Hydrocarbon Fuels	86-08-078				
P-1	860126	2/6/86	Oil and Grease	86-08-094				
			Hydrocarbon Fuels	86-08-094				
			Halogenated vols. (601)	86-02-041				
			Aromatic vols. (602)	86-02-041				
			Pesticides & PCBs (608)	86-02-038				
			B/N & Acid Semi-vols. (625)	86-02-038				
			Metals	86-02-041				
			Hydrogenated vols. (601)	86-02-120	2/10/86	2/24/86		
			Aromatic vols. (602)	86-02-120		2/24/86		
			Pesticides & PCBs (608)	86-02-122	2/20/86	3/6/86		
P-2	860175	2/19/86	B/N & Acid Semi-vols. (625)	86-02-122	2/20/86	3/6/86		
			Metals	86-02-120				
			Hydrogenated vols. (601)	86-02-120				
			Aromatic vols. (602)	86-02-120				
			Pesticides & PCBs (608)	86-02-122				
			B/N & Acid Semi-vols. (625)	86-02-122				
			Metals	86-02-120				
			Hydrogenated vols. (601)	86-02-019	2/4/86	2/16/86		
			Aromatic vols. (602)	86-02-019		2/16/86		
			Pesticides & PCBs (608)	86-02-030	2/6/86	2/16/86		
P-3	860123	2/4/86	B/N & Acid Semi-vols. (625)	86-02-019	2/6/86	2/16/86		
			Oil and Grease	86-02-019				
			Hydrocarbon Fuels	86-02-019				
			Halogenated vols. (601)	86-01-239				
			Aromatic vols. (602)	86-01-239				
			Pesticides & PCBs (608)	86-01-242				
			B/N & Acid Semi-vols. (625)	86-01-242				
			Metals	86-02-001	1/31/86	2/11/86		
			Hydrogenated vols. (601)	86-02-001	1/31/86	2/11/86		
			Aromatic vols. (602)	86-02-004	2/3/86	2/11/86		
P-4	860108	1/30/86	Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86		
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86		
			Metals	86-02-001				
			Oil and Grease	86-02-001				
			Hydrocarbon Fuels	86-02-001				
			Halogenated vols. (601)	86-02-001				
			Aromatic vols. (602)	86-02-001				
			Pesticides & PCBs (608)	86-02-004				
			B/N & Acid Semi-vols. (625)	86-02-004				
			Metals	86-02-001				
P-5u	860111	1/31/86	Oil and Grease	86-02-001				
			Hydrocarbon Fuels	86-02-001				
			Halogenated vols. (601)	86-02-001				
			Aromatic vols. (602)	86-02-001				
			Pesticides & PCBs (608)	86-02-001				
			B/N & Acid Semi-vols. (625)	86-02-001				
			Metals	86-02-001				
			Hydrogenated vols. (601)	86-02-001	2/3/86	2/11/86		
			Aromatic vols. (602)	86-02-001	2/3/86	2/11/86		
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86		
P-5m	860110	1/31/86	B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86		
			Metals	86-02-001				
			Oil and Grease	86-02-001				
			Hydrocarbon Fuels	86-02-001				
			Halogenated vols. (601)	86-02-001				
			Aromatic vols. (602)	86-02-001				
			Pesticides & PCBs (608)	86-02-004				
			B/N & Acid Semi-vols. (625)	86-02-004				
			Metals	86-02-001				
			Oil and Grease	86-02-001				
P6u	860122	2/5/86	Hydrocarbon Fuels	86-02-001				
			Hydrocarbon Fuels	86-02-001				
			Hydrocarbon Fuels	86-02-123				
			Oil and Grease	86-02-031				

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-6m	860118	2/4/86	Hydrocarbon Fuels Oil and Grease	86-02-123			
				86-02-019			
P-7u	860104	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239	1/31/86	2/11/86	
				86-01-242	1/31/86	2/11/86	
				86-01-240			
				86-01-239			
				86-01-239			
P-7m	860103	1/30/86	Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-242	1/31/86	2/7/86	
				86-01-242	1/31/86	2/7/86	
				86-01-240			
				86-02-047			
				86-02-047			
P-8u	860136	2/7/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047	2/10/86	2/25/86	
				86-02-044	2/10/86	2/24/86	
				86-02-044			
				86-02-047			
				86-02-047			
P-8m	860120	2/4/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047			
				86-02-047			
				86-02-019			
				86-02-019			
				86-02-019			
P-9u	860125	2/5/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-030	2/6/86	2/16/86	
				86-02-030	2/6/86	2/16/86	
				86-02-019			
				86-02-019			
				86-02-019			
P-9m	860124	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031			
				86-02-031			
				86-02-031			
				86-02-031			
				86-02-031			
P-10u	860169	2/14/86	Oil and Grease Hydrocarbon Fuels Metals Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031	2/24/86	3/6/86	
				86-02-031	2/24/86	3/6/86	
				86-01-240			
				86-02-113			
				86-02-113			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-10u	860172	2/18/86	Hydrogenated vols. (601)	86-02-113			Duplicate of 860169
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/20/86	3/7/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/20/86	3/7/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/4/86	
P-10m	860170	2/18/86	B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
P-10m	860171	2/18/86	Hydrocarbon Fuels	86-02-113			Duplicate of 860170
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-03-002			
P-11u	860210	2/28/86	Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
P-11m	860212	2/28/86	Oil and Grease	86-03-004			Duplicate of 860212
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
P-11m	860211	2/28/86	Aromatic vols. (602)	86-03-002			Duplicate of 860212
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
P-12u	860213	3/1/86	Metals	86-03-004			Duplicate of 860212
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-003			
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-12m	860214	3/1/86	Hydrogenated vols. (601)	86-03-003	3/5/86	3/24/86	
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021			
			B/N & Acid Semi-vols. (625)	86-03-021			
			Metals	86-03-004			
P-12m	860215	3/1/86	Oil and Grease	86-03-004	3/5/86	3/24/86	Duplicate of 860214
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-003			
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021			
P-20m	860218	4/9/86	B/N & Acid Semi-vols. (625)	86-03-021	4/10/86	4/23/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-04-069			
P-20m	860219	4/9/86	Aromatic vols. (602)	86-04-069	4/10/86	4/23/86	Duplicate of 860218
			Pesticides & PCBs (608)	86-04-070			
			B/N & Acid Semi-vols. (625)	86-04-070			
			Metals	86-04-069			
			Hydrogenated vols. (601)	86-04-069			
P-21u	860221	4/10/86	Aromatic vols. (602)	86-04-069	4/10/86	4/23/86	
			Pesticides & PCBs (608)	86-04-070			
			B/N & Acid Semi-vols. (625)	86-04-070			
			Metals	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
P-22u	860223	4/10/86	Aromatic vols. (602)	86-04-084	4/14/86	4/24/86	
			Pesticides & PCBs (608)	86-04-085			
			B/N & Acid Semi-vols. (625)	86-04-085			
			Metals	86-04-084			
			Hydrogenated vols. (601)	86-04-084			
P-23u	860225	4/8/86	Aromatic vols. (602)	86-04-084	4/14/86	4/22/86	
			Pesticides & PCBs (608)	86-04-085			
			B/N & Acid Semi-vols. (625)	86-04-085			
			Metals	86-04-084			
			Hydrogenated vols. (601)	86-04-164			
P-23u	860257	8/21/86	Aromatic vols. (602)	86-04-164	4/23/86	4/28/86	
			Pesticides & PCBs (608)	86-04-135			
			B/N & Acid Semi-vols. (625)	86-04-135			
			Metals	86-04-164			
			Hydrogenated vols. (601)	86-08-093			
C-1	860100	1/29/86	Aromatic vols. (602)	86-08-093	1/31/86	2/7/86	
			Pesticides & PCBs (608)	86-08-034			
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Halogenated vols. (601)	86-01-239			
C-1	860100	1/29/86	Aromatic vols. (602)	86-01-239	1/31/86	2/7/86	
			Pesticides & PCBs (608)	86-01-242			
			B/N & Acid Semi-vols. (625)	86-01-242			
			Metals	86-01-240			
			Halogenated vols. (601)	86-01-240			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
C-2	860102	1/29/86	Halogenated vols. (601)	86-01-239	1/31/86	2/7/86	
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242			
			B/N & Acid Semi-vols. (625)	86-01-242			
C-3	860105	1/30/86	Metals	86-01-240	1/31/86	2/11/86	
			Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242			
C-4	860107	1/30/86	B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/11/86	
			Metals	86-01-240			
			Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
C-5	860101	1/29/86	Pesticides & PCBs (608)	86-01-242	1/31/86	2/7/86	
			B/N & Acid Semi-vols. (625)	86-01-242			
			Metals	86-01-240			
			Halogenated vols. (601)	86-01-239			
Creek Seep	860106	1/30/86	Aromatic vols. (602)	86-01-239	1/31/86	2/7/86	
			Pesticides & PCBs (608)	86-01-242			
			B/N & Acid Semi-vols. (625)	86-01-242			
			Metals	86-01-240			
Drain Pipe	860153	2/12/86	Halogenated vols. (601)	86-01-239	2/13/86	2/27/86	
			Aromatic vols. (602)	86-02-075			
			Pesticides & PCBs (608)	86-02-075			
			B/N & Acid Semi-vols. (625)	86-02-078			
French Drain 1	860154	2/12/86	Metals	86-02-079	2/13/86	2/27/86	
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Pesticides & PCBs (608)	86-02-078			
French Drain 2	860155	2/12/86	B/N & Acid Semi-vols. (625)	86-02-078	2/13/86	2/28/86	
			Metals	86-02-079			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
Outfall #1	860246	8/20/86	Pesticides & PCBs (608)	86-02-078	2/13/86	2/28/86	(1030)
			B/N & Acid Semi-vols. (625)	86-02-078			
			Metals	86-02-079			
			Hydrogenated vols. (601)	86-08-092			
Outfall #1	860247	8/20/86	Aromatic vols. (602)	86-08-092	2/13/86	2/28/86	(1130)
			Oil and Grease	86-08-094			
			Hydrocarbon Fuels	86-08-094			
			Hydrogenated vols. (601)	86-08-092			
			Aromatic vols. (602)	86-08-092			
			Oil and Grease	86-08-094			
			Hydrocarbon Fuels	86-08-094			
			Hydrogenated vols. (601)	86-08-092			
			Aromatic vols. (602)	86-08-092			
			Oil and Grease	86-08-094			
			Hydrocarbon Fuels	86-08-094			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
Outfall #1	860248	8/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-092		(1230)	
Outfall #1	860249	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		(1330)	
Outfall #1	860250	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094			
Outfall #1	860251	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		(1530)	
Outfall #1	860252	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		(1630)	
Outfall #1	860253	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		(1730)	
Outfall #1	860254	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		Composite (1030-1730)	
Outfall #1	860255	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094		(1730) Duplicate of 860254	
Outfall #5	860237	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(0930)	
Outfall #5	860238	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(Composite 0930-0530)	
Outfall #5	860239	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1130)	
Outfall #5	860240	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1230)	
Outfall #5	860241	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1330)	
Outfall #5	860242	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1430)	
Outfall #5	860243	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1530)	
Outfall #5	860244	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1630)	
Outfall #5	860245	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094		(1730)	

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LAB # 86-01-239

REPORT Radian
TO Bl 4
Austin
ATTEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P. O. Box 9948
Austin, Texas 78766
ATTEN
PHONE (512) 454-4797

Carl Swart
CERTIFIED BY
CONTACT CONDOVER

WORK ID site 1, landfill 1 (VOC)
TAKEN NR
TRANS Fed Ex
TYPE
P. O. # 212-027-27-
INVOICE under separate cover

**Unknown compound eluting here.
Second column confirmation performed for EPA 601 on -06A and -09A.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

- 01 860100
- 02 860102
- 03 860105
- 04 860107
- 05 860101
- 06 860108
- 07 860103
- 08 860104
- 09 860106

Analytical Serv TEST CODES and NAMES used on this report

- GC 601 EPA Method 601/GC
- GC 602 EPA Method 602/GC

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-239

SAMPLE ID 860100

FRACTION O1A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/29/86

Category _____

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ MCL _____ VERIFIED BY MCL _____
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			



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Analytical Serv REPORT
Results by Sample

LAB # 86-01-239
Continued From Above

SAMPLE ID 860100

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/29/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 4 RECEIVED: 01/31/86 Analytical Serv REPORT LAB # 86-01-239 Results by Sample

SAMPLE ID 860100 FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC Date & Time Collected 01/29/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST MCL VERIFIED BY MCL
CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 5 Analytical Serv REPORT LAB # 86-01-239
 RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860102 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 01/29/86 Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ MCL VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	3	Trichloroethene	0.25
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
1	Methylene Chloride	1.57	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	4	Tetrachloroethylene #	0.07
2	trans-1, 2-Dichloroethene	7.11	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1, 2-Dichloropropane	ND	_____		
_____	trans-1, 3-Dichloropropene	ND	_____		

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CORPORATION

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Analytical Serv REPORT LAB # 86-01-239
Results by Sample Continued From Above

SAMPLE ID 860102 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/29/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 7 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860102 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/29/86 Category

DATA FILE _____ D DATE INJECTED 02/03/86 ANALYST _____ MCL VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 8 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860105 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	0.73
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	5.84	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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RECEIVED: 01/31/86 Results by Sample Continued From Above
SAMPLE ID 860105 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 10 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860105 FRACTION Q3C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/30/86 Category

DATA FILE _____ D DATE INJECTED 02/03/86 ANALYST _____ MCL _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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REPORT

LAB # 86-01-239

Results by Sample

SAMPLE ID 860107

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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SAMPLE ID 860107

Analytical Serv REPORT
Results by Sample

LAB # 86-01-239
Continued From Above

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 13 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860107 FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/30/86 Category

DATA FILE _____ D DATE INJECTED 02/03/86 ANALYST _____ MCL _____ VERIFIED BY MCL _____
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

RECEIVED: 01/31/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-01-239

SAMPLE ID 860101

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/29/86

Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-239

Continued From Above

SAMPLE ID 860101

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/29/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 16 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 860101 FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/29/86 Category

DATA FILE _____ D DATE INJECTED 02/03/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

LAB # 86-01-239

SAMPLE ID 860108

FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86

Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	328**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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RECEIVED: 01/31/86 Results by Sample Continued From Above

SAMPLE ID 860108 FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

RECEIVED: 01/31/86

Analytical Serv

REPORT

LAB # 86-01-239

Results by Sample

SAMPLE ID 860108

FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/30/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-239

SAMPLE ID 860103 FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category _____

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP VERIFIED BY MCL
CONC FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>ND</u>	<u>3</u>	Trichloroethene	<u>0.13</u>
_____	Bromomethane	<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride	<u>ND</u>	_____	1,1,2-Trichloroethane *	<u>ND</u>
_____	Chloroethane	<u>ND</u>	_____	cis-1,3-Dichloropropene *	<u>ND</u>
<u>1</u>	Methylene Chloride	<u>6.70</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
_____	Trichlorofluoromethane	<u>ND</u>	_____	Bromoform	<u>ND</u>
_____	1,1-Dichloroethene	<u>ND</u>	_____	1,1,2,2-Tetrachloroethane #	<u>ND</u>
_____	1,1-Dichloroethane	<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
<u>2</u>	trans-1,2-Dichloroethene	<u>3.16</u>	_____	Chlorobenzene	<u>ND</u>
_____	Chloroform	<u>ND</u>	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	1,2-Dichloroethane	<u>ND</u>	_____	1,2-Dichlorobenzene	<u>ND</u>
_____	1,1,1-Trichloroethane	<u>ND</u>	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride	<u>ND</u>	_____		
_____	Bromodichloromethane	<u>ND</u>	_____		
_____	1,2-Dichloropropane	<u>ND</u>	_____		
_____	trans-1,3-Dichloropropene	<u>ND</u>	_____		



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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-239

Continued From Above

SAMPLE ID 860103

FRACTION 07A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-01-239

Results by Sample

SAMPLE ID 860103

FRACTION 07C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 01/30/86

Category

DATA FILE _____ D _____ DATE INJECTED 02/03/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-239

SAMPLE ID 860104

FRACTION OBA TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category

DATA FILE _____ G DATE INJECTED 01/31/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
1	Trichlorofluoromethane	0.64	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1, 2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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Analytical Serv
Results by Sample
LAB # 86-01-239
Continued From Above

SAMPLE ID 860104 FRACTION OBA TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-239

SAMPLE ID 860104

FRACTION 08C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/30/86 Category _____

DATA FILE _____ D _____ DATE INJECTED 02/03/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv REPORT

Results by Sample

LAB # 86-01-239

SAMPLE ID 860106

FRACTION 09A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE _____ G _____ DATE INJECTED 02/03/86

ANALYST _____ RP _____ VERIFIED BY MCL
INSTRUMENT _____ 9 _____ COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	20.0
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	3.07**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

RADIAN
CORPORATION

PAGE 27 Analytical Serv REPORT LAB # 86-01-239
RECEIVED: 01/31/86 Results by Sample Continued From Above
SAMPLE ID 860106 FRACTION 09A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-239

SAMPLE ID 860106

FRACTION 09C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 01/30/86

Category

DATA FILE _____
CONC. FACTOR _____

DATE INJECTED 02/03/86

ANALYST _____
INSTRUMENT _____

VERIFIED BY MCL _____
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
06B	:	DUP601	06D	:	DUP602
07B	:	DUP601	07D	:	DUP602
08B	:	DUP601	08D	:	DUP602
09B	:	DUP601	09D	:	DUP602

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RECEIVED: 01/31/86

Analytical Serv REPORT
03/10/86 12:21:44

LAB # 86-01-240

REPORT Radian
TO BL 4
Austin
ATTEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

ATTEN
PHONE (512) 494-4797

CONTACT CONOVER

[Signature]
CERTIFIED BY

WORK ID site 1, landfill 1 (metals)
TAKEN NR
TRANS Fed Ex
TYPE
P.O. # 212-027-27-40
INV. # 7435

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

② Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

01 860100
02 860102
03 860105
04 860107
05 860101
06 860108
07 860103
08 860104
09 860106

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPES
AS GA Arsenic, low level
BA E Barium, ICPES
CD E Cadmium, ICPES
CR E Chromium, ICPES
DG3020 Digestion by Method 3020
DG6010 Digestion by Method 6010
HG CA Mercury, Cold Vapor
PB GA Lead, low level
SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.012	0.013	0.015	0.004*	0.008*
AS_GA ug/ml	<.005	<.005	<.005	<.005	<.005
BA_E ug/ml	0.053	0.059	0.065	0.035	0.052
CD_E ug/ml	<.002	0.003*	<.002	<.002	<.002
CR_E ug/ml	<.005	0.019*	0.013*	<.005	<.005
DG3020 date complete	02/05/86	02/05/86	02/05/86	02/05/86	02/05/86
DG6010 date complete	02/10/86	02/10/86	02/10/86	02/10/86	02/10/86
HG_CA ug/ml	<.0002	<.0002	<.0002	<.0002	0.0003*
PB_GA ug/ml	<.002	<.002	<.002	<.002	<.002
SE_GA ug/ml	<.003	<.003	<.003	<.003	<.003

TEST CODE	Sample 06 (entered units)	Sample 07 (entered units)	Sample 08 (entered units)	Sample 09 (entered units)
AG_E ug/ml	0.011	0.014	0.017	0.013
AS_GA ug/ml	<.005	<.005	<.005	<.005

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Analytical Serv
RESULTS BY TEST

LAB # 86-01-240
CONTINUED FROM ABOVE

BA_E	0.022	0.068	0.099	0.038
ug/ml				
CD_E	<.002	<.002	<.002	<.002
ug/ml				
CR_E	0.012*	0.010*	0.018*	0.067
ug/ml				
DG3020	02/05/86	02/05/86	02/05/86	02/05/86
date complete				
DG6010	02/10/86	02/10/86	02/10/86	02/10/86
date complete				
HG_CA	<.0002	<.0002	0.0003*	<.0002
ug/ml				
PB_GA	<.002	<.002	0.016	<.002
ug/ml				
SE_GA	<.003	<.003	<.003	<.003
ug/ml				

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REPORT RECEIVED 01/31/85

Analytical Serv
02/21/86 13:31:36

REPORT

LAB # 86-01-242

REPORT Kadian Corporation
TO LARRY FRENCH
AUSTIN, TEXAS

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P O Box 5248
Austin, Texas 78766

CLIENT PLANT 4 SAMPLES 10
COMPANY General Dynamics
FACILITY GENL PLANT 4, Bldg 4
AUSTIN, TEXAS

ATTEN
PHONE (512) 454-4797

CERTIFIED BY

CONTACT FRENCH

WORK ID AC PLANT 4
TAKEN 1/29-30/85
TRANS Fed Ex 321751334, 321751430
TYPE HQ
P O # 612-027-27
INVOICE under separate cover

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

01	321751334	H30
02	321751334	H30
03	321751334	H30
04	321751334	H30
05	321751334	H30
06	321751334	H30
07	321751334	H30
08	321751334	H30
09	321751334	H30
10	321751334	H30
11	321751334	H30
12	321751334	H30
13	321751334	H30
14	321751334	H30
15	321751334	H30
16	321751334	H30
17	321751334	H30
18	321751334	H30
19	321751334	H30
20	321751334	H30
21	321751334	H30
22	321751334	H30
23	321751334	H30
24	321751334	H30
25	321751334	H30
26	321751334	H30
27	321751334	H30
28	321751334	H30
29	321751334	H30
30	321751334	H30

Analytical Serv TEST CODES and NAMES used on this report

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GC/MS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

PAGE 2 Analytical Serv REPORT LAB # 86-01-242
RECEIVED 01/31/85 RESULTS BY TEST

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
(entered units)	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 820	01/31/85	01/31/86	01/31/86	01/31/86	01/31/86
Date complete					

TEST CODE	Sample 06	Sample 07	Sample 08	Sample 09	Sample 10
(entered units)	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 825	01/31/86	01/31/86	01/31/86	01/31/86	01/31/86
Date complete					

ANALYTICAL SERV REPORT LAB # 86-01-242

RECEIVED 01/31/86 Results by Sample

DATE 01/31/86

RESULTS BY SAMPLE

SAMPLE ID 850106 H2O

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 8501242001 DATE EXTRACTED 01/31/86 ANALYST _____ INJL VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/07/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
3A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	37A	2-nitrophenol	ND				

SUBSTRATE RECOVERIES

SCAN	COMPOUND	RESULT
47A	45-phenol	49
48A	46-phenol	49
111A	47-phenol	141
49A	48-phenol	

NOTES: 21A, 22A, 24A, 31A, 34A, 37A, 45-phenol, 46-phenol, 47-phenol, 48-phenol, 49-phenol

SCAN = scan number, retention time on chromatogram

All results reported in _____ by 1 unless otherwise specified

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ANALYTICAL SERV REPORT
RESULTS BY SAMPLE
LAB # 86-01-242
CONTINUED FROM ABOVE
SAMPLE ID 850106 H20
FRACTION 01A TEST CODE M625 A NAME METHOD 625 ACID COMPOUNDS
DATE & TIME COLLECTED 01/30/86 CATEGORY

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank, background subtraction not performed
J = estimated value, less than method detection limit.
CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-01-242

SAMPLE ID 960106 H20

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86

Category

DATA FILE	REQUIRED	DATE EXTRACTED	01/31/86	ANALYST	UWL	VERIFIED BY	LAK
CORR FACTOR	1	DATE INJECTED	05/07/86	INSTRUMENT	F2	COMPOUNDS DETECTED	2
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
49	9B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
49	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
326	9B	hexachlorobenzene	ND	13B	1663	bis(2-ethylhexyl)phthalate	2 3
348	13B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
118	18B	bis(2-chloroethyl)ether	ND	26B	1323	di-butyl phthalate	2 4
158	30B	2-chloronaphthalene	ND	27B	69B	di-n-octyl phthalate	ND
308	35B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
318	36B	1,3-dichlorobenzene	ND	25D	71B	dimethyl phthalate	ND
378	37B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
388	38B	2,3-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
378	35B	1,4-dinitrobenzene	ND	7D	74B	benzo(b)fluoranthene *	ND
388	37B	2,4-dinitrobenzene	ND	9B	75B	benzo(k)fluoranthene *	ND
378	37B	1,2,4-trichlorobenzene	ND	16B	76B	chrysene A	ND
318	25	fluoranthene	ND	2D	77B	acenaphthylene	ND
176	42B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 850105 HED FRACTION OIA TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/85 Category

148	413	4-bromophenyl phenyl ether	ND	6B	79B	benzo(ghi)perylene	ND
158	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
168	428	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
368	548	isophorone	ND	45B	84B	pyrene	ND
378	558	naphthalene	ND				
408	558	nitrobenzene	ND				

SUBSTRATE RECOVERIES

WCAU CODE	RESULT
4001 691	45-nitrobenzene 43
4001 692	2-fluorobiphenyl 44
4001 693	4,4'-terphenyl 52
4001 694	1,1'-biphenyl

Method 625 is a modified EPA method for the determination of polynuclear aromatic hydrocarbons (PAHs) in environmental samples.

Method 625 is a modified EPA method for the determination of polynuclear aromatic hydrocarbons (PAHs) in environmental samples. The method involves the extraction of PAHs from environmental samples using a suitable solvent, followed by cleanup and analysis using a gas chromatograph/mass spectrometer (GC/MS). The results are compared to a library of reference standards to identify the PAHs present in the sample. The method is sensitive and specific, and is suitable for the determination of PAHs in a wide range of environmental samples. The method is also suitable for the determination of PAHs in water, soil, and sediment samples. The method is also suitable for the determination of PAHs in air samples. The method is also suitable for the determination of PAHs in food samples. The method is also suitable for the determination of PAHs in biological samples. The method is also suitable for the determination of PAHs in industrial effluents. The method is also suitable for the determination of PAHs in wastewater. The method is also suitable for the determination of PAHs in sludge. The method is also suitable for the determination of PAHs in ash. The method is also suitable for the determination of PAHs in fly ash. The method is also suitable for the determination of PAHs in bottom ash. The method is also suitable for the determination of PAHs in incinerator emissions. The method is also suitable for the determination of PAHs in stack emissions. The method is also suitable for the determination of PAHs in ambient air. The method is also suitable for the determination of PAHs in indoor air. The method is also suitable for the determination of PAHs in outdoor air. The method is also suitable for the determination of PAHs in water. The method is also suitable for the determination of PAHs in soil. The method is also suitable for the determination of PAHs in sediment. The method is also suitable for the determination of PAHs in food. The method is also suitable for the determination of PAHs in biological samples. The method is also suitable for the determination of PAHs in industrial effluents. The method is also suitable for the determination of PAHs in wastewater. The method is also suitable for the determination of PAHs in sludge. The method is also suitable for the determination of PAHs in ash. The method is also suitable for the determination of PAHs in fly ash. The method is also suitable for the determination of PAHs in bottom ash. The method is also suitable for the determination of PAHs in incinerator emissions. The method is also suitable for the determination of PAHs in stack emissions. The method is also suitable for the determination of PAHs in ambient air. The method is also suitable for the determination of PAHs in indoor air. The method is also suitable for the determination of PAHs in outdoor air.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 850106 H2O

FRACTION O1A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86

Category

d = anthracene and phenanthrene correlate in high concentrations
PL = detected in reagent blank, background subtraction not performed
J = estimated value, less than method detection limit.
DILUT FACTOR indicates dilution of sample if greater than one (1) Minimum detection
Limits should be multiplied by conc factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 860106 HEU

FRACTION VIA

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHRD # 8601243001
SAMPLE SITE 1

DATE ANALYZED 02/11/86

UNITS ug/l

VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCB's detected

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Analytical Serv
Results by Sample

LAB # 86-01-242

SAMPLE ID 950106 H2O

FRACTION O1A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86

Category

DATA FILE 9501242C01 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAW
CORC FACTOR DATE INJECTED 02/07/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	85P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	gamma HCH	ND	24P	112P	PCB-1016	ND
16P	100P	hexachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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SAMPLE ID 850106 H50

Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

LAB # 86-01-242

SAMPLE ID 860100 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

DATA FILE 8601242C02 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/07/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	23A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	481	phenol	2
5A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
403	45-phenol	129
402	2-fluorophenol	249
404	2,4-dinitrophenol	130
401	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860100 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CFAC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-01-242

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Results by Sample

SAMPLE ID 850100 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

NPDES SCAN	EPA	COMPOUND	DATE EXTRACTED	DATE INJECTED	ANALYST	INSTRUMENT	NPDES SCAN	EPA	COMPOUND	RESULT	WJL	VERIFIED BY
			01/31/86	02/07/86		F2						LAK
												COMPOUNDS DETECTED
												2
10	1B	acenaphthene	ND	ND	41B	61B	41B	61B	N-nitrosodimethylamine	ND		ND
40	5B	benzidine	ND	ND	43B	62B	43B	62B	N-nitrosodiphenylamine	ND		ND
450	6B	1,2,4-trichlorobenzene	ND	ND	42B	63B	42B	63B	N-nitrosodi-n-propylamine	ND		ND
230	9B	hexachlorobenzene	ND	ND	13B	1660	13B	1660	bis(2-ethylhexyl)phthalate	5		5
360	10B	hexachloroethane	ND	ND	15B	67B	15B	67B	butyl benzyl phthalate	ND		ND
110	19B	bis(2-chloroethyl)ether	ND	ND	26B	1321	26B	1321	di-butyl phthalate	4		4
160	20B	2-chloronaphthalene	ND	ND	29B	69B	29B	69B	di-n-octyl phthalate	ND		ND
200	25B	1,2-dichlorobenzene	ND	ND	24B	70B	24B	70B	diethyl phthalate	ND		ND
210	26B	1,3-dichlorobenzene	ND	ND	25B	71B	25B	71B	dimethyl phthalate	ND		ND
220	27B	1,4-dichlorobenzene	ND	ND	5B	72B	5B	72B	benzo(a)anthracene	A		ND
230	28B	2,3-dichlorobenzidine	ND	ND	6B	73B	6B	73B	benzo(a)pyrene	HD		HD
240	29B	2,4-dinitrotoluene	ND	ND	7B	74B	7B	74B	benzo(b)fluoranthene	*		ND
250	30B	2,6-dinitrotoluene	ND	ND	9B	75B	9B	75B	benzo(k)fluoranthene	*		ND
260	31B	1,2,4-trinitrobenzene	ND	ND	10B	76B	10B	76B	fluorene	A		HD
270	32B	1,2,4-trinitrobenzene	ND	ND	11B	77B	11B	77B	acenaphthylene	ND		ND
170	40B	4-chlorophenyl ether	ND	ND	30B	28B	30B	28B	anthracene	B		ND

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 Analytical Lab
 Results by Sample
 LAB # 86-01-242
 Continued From Above
 SAMPLE ID 860100 H2U
 FRACTION 02A
 TEST CODE M625 B
 NAME Method 625 Base/Neutrals
 Date & Time Collected 01/29/86
 Category

NO	DESCRIPTION	NO	DESCRIPTION	NO	DESCRIPTION
140	412 4-bromophenyl phenyl ether	ND	79B	benzo(ghi)perylene	ND
120	420 bis(2-chloroisopropyl)ether	ND	80B	fluorene	ND
100	430 bis(2-chloroethoxy)methane	ND	81B	phenanthrene B	ND
340	500 hexachlorobutadiene	ND	82B	dibenzo(a,h)anthracene	ND
350	500 hexachlorocyclopentadiene	ND	83B	indeno(1,2,3-cd)pyrene	ND
360	540 isophorone	ND	84B	pyrene	ND
390	550 naphthalene	ND			
400	550 nitrobenzene	ND			

SUBSTITUTE RETRIEVES

NO	DESCRIPTION	NO	DESCRIPTION
194	45-nitrobenzene	194	
148	2-fluorobiphenyl	148	
278	4,4'-terphenyl	278	

NOTES: 1. See report 86-01-242 for details.

2. All results listed on this report are from the chromatogram.
 3. All results listed on this report are from the laboratory specified.
 4. All results listed on this report are from the laboratory specified.
 5. All results listed on this report are from the laboratory specified.
 6. All results listed on this report are from the laboratory specified.
 7. All results listed on this report are from the laboratory specified.
 8. All results listed on this report are from the laboratory specified.
 9. All results listed on this report are from the laboratory specified.
 10. All results listed on this report are from the laboratory specified.

11. All results listed on this report are from the laboratory specified.
 12. All results listed on this report are from the laboratory specified.
 13. All results listed on this report are from the laboratory specified.
 14. All results listed on this report are from the laboratory specified.
 15. All results listed on this report are from the laboratory specified.

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Analytical Data

REFUR

Results by Sample

LAB # 86-01-242

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SAMPLE ID 850100 HED

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

3 - anthracene and phenanthrene co-elute in high concentrations.
BL - detected in reagent blank; background subtraction not performed
D - estimated value, less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limits should be multiplied by conc factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID S50100 H40

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/29/86 Category

CHAM # QUOTIENTS02
SAMPLE SIZE 1

DATE ANALYZED 02/07/86 UNITS ug/l VERIFIED BY LAK

SCAN CONFIDENCE RESULT CONF LEVEL REF CMPD

140 PCBs Detected

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Analytical Serv
 Results by Sample

LAB # 86-01-242

SAMPLE ID 860100 H2U

FRACTION 02A TEST CUDE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/29/86

Category

DATA FILE 860100H2U02
 CONC FACTOR 1

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/07/86

ANALYST WJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

REFS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1P	89P		aldrin	ND	2P	102P		alpha BHC	ND
10P	93P		dieldrin	ND	3P	103P		beta BHC	ND
2P	91P		chlordane	ND	4P	104P		gamma BHC	ND
7P	92P		4,4'-DDT	ND	5P	105P		delta BHC	ND
8P	93P		4,4'-DDE	ND	18P	106P		PCB-1242	ND
9P	94P		4,4'-DDD	ND	19P	107P		PCB-1254	ND
11P	95P		alpha endosulfan	ND	20P	108P		PCB-1221	ND
12P	95P		beta endosulfan	ND	21P	109P		PCB-1232	ND
14P	91P		endosulfan sulfate	ND	22P	110P		PCB-1248	ND
14S	92P		aldrin	ND	23P	111P		PCB-1260	ND
15P	91P		endrin aldehyde	ND	24P	112P		PCB-1016	ND
16P	103P		4,4'-biphenyl	ND	25P	113P		toxaphene	ND
17P	101P		6,6'-biphenyl epoxide	ND					

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 850100 H20

FRACTION Q2A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/29/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

LAB # 86-01-242

REPORT

SAMPLE ID 860102 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

DATA FILE 8601242C02 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/07/86 INSTRUMENT FC COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	31A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	32A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	33A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
2A	34A	2,4-dimethylphenol	ND	10A	474	65A	phenol
2A	37A	2-nitrophenol	ND				

ENHANCED RECOVERIES

SCAN CODE	COMPOUND	RESULT
122A	15 phenol	123
85	2-chlorophenol	122
312A	2,4-dinitrophenol	124
254	4 phenol	

NOTES AND DEFINITIONS FOR THIS FORM

SCAN # scan number or retention time on chromatogram.

All results reported in mg/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850102 H2O

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit.

COND. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 850102 HED

FRACTION 03A
Date & Time Collected 01/29/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

DATA FILE	DATE EXTRACTED	ANALYST	WJL	VERIFIED BY			
850102HED	01/31/86			LAK			
CONC FACTOR	DATE INJECTED	INSTRUMENT	F2	COMPOUNDS DETECTED			
1	02/07/86			1			
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4E	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
45B	6B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
35B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	13B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3.2
15B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	24B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	28B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	31B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	34B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
24B	37B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
25B	40B	2,5-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
26B	43B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
27B	46B	fluoranthene	ND	2B	77B	acenaphthylene	ND
28B	49B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene U	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860102 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

SCAN CODE	RESULT	SCAN CODE	RESULT
412	4-bromophenyl phenyl ether	ND	benzo(ghi)perylene
422	bis(2-chloroisopropyl)ether	ND	fluorene
432	bis(2-chloroethoxy)methane	ND	phenanthrene B
528	hexachlorobutadiene	ND	dibenzo(a,h)anthracene
538	hexachlorocyclopentadiene	ND	indeno(1,2,3-cd)pyrene
548	isophorone	ND	pyrene
558	naphthalene	ND	
568	nitrobenzene	ND	

SUBSTITUTE RECOVERIES

SCAN CODE	RESULT
176	d5-nitrobenzene
149	2-fluorobiphenyl
275	d14-terphenyl
	d10-biphenyl

SCANS AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.
 All results reported in μg/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 f = benzo(f)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute high concentrations

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID B50102 H20

FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/29/86 Category

S = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CCNC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
SAMPLE ID 850102 H20
FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/29/86 Category

CH-D # 8501242C03
SAMPLE SIZE 1
DATE ANALYZED 02/07/86 UNITS ug/l
VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No. P.P.s. Detected

PAGE 25 Analytical Serv REPORT LAB # 86-01-242
 RECEIVED: 01/31/85 Results by Sample

SAMPLE ID 850102 H2O FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/29/86 Category

DATA FILE 20001842003 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/07/86 COMPOUNDS DETECTED 0

INDEX	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1F	87P		aldrin	ND	2P	102P		alpha BHC	ND
10F	90P		dieldrin	ND	3P	103P		beta BHC	ND
8P	91P		chlordane	ND	4P	104P		gamma BHC	ND
7F	92P		4,4'-DDT	ND	5P	105P		delta BHC	ND
6P	93P		4,4'-DDE	ND	18P	106P		PCB-1242	ND
5P	94P		4,4'-DDD	ND	19P	107P		PCB-1254	ND
11F	95P		alpha endosulfan	ND	20P	108P		PCB-1221	ND
13F	96P		beta endosulfan	ND	21P	109P		PCB-1232	ND
14F	97P		endosulfan sulfate	ND	22P	110P		PCB-1248	ND
15F	98P		aldrin	ND	23P	111P		PCB-1260	ND
16F	99P		gamma BHC	ND	24P	112P		PCB-1016	ND
17F	100P		hexachlor	ND	25P	113P		toxaphene	ND
17F	101F		heptachlor epoxide	ND					

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 850102 H2O

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/29/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

RECEIVED: 01/31/85

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 850103 H2O

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 25091242C04
CONC FACTOR 1

DATE EXTRACTED 01/31/86
DATE INJECTED 02/07/86

ANALYST
INSTRUMENT

WJL
F2
VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SUBSTITUTE RECOVERIES

SCAN CODE	COMPOUND	RESULT
451	45-phenol	54
452	2-fluorophenol	82
111	2,4,6-tribromophenol	119
454	43-phenol	

NOTES: FOR DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

SAMPLE ID 250103 H20

NO α not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
SULF not detected in reagent blank; background subtraction not performed.
U is estimated value, less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limits should be multiplied by conc. factor.

Analytical Serv REPORT
 Results by Sample

LAB # 86-01-242

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/30/86 Category

DATE EXTRACTED	DATE INJECTED	ANALYST INSTRUMENT	WJL F2	VERIFIED BY	COMPOUNDS DETECTED		
01/31/86	02/07/86			LAK	2		
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
48	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
208	98	hexachlorobenzene	ND	13B 1660	66B	bis(2-ethylhexyl)phthalate	2
248	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
118	188	bis(2-chloroethyl)ether	ND	26B 1321	68B	di-butyl phthalate	3
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
208	258	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
228	278	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
238	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
278	358	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene #	ND
288	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene #	ND
318	378	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
318	378	fluoranthene	ND	2B	77B	acenaphthylene	ND
178	403	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv
Results by Sample

LAB # 86-01-242
Continued From Above

REPORT

SAMPLE ID 850103 H2D

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86

Category

RET. TIME	IDENTIFICATION	RET. TIME	IDENTIFICATION	RET. TIME	IDENTIFICATION
148	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene
158	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene
166	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B
178	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene
188	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene
198	isophorone	ND	45B	84B	pyrene
208	naphthalene	ND			
218	nitrobenzene	ND			

AROMATIC RECOVERIES

RET. TIME	IDENTIFICATION	RET. TIME	IDENTIFICATION
141	1,4-dinitrobenzene	47	
152	2-fluorobiphenyl	47	
162	1,4-terphenyl	64	
171	1,1'-biphenyl		

CONTINUED ON REVERSE FOR THIS REPORT

24. Peak number or retention time on chromatogram
All results reported in this report unless otherwise specified.
25. Peak not detected at EPA detection limit method 625, (Federal Register, 10/26/84)
26. Benzo(k)fluoranthrene and benzo(k)fluoranthrene co-elute.
27. Total anthracene and chrysene co-elute high concentrations.

Page 2:
Received 01/31/86
Sample ID: 860103 H2O

Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

Fluoranthracene and phenanthrene co-elute in high concentrations.
None detected in reagent blank, background subtraction not performed.
Estimated value, less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limits should be multiplied by conc. factor.

Analytical Serv REPORT LAB # 86-01-242
Results by Sample

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/30/86 Category

RECEIVED 01/31/85
SAMPLE ID 850103 H2O

LAB # 8601242504
SAMPLE SIZE 1

DATE ANALYZED 02/07/86

UNITS ug/l VERIFIED BY LKK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs detected

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 860103 H20

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86 Category

DATA FILE 25U01242C04
FACIOP

DATE EXTRACTED 01/31/86
DATE INJECTED 02/07/86

ANALYST WJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

INDEX SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
1P	90P	dieldrin	ND	3P	103P	beta BHC	ND
1P	91P	chlordane	ND	4P	104P	gamma BHC	ND
1P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
1P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
1P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
1P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
1P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
1P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
1P	98P	endrin	ND	23P	111P	PCB-1260	ND
1P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
1P	100P	heptachlor	ND	25P	113P	toxaphene	ND
1P	101P	heptachlor epoxide	ND				

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Revised 01/31/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242
Continued From Above

SAMPLE ID 250103 H2O

FRACTION 04A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTE: REPORT LIMITATIONS FOR THIS REPORT.

0247 is scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

0247 not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/29/86 Category

DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
DATE INJECTED 02/07/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1,2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2,4-dichloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
2,4-dichlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
2,4-dimethylphenol	ND	10A	65A	phenol	ND
2-nitrophenol	ND				

RETENTION TIME	RESULT
19.3	phenol 538
21.2	phenol 942
22.1	phenol 462
23.1	phenol

REPORT
Retention Time on chromatogram.
Unless otherwise specified.

KAPLAN
LABORATORY

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

Method: EPA detection limit method 625, (Federal Register, 11/26/84).

Reagent blank, background subtraction not performed.

Value less than method detection limit.

Value indicates dilution of sample if greater than one (1). Minimum detection factor.

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

DATE EXTRACTED	DATE INJECTED	ANALYST INSTRUMENT	NPDES SCAN	EPA	COMPOUND	RESULT	VERIFIED BY LAK
01/31/86	02/07/86						COMPOUNDS DETECTED
			41B	61B	acenaphthene	ND	N-nitrosodimethylamine ND
			43B	62B	benzidine	ND	N-nitrosodiphenylamine ND
			42B	63B	2,4-trichlorobenzene	ND	N-nitrosodi-n-propylamine ND
			13B	66B	hexachlorobenzene	ND	bis(2-ethylhexyl)phthalate 5
			15B	67B	hexachloroethane	ND	butyl benzyl phthalate ND
			26B	68B	1,1,1-trichloroethyl ether	ND	di-butyl phthalate 2.0
			29B	69B	2-chloronaphthalene	ND	di-n-octyl phthalate ND
			24B	70B	1,2-dichlorobenzene	ND	diethyl phthalate ND
			25B	71B	1,3-dichlorobenzene	ND	dimethyl phthalate ND
			5B	72B	1,4-dichlorobenzene	ND	benzo(a)anthracene A ND
			6B	73B	1,2,3-dichlorobenzidine	ND	benzo(a)pyrene ND
			7B	74B	1,4-dinitrotoluene	ND	benzo(b)fluoranthene * ND
			9B	75B	2,6-dinitrotoluene	ND	benzo(k)fluoranthene * ND
			18B	76B	1,2-diphenylhydrazine	ND	chrysene A ND
			2B	77B	fluoranthene	ND	acenaphthylene ND
			3B	78B	2,3,4-trichlorophenyl ether	ND	anthracene B ND

ANALYTICAL SERV REPORT
 Results by Sample
 LAB # 86-01-242
 Continued From Above
 FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/29/86 Category

Retention Time	Peak Name	Retention Time	Peak Name	Retention Time	Peak Name
413	4-bromophenyl phenyl ether	ND	benzo(ghi)perylene	79B	ND
429	bis(2-chloroisopropyl)ether	ND	fluorene	80B	ND
432	bis(2-chloroethoxy)methane	ND	phenanthrene B	81B	ND
508	hexachlorobutadiene	ND	dibenzo(a,h)anthracene	82B	ND
536	hexachlorocyclopentadiene	ND	indeno(1,2,3-cd)pyrene	83B	ND
548	isophorone	ND	pyrene	84B	ND
556	naphthalene	ND			
568	nitrobenzene	ND			

NET WEIGHT RECOVERIES

Retention Time	Peak Name	Retention Time	Peak Name
206	45-nitrobenzene	158	2-fluorobiphenyl
312	114-terphenyl	312	114-terphenyl
	110-biphenyl		110-biphenyl

COMPARISON OF THIS RESULT

Retention time on chromatogram.
 unless otherwise specified.
 EPA detection limit method 625, (Federal Register, 10/26/84).
 fluoranthene and benzo(k)fluoranthene co-elute.
 anthracene and chrysene co-elute high concentrations.

LAB # 86-01-242
Continued From Above

Analytical Serv REPORT
Results by Sample

FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/29/86 Category

fluorene and phenanthrene co-elute in high concentrations.
not detected in reagent blank; background subtraction not performed.
estimated value, less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
factor should be multiplied by conc. factor.

LAB # 86-01-242

Analytical Serv REPORT
Results by Sample

FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/29/86 Category

DATE ANALYZED 02/07/86 UNITS ug/l VERIFIED BY LAK

CONF REF
LEVEL CMPD

RESULT

COMPOUND

SCAN

No. PCBs Detected

PREP TO 01/31/85

ANALYSIS TO 01/31/85

LAB # 86-01-242

Analytical Serv REPORT LAB # 86-01-242
 Results by Sample

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/29/86 Category

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/07/86

ANALYST WJL
 VERIFIED BY LAK
 COMPOUNDS DETECTED 0

COMPOUND	EPA	NPDES	SCAN	EPA	COMPOUND	RESULT
aldrin	102P	2P	102P	alpha BHC	ND	ND
dieldrin	103P	3P	103P	beta BHC	ND	ND
chlordane	104P	4P	104P	gamma BHC	ND	ND
4,4'-DDT	105P	5P	105P	delta BHC	ND	ND
4,4'-DDE	106P	18P	106P	PCB-1242	ND	ND
4,4'-DDD	107P	19P	107P	PCB-1254	ND	ND
alpha endosulfan	108P	20P	108P	PCB-1221	ND	ND
beta endosulfan	109P	21P	109P	PCB-1232	ND	ND
endosulfan sulfate	110P	22P	110P	PCB-1248	ND	ND
endrin	111P	23P	111P	PCB-1260	ND	ND
endrin aldehyde	112P	24P	112P	PCB-1016	ND	ND
heptachlor	113P	25P	113P	to-xephene	ND	ND
heptachlor epoxide						

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SAMPLE ID 660101 H20

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/HIS

Date & Time Collected 01/29/85

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

10
11
125 14 16
22
20
18

Analytical Serv

Report

Results by Sample

LAB # 8611-144
 FRACTION 06A 1ES 100g Meets A Mine Method Sub Acid Compounds Category
 Date & Time Collected at 30/55

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/07/86

ANALYST
 INSTRUMENT

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/07/86

ANALYST
 INSTRUMENT

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/07/86

ANALYST
 INSTRUMENT

COMPOUND	NPDES SCAL.	EPA	COMPOUND	RESULT
2,4,6-trichlorophenol	7A	58A	4-nitrophenol	ND
4-chloro-3-methylphenol	5A	59A	2,4-dinitrophenol	ND
2-chlorophenol	4A	60A	2-methyl-4,6-dinitrophenol	ND
2,4-dichlorophenol	9A	64A	pentachlorophenol	ND
2,4-dimethylphenol	10A	65A	phenol	ND
4-nitrophenol				

QUANTITATIVE RECOVERIES

COMPOUND	RESULT
4-nitrophenol	100
2,4-dinitrophenol	101
2,4,6-trichlorophenol	102
4-chlorophenol	103

NOTE: REACTION TIMES FOR THIS METHOD

Scan number and retention time on chromatogram

All results reported in µg/L unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242
Continued From Above

SAMPLE ID 850107 H2O

FRACTION 06A

TEST CODE N625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625. (Federal Register, 11/26/84)
SL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CCRC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor

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 ANALYTICAL SERV REPORT
 Results by Sample
 LAB # 86-01-242
 SAMPLE ID 850107 H20
 FRACTION 06A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/30/86 Category

INDEX	SCAN	EPA	COMPOUND	DATE EXTRACTED	DATE INJECTED	ANALYST	INSTRUMENT	NPDES SCAN	EPA	COMPOUND	RESULT	VERIFIED BY
				01/31/86	02/07/86							LAW
												COMPOUNDS DETECTED
												2
18	18		acenaphthene	ND				41B	61B	N-nitrosodimethylamine	ND	
48	50		benzidine	ND				43B	62B	N-nitrosodiphenylamine	ND	
46B	68		1,2,4-trichlorobenzene	ND				42B	63B	N-nitrosodi-n-propylamine	ND	
20B	90		hexachlorobenzene	ND				135	1664	bis(2-ethylhexyl)phthalate	2	
26B	128		hexachloroethane	ND				15B	67B	butyl benzyl phthalate	ND	
11B	108		bis(2-chloroethyl)ether	ND				26B	1325	di-butyl phthalate	2	
16B	308		2-chloronaphthalene	ND				29B	69B	di-n-octyl phthalate	ND	
20B	258		1,2-dichlorobenzene	ND				24B	70B	diethyl phthalate	ND	
21B	268		1,3-dichlorobenzene	ND				25B	71B	dimethyl phthalate	ND	
22B	278		1,4-dichlorobenzene	ND				5B	72B	benzo(a)anthracene A	ND	
23B	288		3,3-dichlorobenzidine	ND				6B	73B	benzo(a)pyrene	ND	
24B	358		1,1-difluorotoluene	ND				7B	74B	benzo(b)fluoranthene	ND	
25B	368		1,2-difluorotoluene	ND				9B	75B	benzo(k)fluoranthene	ND	
26B	378		1,3-diphenylhydrazine	ND				10B	76B	chrysene A	ND	
27B	388		fluoranthene	ND				28B	77B	acenaphthylene	ND	
28B	408		4-chlorobenzyl phenyl ether	ND				38B	78B	anthracene B	ND	

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 850107 H2O FRACTION 06A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

148	415	4-bromophenyl phenyl ether	ND	88	79B	benzo(g,h,i)perylene	ND
156	423	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	432	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
346	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
382	542	isophorone	ND	45B	84B	pyrene	ND
396	558	naphthalene	ND				
405	565	nitrobenzene	ND				

SPURIOUS RECOVERIES

SQ#44 CODE	RESULT
617 611	d5-nitrobenzene 230
634	2-fluorobiphenyl 173
1450 1451	d14-terphenyl 155
1452 1453	d10-biphenyl

SPURIOUS RECOVERIES CONTINUED FROM THIS REPORT

Spurious recoveries are listed at retention time on chromatogram
All recoveries are reported in ug/l unless otherwise specified
Recoveries are reported at EPA detection limit method 625 (Federal Register 10/25/84)
Recoveries of fluoranthene and benzo(k)fluoranthene correlate
with recoveries of anthracene and chrysene correlate with high concentrations

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Analytical Serv. REPORT
Results by Sample

LAB # 66-01-242
Continued from Above

SAMPLE ID 850107 H2O

FRACTION OEA TEST CODE M505 2 WME Method 625 Base/Neutrals
Date & Time Collected : 07/86 Category

3 = anthracene and phenanthrene co-elute in high molecular fraction
St = detected in reagent blank, background subtraction not performed
J = estimated value, less than method detection limit
DILUTION FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor.

KAPLAN

LAB # 86-01-242

Analytical Ser. REPORT

Sample

FRACTION 16A TEST CUPS MSMS 5 NAME CUPS Characterization-ADR
Date & Time Collected 01/25/86 Category

VERIFIED BY LAR

DATE ANALYZED 08/07/86

DATE ANALYZED 08/07/86

LAB # 86-01-242

DATE ANALYZED 08/07/86

CONF. REF.

RESULT

COMPOUND

SCAN

No PCBs Detected

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Analytical Serv
Results by Sample

LAP # 30-01-242

SAMPLE ID 850107 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/85 Category

DATA FILE 20001242C06 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
CONC FACTOR DATE INJECTED 02/11/85 COMPOUNDS DETECTED 0

INDEX	SCANS	EPA	COMPOUND	RESULT	INDEXES	SCAN	EPA	COMPOUND	RESULT
100	87P		aldrin	ND	2P	102P		alpha BHC	ND
101	90P		dieldrin	ND	3P	103P		beta BHC	ND
102	91P		chlordane	ND	4P	104P		gamma BHC	ND
103	92P		4,4'-DDT	ND	5P	105P		delta BHC	ND
104	93P		4,4'-DDE	ND	18P	106P		PCB-1242	ND
105	94P		4,4'-DDD	ND	19P	107P		PCB-1254	ND
106	95P		alpha endosulfan	ND	20P	108P		PCB-1221	ND
107	95P		beta endosulfan	ND	21P	109P		PCB-1231	ND
108	97P		endosulfan sulfate	ND	22P	110P		PCB-1248	ND
109	97P		endrin	ND	23P	111P		PCB-1260	ND
110	97P		endrin aldehyde	ND	24P	112P		PCB-1016	ND
111	100P		heptachlor	ND	25P	113P		toxaphene	ND
112	101P		heptachlor epoxide	ND					

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID 860107 H30

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

PAGE 01
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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 850108 HEU

FRACTION 07A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

DATA FILE 8501242C07 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	32A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SUBSTITUTE RECOVERIES

SCAN CODE	COMPOUND	RESULT
451	d5-phenol	17
452	2-fluorophenol	45
453	2,4,6-tribromophenol	43
454	d3-phenol	

(0005 200) DEFINITIONS FOR THIS REPORT:

SCAN # scan number or retention time in chromatogram
All results reported in ug/l unless otherwise specified

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Analytical DIV

REFURI

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID 850108 H20

FRACTION 07A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)
BL = detected in reagent blank, background subtraction not performed
J = estimated value, less than method detection limit
CONC. FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc. factor.

Sample ID: 01/31/85
 RECEIVED 01/31/85

ACI Analytical Serv
 Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID: 01/31/85

FRACTION 07A
 Date & Time Collected 01/30/85

NAME: Method 625 Base/Neutrals
 Category

DATE RECEIVED: 01/31/85
 DATE ANALYZED: 01/31/85

ANALYST: WJH
 INSTRUMENT: 5100

REPORT NO.: 86-01-242

NO.	CONCENTRATION	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
10	10	acena. ethene	ND	41B	41B	N-nitrosodimethylamine	ND
40	50	benzidine	ND	40B	62B	N-nitrosodiphenylamine	ND
41	50	1,2-dichlorobenzene	ND	42B	63B	N-nitrosodimethylpropylamine	ND
42	50	1,2-dichlorobenzene	ND	10B	66B	bis(2-ethylhexyl)phthalate	ND
43	50	1,2-dichlorobenzene	ND	15B	67B	butyl benzyl phthalate	ND
44	50	1,2-dichlorobenzene	ND	26B	68B	di-butyl phthalate	ND
45	50	1,2-dichlorobenzene	ND	29B	69B	di-n-butyl phthalate	ND
46	50	1,2-dichlorobenzene	ND	34B	70B	diethyl phthalate	ND
47	50	1,2-dichlorobenzene	ND	51	71B	di-n-butyl phthalate	ND
48	50	1,2-dichlorobenzene	ND	51	72B	di-n-butyl phthalate	ND
49	50	1,2-dichlorobenzene	ND	51	73B	di-n-butyl phthalate	ND
50	50	1,2-dichlorobenzene	ND	51	74B	di-n-butyl phthalate	ND
51	50	1,2-dichlorobenzene	ND	51	75B	di-n-butyl phthalate	ND
52	50	1,2-dichlorobenzene	ND	51	76B	di-n-butyl phthalate	ND
53	50	1,2-dichlorobenzene	ND	51	77B	di-n-butyl phthalate	ND
54	50	1,2-dichlorobenzene	ND	51	78B	di-n-butyl phthalate	ND
55	50	1,2-dichlorobenzene	ND	51	79B	di-n-butyl phthalate	ND
56	50	1,2-dichlorobenzene	ND	51	80B	di-n-butyl phthalate	ND
57	50	1,2-dichlorobenzene	ND	51	81B	di-n-butyl phthalate	ND
58	50	1,2-dichlorobenzene	ND	51	82B	di-n-butyl phthalate	ND
59	50	1,2-dichlorobenzene	ND	51	83B	di-n-butyl phthalate	ND
60	50	1,2-dichlorobenzene	ND	51	84B	di-n-butyl phthalate	ND
61	50	1,2-dichlorobenzene	ND	51	85B	di-n-butyl phthalate	ND
62	50	1,2-dichlorobenzene	ND	51	86B	di-n-butyl phthalate	ND
63	50	1,2-dichlorobenzene	ND	51	87B	di-n-butyl phthalate	ND
64	50	1,2-dichlorobenzene	ND	51	88B	di-n-butyl phthalate	ND
65	50	1,2-dichlorobenzene	ND	51	89B	di-n-butyl phthalate	ND
66	50	1,2-dichlorobenzene	ND	51	90B	di-n-butyl phthalate	ND
67	50	1,2-dichlorobenzene	ND	51	91B	di-n-butyl phthalate	ND
68	50	1,2-dichlorobenzene	ND	51	92B	di-n-butyl phthalate	ND
69	50	1,2-dichlorobenzene	ND	51	93B	di-n-butyl phthalate	ND
70	50	1,2-dichlorobenzene	ND	51	94B	di-n-butyl phthalate	ND
71	50	1,2-dichlorobenzene	ND	51	95B	di-n-butyl phthalate	ND
72	50	1,2-dichlorobenzene	ND	51	96B	di-n-butyl phthalate	ND
73	50	1,2-dichlorobenzene	ND	51	97B	di-n-butyl phthalate	ND
74	50	1,2-dichlorobenzene	ND	51	98B	di-n-butyl phthalate	ND
75	50	1,2-dichlorobenzene	ND	51	99B	di-n-butyl phthalate	ND
76	50	1,2-dichlorobenzene	ND	51	100B	di-n-butyl phthalate	ND

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LAB # 86-01-242
 CONTINUED FROM ABOVE

RESULTS BY SAMPLE
 DATE TIME COLLECTED 01/30/86

ANALYST	LAB #	DATE	TIME	CONCENTRATION	UNIT	REMARKS
142	86-01-242	01/30/86	19B	benzo(a,h)perylene	ND	
143	86-01-242	01/30/86	80B	fluorene	ND	
144	86-01-242	01/30/86	81B	phenanthrene B	ND	
145	86-01-242	01/30/86	82B	dibenzo(a,h)anthracene	ND	
146	86-01-242	01/30/86	83B	indeno(1,2,3-cd)pyrene	ND	
147	86-01-242	01/30/86	84B	pyrene	ND	

ANALYST	LAB #	DATE	TIME	CONCENTRATION	UNIT	REMARKS
148	86-01-242	01/30/86	45B	1,2-dichloroethane	ND	
149	86-01-242	01/30/86	46B	1,1-dichloroethane	ND	
150	86-01-242	01/30/86	47B	1,1,1-trichloroethane	ND	
151	86-01-242	01/30/86	48B	1,1,2-trichloroethane	ND	
152	86-01-242	01/30/86	49B	1,2-dibromoethane	ND	
153	86-01-242	01/30/86	50B	1,1-dibromoethane	ND	
154	86-01-242	01/30/86	51B	1,2-dibromoethane	ND	
155	86-01-242	01/30/86	52B	1,1,2,2-tetrachloroethane	ND	
156	86-01-242	01/30/86	53B	1,1,1,2-tetrachloroethane	ND	
157	86-01-242	01/30/86	54B	1,1,2,2-tetrachloroethane	ND	
158	86-01-242	01/30/86	55B	1,1,1,2,2-pentachloroethane	ND	
159	86-01-242	01/30/86	56B	1,1,1,2,2,2-hexachloroethane	ND	
160	86-01-242	01/30/86	57B	1,1,1,2,2,2-hexachloroethane	ND	
161	86-01-242	01/30/86	58B	1,1,1,2,2,2-hexachloroethane	ND	
162	86-01-242	01/30/86	59B	1,1,1,2,2,2-hexachloroethane	ND	
163	86-01-242	01/30/86	60B	1,1,1,2,2,2-hexachloroethane	ND	
164	86-01-242	01/30/86	61B	1,1,1,2,2,2-hexachloroethane	ND	
165	86-01-242	01/30/86	62B	1,1,1,2,2,2-hexachloroethane	ND	
166	86-01-242	01/30/86	63B	1,1,1,2,2,2-hexachloroethane	ND	
167	86-01-242	01/30/86	64B	1,1,1,2,2,2-hexachloroethane	ND	
168	86-01-242	01/30/86	65B	1,1,1,2,2,2-hexachloroethane	ND	
169	86-01-242	01/30/86	66B	1,1,1,2,2,2-hexachloroethane	ND	
170	86-01-242	01/30/86	67B	1,1,1,2,2,2-hexachloroethane	ND	
171	86-01-242	01/30/86	68B	1,1,1,2,2,2-hexachloroethane	ND	
172	86-01-242	01/30/86	69B	1,1,1,2,2,2-hexachloroethane	ND	
173	86-01-242	01/30/86	70B	1,1,1,2,2,2-hexachloroethane	ND	
174	86-01-242	01/30/86	71B	1,1,1,2,2,2-hexachloroethane	ND	
175	86-01-242	01/30/86	72B	1,1,1,2,2,2-hexachloroethane	ND	
176	86-01-242	01/30/86	73B	1,1,1,2,2,2-hexachloroethane	ND	
177	86-01-242	01/30/86	74B	1,1,1,2,2,2-hexachloroethane	ND	
178	86-01-242	01/30/86	75B	1,1,1,2,2,2-hexachloroethane	ND	
179	86-01-242	01/30/86	76B	1,1,1,2,2,2-hexachloroethane	ND	
180	86-01-242	01/30/86	77B	1,1,1,2,2,2-hexachloroethane	ND	
181	86-01-242	01/30/86	78B	1,1,1,2,2,2-hexachloroethane	ND	
182	86-01-242	01/30/86	79B	1,1,1,2,2,2-hexachloroethane	ND	
183	86-01-242	01/30/86	80B	1,1,1,2,2,2-hexachloroethane	ND	
184	86-01-242	01/30/86	81B	1,1,1,2,2,2-hexachloroethane	ND	
185	86-01-242	01/30/86	82B	1,1,1,2,2,2-hexachloroethane	ND	
186	86-01-242	01/30/86	83B	1,1,1,2,2,2-hexachloroethane	ND	
187	86-01-242	01/30/86	84B	1,1,1,2,2,2-hexachloroethane	ND	
188	86-01-242	01/30/86	85B	1,1,1,2,2,2-hexachloroethane	ND	
189	86-01-242	01/30/86	86B	1,1,1,2,2,2-hexachloroethane	ND	
190	86-01-242	01/30/86	87B	1,1,1,2,2,2-hexachloroethane	ND	
191	86-01-242	01/30/86	88B	1,1,1,2,2,2-hexachloroethane	ND	
192	86-01-242	01/30/86	89B	1,1,1,2,2,2-hexachloroethane	ND	
193	86-01-242	01/30/86	90B	1,1,1,2,2,2-hexachloroethane	ND	
194	86-01-242	01/30/86	91B	1,1,1,2,2,2-hexachloroethane	ND	
195	86-01-242	01/30/86	92B	1,1,1,2,2,2-hexachloroethane	ND	
196	86-01-242	01/30/86	93B	1,1,1,2,2,2-hexachloroethane	ND	
197	86-01-242	01/30/86	94B	1,1,1,2,2,2-hexachloroethane	ND	
198	86-01-242	01/30/86	95B	1,1,1,2,2,2-hexachloroethane	ND	
199	86-01-242	01/30/86	96B	1,1,1,2,2,2-hexachloroethane	ND	
200	86-01-242	01/30/86	97B	1,1,1,2,2,2-hexachloroethane	ND	
201	86-01-242	01/30/86	98B	1,1,1,2,2,2-hexachloroethane	ND	
202	86-01-242	01/30/86	99B	1,1,1,2,2,2-hexachloroethane	ND	
203	86-01-242	01/30/86	100B	1,1,1,2,2,2-hexachloroethane	ND	

RESULTS BY SAMPLE
 DATE TIME COLLECTED 01/30/86

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 950108 HEU

FRACTION 07A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

S = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit.

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 80-01-242

Analytical Serv REFUMI

Results by Sample

FRACTION O/A TEST CODE MSINS 5 NAME GLMS Characterization-ABI
Date & Time Collected 01/30/86 Category

VERIFIED BY LMP

UNITS (ug/L)

DATE ANALYZED 02/11/86

CONC (ug/L)

RESULT

COMPOUND

SCAN

No. PCBs Detected

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SAMPLE ID 22-108 H20

CLIENT # 200142007
OFFICE 5104 1111

ANALYTICAL SERV
 REPORT
 Results by Sample

LAB # 66-01-242

RECEIVED 01/31/86

FRACTION O/A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/30/86 Category

DATA FILE 82001243007
 CONC FACTOR

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/11/86

ANALYST W/JL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

REF ID	SEAL	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	82P		aldrin	ND	2P	102P	alpha BHC	ND
1CP	90P		dieldrin	ND	3P	103P	beta BHC	ND
2P	71P		chlordane	ND	4P	104P	gamma BHC	ND
7P	52P		4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	53P		4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	54P		4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P		alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P		beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P		endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P		endrin	ND	23P	111P	PCB-1260	ND
15P	99P		endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P		heptachlor	ND	25P	113P	toxaphene	ND
17P	101P		heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860108 H20

FRACTION 07A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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 Results by Sample

SAMPLE ID 850105 H2O FRACTION 08A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 01/30/86 Category _____

DATA FILE SC091242C08 DATE EXTRACTED 01/31/86 ANALYST _____ WJL _____ VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	456	65A	phenol
5A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
1501	45-phenol	111
3011	2-fluorophenol	109
1021	2,4,6-tribromophenol	78
454	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860105 H2O

FRACTION O8A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

EL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit

CCMC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
 Results by Sample

LAB # 86-01-242

SAMPLE ID 860105 HED

FRACTION ORA
 Date & Time Collected 01/30/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
 Category

DATA FILE	DATE EXTRACTED	ANALYST	WJL	VERIFIED BY		
860105 HED	01/31/86	INSTRUMENT	5100	LAK		
LAB #	DATE INJECTED	NPDES SCAN	EPA	COMPOUNDS DETECTED		
86-01-242	02/11/86	41B	61B	1		
SCANS	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	acrenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
42	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodim-n-propylamine	ND
98	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	4
120	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
188	bis(2-ethylhexyl)ether	ND	26B	68B	di-butyl phthalate	ND
208	1,2-dichloroethane	ND	29B	69B	di-n-octyl phthalate	ND
210	1,1-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
212	1,2-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
214	1,4-dichlorobenzene	ND	5C	72B	benzo(a)anthracene	ND
216	1,2,3-trichlorobenzene	ND	6D	73B	benzo(b)pyrene	ND
218	1,2,4-trichlorobenzene	ND	7E	74B	benzo(b)fluoranthene	ND
220	1,2,5-trichlorobenzene	ND	9F	75B	benzo(g)fluoranthene	ND
222	1,2,6-trichlorobenzene	ND	10G	76C	benzo(k)fluoranthene	ND
224	1,2,3,4-tetrachlorobenzene	ND	11H	77B	acenaphthylene	ND
226	1,2,3,5-tetrachlorobenzene	ND	12I	78B	anthracene	ND

Analytical Serv REFURT LAB # 86-01-242
 Results by Sample Continued From Above

SAMPLE ID 860105 H2O FRACTION 08A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/30/86 Category

SCAN CODE	RESULT	SCAN CODE	RESULT	SCAN CODE	RESULT	
418	4-bromophenyl phenyl ether	ND	8E	79B	benzo(ghi)perylene	ND
428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
528	hexachlorobutadiene	ND	19E	82B	dibenzo(a,h)anthracene	ND
538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
548	isophorone	ND	45B	84B	pyrene	ND
558	naphthalene	ND				
568	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
528 581	d5 nitrobenzene 125
551 582	2-fluorobiphenyl 66
1417 553	d14-terphenyl 38
551	d10-biphenyl

NOTES AND OBSERVATIONS FOR THIS REPORT

All results reported are retention time on chromatogram
 All results reported are in $\mu\text{g/g}$ unless otherwise specified
 ND = not detected at EPA detection limit method 625. (General Register, 10/22/84)
 + = benzo(a)fluoranthene and benzo(k)fluoranthene co-elute
 * = benzo(a)anthracene and chrysene co-elute high concentrations

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID 850105 H20

FRACTION 08A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit.

CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 850105 H2O

FRACTION ORA TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/30/86 Category

CHRO # 5001242008
SAMPLE SIZE 1

DATE ANALYZED 02/11/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCBs Detected

LAB # 86-01-242

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860105 H2O FRACTION 08A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86 Category _____

DATA FILE 50001242COB DATE EXTRACTED 01/31/85 ANALYST NJL VERIFIED BY LAK
GAC FACTOR _____ DATE INJECTED 02/11/86 COMPOUNDS DETECTED 0

INDEX SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1F	57P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	71P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
7P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	94P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	95P	beta endosulfan	ND	21P	109P	PCB-1202	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID 860105 H2O

FRACTION OBA TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID dup anal 625

FRACTION 09B

TEST CODE MS25 A NAME Method 625 Acid Compounds

Date : lime Collected not specified

Category

DATA FILE 800124202

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAK

CONC FACTOR 1

DATE INJECTED 02/11/86

INSTRUMENT 5100

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	314	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	324	4-chloro-2-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	354	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	314	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	344	2,4-dimethylphenol	ND	10A	456	phenol	3
5A	374	2-nitrophenol	ND				

SUBSTITUTE RECOVERIES

SCAN CODE	COMPOUND	RESULT
153	phenol	145
154	phenol	147
155	phenol	148
156	phenol	149
157	phenol	150

VALUES ALSO PERTAINING TO THE INITIAL

SCAN = scan number of peak; time on chromatogram

All results reported in %, unless otherwise specified

LAB # 86-01-242
Continued From Above

ANALYTICAL SERVICE REPORT
Results by Sample

SAMPLE ID: 10 dup anal 625
FRACTION 09B TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected not specified Category

NO # not detected at EPA detection limit method 625. (Federal Register, 11/26/84)
BL # detected in reagent blank, background subtraction not performed
estimated value, less than method detection limit
DILUTION FACTOR # indicates dilution of sample if greater than one (1) Minimum detection
limits should be multiplied by conc factor

CASE BY RECEIVED: 01/31/85

Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID dup anal 525

FRACTION 09B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE	DATE EXTRACTED	ANALYST	WJL	VERIFIED BY			
LAB #	DATE INJECTED	INSTRUMENT	5100	COMPOUNDS DETECTED			
NPDES SCAN	EPA	COMPOUND	NPDES SCAN	EPA	COMPOUND	RESULT	RESULT
10	1B	acenaphthene	41B	61B	N-nitrosodimethylamine	ND	ND
40	5B	benzidine	43B	62B	N-nitrosodiphenylamine	ND	ND
40B	6B	1,2,4-trichlorobenzene	42B	63B	N-nitrosodi-n-propylamine	ND	ND
100	9B	hexachlorobenzene	13B	66B	bis(2-ethylhexyl)phthalate	ND	ND
100	12B	hexachloroethane	15B	67B	butyl benzyl phthalate	ND	ND
100	18B	bis(2-chloroethyl)ether	26B	68B	di-butyl phthalate	ND	ND
100	20B	2-chloronaphthalene	29B	69B	di-n-octyl phthalate	ND	ND
100	22B	1,2-dichlorobenzene	24B	70B	diethyl phthalate	ND	ND
100	24B	1,3-dichlorobenzene	25B	71B	dimethyl phthalate	ND	ND
100	26B	1,4-dichlorobenzene	5B	72B	benzo(a)anthracene	A	ND
100	28B	3,3'-dichlorobenzidine	6B	73B	benzo(a)pyrene	ND	ND
100	30B	1,3-dinitrotoluene	7B	74B	benzo(b)fluoranthene	ND	ND
100	32B	1,4-dinitrotoluene	9B	75B	benzo(k)fluoranthene	ND	ND
100	34B	1,4-diaminodiphenylhydrazine	18B	76B	fluorene	ND	ND
100	36B	fluoranthene	2B	77B	phenylphthalene	ND	ND
100	38B	1,2,3,4-tetrachloro-1,2,3,4-diphenyl ether	3B	78B	anthracene	B	ND

Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

Continued From Above

FRACTION 09B TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category

phenyl ether	ND	88	79b	benzo(ghi)perylene	ND
(1,1-dimethyl-2-propyl)ether	ND	88	80B	fluorene	ND
bis(2-chloroethoxy)methane	ND	4H	81B	phenanthrene B	ND
tetrachlorobutadiene	ND	192	82B	dibenzo(a,h)anthracene	ND
tetrachlorocyclopentadiene	ND	375	83B	indeno(1,2,3-cd)pyrene	ND
isophorone	ND	43P	84B	pyrene	ND

naphthalene	ND
nitrobenzene	ND

1,2-dibromobenzene	56
1,3-diphenyl	54
1,4-terphenyl	112
1,1-diphenyl	

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ANALYTICAL SET

REFUR

LAB # 86-01-242

RESULTS BY SAMPLE

(CONTINUED FROM ABOVE)

PHALLION 09B 1ES1 LULU MEAS B NAME METHOD 625 Base/Neutrals
Date & Time Collected not specified (Category)

NOTE: This sample contains a high concentration of benzene. The benzene concentration is high enough to prevent blank background subtraction from being performed. The benzene concentration is also high enough to prevent method detection limit (MDL) calculations. If the benzene concentration is greater than one (1) times the MDL, the results are multiplied by one factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID DUP ANAL. 625
FRACTION 09B TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category

CHRD # 5001242009
SAMPLE SIZE 1
DATE ANALYZED 02/11/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No. PCBs Detected

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID dup anal. 625

FRACTION 09B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 50D01242C09

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAK

CDSC FACTOR

DATE INJECTED 02/11/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	aldrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID: 86-01-242

FRACTION 09B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

USES AND LIMITATIONS FOR THIS REPORT

State scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

NO amount detected at EPA detection limit method 625, (Federal Register, 12/3/79).

LAB # 86-01-242

Analytical Serv
 Results by Sample

FRACIION 0YA TEST CODE M525 A NAME Method 625 Acid Compounds
 Date & Time Collected not specified Category

DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 11

EPHA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	2,4,6-trichlorophenol	69	7A	58A	4-nitrophenol	110
114	4-chloro-3-methylphenol	21	5A	59A	2,4-dinitrophenol	43
114	2-chlorophenol	80	4A	60A	2-methyl-4,6-dinitrophenol	74
114	2,4 dichlorophenol	75	9A	64A	pentachlorophenol	175
114	2,4 dimethylphenol	40	10A	65A	phenol	02
114	2-nitrophenol	46				

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COMPOUND RECOVERIES

TEST CODE	COMPOUND	RESULT
621	4-nitrophenol	110
652	2,4-dinitrophenol	43
603	2,4,6-trichlorophenol	69
644	2-chlorophenol	80
645	2,4 dichlorophenol	75
604	2,4 dimethylphenol	40
646	2-nitrophenol	46

USE THE FOLLOWING INFORMATION FOR THIS REPORT

Blank scan number or retention time on chromatogram
 All results reported in _____ unless otherwise specified

LAB # 86-01-242
Continued From Above

LAB # 86-01-242
Continued From Above

LAB # 86-01-242
Continued From Above

Analytical Serv REPORT
Results by Sample

SAMPLE ID matrix spike 625 FRACTION 09A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected not specified Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)
EPA detected in reagent blank; background subtraction not performed
Value estimated value; less than method detection limit
CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection
Limits should be multiplied by conc factor.

Analytical Serv REPORT LAB # 86-01-242
 Results by Sample

Sample ID: 86-01-242-11-11-86 FRACTION 09A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected not specified Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT	ANALYST INSTRUMENT	W/JI	VERIFIED BY	COMPOUNDS DETECTED
18	1001	acenaphthene	95	418	210	61B	N-nitrosodimethylamine	72			42
40	1024	benzidine	17	438	1060	62B	N-nitrosodiphenylamine	110			
40	1024	1,2,4-trichlorobenzene	71	428	561	63B	N-nitrosodi-n-propylamine	43			
30	1141	hexachlorobenzene	85	136	1629	66B	bis(2-ethylhexyl)phthalate	59			
30	1141	hexachloroethane	71	158	1531	67B	butyl benzyl phthalate	22			
110	1451	bis(2-chloroethyl)ether	81	268	1291	68B	di-butyl phthalate	85			
110	1451	1-chloronaphthalene	75	298	1737	69B	di-n-octyl phthalate	63			
210	1821	1,2-dichlorobenzene	80	248	990	70B	diethyl phthalate	59			
210	1821	1,3-dichlorobenzene	82	258	919	71B	dimethyl phthalate	62			
210	1821	1,4-dichlorobenzene	78	58	1614	72B	benzo(a)anthracene A	70			
210	1821	2,3-dichlorobenzidine	103	68	1900	73B	benzo(f)pyrene	49			
210	1821	2,4-dinitrotoluene	99	78	1921	74B	benzo(b)fluoranthene	59			
210	1821	2,6-dinitrotoluene	71	98	1827	75B	benzo(k)fluoranthene	91			
210	1821	1,2,3-triphenylhydrazine	ND	108	1621	76B	chrysenes A	81			
210	1821	fluoranthene	84	28	931	77B	acenaphthylene	90			
210	1821	4,5,4-triisopropenyl phenyl ether	88	38	1199	78B	anthracene B	91			

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REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID Matrix Spike 625

FRACTION 09A
Date & Time Collected not specified

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

140	1118	418	4-bromophenyl phenyl ether	76	88	2376	79B	benzo(ghi)perylene	69
120	503	429	bis(2-chloroisopropyl)ether	93	32B	1040	80B	fluorene	85
100	518	428	bis(2-chloroethoxy)methane	78	44B	1192	81B	phenanthrene B	91
340	714	528	hexachlorobutadiene	72	19B	2280	82B	dibenzo(a,h)anthracene	71
358	637	538	hexachlorocyclopentadiene	3	37B	2269	83B	indeno(1,2,3-cd)pyrene	89
398	614	548	isophorone	85	45B	1420	84B	pyrene	79
358	624	558	naphthalene	74					
408	520	568	nitrobenzene	66					

APPROPRIATE RECOVERIES

2 110

SCAN CODE	RESULT
528 251	45-nitrobenzene 75
627 652	2-fluorobiphenyl 76
637 653	d14-terphenyl 43
647	d10-biphenyl

APPROPRIATE DEFINITIONS FOR THIS REPORT

Scan code number of retention time on chromatogram
 All results reported in _____ unless otherwise specified.
 Data not detected at EPA detection limit method 625, (Federal Register, 10/26/84)
 1,2,3,4-tetrafluoranthene and benzo(k)fluoranthene co-elute
 1,2,3,4-tetraanthracene and chrysene co-elute high concentrations.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242
Continued From Above

SAMPLE ID BATCH NO DATE

FRACTION OYA TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category

1,2-dibenzofluorene and phenanthrene co-elute in high concentrations.
Blank subtracted in reagent blank, background subtraction not performed.
J = estimated value; less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limits should be multiplied by conc factor.

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Analytical Serv
Results by Sample

LAB # 86-01-242

SAMPLE ID reagent blank 625

FRACTION 09C TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected not specified Category

DATA FILE 28501242C09 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK
CONC FACTOR 1 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	31A	2, 4, 6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	32A	4-chloro-3-methylphenol	ND	5A	59A	2, 4-dinitrophenol	ND
1A	34A	2-chlorophenol	ND	4A	60A	2-methyl-4, 6-dinitrophenol	ND
2A	31A	3, 4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	3, 4-dimethylphenol	ND	10A	65A	phenol	ND
5A	37A	2-nitrophenol	ND				

SPRINKLE RECOVERIES

NPDES SCAN	EPA	COMPOUND	RESULT
1001	301	45-phenol	74
1002	402	2-Fluorophenol	69
1003	303	2, 4, 6-tribromophenol	41
1004	304	33-phenol	

NPDES AND USEP NUMBER FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram

All results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242
Continued From Above

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
Not detected in reagent blank; background subtraction not performed.
Not estimated value; less than method detection limit.
DILUTION FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limit should be multiplied by conc factor.

LAB # 86-01-242

Analytical Serv REPORT
Results by Sample

Sample ID: Reseant blank 625
 FRACTION 09C TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected not specified Category

DATE RECEIVED	DATE EXTRACTED	ANALYST	W/JL	VERIFIED BY LAB		
LAB #	DATE INJECTED	INSTRUMENT	5100	COMPOUNDS DETECTED		
NO	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
10	scenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
40	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
90	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
98	hexachlorobenzene	ND	13C	66B	bis(2-ethylhexyl)phthalate	ND
105	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
165	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
166	1-chloronaphthalene	ND	27B	69B	di-n-octyl phthalate	ND
178	1,2-dichlorobenzene	ND	24D	70B	diethyl phthalate	ND
179	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
200	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
210	2,3-dichlorobenzidine	ND	6C	73B	benzo(a)pyrene	ND
215	2,6-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
217	2,4-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene	ND
218	1,3-diphenylhydrazine	ND	18B	76B	chrysenes A	ND
219	fluoranthene	ND	2C	77B	scenaphthylene	ND
220	4-chlorophenyl phenyl ether	ND	3E	78B	anthracene B	ND

LAB # 86-01-242
 Continued From Above

ANALYTICAL SERV REPORT
 Results by Sample

TEST CODE M625 B NAME Method 625 Base/Neutrals
 FRACTION 09C TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected not specified Category

Sample ID	Reagent	Blank	625	88B	79B	80B	81B	82B	83B	84B
413	4-nitrophenyl phenyl ether	ND	ND	88B	79B	80B	81B	82B	83B	84B
428	bis(2-chloroisopropyl)ether	ND	ND	32B	80B	80B	81B	82B	83B	84B
433	bis(2-chloroethoxy)methane	ND	ND	44B	81B	81B	82B	83B	84B	84B
438	hexachlorobutadiene	ND	ND	19B	82B	82B	83B	84B	84B	84B
443	hexachlorocyclopentadiene	ND	ND	37B	83B	83B	84B	84B	84B	84B
448	isophorone	ND	ND	45D	84B	84B	84B	84B	84B	84B
453	naphthalene	ND	ND							
458	nitrobenzene	ND	ND							

benzo(ghi)perylene ND
 fluorene ND
 phenanthrene B ND
 dibenzo(a,h)anthracene ND
 indeno(1,2,3-cd)pyrene ND
 pyrene ND

LAB # 86-01-242
Continued From Above

Analytical Method: [unclear]
Specimens by Sample

Test Code: M525 B NAME Method 625 Base/Neutrals
Date: [unclear] (the collected not specified) Category

Minimum detection [unclear]
[unclear] by [unclear]

Lab # 85000000

Make = White vials Character: National
Date of the collection not specified

Category
METHICILLIN
CLOXACILIN
AMOXICILIN
CLAVULANIC ACID

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID reagent blank 689

FRACTION 09C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 50601242C02
 CONC. FACTOR

DATE EXTRACTED 01/31/86
 DATE INJECTED 02/11/86

ANALYST MJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
87P	87P	aldrin	ND	2P	102P	alpha BHC	ND
90P	90P	dieldrin	ND	3P	103P	beta BHC	ND
91P	91P	chlordane	ND	4P	104P	gamma BHC	ND
92P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
93P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
94P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
95P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
96P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
97P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
98P	98P	endrin	ND	23P	111P	PCB-1260	ND
99P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
100P	100P	heptachlor	ND	25P	113P	toxaphene	ND
101P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 250104 H2O

FRACTION 10A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

DATA FILE S001242C10 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAZ
INSTRUMENT 5100 COMPOUNDS DETECTED 0

REPORT SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
12A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
13A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
14A	21A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
15A	24A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
16A	27A	2-nitrophenol	ND				

REPORT SCAN	EPA	COMPOUND	RESULT
17A	23A	d5-phthalate	ND
18A	25A	2,4-dibromophenol	ND
19A	26A	4,6-dibromophenol	ND
20A	28A	4-nitrophenol	ND

DATA FILE S001242C10 FOR THIS REPORT
SCAN NUMBER OR RETENTION TIME OR CHROMATOGRAM
RESULTS REPORTED IN ug/l UNLESS OTHERWISE SPECIFIED

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Received 01/31/85

Analytical Serv

Results by Sample

REPORT

LAL # 86-01-242

Continued From Above

SAMPLE ID 850104 H2U

FRACTION 10A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)
Not detected in reagent blank, background subtraction not performed
Not estimated value, less than method detection limit
DILUTION FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor

LAB # 86-01-242

Analytical Serv REPORT

Results by Sample

TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/30/86 Category

Sample ID 860104 H20

DATA FILE	REUJERJECIO	DATE EXTRACTED	01/31/86	ANALYST	MJL	VERIFIED BY	LAK
INSTR	FACTOR	DATE INJECTED	02/11/86	INSTRUMENT	5100	COMPOUNDS DETECTED	0
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
40	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
45B	6B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
93B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
94B	10B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
110	105	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
146	108	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
160	150	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
116	158	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	172	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene	ND
150	180	3,3-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
270	188	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
286	190	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene	ND
300	200	2,3-diphenylthiazine	ND	18B	76B	chrysene	ND
318	250	fluoranthene	ND	20	77B	acenaphthylene	ND
170	403	4-chlorophenyl phenyl ether	ND	30	78B	anthracene	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 850104 H20

FRACTION 10A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

Scan	Retention	Identified Compound	Scan	Retention	Identified Compound	Scan	Retention	Identified Compound
146	418	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND	
188	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND	
108	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND	
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND	
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND	
368	548	isophorone	ND	45B	84B	pyrene	ND	
398	508	naphthalene	ND					
408	558	nitrobenzene	ND					

SURROGATE RECOVERIES

SCAN CODE	RESULT
578 851	d5-nitrobenzene 59
851 852	2-fluorobiphenyl 78
1447 853	d14-terphenyl 40
884	d10 biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number of retention time on chromatogram
 All results reported to _____ unless otherwise specified
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
 ^ = benzo(a)anthracene and chrysene co-elute (high concentrations)

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850104 H2O

FRACTION 10A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

S = anthracene and phenanthrene co-elute in high concentrations.

Bl. = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-01-242

SAMPLE ID 860104 H20

FRACTION 10A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/30/86 Category

CHRO # 2901242010
SAMPLE SIZE 1

DATE ANALYZED 02/11/86 UNITS ug/l VERIFIED BY LAK

COMPOUND	SCAN	RESULT	CONF LEVEL	REF CMPD
	•			

No PCBs Detected

8885 94 Analytical Serv REPORT LAB # 86-01-242
 RECEIVED: 01/31/86 Results by Sample

SAMPLE ID 85104 H20 FRACTION 10A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/30/86 Category _____

DATA FILE 82U01242C10 DATE EXTRACTED 01/31/86 ANALYST MJL VERIFIED BY LAK
 CONC FACTOR DATE INJECTED 02/11/86 COMPOUNDS DETECTED 0

LABOR SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	84P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

(Continued From Above)

SAMPLE ID B50104 H20

FRACTION 10A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625. (Federal Register, 12/3/79)

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Analytical Serv REPORT
NonReported Work

Lab # 86-01-242

ACTIVITY AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

119 | | | | | D U P L I N G
120 | | | | | D U P L I N G
121 | | | | | D U P L I N G
122 | | | | | D U P L I N G
123 | | | | | D U P L I N G
124 | | | | | D U P L I N G
125 | | | | | D U P L I N G
126 | | | | | D U P L I N G
127 | | | | | D U P L I N G
128 | | | | | D U P L I N G

PAGE 1 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 02/27/86 17:16:51

REPORT Radian
TO Bl. 4
Austin
ATTEN Larry French
CLIENT PLANT 4 SAMPLES 6
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766
CERTIFIED BY *Carol Smith*
ATTEN _____ CONTACT CONOVER
PHONE (512) 454-4797

**Unknown compound eluting here.
Second column confirmation performed for EPA 601 on -01 through -06.

WORK ID water samples
TAKEN NR, AM
TRANS Fed Ex
TYPE _____
P.O. # 212-027-27-40
INVOICE under separate cover

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01 860109
02 860110
03 860111
03 860111
04 860112
05 860113
06 860114

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs
AS GA Arsenic, low level
BA E Barium, ICPEs
CD E Cadmium, ICPEs
CR E Chromium, ICPEs
DG3020 Digestion by Method 3020
DG6010 Digestion by Method 6010
GC 601 EPA Method 601/GC
GC 602 EPA Method 602/GC
HC IR Hydrocarbons in soil
HG CA Mercury, Cold Vapor
ONG IR Oil and Grease, Infrared
PB GA Lead, low level
SE GA Selenium, low level

RESULTS BY TEST

RECEIVED: 02/01/86

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.005*	0.011	0.008*	0.012	0.019
AS_GA ug/ml	<.005	<.005	<.005	<.005	<.005
BA_E ug/ml	0.11	0.095	0.050	0.023	0.12
CD_E ug/ml	<.002	0.003*	0.003*	<.002	0.003*
CR_E ug/ml	0.14	0.007*	0.013*	0.017*	0.13
DG3020 date complete	02/05/86	02/05/86	02/05/86	02/05/86	02/05/86
DG6010 date complete	02/10/86	02/10/86	02/10/86	02/10/86	02/10/86
HC_IR ug/g	<1.0	<1.0	<1.0	<.0002	<.0002
HG_CA ug/ml	<.0002	<.0002	<.0002	<.0002	<.0002
ONG_IR mg/L	<1.0	<1.0	<1.0	<.002	<.002
PB_GA ug/ml	<.002	<.002e	0.003*	<.002	0.009
SE_GA ug/ml	<.003e	<.003	<.003	<.003	<.003

RECEIVED 02/01/86

TEST CODE	default units	Sample 06 (entered units)
AG_E	ug/ml	0.016
AS_GA	ug/ml	<.005
BA_E	ug/ml	0.053
CD_E	ug/ml	0.003*
CR_E	ug/ml	0.024*
DG3020		02/05/86
date complete		02/10/86
DG6010		<.0002
date complete		<.002
HG_CA	ug/ml	<.003
PB_GA	ug/ml	
SE_GA	ug/ml	

PAGE 4 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 Results by Sample

SAMPLE ID 860109 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/31/86 Category

DATA FILE 9 DATE INJECTED 02/03/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT 9 COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	3	Trichloroethene	2314
	Bromomethane	ND		Dibromochloromethane #	ND
	Vinyl Chloride	ND		1, 1, 2-Trichloroethane #	ND
	Chloroethane	ND		cis-1, 3-Dichloropropene #	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1, 1-Dichloroethene	ND		1, 1, 2, 2-Tetrachloroethane #	ND
	1, 1-Dichloroethane	ND		Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	6.37		Chlorobenzene	ND
	Chloroform	ND		1, 3-Dichlorobenzene	ND
	1, 2-Dichloroethane	ND		1, 2-Dichlorobenzene	ND
2	1, 1, 1-Trichloroethane	235		1, 4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1, 2-Dichloropropane	ND			
	trans-1, 3-Dichloropropene	ND			

PAGE 5 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 Results by Sample Continued From Above
SAMPLE ID 860109 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/01/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-001

SAMPLE ID 860109

FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/31/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv
Results by Sample

LAB # 86-02-001

SAMPLE ID 860110

FRACTION 02A
Date & Time Collected 01/31/86

TEST CODE GC 601 NAME EPA Method 601/GC
Category

DATA FILE	CONC	FACTOR	g	DATE INJECTED	02/03/86	ANALYST	RP	INSTRUMENT	g	COMPOUNDS DETECTED	1	VERIFIED BY	MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT					
—	Chloromethane	ND	—	Trichloroethene	ND	—							
—	Bromomethane	ND	—	Dibromochloromethane *	ND	—							
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND	—							
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND	—							
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND	—							
—	Trichlorofluoromethane	ND	—	Bromoform	ND	—							
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND	—							
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND	—							
1	trans-1,2-Dichloroethene	10.9**	—	Chlorobenzene	ND	—							
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND	—							
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND	—							
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND	—							
—	Carbon Tetrachloride	ND	—			—							
—	Bromodichloromethane	ND	—			—							
—	1,2-Dichloropropane	ND	—			—							
—	trans-1,3-Dichloropropene	ND	—			—							

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Analytical Serv
Results by Sample
REPORT
LAB # 86-02-001
Continued From Above

SAMPLE ID 860110
FRACTION 02A
TEST CODE GC 601
NAME EPA Method 601/GC
Date & Time Collected 01/31/86
Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-001

SAMPLE ID 860110

FRACTION Q2C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/31/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 10 Analytical Serv REPORT LAB # 86-02-001
 RECEIVED: 02/01/86 Results by Sample

SAMPLE ID 860111 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 01/31/86 Category

DATA FILE _____ ANALYST _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	11.3**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-001

Continued From Above

SAMPLE ID 860111

FRACTION Q3A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 12 Analytical Serv REPORT LAB # 86-02-001
 RECEIVED: 02/01/86 Results by Sample

SAMPLE ID 860111 FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 01/31/86 Category _____

DATA FILE _____ DATE INJECTED 02/04/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT 4 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

RECEIVED: 02/01/86

Analytical Serv REPORT

Results by Sample

LAB # 86-02-001

SAMPLE ID 860112

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	2	Trichloroethene	2015
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1, 1, 2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1, 3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1, 1-Dichloroethene	ND	—	1, 1, 2, 2-Tetrachloroethane #	ND
—	1, 1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	298	—	Chlorobenzene	ND
—	Chloroform	ND	—	1, 3-Dichlorobenzene	ND
—	1, 2-Dichloroethane	ND	—	1, 2-Dichlorobenzene	ND
—	1, 1, 1-Trichloroethane	ND	—	1, 4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
—	1, 2-Dichloropropane	ND	—		
—	trans-1, 3-Dichloropropene	ND	—		

DATA FILE 9 DATE INJECTED 02/04/86 ANALYST RP VERIFIED BY MCL

CONC. FACTOR INSTRUMENT 9 COMPOUNDS DETECTED 2

KADIAN
CORPORATION

PAGE 14 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 Results by Sample Continued From Above

SAMPLE ID 860112 FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv
Results by Sample

LAB # 86-02-001

SAMPLE ID 860112 FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/31/86 Category _____

DATA FILE _____ D _____ DATE INJECTED 02/04/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT
SCAN = scan number or retention time on chromatogram
All results reported in ug/L unless otherwise specified
ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79)

LAB # 86-02-001

Analytical Serv REPORT

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Results by Sample

RECEIVED 02/01/86

SAMPLE ID 860113 FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 01/31/86 Category

DATA FILE _____ ANALYST _____ VERIFIED BY MCL
 CONC FACTOR _____ INSTRUMENT _____ COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloroethane	ND	2	Trichloroethene	390
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethane	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethane	136**		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

PAGE 17 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 Results by Sample Continued From Above
SAMPLE ID 860113 FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/31/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-001

SAMPLE ID 860113

FRACTION OSC TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/31/86 Category

DATA FILE _____ DATE INJECTED 02/04/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
—	Toluene	ND	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 19 Analytical Serv REPORT LAB # 86-02-001
RECEIVED: 02/01/86 Results by Sample

SAMPLE ID 860114 FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 01/31/86 Category _____

DATA FILE _____ Q _____ DATE INJECTED 02/04/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g _____ COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	<u>2</u>	Trichloroethene	<u>402</u>
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethane	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
<u>1</u>	trans-1, 2-Dichloroethane	<u>160**</u>	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-001

Continued From Above

SAMPLE ID 860114

FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601. (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute
@1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-001

SAMPLE ID 860114

FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 01/31/86 Category

DATA FILE _____ D DATE INJECTED 02/04/86 ANALYST _____ RP VERIFIED BY MCL
CONC FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
—	Toluene	ND	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND			

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram
All results reported in ug/L unless otherwise specified
ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79)

LAB # 86-02-001

Analytical Serv REPORT

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NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

		OZE	DUP_MS
01B	...		DUP 601
02B	...		DUP 601
03B	...		DUP 601
03E	...		DUP_MS
04B	...		DUP 601
05B	...		DUP 601
06B	...		DUP 601

LAB # 86-02-004

REFURM

85 14 32 '86

UPM

Radian Analytical Services
6501 Mopac Blvd
P O Box 9748
Austin, Texas 78766

CERTIFIED BY

CONTACT FRENCH

PHONE (512) 454-4797

SAMPLE # 6

General Dynamics
Plant 4 Bldg 4
Austin, Texas

Plant 4
Bell, Robinson
Austin, Texas 78712

Plant 4
Bell, Robinson
Austin, Texas 78712

Footnotes and Comments

* Indicates a value less than 5 times the detection limit
Potential error for such low values ranges between
50 and 100%

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present

ANALYTICAL IDENTIFICATION

ANALYTICAL SERV TEST CODES and NAMES used on this report

- EA 625 Extraction only - 625 BN/A
- MSA A Method 625 Acid Compounds
- MSB B Method 625 Base/Neutrals
- MSM MMS Characterization-ABN
- MSX X Pesticides & PCBs by GC/MS

PAGE 3 RECEIVED 02/01/86 Analytical Serv REPORT LAB # 86-02-004 RESULTS BY TEST

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EX 625 date complete	02/03/86	02/03/86	02/03/86	02/03/86	02/03/86

TEST CODE default units	Sample 06 (entered units)
EX 625 date complete	02/03/86

LAB # 86-02-004

Analytical Serv REPORT
Results by Sample

DATE RECEIVED 02/01/85

FRAC TION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

DATA FILE 25002004001 DATE EXTRACTED 02/03/86 ANALYST INSTRUMENT 5100 VERIFIED BY LAK
FACTOR 1 DATE INJECTED 02/11/86 COMPOUNDS DETECTED 0

INDEX	SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	31A		2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
116	32A		4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
118	34A		2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
120	31A		2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
122	34A		2,4-dimethylphenol	ND	10A	65A	phenol	ND
124	37A		2-nitrophenol	ND				

DETECTED COMPOUNDS

SCAN	EPA	COMPOUND	RESULT
31A		4-nitrophenol	62
32A		2-nitrophenol	72
34A		2,4-dinitrophenol	50
37A		4-nitrophenol	

NOTE: All values are in micrograms per liter (µg/L) unless otherwise specified.
Retention times are reported in minutes (min) unless otherwise specified.

LAB # 86-02-004
Continued From Above

Analytical Serv REPURI
Results by Sample

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)
Not detected in reagent blank, background subtraction not performed.
Calculated value less than method detection limit.
Indicates dilution of sample if greater than one (1). Minimum detection
limit should be multiplied by conc factor

REPORT

LAB # 86-02-004

RESULTS BY SAMPLE

TEST CODE: 11A TEST CODE: M625 b NAME: Method 625 Base/Neutrals
DATE: 1/30/86 DATE COLLECTED: 01/30/86 CATEGORY: _____

NO.	TEST CODE	NO.	TEST CODE	EPA	QUALITY INSTRUMENT	M/L	VERIFIED BY	COMPOUNDS DETECTED	RESULT
1	11A	41B	41B	61B	4	4	LAK	N nitrosodimethylamine	ND
2	11A	42F	42F	62B	4	4	LAK	N nitrosodiphenylamine	ND
3	11A	43F	43F	63B	4	4	LAK	N nitrosodipropylamine	ND
4	11A	44P	44P	64B	4	4	LAK	diethyl ethylphthalate	ND
5	11A	45P	45P	65B	4	4	LAK	butyl benzyl phthalate	ND
6	11A	46F	46F	66B	4	4	LAK	di butyl phthalate	ND
7	11A	47F	47F	67B	4	4	LAK	tri n butyl phthalate	ND
8	11A	48B	48B	68B	4	4	LAK	diethyl phthalate	ND
9	11A	49F	49F	69B	4	4	LAK	diethyl phthalate	ND
10	11A	50F	50F	70B	4	4	LAK	diethyl phthalate	ND

KAPLAN

LAB # 8506-004
CONTINUED FROM ABOVE

DATE COLLECTED 01/30/86
METH. NAME M625 B
METH. NO. 625 B
METH. NAME Method Sub Base/Neutrals
METH. NO. 625 B
METH. NAME Category

SCAN CODE	RESULT	CONCENTRATION (ug/L)	REMARKS
822	4,4'-dichlorodiphenyl ether	ND	
823	1,2-dichloroethane	ND	
824	1,1-dichloroethane	ND	
825	1,1,1-trichloroethane	ND	
826	1,1,2-trichloroethane	ND	
827	1,2-dichlorobenzene	ND	
828	1,4-dichlorobenzene	ND	
829	1,2-dichlorobenzene	ND	
830	1,4-dichlorobenzene	ND	
831	1,2-dichlorobenzene	ND	
832	1,4-dichlorobenzene	ND	
833	1,2-dichlorobenzene	ND	
834	1,4-dichlorobenzene	ND	
835	1,2-dichlorobenzene	ND	
836	1,4-dichlorobenzene	ND	
837	1,2-dichlorobenzene	ND	
838	1,4-dichlorobenzene	ND	
839	1,2-dichlorobenzene	ND	
840	1,4-dichlorobenzene	ND	
841	1,2-dichlorobenzene	ND	
842	1,4-dichlorobenzene	ND	
843	1,2-dichlorobenzene	ND	
844	1,4-dichlorobenzene	ND	
845	1,2-dichlorobenzene	ND	
846	1,4-dichlorobenzene	ND	
847	1,2-dichlorobenzene	ND	
848	1,4-dichlorobenzene	ND	
849	1,2-dichlorobenzene	ND	
850	1,4-dichlorobenzene	ND	
851	1,2-dichlorobenzene	ND	
852	1,4-dichlorobenzene	ND	
853	1,2-dichlorobenzene	ND	
854	1,4-dichlorobenzene	ND	
855	1,2-dichlorobenzene	ND	
856	1,4-dichlorobenzene	ND	
857	1,2-dichlorobenzene	ND	
858	1,4-dichlorobenzene	ND	
859	1,2-dichlorobenzene	ND	
860	1,4-dichlorobenzene	ND	
861	1,2-dichlorobenzene	ND	
862	1,4-dichlorobenzene	ND	
863	1,2-dichlorobenzene	ND	
864	1,4-dichlorobenzene	ND	
865	1,2-dichlorobenzene	ND	
866	1,4-dichlorobenzene	ND	
867	1,2-dichlorobenzene	ND	
868	1,4-dichlorobenzene	ND	
869	1,2-dichlorobenzene	ND	
870	1,4-dichlorobenzene	ND	
871	1,2-dichlorobenzene	ND	
872	1,4-dichlorobenzene	ND	
873	1,2-dichlorobenzene	ND	
874	1,4-dichlorobenzene	ND	
875	1,2-dichlorobenzene	ND	
876	1,4-dichlorobenzene	ND	
877	1,2-dichlorobenzene	ND	
878	1,4-dichlorobenzene	ND	
879	1,2-dichlorobenzene	ND	
880	1,4-dichlorobenzene	ND	
881	1,2-dichlorobenzene	ND	
882	1,4-dichlorobenzene	ND	
883	1,2-dichlorobenzene	ND	
884	1,4-dichlorobenzene	ND	
885	1,2-dichlorobenzene	ND	
886	1,4-dichlorobenzene	ND	
887	1,2-dichlorobenzene	ND	
888	1,4-dichlorobenzene	ND	
889	1,2-dichlorobenzene	ND	
890	1,4-dichlorobenzene	ND	
891	1,2-dichlorobenzene	ND	
892	1,4-dichlorobenzene	ND	
893	1,2-dichlorobenzene	ND	
894	1,4-dichlorobenzene	ND	
895	1,2-dichlorobenzene	ND	
896	1,4-dichlorobenzene	ND	
897	1,2-dichlorobenzene	ND	
898	1,4-dichlorobenzene	ND	
899	1,2-dichlorobenzene	ND	
900	1,4-dichlorobenzene	ND	

APPROPRIATE RECOVERIES

SCAN CODE	RESULT	CONCENTRATION (ug/L)
851	4,4'-dinitrobenzene	64
852	2-fluorobiphenyl	84
853	1,1'-terphenyl	46
854	1,1'-biphenyl	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)
 k = benzo(k)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrycene co-elute high concentrations.

LABORATORY REPORT

LAB # 86-02-004

Results by Sample

Continued From Above

FRACTION O1A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

... and phenanthrene co-elute in high concentrations.
... to a reagent blank, background subtraction not performed.
... value less than method detection limit.
... indicates dilution of sample if greater than one (1). Minimum detection
... be multiplied by conc. factor.

LAB # 86-02-004

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 850110 H20

FRACTION 01A TEST CODE MSNS S NAME GCM5 Characterization-Alt
Date & Time Collected 01/30/86 Category

CHRD # 5U02004C01
SAMPLE SIZE 1

DATE ANALYZED 02/11/86 UNITS ug/L

SCAN	COMPOUND	RESULT	CONF	REF
------	----------	--------	------	-----

No PCBs Detected

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004

SAMPLE ID 850110 H20

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86 Category

DATA FILE 50002004C01 DATE EXTRACTED 02/03/86 ANALYST _____ WJL VERIFIED BY LMP
CONC FACTOR _____ DATE INJECTED 02/11/86 COMPOUNDS DETECTED _____

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
2P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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SAMPLE ID 860110 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

LAB # 86-02-004
 Analytical Serv REPORT
 Results by Sample

FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 01/30/86 Category

DATA FILE 51002004C02 DATE EXTRACTED 02/03/86 ANALYST WJL VERIFIED BY LAK
 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
3A	32A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	3,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	4-dimethylphenol	ND	10A	454	65A	phenol
5A	37A	2-nitrophenol	ND				

SEMI-QUANTITATIVE RECOVERIES

SCAN CODE	COMPOUND	RESULT
454	454 phenol	ND
61	61 phenol	ND
61	61 phenol	ND
61	61 phenol	ND

NOTES AND DEFINITIONS FOR THIS REPORT
 SCAN # scan number or retention time on chromatogram
 ND results reported in this report unless otherwise specified

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ANALYTICAL DEPT.

RESULTS BY SAMPLE

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID 850111 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date of Time Collected 01/30/86

Category

NO 2 not detected at EPA detection limit method 625 (Federal Register 11/26/81)

SL not detected in reagent blank, background subtraction not performed

2.5 estimated value, less than method detection limit

CONC. FACTOR indicates dilution of sample if greater than one (1) Minimum detection

limits should be multiplied by conc. factor

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Analytical Serv REP JIM
Results by Sample

LAB # 88-02-200

SAMPLE ID 850111 H20

FRACTION 02A

TEST CODE M225 B NAME Method sac base Neutral

Date : Time Collected 01/30/85

Lab Report

DATA FILE 850204C02 DATE EXTRACTED 02/03/85 ANALYST
CONC FACTOR 1.1 DATE INJECTED 02/11/85 INSTRUMENT 5830 OPERATOR JIM JIM

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND
18	18	acenaphthene	ND	416	616	N-nitrosodimethylamine
48	58	benzidine	ND	438	628	N-nitrosodiphenylamine
466	85	1,2,4-trichlorobenzene	ND	428	635	N-nitrosodipropylamine
336	98	hexachlorobenzene	ND	138	668	bis(2-ethylhexyl)phthalate
368	128	hexachloroethane	ND	156	676	butyl phenyl phthalate
118	182	bis(2-chloroethyl)ether	ND	268	688	di-butyl phthalate
168	208	2-chloronaphthalene	ND	298	696	dipropyl phthalate
308	258	1,2-dichlorobenzene	ND	248	708	diethyl phthalate
218	268	1,3-dichlorobenzene	ND	258	718	diethyl phthalate
238	278	1,4-dichlorobenzene	ND	58	728	diethyl phthalate
328	308	3,3'-dichlorobenzidine	ND	68	738	diethyl phthalate
378	348	2,4-dinitrotoluene	ND	71	748	diethyl phthalate
388	358	2,6-dinitrotoluene	ND	42	758	diethyl phthalate
378	378	1,2,4-trichlorobenzene	ND	48	768	diethyl phthalate
318	398	1,3-dichlorobenzene	ND	148	778	diethyl phthalate
318	398	1,4-chlorophenyl propyl ether	ND	38	788	diethyl phthalate

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Analytical Serv

Results by Sample

REPORT

LAB # 807-2-014

CONTAINED FROM ABOVE

SAMPLE ID 85011 H20

FRACTION 02A

TEST CODE M625 B NAME METHOD 535 base Neutral

Date & Time Collected 01/30/85

Category

148	412	4-bromophenyl phenyl ether	ND	88	79B	benzo(a)pyrene	14
128	428	bis(2-chloroisopropyl)ether	ND	328	80B	fluorene	102
108	438	bis(2-chloroethoxy)methane	ND	448	81B	phenanthrene	103
348	528	hexachlorobutadiene	ND	198	82B	dibenz(a,h)anthracene	142
358	538	hexachlorocyclopentadiene	ND	378	83B	indeno(1,2,3-cd)pyrene	143
388	548	isophorone	ND	458	84B	pyrene	144
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>577</u> 851	d5-nitrobenzene <u>123</u>
<u>850</u> 852	2 fluorobiphenyl <u>80</u>
<u>1447</u> 853	d14 terphenyl <u>44</u>
854	d10 biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT

- SCAN # scan number or retention time on chromatogram
- All results reported in micrograms/l unless otherwise specified
- ND = not detected at EPA detection limit method 625, (Federal Register 1/20/84)
- 4 = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
- A = benzo(a)anthracene and chrysene co-elute (high concentration)

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SAMPLE ID 850111 H2O

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

FRACTION 02A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = anthracene and phenanthrene co-elute in high concentrations

EL = detected in reagent blank, background subtraction not performed

J = estimated value, less than method detection limit

CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004
SAMPLE ID 250111 H2O FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/30/86 Category

CHRG # 250200+02 VERIFIED BY LAK
SAMPLE SIZE 1 DATE ANALYZED 02/11/86 UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs Detected

ANALYTICAL SERV. REFUMT LAB # 86-02-004
 RECEIVED 06/01/86 Results by Sample

SAMPLE ID 86111 H29 FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/30/86 Category

DATA FILE 86020408 DATE EXTRACTED 02/03/86 ANALYST NJI VERIFIED BY LAR
 0000 FACILITY DATE INJECTED 02/11/86 COMPOUNDS DETECTED 0

INDEX SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	64P	aldrin	ND	2P	102P	alpha BHC	ND
1P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordan	ND	4P	104P	gamma BHC	ND
7P	92P	4,4-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4-DDE	ND	18P	106P	POLY-1040	ND
9P	94P	4,4-DDD	ND	19P	107P	POLY-1054	ND
11P	95P	1,1,1-trichloroethane	ND	20P	108P	POLY-1061	ND
12P	96P	1,1,2-trichloroethane	ND	21P	109P	POLY-1071	ND
13P	97P	1,1,1,2-tetrachloroethane	ND	22P	110P	POLY-1081	ND
14P	98P	1,1,2,2-tetrachloroethane	ND	23P	111P	POLY-1091	ND
15P	99P	1,1,1,1-tetrachloroethane	ND	24P	112P	POLY-1101	ND
16P	100P	1,1,1,2,2-pentachloroethane	ND	25P	113P	POLY-1111	ND
17P	101P	1,1,1,2,2,2-hexachloroethane	ND	26P	114P	POLY-1121	ND

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SAMPLE ID 850111 HEU

Analytical Serv

Results by Sample

REFID

FRACTION 02A

Date & Time Collected 11/30/84

Lab # 25-100-004

Continued from Above

NAME PESTICIDES & FUNG BY G/MS
CATEGORY

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625. Federal Register 1/1/84

KADIAN CORPORATION

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SAMPLE ID 80012 HAS

DATA FILE 80012001002

DATE EXPIRES 01/01/86

DATE INITIATED 01/01/85

PROJECT

ANALYST

NEDES SCALP EPA

CONCENTR

NO. OF

WPTS

ANALYSES

11A 31A 3.43

ML

W

1

2A 32A 4.01

ML

W

1

3A 33A 3.17

ML

W

1

4A 34A 2.44

ML

W

1

5A 35A 2.44

ML

W

1

6A 37A

ML

W

1

BLINDGATE RECOVERIES

SCALP CODE

CONCENTR

NO. OF

WPTS

ANALYSES

425 601

ML

W

1

347 612

ML

W

1

1031 653

ML

W

1

654

NOTES: 2100 Dept 1411 Jobs: FDE

SCALP = Scalp Number

All results reported in

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RECEIVED: 02/01/86

Analytical Ser.

REPORT

LAB # 86-02-034

Results by Sample

CONTINUED FROM ABOVE

SAMPLE ID 86012 H2O

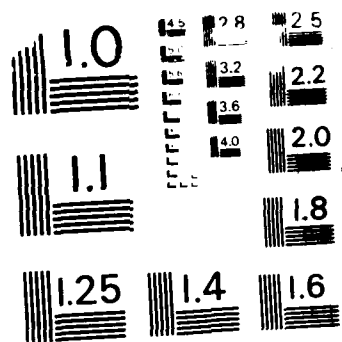
FRACTION USA TEST CODE M525 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)

BL = detected in reagent blank, background subtraction not performed

U = estimated value, less than method detection limit

DF = DILUTION FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc. factor



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963-A

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID 850112 H30

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATA FILE 5CU02004C03
CORC FACTOR 1

DATE EXTRACTED 02/03/86
DATE INJECTED 02/11/86

ANALYST WJL
INSTRUMENT 5100

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	9B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
31B	34B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
33B	37B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
35B	40B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
37B	35B	2,4-dinitrotoluene	ND	7C	74B	benzo(b)fluoranthene *	ND
38B	35B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
39B	37B	1,2,4-triazole	ND	18B	76B	chrysene A	ND
31B	37B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-004
Continued From Above

SAMPLE ID 850112 H20

FRACTION 03A
Date & Time Collected 01/30/86

TEST CODE M625 B

NAME Method 625 Base/Neutrals
Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
572 851	d5-nitrobenzene 133
851 852	2-fluorobiphenyl 100
1447 853	d14-terphenyl 67
854	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN# = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 (B) = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 4 = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 860112 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = Anthracene and phenanthrene co-elute in high concentrations.

SL = Detected in reagent blank; background subtraction not performed.

V = Estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID 850112 H2O

FRACTION 03A

TEST CODE MSMS S NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHKO # 5U02004C03

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No. PCBs Detected

RECEIVED 02/01/86

Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 850112 H20

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/30/86 Category

DATA FILE 5CU02004C03
 CONC. FACTOR

DATE EXTRACTED 02/03/86
 DATE INJECTED 02/11/86

ANALYST MJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
16P	98P	endrin	ND	23P	111P	PCB-1260	ND
18P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
19P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004
Continued From Above

SAMPLE ID 250112 H2O

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN # scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004

SAMPLE ID 850114 H.O

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/30/86 Category

DATA FILE SC002004C04
CONC FACTOR 1

DATE EXTRACTED 02/03/86
DATE INJECTED 02/12/86

ANALYST WJL
INSTRUMENT 5100

VERIFIED BY LAK
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
6A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	450	phenol	16
4A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
455	45-phenol	60
918	2-fluorophenol	17
1036	2,4-dibromophenol	12
AS4	40-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID 850114 H20

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category _____

ND = not detected at EPA detection limit method 625. (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CCNC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-004

Analytical Data REPORT

Results by Sample

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SAMPLE ID 850114 H2P FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

DATA FILE SQU02004C04 DATE EXTRACTED 02/03/86 ANALYST WJL VERIFIED BY LAK
INSTRUMENT 5100 COMPOUNDS DETECTED 0

REFS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
18	18		acenaphthene	ND	41B	61B		N-nitrosodimethylamine	ND
48	58		benzidine	ND	43B	62B		N-nitrosodiphenylamine	ND
46E	88		1,2,4-trichlorobenzene	ND	42B	63B		N-nitrosodi-n-propylamine	ND
93E	92		hexachlorobenzene	ND	13B	66B		bis(2-ethylhexyl)phthalate	ND
36B	128		hexachloroethane	ND	15B	67B		butyl benzyl phthalate	ND
110	188		bis(2-chloroethyl)ether	ND	26B	68B		di-butyl phthalate	ND
168	208		2-chloronaphthalene	ND	29B	69B		di-n-octyl phthalate	ND
208	258		1,2-dichlorobenzene	ND	24B	70B		diethyl phthalate	ND
210	268		1,3-dichlorobenzene	ND	25B	71B		dimethyl phthalate	ND
212	278		1,4-dichlorobenzene	ND	5B	72B		benzo(a)anthracene A	ND
208	288		3,3-dichlorobenzidine	ND	6B	73B		benzo(a)pyrene	ND
208	308		2,4-dinitrotoluene	ND	7B	74B		benzo(b)fluoranthene *	ND
208	348		2,6-dinitrotoluene	ND	9B	75B		benzo(k)fluoranthene *	ND
208	378		1,2-diphenylhydrazine	ND	18B	76B		chrysene A	ND
318	358		fluoranthene	ND	2B	77B		acenaphthylene	ND
17B	40B		4-chlorophenyl phenyl ether	ND	3B	78B		anthracene B	ND

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-004
Continued From Above

SAMPLE ID 850114 H20

FRACTION 04A
Date & Time Collected 01/30/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

14B	418	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
24B	508	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
28B	548	isophorone	ND	45B	84B	pyrene	ND
39B	558	naphthalene	ND				
40B	568	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
579 891	d5-nitrobenzene 110
929 930	2-fluorobiphenyl 93
1499 993	d14-terphenyl 48
994	d10-biphenyl

NOTES FOR REPHILITORS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
 A (= anthracene and chrysene co-elute high concentrations)

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SAMPLE ID 850114 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

Q = anthracene and phenanthrene co-elute in high concentrations.

SL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit.

CCNC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 250114 H2O

FRACTION 04A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CFR # 510.5004C04

SAMPLE SITE 1

DATE ANALYZED 02/12/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No PCBs Detected

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID 860114 H2O

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

DATA FILE 52U02004C04

DATE EXTRACTED 02/03/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/12/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	82P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	96P	endrin	ND	23P	111P	PCB-1260	ND
16P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004
Continued From Above

SAMPLE ID 850114 HED

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

(N) = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID B50109 H2O

FRACTION 05A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 50002004C05
CONC FACTOR 1

DATE EXTRACTED 02/03/86
DATE INJECTED 02/12/86

ANALYST NJL
INSTRUMENT 5100

VERIFIED BY LAK
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	45Z	phenol	11
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
45Z	45-phenol	97
31Z	2-fluorophenol	94
103Z	2,4,6-tribromophenol	67
49Z	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID 860109 H2O

FRACTION 05A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NU = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-004

SAMPLE ID 850109 H2O

FRACTION 05A
Date & Time Collected 01/30/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

DATA FILE 5CU02004C05
CONC. FACTOR 1

DATE EXTRACTED 02/03/86
DATE INJECTED 02/12/86

ANALYST WJL
INSTRUMENT 5100

VERIFIED BY LAK
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	86	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
30B	9B	hexachlorobenzene	ND	13B 1631	66B	bis(2-ethylhexyl)phthalate	25
26B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
23B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	29B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	34B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	75B	chrysene A	ND
29B	38B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

Continued From Above

SAMPLE ID 850109 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

SCAN CODE	RESULT	SCAN CODE	RESULT	SCAN CODE	RESULT	
41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
54B	isophorone	ND	45B	84B	pyrene	ND
55B	naphthalene	ND				
56B	nitrobenzene	ND				

SUBSTITUTE RECOVERIES

SCAN CODE	RESULT
57B 851	4,5-nitrobenzene 106
85B 852	2-fluorobiphenyl 89
145B 853	4,14-terphenyl 60
854	4,10-biphenyl

NOTES AND REVISIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram
 All results reported in ppm unless otherwise specified
 ND = not detected or EPA detection limit method 625, (Federal Register, 10/26/84)
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
 A = benzo(a)anthracene and chrysene co-elute (high concentrations)

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Analytical Serv REPORT LAB # 86-02-004
Results by Sample Continued From Above

SAMPLE ID 850109 H2O

FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 01/30/86 Category

2 = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value, less than method detection limit.
CORC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 860109 H2O

FRACTION 05A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category _____

CIRCU # 5002004005

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 02/12/86

UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs Detected

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID 850109 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/30/86 Category

DATA FILE 850200405
 CONC FACTOR

DATE EXTRACTED 02/03/86
 DATE INJECTED 02/12/86

ANALYST WJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCD-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
13P	98P	endrin	ND	23P	111P	PCE-1250	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-004
Continued From Above

SAMPLE ID 860109 H20

FRACTION 05A TEST CODE MS 608
Date & Time Collected 01/30/86

NAME Pesticides & PCBs by GC/MS
Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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RECEIVED: 02/01/86

Analytical Serv
Results by Sample

LAB # 86-02-004

REPORT

SAMPLE ID Reagent blank 625

FRACTION 06A TEST CUDE M625 A NAME Method 625 Acid Compounds
Date & Time Collected not specified Category

DATA FILE SCF02004C06
CONC. FACTOR 1

DATE EXTRACTED 02/03/86
DATE INJECTED 02/12/86

ANALYST INSTRUMENT
WJL 5100

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	214	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	37A	2-nitrophenol	ND				

surrogate recoveries

SCAN CODE	COMPOUND	RESULT
125 651	45-phenol	85
211 651	2-fluorophenol	81
1023 653	2,4,5-tribromophenol	43
654	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.
611 results reported in ug/l unless otherwise specified

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RECEIVED: 02/01/85

Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected not specified Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
SL = detected in reagent blank; background subtraction not performed
J = estimated value; less than method detection limit.
CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection
limits should be multiplied by conc. factor.

RECEIVED: 02/01/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 86020204006 DATE EXTRACTED 02/03/86 ANALYST _____ VERIFIED BY LAK
 CONC FACTOR 1 DATE INJECTED 02/12/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

LAB#	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
18	10		acenaphthene	ND	41B	61B		N-nitrosodimethylamine	ND
48	5B		benzidine	ND	43B	62B		N-nitrosodiphenylamine	ND
408	88		1,2,4-trichlorobenzene	ND	42B	63B		N-nitrosodi-n-propylamine	ND
328	93		hexachlorobenzene	ND	13B	66B		bis(2-ethylhexyl)phthalate	ND
308	12B		hexachloroethane	ND	15B	67B		butyl benzyl phthalate	ND
118	188		tris(2-chloroethyl) ether	ND	26B	68B		di-butyl phthalate	ND
168	268		2-chloro-1-naphthalene	ND	298	69B		di-n-octyl phthalate	ND
208	288		1,2-dichlorobenzene	ND	24B	70B		diethyl phthalate	ND
218	368		1,2-dichlorobenzene	ND	25B	71B		dimethyl phthalate	ND
228	378		1,4-dichlorobenzene	ND	5B	72B		benzo(a)anthracene A	ND
238	388		5,6-dichlorobenzidine	ND	6B	73B		benzo(a)pyrene	ND
248	458		2,4-dinitrotoluene	ND	7B	74B		benzo(b)fluoranthene	ND
258	468		2,6-dinitrotoluene	ND	9B	75B		benzo(k)fluoranthene	ND
268	478		1,2-diphenylhydrazine	ND	18B	76B		chrysene A	ND
278	488		fluoranthene	ND	20	77B		acenaphthylene	ND
288	498		4-chlorophenyl phenyl ether	ND	3B	78B		anthracene B	ND

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RECEIVED 05/01/85

Analytical Setv
Results by Sample

LAB # 86-02-004
Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

410	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
420	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
430	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
440	44B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
450	45B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
460	46B	isophorone	ND	45B	84B	pyrene	ND
470	47B	naphthalene	ND				
480	48B	nitrobenzene	ND				

INTERMEDIATE RECOVERIES

SCAN CODE	RESULT
570 031	d5-nitrobenzene 120
850 033	2-fluorobiphenyl 76
1430 033	d14-terphenyl 32
151	d10-biphenyl

CAUTION: 400 REPLICATIONS FOR THIS REPORT

SCAN 151000 number of retention time on chromatogram
 All results reported in ug/L unless otherwise specified
 ND = not detected at EPA detection limit method 625, (Federal Register 10/26/84)
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
 A = (a)anthracene and chrysene co-elute (high concentration)

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RECEIVED: 02/01/86

SAMPLE ID Reagent Blank 625

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

FRACTION 06A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
V = estimated value; less than method detection limit
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-004

Analytical Serv REPORT

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Results by Sample

RECEIVED: 02/01/86

SAMPLE ID Reagent Blank 625 FRACTION 06A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category

CHG# # 5802004C06 DATE ANALYZED 02/12/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs Detected

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 RECEIVED: 02/01/85

Analytical Serv REPORT
 Results by Sample

LAB # 86-02-004

SAMPLE ID Reagent Blank 309

FRACTION 06A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected not specified Category

DATA FILE 20002004005
 CONC FACTOR

DATE EXTRACTED 02/03/86
 DATE INJECTED 02/12/86

ANALYST MJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
15P	98P	endrin	ND	23P	111P	PCB-1260	ND
17P	99P	gamma HCH	ND	24P	112P	PCB-1016	ND
18P	100P	heptachlor	ND	25P	113P	toxaphene	ND
19P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-004

NonReported Work

FRACITION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

018 | SUP_INS
038 | SUP_INS
048 | SUP_INS

PAGE 1
RECEIVED: 02/04/86

Analytical Serv
02/27/86 17:34:02

LAB # 86-02-015

REPORT Radian
TO BL 4
Austin
ATTEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY B501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766
ATTEN
PHONE (512) 454-4797

Carol Scott
CERTIFIED BY
CONTACT CONOVER

WORK ID water
TAKEN NR, AM
TRANS Fed Ex
TYPE
P.O. # 212-027-27-40
INVOICE under separate cover

**Unknown compound eluting here.
Second column confirmation performed for EPA 601 on -01,
-02, -03.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

01 860113
02 860116
03 860117

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs
AS GA Arsenic, low level
BA E Barium, ICPEs
CD E Cadmium, ICPEs
CR E Chromium, ICPEs
DG3020 Digestion by Method 3020
DG6010 Digestion by Method 6010
9C 601 EPA Method 601/GC
9C 602 EPA Method 602/GC
HC IR Hydrocarbons in soil
HG CA Mercury, Cold Vapor
ONG IR Oil and Grease, Infrared
PB GA Lead, low level
SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)
AG E ug/ml	0.011	0.012	0.008*
AS GA ug/ml	<.005	<.005	<.005
BA E ug/ml	0.097	0.091	0.082
CD E ug/ml	<.002	<.002	<.002
CR E ug/ml	0.029	0.14	0.016*
DG3020 date complete	02/05/86	02/05/86	02/05/86
DG6010 date complete	02/11/86	02/11/86	02/11/86
HC IR ug/g	<1.0 mg/L	<1.0 mg/L	<1.0 mg/L
HG CA ug/ml	<.0002	<.0002	<.0002
ONG IR mg/L	<1.0	<1.0	<1.0
PB GA ug/ml	0.006*	<.002	<.002
SE GA ug/ml	<.003	<.003	<.003

RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-015

Results by Sample

SAMPLE ID 860115

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

DATA FILE _____ G DATE INJECTED 02/11/86 ANALYST _____ MGL VERIFIED BY MGL
CONC. FACTOR _____ INSTRUMENT _____ a COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	1	Trichloroethene	6.63
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	2	Tetrachloroethylene #	43.3
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

PAGE 4 Analytical Serv REPORT LAB # 86-02-015
RECEIVED: 02/04/86 Results by Sample Continued From Above
SAMPLE ID 860115 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/03/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 5 Analytical Serv REPORT LAB # 86-02-015
RECEIVED: 02/04/86 Results by Sample

SAMPLE ID 860115 FRACTION O1C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/03/86 Category

DATA FILE _____ DATE INJECTED 02/03/86 ANALYST _____ MCL _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
1	Toluene	5.30 ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

LAB # 86-02-015

Analytical Serv REPORT

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RECEIVED: 02/04/86

Results by Sample

SAMPLE ID 860116

FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	2	Trichloroethene	1274
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND	3	Tetrachloroethylene #	22.8
1	trans-1,2-Dichloroethene	74.5**		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

DATA FILE 9 DATE INJECTED 02/11/86 ANALYST RP VERIFIED BY MCL
 CONC. FACTOR INSTRUMENT 9 COMPOUNDS DETECTED 3

PAGE 7 Analytical Serv REPORT LAB # 86-02-015
RECEIVED: 02/04/86 Results by Sample Continued From Above

SAMPLE ID 860116 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/03/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 8 Analytical Serv REPORT LAB # 86-02-015

RECEIVED: 02/04/86 Results by Sample

SAMPLE ID 860116 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/03/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST MCL VERIFIED BY MCL
CONC FACTOR INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
—	Toluene	7.56	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/04/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-015

SAMPLE ID 860117

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/03/86

Category

DATA FILE _____ G DATE INJECTED 02/11/86
CONC. FACTOR _____ ANALYST _____ RP VERIFIED BY MCL
INSTRUMENT _____ a COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	1	Trichloroethene	174
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethane	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	2	Tetrachloroethylene #	12.5
_____	trans-1,2-Dichloroethane	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-015

Continued From Above

SAMPLE ID 860117

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/03/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

LAB # 86-02-015

Analytical Serv REPORT
Results by Sample

PAGE 11
RECEIVED: 02/04/86

SAMPLE ID 860117 FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/03/86 Category _____

DATA FILE _____ DATE INJECTED 02/03/86 ANALYST _____ MCL _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
1	Toluene	1.44	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602	01F	:	DUP_NS
02B	:	DUP601	02D	:	DUP602	02F	:	DUP_NS
03B	:	DUP601	03D	:	DUP602	03F	:	DUP_NS

REPORT RECEIVED: 02/04/86 Analytical Serv REPORT LAB # 86-02-016

PAGE 1

02/26/86 19:08:05

REPORT Radian Corporation
TO Larry French
Austin, Texas

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9748
Austin, Texas 78766

Larry French
CERTIFIED BY

ATTEN _____
CLIENT PLANT 4 SAMPLES 6
COMPANY General Dynamics
FACILITY DEHL Plant 4, Bldg 4
Austin, Texas

ATTEN _____
PHONE (512) 434-4797 CONTACT FRENCH

WORK ID Fort Worth Plant 4
TAKEN 1/30/86 - 2/3/86
TRANS Fed Ex 321175260
TYPE H2O

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

2 214
INVOICE under separate cover

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

Analytical Serv TEST CODES and NAMES used on this report

- 01 860112 H2O
- 02 860113 H2O
- 03 860115 H2O
- 04 860116 H2O
- 05 860117 H2O
- 06 Duplicate Analysis 86013
- 06 Matrix Spike 86013
- 06 Reagent Blank

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 60B Pesticides & PCBs by GC/MS

RECEIVED: 02/04/86

Analytical Serv REPORT
RESULTS BY TEST

LAB # 86-02-016

TEST CODE Sample 01 Sample 02 Sample 03 Sample 04 Sample 05
default units (entered units) (entered units) (entered units) (entered units) (entered units)
EX_625 02/04/86 02/04/86 02/04/86 02/04/86 02/04/86
date complete

TEST CODE Sample 06
default units (entered units)
EX_625 02/04/86
date complete 02/04/86
 02/04/86

PAGE 3
RECEIVED: 02/04/86

Analytical Serv
Results by Sample

LAB # 86-02-016

SAMPLE ID 860112 H20

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/31/86 Category _____

DATA FILE SCU02016C01 DATE EXTRACTED 02/04/86 ANALYST _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT _____ COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>454</u> AS1	d5-phenol	<u>54</u>
<u>342</u> AS2	2-fluorophenol	<u>60</u>
<u>1082</u> AS3	2,4,6-tribromophenol	<u>39</u>
AS4	d3-phenol	_____

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H20

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 01/31/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-016

SAMPLE ID 860112 H20

FRACTION 01A
Date & Time Collected 01/31/86

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE SCU02016C01 DATE EXTRACTED 02/04/86 ANALYST INSTRUMENT 5100 VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/14/86 COMPOUNDS DETECTED 0

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SAMPLE ID 860112 H20 FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 01/31/86 Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>57B</u> BS1	d5-nitrobenzene <u>38</u>
<u>852</u> BS2	2-fluorobiphenyl <u>41</u>
<u>144B</u> BS3	d14-terphenyl <u>31</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT

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Results by Sample

LAB # 86-02-016

SAMPLE ID 860112 H20

FRACTION 01A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 01/31/86

Category

CHRO # 3CU02016C1

DATE ANALYZED 02/14/86

VERIFIED BY LAK

SAMPLE SIZE 1

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL

REF CMPD

No PCB's Detected

PAGE 9 Analytical Serv REPORT LAB # 86-02-016
 RECEIVED: 02/04/86 Results by Sample

SAMPLE ID 860112 H20 FRACTION D1A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/31/86 Category _____

DATA FILE SCU02016C01 DATE EXTRACTED 02/04/86 ANALYST _____ MM
 CONC. FACTOR _____ DATE INJECTED 02/14/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H20

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860113 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category _____

DATA FILE SCU02016C02

DATE EXTRACTED 02/04/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT 3100

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

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SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>454</u> AS1	d5-phenol	<u>61</u>
<u>343</u> AS2	2-fluorophenol	<u>64</u>
<u>1083</u> AS3	2,4,6-tribromophenol	<u>65</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category

DATA FILE 5CU02016C02 DATE EXTRACTED 02/04/86 ANALYST MM VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT 5100 COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	163Q	bis(2-ethylhexyl)phthalate	3
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1293	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category _____

14B	41B	4-bromophenyl phenyl ether	<u>ND</u>	8B	79B	benzo(ghi)perylene	<u>ND</u>
12B	42B	bis(2-chloroisopropyl)ether	<u>ND</u>	32B	80B	fluorene	<u>ND</u>
10B	43B	bis(2-chloroethoxy)methane	<u>ND</u>	44B	81B	phenanthrene B	<u>ND</u>
34B	52B	hexachlorobutadiene	<u>ND</u>	19B	82B	dibenzo(a,h)anthracene	<u>ND</u>
35B	53B	hexachlorocyclopentadiene	<u>ND</u>	37B	83B	indeno(1,2,3-cd)pyrene	<u>ND</u>
38B	54B	isophorone	<u>ND</u>	45B	84B	pyrene	<u>ND</u>
39B	55B	naphthalene	<u>ND</u>				
40B	56B	nitrobenzene	<u>ND</u>				

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SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>579</u> BS1	d5-nitrobenzene <u>75</u>
<u>852</u> BS2	2-fluorobiphenyl <u>77</u>
<u>1449</u> BS3	d14-terphenyl <u>80</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

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SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

SAMPLE ID 860113 H20

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 01/31/86 Category _____

CHRD # SCU02016C2
SAMPLE SIZE 1

DATE ANALYZED 02/14/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCB's Detected

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SAMPLE ID 860113 H20 FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 01/31/86 Category _____

DATA FILE 5GU020J6C02 DATE EXTRACTED 02/04/86 ANALYST _____ MM
 CONC. FACTOR _____ DATE INJECTED 02/14/86 COMPOUNDS DETECTED 0

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860113 H20

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/31/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016

SAMPLE ID 860115 H20

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/03/86 Category _____

DATA FILE 5CU02016C03 DATE EXTRACTED 02/04/86 ANALYST _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT _____ COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>456</u> AS1	d5-phenol	<u>70</u>
<u>348</u> AS2	2-fluorophenol	<u>77</u>
<u>1083</u> AS3	2,4,6-tribromophenol	<u>48</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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SAMPLE ID 860115 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860115 H20

FRACTION 03A TEST CODE M625 B
Date & Time Collected 02/03/86

NAME Method 625 Base/Neutrals
Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 5CU02016C03 DATE EXTRACTED 02/04/86 ANALYST _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT 3100 COMPOUNDS DETECTED 1

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H20

FRACTION Q3A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>579</u> BS1	d5-nitrobenzene <u>80</u>
<u>852</u> BS2	2-fluorobiphenyl <u>91</u>
<u>1448</u> BS3	d14-terphenyl <u>48</u>
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H2U

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016

SAMPLE ID 860115 H20 FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/03/86 Category _____

CHRD # 5CU02016C3 DATE ANALYZED 02/14/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCB's Detected _____

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860115 H20

FRACTION 03A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category

DATA FILE 3CU02016C03
CONC. FACTOR

DATE EXTRACTED 02/04/86
DATE INJECTED 02/14/86

ANALYST MM

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H20

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category _____

DATA FILE 5CU02016C04

DATE EXTRACTED 02/04/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT 5100

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	<u>ND</u>	7A	58A	4-nitrophenol	<u>ND</u>
8A	22A	4-chloro-3-methylphenol	<u>ND</u>	5A	59A	2,4-dinitrophenol	<u>ND</u>
1A	24A	2-chlorophenol	<u>ND</u>	4A	60A	2-methyl-4,6-dinitrophenol	<u>ND</u>
2A	31A	2,4-dichlorophenol	<u>ND</u>	9A	64A	pentachlorophenol	<u>ND</u>
3A	34A	2,4-dimethylphenol	<u>ND</u>	10A	<u>45B</u> 65A	phenol	<u>2</u>
6A	57A	2-nitrophenol	<u>ND</u>				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>45A</u> AS1	d5-phenol	<u>70</u>
<u>341</u> AS2	2-fluorophenol	<u>76</u>
<u>1082</u> AS3	2,4,6-tribromophenol	<u>60</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860116 H20

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/03/86

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 5CU0201604 DATE EXTRACTED 02/04/86 ANALYST _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>57B</u> BS1	d5-nitrobenzene <u>80</u>
<u>852</u> BS2	2-fluorobiphenyl <u>89</u>
<u>1449</u> BS3	d14-terphenyl <u>60</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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SAMPLE ID 860116 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/03/86 Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

REPORT

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/03/86 Category

LAB # 86-02-016

CHRO # 5CU02016C4

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 02/14/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL

REF CMPD

No PCB's Detected

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID B60116 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category _____

DATA FILE 5CU02016C04

DATE EXTRACTED 02/04/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR _____

DATE INJECTED 02/14/86

MM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016
Continued From Above

SAMPLE ID 860116 H20

FRACTION Q4A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/03/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

LAB # 86-02-016

SAMPLE ID 860117 H20

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/03/86 Category _____

DATA FILE 5CU02016C05 DATE EXTRACTED 02/04/86 ANALYST LAK VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT 5100 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	457	phenol	2
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>455</u> AS1	d5-phenol	<u>66</u>
<u>344</u> AS2	2-fluorophenol	<u>73</u>
<u>1083</u> AS3	2,4,6-tribromophenol	<u>40</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016
Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/03/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-016

Analytical Serv REPORT

Results by Sample

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SAMPLE ID 860117 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

DATA FILE	SCU02016003	DATE EXTRACTED	02/04/86	ANALYST	MM	VERIFIED BY	LAK
CONC. FACTOR	1	DATE INJECTED	02/14/86	INSTRUMENT	5100	COMPOUNDS DETECTED	Q
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,b)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>580</u> BS1	d5-nitrobenzene <u>7B</u>
<u>853</u> BS2	2-fluorobiphenyl <u>82</u>
<u>1450</u> BS3	d14-terphenyl <u>62</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID 860117 H20

Analytical Serv

Results by Sample

LAB # 86-02-016

FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/03/86 Category _____

CHRD # 5CU0201603
SAMPLE SIZE 1

VERIFIED BY LAK

DATE ANALYZED 02/14/86 UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCB's Detected _____

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860117 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category

DATA FILE 5CU02016C05
CONC. FACTOR

DATE EXTRACTED 02/04/86
DATE INJECTED 02/14/86

ANALYST MM

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/03/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 20002016006
CONC. FACTOR 2

DATE EXTRACTED 02/04/86
DATE INJECTED 02/16/86

ANALYST WJL
INSTRUMENT f2

VERIFIED BY LAK
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	4
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>458</u> AS1	d5-phenol	<u>76</u>
<u>336</u> AS2	2-fluorophenol	<u>115</u>
<u>1075</u> AS3	2,4,6-tribromophenol	<u>103</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

DATA FILE 2CD02016C06 DATE EXTRACTED 02/04/86 ANALYST _____ WJL VERIFIED BY LAK
 CONC. FACTOR 2 DATE INJECTED 02/16/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B <u>1646</u>	66B	bis(2-ethylhexyl)phthalate	3
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B <u>1305</u>	68B	di-butyl phthalate	B BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>588</u> BS1	d5-nitrobenzene <u>94</u>
<u>864</u> BS2	2-fluorobiphenyl <u>75</u>
<u>1461</u> BS3	d14-terphenyl <u>106</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category _____

CHRO # 2CD02016C6
SAMPLE SIZE 2

VERIFIED BY LAK

DATE ANALYZED 02/16/86 UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No PCB's Detected

RECEIVED: 02/04/86

Results by Sample

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

DATA FILE 2CD002016C06

DATE EXTRACTED 02/04/86

ANALYST _____ MM

VERIFIED BY LAK

CONC. FACTOR _____

DATE INJECTED 02/16/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4, 4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4, 4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4, 4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-016
Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 5CM02016C06
 CONC. FACTOR 1

DATE EXTRACTED 02/03/86
 DATE INJECTED 02/18/86

ANALYST _____
 INSTRUMENT 5100 MM

VERIFIED BY LAK
 COMPOUNDS DETECTED 11

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	<u>841</u>	2,4,6-trichlorophenol	<u>41</u>	7A	<u>979</u>	4-nitrophenol	<u>38</u>
8A	<u>771</u>	4-chloro-3-methylphenol	<u>28</u>	5A	<u>969</u>	2,4-dinitrophenol	<u>52</u>
1A	<u>478</u>	2-chlorophenol	<u>57</u>	4A	<u>1057</u>	2-methyl-4,6-dinitrophenol	<u>74</u>
2A	<u>662</u>	2,4-dichlorophenol	<u>62</u>	9A	<u>1172</u>	pentachlorophenol	<u>85</u>
3A	<u>636</u>	2,4-dimethylphenol	<u>56</u>	10A	<u>459</u>	phenol	<u>54</u>
6A	<u>630</u>	2-nitrophenol	<u>64</u>				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>457</u>	AS1	d5-phenol <u>56</u>
<u>349</u>	AS2	2-fluorophenol <u>226</u>
<u>1084</u>	AS3	2,4,6-tribromophenol <u>43</u>
	AS4	d3-phenol _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in% Recov. unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID Matrix Spike 86013

FRACTION 06A

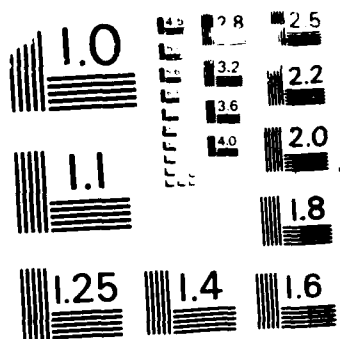
TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	964	1B acenaphthene	45	41B	61B	N-nitrosodimethylamine	ND
4B	1413	5B benzidine	1	43B	1063	N-nitrosodiphenylamine	85
46B	679	8B 1,2,4-trichlorobenzene	102	42B	563	N-nitrosodi-n-propylamine	34
33B	1145	9B hexachlorobenzene	111	13B	1632	bis(2-ethylhexyl)phthalate	68
36B	574	12B hexachloroethane	86	15B	1533	butyl benzyl phthalate	32
11B	470	18B bis(2-chloroethyl)ether	57	26B	1295	di-butyl phthalate	93
16B	858	20B 2-chloronaphthalene	46	29B	1741	di-n-octyl phthalate	41
20B	530	25B 1,2-dichlorobenzene	66	24B	1035	diethyl phthalate	43
21B	498	26B 1,3-dichlorobenzene	67	25B	923	dimethyl phthalate	50
22B	505	27B 1,4-dichlorobenzene	68	5B	1618	benzo(a)anthracene A	98
23B	1614	28B 3,3'-dichlorobenzidine	20	6B	1907	benzo(a)pyrene	88
27B	973	35B 2,4-dinitrotoluene	41	7B	1826	benzo(b)fluoranthene *	47
28B	532	36B 2,6-dinitrotoluene	49	9B	1832	benzo(k)fluoranthene *	53
29B	37B	37B 1,2-diphenylhydrazine	ND	18B	1624	chrysene A	87
31B	1337	39B fluoranthene	110	2B	934	acenaphthylene	62
17B	1044	40B 4-chlorophenyl phenyl ether	44	3B	1203	anthracene B	106

DATA FILE 35M02016C06 DATE EXTRACTED 02/03/86 ANALYST MM VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/18/86 INSTRUMENT 5100 COMPOUNDS DETECTED 44



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

14B	<u>1121</u>	41B	4-bromophenyl phenyl ether	<u>91</u>	8B	<u>3283</u>	79B	benzo(ghi)perylene	<u>31</u>
12B	<u>343</u>	42B	bis(2-chloroisopropyl)ether	<u>46</u>	32B	<u>1044</u>	80B	fluorene	<u>31</u>
10B	<u>631</u>	43B	bis(2-chloroethoxy)methane	<u>71</u>	44B	<u>1196</u>	81B	phenanthrene B	<u>100</u>
34B	<u>717</u>	52B	hexachlorobutadiene	<u>94</u>	19B	<u>2288</u>	82B	dibenzo(a,h)anthracene	<u>26</u>
35B	<u>829</u>	53B	hexachlorocyclopentadiene	<u>1</u>	37B	<u>2281</u>	83B	indeno(1,2,3-cd)pyrene	<u>26</u>
38B	<u>618</u>	54B	isophorone	<u>80</u>	45B	<u>1423</u>	84B	pyrene	<u>83</u>
37B	<u>688</u>	55B	naphthalene	<u>91</u>					
40B	<u>584</u>	56B	nitrobenzene	<u>73</u>					

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>581</u> BS1	d5-nitrobenzene <u>39</u>
<u>854</u> BS2	2-fluorobiphenyl <u>22</u>
<u>1450</u> BS3	d14-terphenyl <u>34</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in % Recovery, unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 2CB02016C06
CONC. FACTOR 1

DATE EXTRACTED 02/04/86
DATE INJECTED 02/16/86

ANALYST _____
INSTRUMENT F2

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>465</u> AS1	d5-phenol	<u>63</u>
<u>351</u> AS2	2-fluorophenol	<u>79</u>
<u>1076</u> AS3	2,4,6-tribromophenol	<u>78</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016
Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
SL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-016

SAMPLE ID Reagent Blank

FRACTION 06C
Date & Time Collected not specified

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category _____

DATA FILE 2CBO2016C06 DATE EXTRACTED 02/04/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT 1 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2 2 2

SUBROGATE RECOVERIES

SCAN CODE	RESULT
<u>392</u> BS1	d5-nitrobenzene <u>50</u>
<u>866</u> BS2	2-fluorobiphenyl <u>52</u>
<u>1463</u> BS3	d14-terphenyl <u>37</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT

RECEIVED: 02/04/86

Results by Sample

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category _____

CHRD # 2CB02016C6

SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCB's Detected

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RECEIVED: 02/04/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-016

SAMPLE ID Reagent Blank

FRACTION 06C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category _____

DATA FILE 2CB02016C06
CONC. FACTOR _____

DATE EXTRACTED 02/04/86
DATE INJECTED 02/14/86

ANALYST WJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

KRADIANT
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Conti

PAGE 1
RECEIVED: 02/05/86

Analytical Serv
02/27/86 17:39:51

LAB # 86-02-019 ✓

REPORT Radian
TO BL. 4
Austin
ATTEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 Mopac Blvd.
P.O. Box 9948
Austin, Texas 78766
ATTEN
PHONE (512) 454-4797

Carl Smith
CERTIFIED BY

CONTACT CONOVER

WORK ID groundwater
TAKEN NR. AM
TRANS Fed Ex
TYPE
P. O. # 212-027-27-40
INVOICE under separate cover

*Unknown compound eluting here.
2nd column confirmation on EPA 601 for -04. Many unknown compounds in high quantities eluting on EPA 602 for -04.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

⊗ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

- 01 860118
- 02 860119
- 03 860120
- 04 860121
- 05 860123

Analytical Serv TEST CODES and NAMES used on this report

- AG E Silver, ICPEs
- AS GA Arsenic, low level
- BA E Barium, ICPEs
- CD E Cadmium, ICPEs
- CR E Chromium, ICPEs
- DC3020 Digestion by Method 3020
- DC6010 Digestion by Method 6010
- GC 601 EPA Method 601/GC
- GC 602 EPA Method 602/GC
- HC IR Hydrocarbons in soil
- HG CA Mercury, Cold Vapor
- ONG IR Oil and Grease, Infrared
- PB GA Lead, low level
- SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml			0.007*	0.012	
AS_GA ug/ml			<.005	<.005	
BA_E ug/ml			0.082	0.13	
CD_E ug/ml			<.002	<.002	
CR_E ug/ml			0.006*	0.33	
DG3020 date complete			02/05/86	02/05/86	
DG6010 date complete			02/11/86	02/11/86	
HC_IR ug/g			<1.0 mg/L	<1.0 mg/L	<1.0 mg/L
HG_GA ug/ml			<.0002	<.0002	
ONG_IR mg/L	<1.0	<1.0	<1.0	<1.0	<1.0
PB_GA ug/ml			<.002e	0.004*	
SE_GA ug/ml			0.003*	<.002e	

SAMPLE ID 860120 FRACTION 03C TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/04/86 Category _____

DATA FILE _____ ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ Q _____ COMPOUNDS DETECTED _____ Q _____

SCAN	COMPOUND	DATE INJECTED	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>02/06/86</u>	<u>ND</u>	_____	Trichloroethene	<u>ND</u>
_____	Bromomethane		<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride		<u>ND</u>	_____	1, 1, 2-Trichloroethane *	<u>ND</u>
_____	Chloroethane		<u>ND</u>	_____	cis-1, 3-Dichloropropene *	<u>ND</u>
_____	Methylene Chloride		<u>ND</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
_____	Trichlorofluoromethane		<u>ND</u>	_____	Bromoform	<u>ND</u>
_____	1, 1-Dichloroethene		<u>ND</u>	_____	1, 1, 2, 2-Tetrachloroethane #	<u>ND</u>
_____	1, 1-Dichloroethane		<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
_____	trans-1, 2-Dichloroethene		<u>ND</u>	_____	Chlorobenzene	<u>ND</u>
_____	Chloroform		<u>ND</u>	_____	1, 3-Dichlorobenzene	<u>ND</u>
_____	1, 2-Dichloroethane		<u>ND</u>	_____	1, 2-Dichlorobenzene	<u>ND</u>
_____	1, 1, 1-Trichloroethane		<u>ND</u>	_____	1, 4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride		<u>ND</u>			
_____	Bromodichloromethane		<u>ND</u>			
_____	1, 2-Dichloropropane		<u>ND</u>			
_____	trans-1, 3-Dichloropropene		<u>ND</u>			

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Analytical Serv REPORT
Results by Sample
LAB # 86-02-019
Continued From Above
SAMPLE ID 860120
FRACTION Q3C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/04/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 5 Analytical Serv REPORT LAB # 86-02-019
RECEIVED: 02/05/86 Results by Sample

SAMPLE ID 860120 FRACTION 03E TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/04/86 Category

DATA FILE _____ DATE INJECTED 02/02/86 ANALYST _____ MCL _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
1	Toluene	0.64 ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-019

SAMPLE ID 860121

FRACTION 04C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/04/86

Category _____

DATA FILE _____ g DATE INJECTED 02/06/86 ANALYST _____ MCL VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	2	Trichloroethene	18688
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	1288**	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
—	1,2-Dichloropropane	ND	—		
—	trans-1,3-Dichloropropene	ND	—		

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ANALYTICAL SERV REPORT
RESULTS BY SAMPLE
LAB # 86-02-019
CONTINUED FROM ABOVE
SAMPLE ID 860121
FRACTION 04C TEST CODE GC 601 NAME EPA METHOD 601/GC
DATE & TIME COLLECTED 02/04/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 8 Analytical Serv REPORT LAB # 86-02-019
RECEIVED: 02/05/86 Results by Sample

SAMPLE ID 860121 FRACTION 04E TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/04/86 Category _____

DATA FILE _____ D DATE INJECTED 02/02/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND	_____		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/05/86 Results by Sample

SAMPLE ID 860123 FRACTION 05C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/04/86 Category

DATA FILE _____ g DATE INJECTED 02/06/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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RECEIVED: 02/05/86
Analytical Serv
Results by Sample
REPORT
LAB # 86-02-019
Continued From Above

SAMPLE ID 860123 FRACTION 05C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/04/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-019

RECEIVED: 02/05/86

Results by Sample

SAMPLE ID 860123

FRACTION 05E TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/04/86

Category

DATA FILE D DATE INJECTED 02/05/86 ANALYST RP VERIFIED BY MCL
 CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
—	Toluene	ND	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

03D	:	DUP601	03F	:	DUP602	03H	:	DUP_NS
04D	:	DUP601	04F	:	DUP602	04H	:	DUP_NS
05D	:	DUP601	05F	:	DUP602		:	

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Analytical Serv
02/26/86 17:57:57

LAB # 86-02-030

REPORT Radian Corporation
TO Larry French
Austin, Texas

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

Larry French
CERTIFIED BY

ATTEN N. Robinson
CLIENT PLANT 4 SAMPLES 6
COMPANY General Dynamics
FACILITY DEHL Plant 4, Bldg 4
Austin, Texas

ATTEN
PHONE (512) 454-4797

CONTACT FRENCH

WORK ID Air Force Plant 4 Ft. Worth
TAKEN 2/4-2/5/86
TRANS Federal 321175024
TYPE H2O
P. O. # 212-027-27-40
INVOICE under separate cover

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

⊗ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

- 01 86Q120
- 02 86Q121
- 03 86Q123
- 04 86Q124
- 05 86Q125
- 06 Reagent Blank

Analytical Serv TEST CODES and NAMES used on this report

- EX 622 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

PAGE 2 Analytical Serv REPORT LAB # 86-02-030
RECEIVED: 02/06/86 RESULTS BY TEST

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 625	02/06/86	02/06/86	02/06/86	02/06/86	02/06/86
date complete					

TEST CODE	Sample 06
default units	(entered units)
EX 625	02/06/86
date complete	

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Analytical Serv
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION Q1A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/04/86 Category

DATA FILE 2CU02030C01 DATE EXTRACTED 02/06/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT f2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	473	phenol	3
6A	57A	2-nitrophenol	ND				

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SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
471 AS1	d3-phenol	116
354 AS2	2-fluorophenol	147
1105 AS3	2,4,6-tribromophenol	139
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030
Continued From Above

SAMPLE ID 860120

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/04/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120 FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/04/86 Category _____

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02030C01 DATE EXTRACTED 02/06/86 ANALYST HJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT f2 COMPOUNDS DETECTED 1

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-030
Continued From Above

SAMPLE ID 860120

FRACTION O1A
Date & Time Collected 02/04/86

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
399	BS1
47	d5-nitrobenzene
874	BS2
53	2-fluorobiphenyl
1472	BS3
31	d14-terphenyl
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030
Continued From Above

SAMPLE ID 860120

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/04/86 Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION Q1A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/04/86 Category

CHRO # 2CU02030C1
SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/l

VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
	PCB			ND

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/04/86 Category

DATA FILE 20U02030C01
CONC. FACTOR

DATE EXTRACTED 02/06/86
DATE INJECTED 02/16/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

Continued From Above

SAMPLE ID 860120

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

PAGE 11 Analytical Serv REPORT LAB # 86-02-030
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860121 FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 02/04/86 Category _____

DATA FILE 2CU02030C02 DATE EXTRACTED 02/06/86 ANALYST _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT _____ COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	471	phenol	4
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>469</u> AS1	d5-phenol	<u>143</u>
<u>349</u> AS2	2-fluorophenol	<u>126</u>
<u>1106</u> AS3	2,4,6-tribromophenol	<u>142</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/04/86 Category _____

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A TEST CODE M625 B
Date & Time Collected 02/04/86

NAME Method 625 Base/Neutrals
Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	4 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02030C02 DATE EXTRACTED 02/06/86 ANALYST HJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT f2 COMPOUNDS DETECTED 2

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>599</u> BS1	d5-nitrobenzene <u>73</u>
<u>874</u> BS2	2-fluorobiphenyl <u>50</u>
<u>1472</u> BS3	d14-terphenyl <u>28</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/04/86 Category _____

CHRO # 2CU02030C2
SAMPLE SIZE 1

DATE ANALYZED 02/16/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
	<u>PCB</u>			
				<u>ND</u>

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category

DATA FILE 2CU02030C02
CONC. FACTOR

DATE EXTRACTED 02/06/86
DATE INJECTED 02/16/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	1-CB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

LAB # 86-02-030

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/04/86 Category _____

DATA FILE 2CU02030C03

DATE EXTRACTED 02/06/86

ANALYST _____

VERIFIED BY LAK

INC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT _____

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	2
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>469</u> AS1	d5-phenol	<u>81</u>
<u>352</u> AS2	2-fluorophenol	<u>97</u>
<u>1104</u> AS3	2,4,6-tribromophenol	<u>73</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID 860123

FRACTION Q3A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/04/86

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1314	di-butyl phthalate	3 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02030C03 DATE EXTRACTED 02/06/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT f2 COMPOUNDS DETECTED 1

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2 3 10

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>597</u> BS1	d5-nitrobenzene <u>68</u>
<u>873</u> BS2	2-fluorobiphenyl <u>44</u>
<u>1471</u> BS3	d14-terphenyl <u>32</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

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LAB # 86-02-030

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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LAB # 86-02-030
Analytical Serv REPORT
Results by Sample

SAMPLE ID 860123 FRACTION Q3A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/04/86 Category _____

CHRO # 2CU02030C3 DATE ANALYZED 02/16/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
	<u>PCB</u>			<u>ND</u>

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860123

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category

DATA FILE 20U02030C03
CONC. FACTOR

DATE EXTRACTED 02/06/86
DATE INJECTED 02/16/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

RECEIVED: 02/06/86

Results by Sample

SAMPLE ID 860124

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86 Category _____

DATA FILE 2CU02030C04
CONC. FACTOR 1

DATE EXTRACTED 02/06/86
DATE INJECTED 02/21/86

ANALYST WJL
INSTRUMENT f2

VERIFIED BY LAK
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	481	phenol	2
6A	57A	2-nitrophenol	ND				

2 315

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>479</u> AS1	d3-phenol	<u>74</u>
<u>352</u> AS2	2-fluorophenol	<u>87</u>
<u>1114</u> AS3	2,4,6-tribromophenol	<u>52</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-030

SAMPLE ID 860124

FRACTION 04A
Date & Time Collected 02/05/86

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	1666	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1325	di-butyl phthalate	1 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02030C04 DATE EXTRACTED 02/06/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/16/86 INSTRUMENT f2 COMPOUNDS DETECTED 2

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

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SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>60B</u> 851	d5-nitrobenzene <u>42</u>
<u>88B</u> 852	2-fluorobiphenyl <u>36</u>
<u>148B</u> 853	d14-terphenyl <u>38</u>
854	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank, background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860124 FRACTION 04A TEST CODE MSNS 5 NAME GCMS Characterization-ABN
Date & Time Collected 02/05/86 Category _____

CHRO # 2EUV02030C4 DATE ANALYZED 02/16/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
	<u>PCB</u>	_____		
				<u>ND</u>

RECEIVED: 02/06/86

Analytical Serv REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860124

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/05/86 Category _____

DATA FILE 2CU02030C04
 CONC. FACTOR _____

DATE EXTRACTED 02/06/86
 DATE INJECTED 02/16/86

ANALYST MJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-030
Continued From Above

SAMPLE ID 860124 FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/05/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category _____

DATA FILE 2CU02037002

DATE EXTRACTED 02/06/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT _____

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
3	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>480</u> AS1	d5-phenol	<u>66</u>
<u>364</u> AS2	2-fluorophenol	<u>81</u>
<u>1112</u> AS3	2,4,6-tribromophenol	<u>55</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/06/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-030

SAMPLE ID 860125

FRACTION 05A TEST CODE M625 B
Date & Time Collected 02/05/86

NAME Method 625 Base/Neutrals
Category

DATA FILE 25U02030C03
CONC. FACTOR 1

DATE EXTRACTED 02/06/86
DATE INJECTED 02/16/86

ANALYST WJL
INSTRUMENT f2

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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RECEIVED: 02/06/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>607</u> BS1	d5-nitrobenzene <u>53</u>
<u>890</u> BS2	2-fluorobiphenyl <u>41</u>
<u>1480</u> BS3	d14-terphenyl <u>37</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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RECEIVED: 02/06/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

FRACTION 05A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/05/86

Category

CHRD # 2CU02030C3

SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF
LEVEL CMPD

PCB

ND

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RECEIVED: 02/06/86

Analytical Serv REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860125

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/05/86 Category _____

DATA FILE 2CU02030C02
 CONC. FACTOR _____

DATE EXTRACTED 02/06/86
 DATE INJECTED 02/16/86

ANALYST WJL

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordan	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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RECEIVED: 02/06/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/05/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

RECEIVED: 02/06/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 2EU02024C0Z
CONC. FACTOR 1

DATE EXTRACTED 02/06/86
DATE INJECTED 02/21/86

ANALYST _____
INSTRUMENT MJL f2

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

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SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>487</u> AS1	d5-phenol	<u>145</u>
<u>370</u> AS2	2-fluorophenol	<u>90</u>
<u>1120</u> AS3	2,4,6-tribromophenol	<u>120</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/06/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-030

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

DATA FILE 2EU02024C0Z

DATE EXTRACTED 02/06/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/21/86

INSTRUMENT f2

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

14B	41B	4-bromophenyl phenyl ether	<u>ND</u>	8B	79B	benzo(ghi)perylene	<u>ND</u>
12B	42B	bis(2-chloroisopropyl)ether	<u>ND</u>	32B	80B	fluorene	<u>ND</u>
10B	43B	bis(2-chloroethoxy)methane	<u>ND</u>	44B	81B	phenanthrene B	<u>ND</u>
34B	52B	hexachlorobutadiene	<u>ND</u>	19B	82B	dibenzo(a,h)anthracene	<u>ND</u>
35B	53B	hexachlorocyclopentadiene	<u>ND</u>	37B	83B	indeno(1,2,3-cd)pyrene	<u>ND</u>
38B	54B	isophorone	<u>ND</u>	45B	84B	pyrene	<u>ND</u>
39B	55B	naphthalene	<u>ND</u>				
40B	56B	nitrobenzene	<u>ND</u>				

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SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>614</u> BS1	d5-nitrobenzene <u>94</u>
<u>888</u> BS2	2-fluorobiphenyl <u>87</u>
<u>1487</u> BS3	d14-terphenyl <u>62</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

g = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/06/86

Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category _____

CHRO # 2CB02024CZ

SAMPLE SIZE 1

DATE ANALYZED 02/21/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

PCB

ND

SAMPLE ID Reagent Blank

FRACTION 06A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

DATA FILE 2CB02024C07

DATE EXTRACTED 02/06/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR _____

DATE INJECTED 02/21/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
2P	90P	dieldrin	ND	3P	103P	beta BHC	ND
3P	91P	chlordane	ND	4P	104P	gamma BHC	ND
4P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
5P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
6P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
7P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
8P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
9P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
10P	98P	endrin	ND	23P	111P	PCB-1260	ND
11P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
12P	100P	heptachlor	ND	25P	113P	toxaphene	ND
13P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-030

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

04B ! DUP_NS
05B ! DUP_NS

PAGE 1
RECEIVED: 02/06/86

Analytical Serv
02/27/86 17:46:55

LAB # 86-02-031

REPORT Radian
TO BL 4
Austin
ATTEEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766
ATTEEN
PHONE (512) 454-4797

Carl Scott
CERTIFIED BY

CONTACT CONOVER

WORK ID groundwater
TAKEN NR
TRANS Fed Ex
TYPE
P.O. # 212-027-27-40
INVOICE under separate cover

**Unknown compound eluting here.
Second column confirmation for EPA 601 on -04; for EPA 602 on -04 and -05.

Footnotes and Comments

- * Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- ⊗ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01	860122	
02	860124	
03	860125	
04	860127	
05	860128	
06	860129	
07	field blank	
08	trip blank	

Analytical Serv TEST CODES and NAMES used on this report

AG E	Silver, ICPEs
AS GA	Arsenic, low level
BA E	Barium, ICPEs
CD E	Cadmium, ICPEs
CR E	Chromium, ICPEs
DG3020	Digestion by Method 3020
DG6010	Digestion by Method 6010
GC 601	EPA Method 601/GC
GC 602	EPA Method 602/GC
HC IR	Hydrocarbons in soil
HG CA	Mercury, Cold Vapor
ONG IR	Oil and Grease, Infrared
PB GA	Lead, low level
SE GA	Selenium, low level
XYLENE	Xylenes

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml		0.007*	0.007*		
AS_GA ug/ml		<.005	<.005		
BA_E ug/ml		0.076	0.072		
CD_E ug/ml		<.002	<.002		
CR_E ug/ml		0.007*	<.005		
DG3020 date complete		02/12/86	02/12/86		
DG6010 date complete		02/11/86	02/11/86		
HC_IR ug/g		<1 mg/L	<1 mg/L	26 mg/L	<1 mg/L
HG_GA ug/ml		<.0002	<.0002		
DNG_IR mg/L	<1	<1	<1		
PB_GA ug/ml		0.032	<.002		
SE_GA ug/ml		<.003e	<.003		

PAGE 3 Analytical Serv REPORT LAB # 86-02-031
RECEIVED: 02/06/86 RESULTS BY TEST

TEST CODE	Sample 06
default units	(entered units)
ONG_IR	<1
mg/L	

PAGE 4 Analytical Serv REPORT LAB # 86-02-031
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860124 FRACTION 02C TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/05/86 Category

DATA FILE _____ g DATE INJECTED 02/06/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND			
—	Bromodichloromethane	ND			
—	1,2-Dichloropropane	ND			
—	trans-1,3-Dichloropropene	ND			

PAGE 5
RECEIVED: 02/06/86
ANALYTICAL SERV REPORT
Results by Sample
LAB # 86-02-031
Continued From Above
SAMPLE ID 860124
FRACTION 02C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 6 Analytical Serv REPORT LAB # 86-02-031
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860124 FRACTION 02E TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/05/86 Category

DATA FILE _____ D DATE INJECTED 02/06/86 ANALYST _____ MCL VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 7 Analytical Serv REPORT LAB # 86-02-031
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860125 FRACTION 03C TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/05/86 Category

DATA FILE 9 DATE INJECTED 02/06/86 ANALYST RP VERIFIED BY MCL
 CONC. FACTOR INSTRUMENT 9 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
—	1,2-Dichloropropane	ND	—		
—	trans-1,3-Dichloropropene	ND	—		

PAGE 8 Analytical Serv REPORT LAB # 86-02-031
RECEIVED: 02/06/86 Results by Sample Continued From Above

SAMPLE ID 860125 FRACTION 03C TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 9 Analytical Serv REPORT LAB # 86-02-031
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860125 FRACTION 03E TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/05/86 Category

DATA FILE _____ DATE INJECTED 02/06/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 9

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
2	Benzene	ND ;		1,4-Dichlorobenzene	ND
348	Toluene	ND ;		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND ;		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79).

LAB # 86-02-031
Analytical Serv REPORT
Results by Sample

SAMPLE ID 860127 FRACTION 04B TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86 Category

DATA FILE _____ ANALYST _____ RP _____ VERIFIED BY MCL
CONC FACTOR _____ INSTRUMENT _____ g _____ COMPOUNDS DETECTED 3

DATE INJECTED 02/06/86

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Chloromethane	ND	5	Trichloroethene	0.96
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	0.33		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
2	Methylene Chloride	0.32		2-Chloroethylvinyl Ether	ND
3	Trichlorofluoromethane	2.45		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
4	trans-1,2-Dichloroethene	7.37**		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

PAGE 11 Analytical Serv REPORT LAB # 86-02-031
RECEIVED: 02/06/86 Results by Sample Continued From Above
SAMPLE ID 860127 FRACTION 04B TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-031

SAMPLE ID 860127

FRACTION 04D TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/05/86 Category _____

DATA FILE D DATE INJECTED 02/06/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT 4 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>1</u>	Benzene	<u>8442</u> ;	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Toluene	<u>ND</u> ;	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	Ethyl Benzene	<u>ND</u> ;	_____	1,2-Dichlorobenzene	<u>ND</u>
_____	Chlorobenzene	<u>ND</u> ;	_____		

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/06/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-031

SAMPLE ID 860128

FRACTION 05B TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86 Category

DATA FILE _____ g DATE INJECTED 02/06/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1, 1, 2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1, 3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1, 1-Dichloroethene	ND	—	1, 1, 2, 2-Tetrachloroethane #	ND
—	1, 1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1, 2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1, 3-Dichlorobenzene	ND
—	1, 2-Dichloroethane	ND	—	1, 2-Dichlorobenzene	ND
—	1, 1, 1-Trichloroethane	ND	—	1, 4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
1	1, 2-Dichloropropane	1.70	—		
—	trans-1, 3-Dichloropropene	ND	—		

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-031
Continued From Above

SAMPLE ID 860128

FRACTION 058 TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/05/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-031

SAMPLE ID 860128

FRACTION Q5D TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/05/86 Category

DATA FILE D DATE INJECTED 02/06/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT 4 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/06/86 Results by Sample

SAMPLE ID 860129 FRACTION 06D TEST CODE XYLENE NAME Xylenes
Date & Time Collected 02/05/86 Category _____

DATA FILE _____ DATE INJECTED 02/06/86 ANALYST _____ RP _____ VERIFIED BY MGL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT
—	p-xylene	ND ;
—	m-xylene	ND ;
—	o-xylene	ND ;

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected.

PAGE 17 Analytical Serv REPORT LAB # 86-02-031
 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID field blank FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected not specified Category

DATA FILE 0 DATE INJECTED 02/06/86 ANALYST RP VERIFIED BY MCL
 CONC. FACTOR INSTRUMENT 9 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND		Trichloroethene	ND
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1, 1, 2-Trichloroethane *	ND
	Chloroethane	ND		cis-1, 3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
2	Trichlorofluoromethane	ND		Bromoform	ND
356	1, 1-Dichloroethene	ND		1, 1, 2, 2-Tetrachloroethane #	ND
	1, 1-Dichloroethane	ND		Tetrachloroethylene #	ND
	trans-1, 2-Dichloroethene	ND		Chlorobenzene	ND
	Chloroform	ND		1, 3-Dichlorobenzene	ND
	1, 2-Dichloroethane	ND		1, 2-Dichlorobenzene	ND
	1, 1, 1-Trichloroethane	ND		1, 4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1, 2-Dichloropropane	ND			
	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-031

Continued From Above

SAMPLE ID field blank

FRACTION 07A

Date & Time Collected not specified

TEST CODE GC 601 NAME EPA Method 601/GC

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-031

SAMPLE ID field blank

FRACTION 07B TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected not specified Category _____

DATA FILE _____ DATE INJECTED 02/06/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
2	Toluene	1.73 ;	—	1,3-Dichlorobenzene	ND
358	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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 RECEIVED: 02/06/86 Results by Sample

SAMPLE ID trip blank FRACTION 08A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected not specified Category _____

DATA FILE _____ G DATE INJECTED 02/06/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ a COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
1	Trichlorofluoromethane	2.32	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

PAGE 21 Analytical Serv REPORT LAB # 86-02-031
RECEIVED: 02/06/86 Results by Sample Continued From Above

SAMPLE ID trip blank FRACTION OBA TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected not specified Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
#Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-031

SAMPLE ID trip blank

FRACTION 08A

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE D
CONC. FACTOR

DATE INJECTED 02/06/86

ANALYST RP
INSTRUMENT d

VERIFIED BY MCL
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

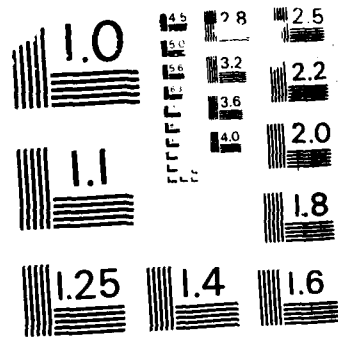
REPORT

NonReported Work

LAB # 86-02-031

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

02D	:	DUP601	02F	:	DUP602	02H	:	DUP_NS
03D	:	DUP601	03F	:	DUP602	03H	:	DUP_NS
04C	:	DUP601	04E	:	DUP602			
05C	:	DUP601	05E	:	DUP602			
06E	:	DUP_NS						



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

RECEIVED: 02/07/86

Analytical Serv

REPORT

03/01/86 16:39:21

LAB # 86-02-038

REPORT Radian Corporation
TO Larry French
Austin, Texas

PREPARED BY Radian Analytical Services
8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

ATTEN _____

ATTEN
PHONE (512) 454-4797

CERTIFIED BY _____

CLIENT PLANT 4 SAMPLES 6
COMPANY General Dynamics
FACILITY OEHL Plant 4, Bldg 4
Austin, Texas

CONTACT FRENCH _____

WORK ID General Dynamics Ft. Worth 4
TAKEN 2/6/86
TRANS Federal 321175046
TYPE H2O
P.O. # 212-027-27-40
INV. # 7450

Duplicate of report of 02/27/86.

Footnotes and Comments

2
3
63

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

- 01 860126
- 02 860132
- 03 860133
- 04 860134
- 05 860135
- 06 duplicate anal. 860126
- 06 reagent blank

Analytical Serv TEST CODES and NAMES used on this report

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

PAGE 2 RECEIVED: 02/07/86 Analytical Serv REPORT LAB # 86-02-038
RESULTS BY TEST

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX_625	02/10/86	02/10/86	02/10/86	02/10/86	02/10/86
date complete					

TEST CODE	Sample 06
default units	(entered units)
EX_625	02/10/86
date complete	02/10/86

LAB # 86-02-038

Analytical Serv REPORT

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RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860126 FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C01 DATE EXTRACTED 02/10/86 ANALYST _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	486	phenol	2
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>494</u> AS1	d5-phenol	<u>100</u>
<u>367</u> AS2	2-fluorophenol	<u>150</u>
<u>1118</u> AS3	2,4,6-tribromophenol	<u>150</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/07/86
Analytical Serv
Results by Sample
REPORT
LAB # 86-02-038
Continued From Above
SAMPLE ID 860126
FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT

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Results by Sample

SAMPLE ID 860126 FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals LAB # 86-02-038
 Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU0203BC01 DATE EXTRACTED 02/10/86 ANALYST _____ LAK _____ VERIFIED BY LAK _____
 CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT _____ F2 _____ COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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 Results by Sample Continued From Above

SAMPLE ID 860126 FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 02/06/86 Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2
3
5
6 SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>612</u> BS1	d5-nitrobenzene <u>142</u>
<u>897</u> BS2	2-fluorobiphenyl <u>82</u>
<u>1485</u> BS3	d14-terphenyl <u>64</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860126

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86 Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860126

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/06/86 Category _____

CHRO # 2U02038C01
SAMPLE SIZE 1

DATE ANALYZED 02/24/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No PCBs _____

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860126

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C01
CONC. FACTOR

DATE EXTRACTED 02/10/86
DATE INJECTED 02/24/86

ANALYST WJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

Continued From Above

SAMPLE ID 860126

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

SAMPLE ID 860132 FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds LAB # 86-02-038
Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU0203BC02 DATE EXTRACTED 02/10/86 ANALYST LAK VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>47B</u> AS1	d5-phenol	<u>116</u>
<u>35B</u> AS2	2-fluorophenol	<u>130</u>
<u>111B</u> AS3	2,4,6-tribromophenol	<u>120</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CGNC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

DATA FILE 2CU02038C02

DATE EXTRACTED 02/10/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/24/86

INSTRUMENT _____

COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	4
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

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SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>60B</u> BS1	d5-nitrobenzene <u>100</u>
<u>89B</u> BS2	2-fluorobiphenyl <u>78</u>
<u>148B</u> BS3	d14-terphenyl <u>54</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860132 FRACTION 02A TEST CODE MSNS 5 NAME GCMS Characterization-ABN
Date & Time Collected 02/06/86 Category _____

CHRO # 2U02038C02
SAMPLE SIZE 1

DATE ANALYZED 02/24/86 UNITS ug/l VERIFIED BY LAK

SCAN COMPOUND
No PCBs _____

RESULT CONF REF
LEVEL CMPD

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860132

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C02
 CONC. FACTOR _____

DATE EXTRACTED 02/10/86
 DATE INJECTED 02/24/86

ANALYST _____ LAK

VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

Continued From Above

LAB # 86-02-038

SAMPLE ID 860132

FRACTION 02A

TEST CODE MS 608

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860133

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C03
CONC. FACTOR 1

DATE EXTRACTED 02/10/86
DATE INJECTED 02/25/86

ANALYST _____
INSTRUMENT F2

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>491</u> AS1	d5-phenol	<u>120</u>
<u>357</u> AS2	2-fluorophenol	<u>130</u>
<u>1113</u> AS3	2,4,6-tribromophenol	<u>130</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038
Continued From Above

SAMPLE ID 860133

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-038

Analytical Serv REPORT

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Results by Sample

SAMPLE ID 860133 FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 02/06/86 Category _____

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	1663	bis(2-ethylhexyl)phthalate	3
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1323	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02038C03 DATE EXTRACTED 02/10/86 ANALYST _____ WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 2

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
238B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>60B</u> BS1	d5-nitrobenzene <u>130</u>
<u>892</u> BS2	2-fluorobiphenyl <u>92</u>
<u>1481</u> BS3	d14-terphenyl <u>72</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID 860133

FRACTION 03A TEST CODE MSNS 5 NAME GCMS Characterization-ABN
Date & Time Collected 02/06/86 Category _____

CHRD # 2U02038C03

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 02/25/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No PCBs _____

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860133

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C03
CONC. FACTOR

DATE EXTRACTED 02/10/86
DATE INJECTED 02/23/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	NI
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860133

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860134 FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C04 DATE EXTRACTED 02/10/86 ANALYST _____ WJL _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT _____ F2 _____ COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
208A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
308A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>482</u> AS1	d5-phenol	<u>130</u>
<u>366</u> AS2	2-fluorophenol	<u>280</u>
<u>1114</u> AS3	2,4,6-tribromophenol	<u>72</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860134 FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C04 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1324	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-03B

Continued From Above

SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
238B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>609</u> BS1	d5-nitrobenzene <u>112</u>
<u>833</u> BS2	2-fluorobiphenyl <u>94</u>
<u>1491</u> BS3	d14-terphenyl <u>88</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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REPORT

Results by Sample

LAB # 86-02-038

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SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860134 FRACTION 04A TEST CODE MSNS 5 NAME GCMS Characterization-ABN
Date & Time Collected 02/06/86 Category _____

CHRO # 2U0203C04 DATE ANALYZED 02/23/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No. PCBs _____

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860134

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU0203BC04
CONC. FACTOR _____

DATE EXTRACTED 02/10/86
DATE INJECTED 02/23/86

ANALYST WJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860134

FRACTION 04A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C02 DATE EXTRACTED 02/10/86 ANALYST _____ M/JL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	496 65A	phenol	2
6A	57A	2-nitrophenol	ND				

2 397

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
494 AS1	d5-phenol	105
372 AS2	2-fluorophenol	140
1137 AS3	2,4,6-tribromophenol	140
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860135

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/06/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A
Date & Time Collected 02/06/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CU02038C02 DATE EXTRACTED 02/10/86 ANALYST MJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
2 38B	54B	isophorone	ND	45B	84B	pyrene	ND
400 39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>625</u> BS1	d5-nitrobenzene <u>122</u>
<u>904</u> BS2	2-fluorobiphenyl <u>80</u>
<u>1506</u> BS3	d14-terphenyl <u>78</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A () enzo(a)anthracene and chrysene co-elute () high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.
SL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/06/86 Category _____

CHRD # 2U02038C05
SAMPLE SIZE 1

DATE ANALYZED 02/25/86 UNITS ug/l VERIFIED BY LAK

SCAN
COMPOUND
No. PCBs _____

RESULT
CONF LEVEL REF
CMPD

LAB # 86-02-038

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860135 FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/06/86 Category _____

DATA FILE 2CU02038C05 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR _____ DATE INJECTED 02/23/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
2 10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordan	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860135

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

NO = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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 Results by Sample

SAMPLE ID duplicate anal. 860126 FRACTION 06B TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected not specified Category _____

DATA FILE 2CD02038C06 DATE EXTRACTED 02/10/86 ANALYST _____ LAK _____ VERIFIED BY LAK
 CONC. FACTOR _____ DATE INJECTED 02/24/86 INSTRUMENT _____ F2 _____ COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	484	phenol	3
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>483</u> AS1	d5-phenol	<u>130</u>
<u>367</u> AS2	2-fluorophenol	<u>290</u>
<u>1114</u> AS3	2,4,6-tribromophenol	<u>81</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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Results by Sample

REPORT

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SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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LAB # 86-02-038

Results by Sample

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
211B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

DATA FILE 2CD02038C06 DATE EXTRACTED 02/10/86 ANALYST _____ LAK _____ VERIFIED BY LAK _____
 CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>610</u> BS1	d5-nitrobenzene <u>102</u>
<u>883</u> BS2	2-fluorobiphenyl <u>78</u>
<u>1114</u> BS3	d14-terphenyl <u>62</u>
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID duplicate anal. 860126

FRACTION 06B TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category _____

CHRD # 2D0203BC06
SAMPLE SIZE 1

DATE ANALYZED 02/24/86 UNITS ug/l VERIFIED BY LAK

SCAN COMPOUND No PCBs

RESULT CONF LEVEL REF CMPD

PAGE 49 Analytical Serv REPORT LAB # 86-02-038
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID duplicate anal. 860126 FRACTION 06B TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected not specified Category

DATA FILE 2CD02038C06 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR DATE INJECTED 02/24/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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 Results by Sample

SAMPLE ID reagent blank FRACTION 06C TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected not specified Category

DATA FILE 2E802038C06 DATE EXTRACTED 02/10/86 ANALYST LAK VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED Q

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

2 413

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
477 AS1	d5-phenol	140
360 AS2	2-fluorophenol	200
1114 AS3	2,4,6-tribromophenol	78
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2EB02038C06 DATE EXTRACTED 02/10/86 ANALYST LAK VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

2 415

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

SCAN CODE	RESULT	SCAN CODE	NAME	Category
14B	4-bromophenyl ether	8B	benzo(ghi)perylene	ND
12B	bis(2-chloroisopropyl)ether	32B	fluorene	ND
10B	bi(2-chloroethoxy)methane	44B	phenanthrene B	ND
34B	hexachlorobutadiene	19B	dibenzo(a,h)anthracene	ND
35B	hexachlorocyclopentadiene	37B	indeno(1,2,3-cd)pyrene	ND
38B	isophorone	45B	pyrene	ND
39B	naphthalene			
40B	nitrobenzene			

2 41

SURROGATE RECOVERIES

SCAN CODE	RESULT
606 BS1	d5-nitrobenzene 146
832 BS2	2-fluorobiphenyl 81
1480 BS3	d14-terphenyl 94
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 † = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-038

SAMPLE ID reagent blank

FRACTION 06C TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category _____

CHRD # 2802038C06
SAMPLE SIZE 1

DATE ANALYZED 02/24/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs _____

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 2EBO2038C06

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/24/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-038

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP_NS
02B	:	DUP_NS
03B	:	DUP_NS
04B	:	DUP_NS
05B	:	DUP_NS

PAGE 1 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 02/27/86 17:56:44

REPORT Radian _____
 TO Bl. 4 _____
 Austin _____
 ATTN Larry French _____
 CLIENT PLANT4 _____ SAMPLES B
 COMPANY Plant 4 _____
 FACILITY Carswell AFB (Gen. Dynamics) _____
 PREPARED Radian Analytical Services _____
 BY 8501 MoPac Blvd. _____
 P.O. Box 9948 _____
 Austin, Texas 78766 _____
 ATTN _____
 PHONE (512) 454-4797 _____
 CERTIFIED BY _____
 CONTACT CONOVER _____

Unknown compound eluting here.
 Second column confirmation performed for EPA 601: -02, -03,
 -04, -05, -06; for EPA 602: -02, -03.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
 Potential error for such low values ranges between
 50 and 100%.

@ Indicates that spike recovery for this analysis on the
 specific matrix was not within acceptable limits indicating
 an interferent present.

SAMPLE IDENTIFICATION

01 860126 _____
 02 860130 _____
 03 860131 _____
 04 860132 _____
 05 860134 _____
 06 860135 _____
 07 field blank _____
 08 trip blank _____

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs
 AS GA Arsenic, low level
 BA E Barium, ICPEs
 CD E Cadmium, ICPEs
 CR E Chromium, ICPEs
 DG3020 Digestion by Method 3020
 DG6010 Digestion by Method 6010
 GC 601 EPA Method 601/GC
 GC 602 EPA Method 602/GC
 HC IR Hydrocarbons in soil
 HG CA Mercury, Cold Vapor
 ONG IR Oil and Grease, Infrared
 PB GA Lead, low level
 SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	<.002	0.003*	<.002	0.003*	<.002
AS_GA ug/ml	<.005	<.005	<.005	<.005	0.010*
BA_E ug/ml	0.076	0.51	0.53	0.054	0.17
CD_E ug/ml	<.002	<.002	<.002	<.002	<.002
CR_E ug/ml	0.007*	0.019*	0.019*	0.12	0.048
DG3020 date complete	02/12/86	02/12/86	02/12/86	02/12/86	02/12/86
DG6010 date complete	02/11/86	02/11/86	02/11/86	02/11/86	02/11/86
HC_IR ug/g	<1.0	<1.0	<1.0		
HG_CA ug/ml	0.0002*	<.0002	0.0003*	<.0002	<.0002
ONG_IR mg/L		1.1*	1.1*		
PB_GA ug/ml	<.0020	<.002	<.002	0.003*	0.005*
SE_GA ug/ml	0.003*	<.002	0.003*	<.002	<.002

RECEIVED: 02/07/86

RESULTS BY TEST

TEST CODE	Sample 06
default units	(entered units)
AG_E	<.002
ug/ml	
AS_GA	<.005
ug/ml	
BA_E	0.099
ug/ml	
CD_E	<.002
ug/ml	
CR_E	<.005
ug/ml	
DC3020	02/12/86
date complete	
DG6010	02/11/86
date complete	
HG_CA	<.0002
ug/ml	
PB_GA	0.003*
ug/ml	
SE_GA	<.002
ug/ml	

RECEIVED: 02/07/86

Results by Sample

SAMPLE ID 860126

FRACTION O1A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

DATA FILE _____ G DATE INJECTED 02/11/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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Analytical Serv
Results by Sample

LAB # 86-02-041
Continued From Above

SAMPLE ID 860126 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/06/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

LAB # 86-02-041

RECEIVED: 02/07/86 Results by Sample

FRACTION OIC TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/06/86 Category

SAMPLE ID 860126

DATA FILE _____ D DATE INJECTED 02/10/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ Q COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND ;		1,4-Dichlorobenzene	ND
	Toluene	ND ;		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND ;		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 7 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860130 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/06/86 Category _____

DATA FILE _____ G DATE INJECTED 02/11/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ a COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>ND</u>	<u>2</u>	Trichloroethene	<u>10,979</u>
_____	Bromomethane	<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride	<u>ND</u>	_____	1, 1, 2-Trichloroethane *	<u>ND</u>
_____	Chloroethane	<u>ND</u>	_____	cis-1, 3-Dichloropropene *	<u>ND</u>
_____	Methylene Chloride	<u>ND</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
_____	Trichlorofluoromethane	<u>ND</u>	_____	Bromoform	<u>ND</u>
_____	1, 1-Dichloroethene	<u>ND</u>	_____	1, 1, 2, 2-Tetrachloroethane #	<u>ND</u>
_____	1, 1-Dichloroethane	<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
<u>1</u>	trans-1, 2-Dichloroethene	<u>3067^</u>	<u>3</u>	Chlorobenzene	<u>308</u>
_____	Chloroform	<u>ND</u>	_____	1, 3-Dichlorobenzene	<u>ND</u>
_____	1, 2-Dichloroethane	<u>ND</u>	_____	1, 2-Dichlorobenzene	<u>ND</u>
_____	1, 1, 1-Trichloroethane	<u>ND</u>	_____	1, 4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride	<u>ND</u>			
_____	Bromodichloromethane	<u>ND</u>			
_____	1, 2-Dichloropropane	<u>ND</u>			
_____	trans-1, 3-Dichloropropene	<u>ND</u>			

Analytical Serv REPORT
Results by Sample

LAB # 86-02-041

Continued From Above

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RECEIVED: 02/07/86

SAMPLE ID 860130

FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/06/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 9 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860130 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/06/86 Category _____

DATA FILE _____ D DATE INJECTED 02/10/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	<u>ND</u> ;	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Toluene	; <u>ND</u> ;	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	Ethyl Benzene	; <u>ND</u> ;	_____	1,2-Dichlorobenzene	<u>ND</u>

_____ 1 Chlorobenzene 737 ;

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79).

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LAB # 86-02-041

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Results by Sample

SAMPLE ID 860131 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/06/86 Category _____

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>ND</u>	<u>3</u>	Trichloroethene	<u>12.066</u>
_____	Bromomethane	<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride	<u>ND</u>	_____	1,1,2-Trichloroethane *	<u>ND</u>
_____	Chloroethane	<u>ND</u>	_____	cis-1,3-Dichloropropene *	<u>ND</u>
_____	Methylene Chloride	<u>ND</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
_____	Trichlorofluoromethane	<u>ND</u>	_____	Bromoform	<u>ND</u>
_____	1,1-Dichloroethene	<u>ND</u>	_____	1,1,2,2-Tetrachloroethane #	<u>ND</u>
_____	1,1-Dichloroethane	<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
<u>1</u>	trans-1,2-Dichloroethene	<u>3530^</u>	<u>4</u>	Chlorobenzene	<u>771</u>
_____	Chloroform	<u>ND</u>	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	1,2-Dichloroethane	<u>ND</u>	_____	1,2-Dichlorobenzene	<u>ND</u>
<u>2</u>	1,1,1-Trichloroethane	<u>1.00</u>	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride	<u>ND</u>	_____		
_____	Bromodichloromethane	<u>ND</u>	_____		
_____	1,2-Dichloropropane	<u>ND</u>	_____		
_____	trans-1,3-Dichloropropene	<u>ND</u>	_____		

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-041
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SAMPLE ID 860131

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/06/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 12 Analytical Serv REPORT LAB # 86-02-041
RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860131 FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/06/86 Category _____

DATA FILE _____ DATE INJECTED 02/10/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	<u>ND</u> ;	_____	1,4-Dichlorobenzene	<u>ND</u>
<u>2</u>	Toluene	<u>ND</u> ;	_____	1,3-Dichlorobenzene	<u>ND</u>
<u>433</u>	Ethyl Benzene	<u>ND</u> ;	_____	1,2-Dichlorobenzene	<u>ND</u>
<u>1</u>	Chlorobenzene	<u>709</u> ;	_____		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-041

SAMPLE ID 860132

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	602
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	360^	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

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REPORT

LAB # 86-02-041

Results by Sample

Continued From Above

SAMPLE ID 860132

FRACTION 04A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
 *Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv
Results by Sample

LAB # 86-02-041

SAMPLE ID 860132

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/06/86

Category

DATA FILE _____ D _____ DATE INJECTED 02/10/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

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NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-041

SAMPLE ID 860134

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

DATA FILE _____ G _____ DATE INJECTED 02/12/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g _____ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	1	Trichloroethene	401
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1, 1, 2-Trichloroethane *	ND
	Chloroethane	ND		cis-1, 3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1, 1-Dichloroethene	ND		1, 1, 2, 2-Tetrachloroethane #	ND
	1, 1-Dichloroethane	ND		Tetrachloroethylene #	ND
	trans-1, 2-Dichloroethene	ND		Chlorobenzene	ND
	Chloroform	ND		1, 3-Dichlorobenzene	ND
	1, 2-Dichloroethane	ND		1, 2-Dichlorobenzene	ND
	1, 1, 1-Trichloroethane	ND		1, 4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1, 2-Dichloropropane	ND			
	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-041

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SAMPLE ID 860134

FRACTION 05A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 601. (Federal Register, 12/3/79).
 #Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 18 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860134 FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/06/86 Category _____

DATA FILE _____ D DATE INJECTED 02/10/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860135 FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/06/86 Category

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	3.90
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	0.78^	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1, 2-Dichloropropane	ND	_____		
_____	trans-1, 3-Dichloropropene	ND	_____		

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID 860135

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID 860135 FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/06/86 Category

DATA FILE D DATE INJECTED 02/11/86 ANALYST MCL VERIFIED BY MCL
 CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND ;		1,4-Dichlorobenzene	ND
	Toluene	ND ;		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND ;		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND ;			

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NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-041

RECEIVED: 02/07/86

Results by Sample

SAMPLE ID field blank

FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/06/86 Category _____

DATA FILE _____ g DATE INJECTED 02/12/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1, 2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1, 2-Dichloropropane	ND	_____		
_____	trans-1, 3-Dichloropropene	ND	_____		

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RECEIVED: 02/07/86

Analytical Serv REPORT

Results by Sample

LAB # 86-02-041
Continued From Above

SAMPLE ID field blank

FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/06/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 24 Analytical Serv REPORT LAB # 86-02-041
RECEIVED: 02/07/86 Results by Sample

SAMPLE ID field blank FRACTION 07B TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/06/86 Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ MCL _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND ;		1, 4-Dichlorobenzene	ND
1	Toluene	2.19 ;		1, 3-Dichlorobenzene	ND
	Ethyl Benzene	ND ;		1, 2-Dichlorobenzene	ND
	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in _____ ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

PAGE 25 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID trip blank FRACTION 08A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected not specified Category _____

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ MCL VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
1	Trichlorofluoromethane	3.00	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1, 2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

Continued From Above

SAMPLE ID trip blank

FRACTION O8A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 27 Analytical Serv REPORT LAB # 86-02-041
 RECEIVED: 02/07/86 Results by Sample

SAMPLE ID trip blank FRACTION Q8A TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected not specified Category

DATA FILE _____ D DATE INJECTED 02/12/86 ANALYST _____ MCL VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

2 448

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in _____ ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/07/86 NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
06B	:	DUP601	06D	:	DUP602

PAGE 1
RECEIVED: 02/08/86

Analytical Serv
03/01/86 01:31:01

LAB # 86-02-044

REPORT Radian Corporation
TO Larry French
Austin, Texas

PREPARED BY Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

Lucas A. Patton
CERTIFIED BY

ATTEN _____

ATTEN _____
PHONE (512) 454-4797

CLIENT PLANT 4 SAMPLES 6
COMPANY General Dynamics
FACILITY OEHL Plant 4, Bldg 4
Austin, Texas

CONTACT FRENCH _____

WORK ID General Dynamics Plant 4
TAKEN 2/7/86 Neil Robinson
TRANS Fed Ex 321175105
TYPE H2O
P.O. # 212-027-27-40
INV. # 7453

Duplicate of report of 02/28/86.
Footnotes and Comments _____

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

- 01 860136 H2O
- 02 860137 H2O
- 03 860138 H2O
- 04 860139 H2O
- 05 860140 H2O
- 06 Reagent Blank 625

Analytical Serv TEST CODES and NAMES used on this report

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

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RECEIVED: 02/08/86

Analytical Serv REPORT
RESULTS BY TEST

LAB # 86-02-044

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EX 625 date complete	02/10/86	02/10/86	02/10/86	02/10/86	02/10/86
TEST CODE default units	Sample 06 (entered units)				
EX 625 date complete	02/10/86				

PAGE 3
RECEIVED: 02/08/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-044

SAMPLE ID 860136 H20

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU02044C01
CONC. FACTOR 1

DATE EXTRACTED 02/10/86
DATE INJECTED 02/25/86

ANALYST _____
INSTRUMENT F2

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

2
4
5
2

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>480</u> AS1	d5-phenol	<u>54</u>
<u>364</u> AS2	2-fluorophenol	<u>36</u>
<u>1112</u> AS3	2,4,6-tribromophenol	<u>37</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/08/86

SAMPLE ID 860136 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

FRACTION O1A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/07/86 Category _____

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimate value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv
Results by Sample

LAB # 86-02-044

SAMPLE ID 860136 H20

FRACTION 01A TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C01 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/24/86 INSTRUMENT F2 COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	1662	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
211B	18B	bis(2-chloroethyl)ether	ND	26B	1322	di-butyl phthalate	2
4546B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

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 RECEIVED: 02/08/86
 Analytical Serv REPORT
 Results by Sample
 LAB # 86-02-044
 Continued From Above
 SAMPLE ID 860136 H20 FRACTION O1A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 02/07/86 Category _____

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>608</u> BS1	d5-nitrobenzene <u>76</u>
<u>891</u> BS2	2-fluorobiphenyl <u>62</u>
<u>1480</u> BS3	d14-terphenyl <u>66</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860136 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-044

SAMPLE ID 860136 H20

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/07/86 Category

CHRO # 2U02044C01

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 02/25/86

UNITS ug/l

CONF REF
LEVEL CMPD

SCAN COMPOUND

RESULT

No PCBs

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RECEIVED: 02/08/86

Analytical Serv
Results by Sample

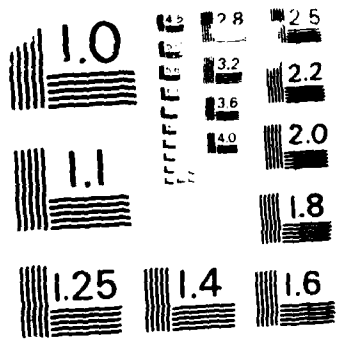
LAB # 86-02-044

SAMPLE ID 860136 H2u

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/07/86 Category

DATA FILE 2CU02044C01 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR DATE INJECTED 02/23/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

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RECEIVED: 02/08/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860136 H20

FRACTION Q1A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

PAGE 11 Analytical Serv REPORT LAB # 86-02-044
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860137 H2O FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU02044C02 DATE EXTRACTED 02/10/86 ANALYST _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>480</u> AS1	d5-phenol	<u>59</u>
<u>353</u> AS2	2-fluorophenol	<u>58</u>
<u>1114</u> AS3	2,4,6-tribromophenol	<u>63</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/08/86

SAMPLE ID 860137 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/07/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	4
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene P	ND

DATA FILE 2CU02044C02 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 2

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RECEIVED: 02/08/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2 463 SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>608</u> BS1	d5-nitrobenzene <u>114</u>
<u>892</u> BS2	2-fluorobiphenyl <u>76</u>
<u>1492</u> BS3	d14-terphenyl <u>73</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 † = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-044
SAMPLE ID 860137 H20 FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/07/86 Category _____

CHRO # 2U02044C02 DATE ANALYZED 02/25/86 UNITS ug/l
SAMPLE SIZE 1

VERIFIED BY LAK

SCAN COMPOUND No. PCBs
CONF LEVEL RESULT

REF CMPD

PAGE 17 Analytical Serv REPORT LAB # 86-02-044
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860137 H20 FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU0204C02 DATE EXTRACTED 02/10/86
 CONC. FACTOR _____ DATE INJECTED 02/23/86

ANALYST WJL VERIFIED BY LAK
 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044
Continued From Above

SAMPLE ID 860137 H20

FRACTION Q2A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv
Results by Sample

LAB # 86-02-044

SAMPLE ID 860138 H20 FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU02044C03 DATE EXTRACTED 02/10/86 ANALYST _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT _____ COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	483	phenol	3
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>481</u> AS1	d5-phenol	<u>72</u>
<u>352</u> AS2	2-fluorophenol	<u>24</u>
<u>1115</u> AS3	2,4,6-tribromophenol	<u>73</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

DATA FILE 2CU0204C03

DATE EXTRACTED 02/10/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

F2

COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
2 38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>609</u> BS1	d5-nitrobenzene <u>110</u>
<u>884</u> BS2	2-fluorobiphenyl <u>80</u>
<u>1493</u> BS3	d14-terphenyl <u>44</u>
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A () enzo(a)anthracene and chrysene co-elute () high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H2U

FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86 Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION Q3A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/07/86 Category

CHRO # 2U02044C03
SAMPLE SIZE 1

DATE ANALYZED 02/23/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
No PCBs				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C03

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/23/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordan	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

RADIAN
CORPORATION

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Results by Sample

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LAB # 86-02-044

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SAMPLE ID 860138 H20

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

PAGE 27 Analytical Serv REPORT LAB # 86-02-044
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860139 H2O FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds
 Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU02044C04 DATE EXTRACTED 02/10/86 ANALYST _____ WJL VERIFIED BY LK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
482 AS1	d5-phenol	5
358 AS2	2-fluorophenol	2
AS3	2,4,6-tribromophenol	
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 Al results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860139 H20

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/07/86 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860139 H20 FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
 Date & Time Collected 02/07/86 Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B 1664	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B 1323	68B	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22P	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

DATA FILE 2CU02044C04 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 2

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>607</u> BS1	d5-nitrobenzene <u>116</u>
<u>821</u> BS2	2-fluorobiphenyl <u>84</u>
<u>1481</u> BS3	d14-terphenyl <u>66</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 † = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A, enzo(a)anthracene and chrysene co-elute high concentrations.

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Results by Sample

REPORT

LAB # 86-02-044

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SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

SAMPLE ID 860139 H20 FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/07/86 Category _____

CHRD # 2U02044C04
SAMPLE SIZE 1

DATE ANALYZED 02/23/86 UNITS ug/l VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCBs

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Analytical Serv
Results by Sample

LAB # 86-02-044

SAMPLE ID 860139 H20

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/07/86 Category _____

DATA FILE 2CU02044C04
CONC. FACTOR _____

DATE EXTRACTED 02/10/86
DATE INJECTED 02/25/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H20

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860140 H20

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C05

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	485 65A	phenol	3
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
483 AS1	d5-phenol	98
355 AS2	2-fluorophenol	26
1115 AS3	2,4,6-tribromophenol	40
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A TEST CODE M625 B
Date & Time Collected 02/07/86

NAME Method 625 Base/Neutrals
Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B 1666	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B 1325	68B	di-butyl phthalate	4
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

DATA FILE 2CU02044C03 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/25/86 INSTRUMENT F2 COMPOUNDS DETECTED 2

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
2 38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

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SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>610</u> BS1	d5-nitrobenzene <u>99</u>
<u>893</u> BS2	2-fluorobiphenyl <u>84</u>
<u>1493</u> BS3	d14-terphenyl <u>56</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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RECEIVED: 02/08/86

Analytical Serv

Results by Sample

REPORT

Continued From Above

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A

NAME GCMS Characterization-ABN

Date & Time Collected 02/07/86

Category _____

CHRD # 2U02044C03

VERIFIED BY LAK

SAMPLE SIZE 1

UNITS ug/l

DATE ANALYZED 02/25/86

SCAN

COMPOUND

RESULT

CONF LEVEL CMPD

No PCBs _____

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C05
CONC. FACTOR

DATE EXTRACTED 02/10/86
DATE INJECTED 02/25/86

ANALYST WJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 2CU0203BC06

DATE EXTRACTED 02/10/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

INSTRUMENT F2

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2, 4, 6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2, 4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4, 6-dinitrophenol	ND
2A	31A	2, 4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2, 4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>477</u> AS1	d5-phenol	<u>70</u>
<u>360</u> AS2	2-fluorophenol	<u>100</u>
<u>1114</u> AS3	2, 4, 6-tribromophenol	<u>39</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

DATA FILE 2E02078C06

DATE EXTRACTED 02/10/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/24/86

INSTRUMENT _____

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

148	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
128	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	54B	isophorone	ND	45B	84B	pyrene	ND
398	55B	naphthalene	ND				
408	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>606</u> BS1	d5-nitrobenzene <u>73</u>
<u>892</u> BS2	2-fluorobiphenyl <u>41</u>
<u>1480</u> BS3	d14-terphenyl <u>47</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID Reagent Blank 625 FRACTION 06A TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified Category _____

CHRO # 2802038C06 DATE ANALYZED 02/24/86 UNITS ug/l VERIFIED BY LAK

SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs _____

Analytical Serv REPORT LAB # 86-02-044
 Results by Sample
 SAMPLE ID Reagent Blank 625 FRACTION 06A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected not specified Category

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DATA FILE 2E802038C06 DATE EXTRACTED 02/10/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR DATE INJECTED 02/24/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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RECEIVED: 02/08/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-044

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

02B : DUP_NS
03B : DUP_NS
04B : DUP_NS
05B : DUP_NS

PAGE 1
RECEIVED: 02/08/86

Analytical Serv REPORT
04/01/86 17:16:52

LAB # 86-02-047

REPORT Radian
TO Bl 4
Austin
ATTEN Larry Fren h
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd
P. O. Box 9948
Austin, Texas 78766
ATTEN
PHONE (512) 454-4797

Carl S. ...
CERTIFIED BY

CONTACT CONDOVER

WORK ID groundwater
TAKEN AM, NR
TRANS Fed Ex
TYPE
P. O. # 212-027-27-40
INVOICE under separate cover

Unknown compound eluting here.
Second column confirmation performed for EPA 601 on
-01, -02, -03, -04.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

e Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

01 860136
02 860137
03 860138
04 860139
05 860140
06 field blank
07 trip blank

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs
AS GA Arsenic, low level
BA E Barium, ICPEs
CD E Cadmium, ICPEs
CR E Chromium, ICPEs
DG3020 Digestion by Method 3020
DG6010 Digestion by Method 6010
GC 601 EPA Method 601/GC
GC 602 EPA Method 602/GC
HC IR Hydrocarbons
HG CA Mercury, Cold Vapor
ONG IR Oil and Grease, Infrared
PB GA Lead, low level
SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.006*	0.007*	0.004*	0.015	0.019
AS_GA ug/ml	<.005	<.005	<.005	0.075	0.007*
BA_E ug/ml	0.099	0.15	0.10	0.52	0.077
CD_E ug/ml	<.002	<.002	<.002	<.002	<.002
CR_E ug/ml	0.018*	0.042	0.007*	0.031	0.050
DG3020 date complete	02/12/86	02/12/86	02/12/86	02/12/86	02/12/86
DG6010 date complete	02/20/86	02/20/86	02/20/86	02/20/86	02/20/86
HC_IR mg/L	<1.0				<1.0
HG_GA ug/ml	<.0002	0.0002*	0.0002*	<.0002	<.0002
ONG_IR mg/L	<1.0				<1.0
PB_GA ug/ml	0.025	0.018	0.004*	0.008*	0.20
SE_GA ug/ml	<.003	<.003	<.003	<.003	<.003

PAGE 3 Analytical Serv REPORT LAB # 86-02-047
RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860136 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category

DATA FILE B DATE INJECTED 02/12/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT b COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	<u>2</u>	Trichloroethene	<u>7211</u>
	Bromomethane	ND		Dibromochloromethane *	<u>ND</u>
	Vinyl Chloride	ND		1, 1, 2-Trichloroethane *	<u>ND</u>
	Chloroethane	ND		cis-1, 3-Dichloropropene *	<u>ND</u>
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	<u>ND</u>
	Trichlorofluoromethane	ND		Bromoform	<u>ND</u>
	1, 1-Dichloroethene	ND		1, 1, 2, 2-Tetrachloroethane #	<u>ND</u>
	1, 1-Dichloroethane	ND		Tetrachloroethylene #	<u>ND</u>
<u>1</u>	trans-1, 2-Dichloroethene	<u>288^</u>		Chlorobenzene	<u>ND</u>
	Chloroform	ND		1, 3-Dichlorobenzene	<u>ND</u>
	1, 2-Dichloroethane	ND		1, 2-Dichlorobenzene	<u>ND</u>
	1, 1, 1-Trichloroethane	ND		1, 4-Dichlorobenzene	<u>ND</u>
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1, 2-Dichloropropane	ND			
	trans-1, 3-Dichloropropene	ND			

PAGE 4 Analytical Serv REPORT LAB # 86-02-047
RECEIVED: 02/08/86 Results by Sample Continued From Above
SAMPLE ID 860136 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

LAB # 86-02-047

RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860136 FRACTION Q1C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/07/86 Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ MCL _____ VERIFIED BY MCL _____
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND ;		1,4-Dichlorobenzene	ND
	Toluene	ND ;		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND ;		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in _____ ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860137 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/07/86 Category

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ 9 COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	36.6
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	54.2^	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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RECEIVED: 02/08/86 Results by Sample Continued From Above

SAMPLE ID 860137 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 8 Analytical Serv REPORT LAB # 86-02-047
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860137 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected 02/07/86 Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in _____ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

LAB # 86-02-047

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860138 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category _____

DATA FILE B DATE INJECTED 02/12/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT b COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>ND</u>	_____	Trichloroethene	<u>ND</u>
_____	Bromomethane	<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride	<u>ND</u>	_____	1,1,2-Trichloroethane *	<u>ND</u>
_____	Chloroethane	<u>ND</u>	_____	cis-1,3-Dichloropropene *	<u>ND</u>
_____	Methylene Chloride	<u>ND</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
_____	Trichlorofluoromethane	<u>ND</u>	_____	Bromoform	<u>ND</u>
_____	1,1-Dichloroethene	<u>ND</u>	_____	1,1,2,2-Tetrachloroethane #	<u>ND</u>
_____	1,1-Dichloroethane	<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
<u>1</u>	trans-1,2-Dichloroethene <u>63459^</u>		_____	Chlorobenzene	<u>ND</u>
_____	Chloroform	<u>ND</u>	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	1,2-Dichloroethane	<u>ND</u>	_____	1,2-Dichlorobenzene	<u>ND</u>
_____	1,1,1-Trichloroethane	<u>ND</u>	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride	<u>ND</u>			
_____	Bromodichloromethane	<u>ND</u>			
_____	1,2-Dichloropropane	<u>ND</u>			
_____	trans-1,3-Dichloropropene	<u>ND</u>			

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-047
Continued From Above

SAMPLE ID 860138

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

LAB # 86-02-047

RECEIVED: 02/08/86 Results by Sample

SAMPLE ID 860138

FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/07/86 Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in _____ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-047

SAMPLE ID 860139

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86

Category

DATA FILE B DATE INJECTED 02/13/86 ANALYST MCL VERIFIED BY MCL
CONC FACTOR INSTRUMENT b COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	2	Trichloroethene	4484
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1, 1, 2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1, 3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1, 1-Dichloroethene	ND	—	1, 1, 2, 2-Tetrachloroethane #	ND
—	1, 1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
1	trans-1, 2-Dichloroethene	1054	—	Chlorobenzene	ND
—	Chloroform	ND	—	1, 3-Dichlorobenzene	ND
—	1, 2-Dichloroethane	ND	—	1, 2-Dichlorobenzene	ND
—	1, 1, 1-Trichloroethane	ND	—	1, 4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
—	1, 2-Dichloropropane	ND	—		
—	trans-1, 3-Dichloropropene	ND	—		

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Analytical Serv
Results by Sample
LAB # 86-02-047
Continued From Above

SAMPLE ID 860139
FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-047

SAMPLE ID 860139

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/07/86 Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram
All results reported in ug/L unless otherwise specified
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-047

SAMPLE ID 860140

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/07/86

Category

DATA FILE _____ B _____ DATE INJECTED 02/13/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ b _____ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1, 2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1, 2-Dichloropropane	ND			
_____	trans-1, 3-Dichloropropene	ND			

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-047

Continued From Above

SAMPLE ID 860140

FRACTION 05A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-047

SAMPLE ID 860140

FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/07/86 Category

DATA FILE D DATE INJECTED 02/11/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
<u>1</u>	Toluene	<u>3.48</u> ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

RECEIVED: 02/08/86

Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID field blank

FRACTION 06A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

DATA FILE _____ B
CONC. FACTOR _____

DATE INJECTED 02/13/86

ANALYST _____
INSTRUMENT _____

RP _____
b. _____
VERIFIED BY MCL
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethane	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethane	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethane	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

PAGE 19 Analytical Serv REPORT LAB # 86-02-047
RECEIVED: 02/08/86 Results by Sample Continued From Above

SAMPLE ID field blank FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 20 Analytical Serv REPORT LAB # 86-02-047
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID field blank FRACTION 06B TEST CODE GC 602 NAME EPA Method 602/GC
 Date & Time Collected not specified Category

DATA FILE _____ D DATE INJECTED 02/11/86 ANALYST _____ RP VERIFIED BY MCL
 CONC FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND ;	---	1, 4-Dichlorobenzene	ND
1	Toluene	4.06 ;	---	1, 3-Dichlorobenzene	ND
---	Ethyl Benzene	ND ;	---	1, 2-Dichlorobenzene	ND
---	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT
 SCAN = scan number or retention time on chromatogram.
 All results reported in _____ ug/L unless otherwise specified.
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

PAGE 21 Analytical Serv REPORT LAB # 86-02-047
 RECEIVED: 02/08/86 Results by Sample

SAMPLE ID trip blank FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected not specified Category _____

DATA FILE B DATE INJECTED 02/12/86 ANALYST _____ RP _____ VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT b COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	<u>ND</u>	_____	Trichloroethene	<u>ND</u>
_____	Bromomethane	<u>ND</u>	_____	Dibromochloromethane *	<u>ND</u>
_____	Vinyl Chloride	<u>ND</u>	_____	1,1,2-Trichloroethane *	<u>ND</u>
_____	Chloroethane	<u>ND</u>	_____	cis-1,3-Dichloropropene *	<u>ND</u>
_____	Methylene Chloride	<u>ND</u>	_____	2-Chloroethylvinyl Ether	<u>ND</u>
<u>1</u>	Trichlorofluoromethane	<u>2.75</u>	_____	Bromoform	<u>ND</u>
_____	1,1-Dichloroethene	<u>ND</u>	_____	1,1,2,2-Tetrachloroethane #	<u>ND</u>
_____	1,1-Dichloroethane	<u>ND</u>	_____	Tetrachloroethylene #	<u>ND</u>
_____	trans-1,2-Dichloroethene	<u>ND</u>	_____	Chlorobenzene	<u>ND</u>
_____	Chloroform	<u>ND</u>	_____	1,3-Dichlorobenzene	<u>ND</u>
_____	1,2-Dichloroethane	<u>ND</u>	_____	1,2-Dichlorobenzene	<u>ND</u>
_____	1,1,1-Trichloroethane	<u>ND</u>	_____	1,4-Dichlorobenzene	<u>ND</u>
_____	Carbon Tetrachloride	<u>ND</u>			
_____	Bromodichloromethane	<u>ND</u>			
_____	1,2-Dichloropropane	<u>ND</u>			
_____	trans-1,3-Dichloropropene	<u>ND</u>			

**KADIAN
CORPORATION**

PAGE 22 Analytical Serv REPORT LAB # 86-02-047
RECEIVED: 02/08/86 Results by Sample Continued From Above

SAMPLE ID trip blank FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in mg/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

RECEIVED: 02/08/86

Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID trip blank

FRACTION 07A TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified Category

DATA FILE D DATE INJECTED 02/12/86 ANALYST RP VERIFIED BY MCL
CONC FACTOR INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602	01H	:	DUP_NS
02B	:	DUP601	02D	:	DUP602		:	
03B	:	DUP601	03D	:	DUP602		:	
04B	:	DUP601	04D	:	DUP602		:	
05B	:	DUP601	05D	:	DUP602	05H	:	DUP_NS

PAGE 1 Analytical Serv REPORT LAB # 86-02-058
RECEIVED: 02/11/86 09/08/86 12:02:12

REPORT Radian Corporation
TO Larry French
Austin, Texas

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

ATTEN _____
PHONE (512) 454-4797
CERTIFIED BY _____
CONTACT FRENCH _____

CLIENT PLANT 4 SAMPLES 3
COMPANY General Dynamics
FACILITY DEHL Plant 4, Bldg 4
Austin, Texas

WORK ID General Dynamics Ft. Worth
TAKEN 2/10/86
TRANS Federal 321175142
TYPE H2O
P.O. # 212-027-27-40
INV. # 7454

Duplicate of report of 02/28/86.
Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

- 01 860141
- 02 860143
- 03 860144
- 04 860146
- 05 duplicate analysis BNA
- 05 matrix spike BNA
- 05 reagent blank 625

Analytical Serv TEST CODES and NAMES used on this report

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 625	02/12/86	02/12/86	02/12/86	02/12/86	02/12/86
date complete					

RECEIVED: 02/11/86

Results by Sample

SAMPLE ID 860141

FRACTION Q1A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/10/86 Category _____

DATA FILE 2CU02058C01 DATE EXTRACTED 02/12/86 ANALYST _____ M/JL _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT _____ F2 _____ COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	47B	phenol	2
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>476</u> AS1	d5-phenol	<u>60</u>
<u>355</u> AS2	2-fluorophenol	<u>65</u>
<u>1115</u> AS3	2,4,6-tribromophenol	<u>67</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

PAGE 4 Analytical Serv REPORT LAB # 86-02-058
RECEIVED: 02/11/86 Results by Sample Continued From Above

SAMPLE ID 860141 FRACTION Q1A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/10/86 Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/11/86

Analytical Serv
Results by Sample

LAB # 86-02-058

SAMPLE ID 860141

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/10/86 Category

DATA FILE 2CU0205BC01 DATE EXTRACTED 02/12/86 ANALYST MJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1325	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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RECEIVED: 02/11/86

Analytical Serv
Results by Sample

LAB # 86-02-058
Continued From Above

SAMPLE ID 860141 FRACTION Q1A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/10/86 Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2
530

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>607</u> BS1	d5-nitrobenzene <u>83</u>
<u>883</u> BS2	2-fluorobiphenyl <u>71</u>
<u>1483</u> BS3	d14-terphenyl <u>46</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
= benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860141

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID 860141

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/10/86 Category _____

CHRD # 2U02058C01

SAMPLE SIZE 1

DATE ANALYZED 02/26/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL
REF CMPD

No PCBs _____

Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

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RECEIVED: 02/11/86

SAMPLE ID 860141 FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/10/86 Category _____

DATA FILE 26U02038601 DATE EXTRACTED 02/12/86 ANALYST MJL VERIFIED BY AK
CONC. FACTOR _____ DATE INJECTED 02/26/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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RECEIVED: 02/11/86

Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

Continued From Above

SAMPLE ID 860141

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID 860143

FRACTION 02A TEST CODE M625 A
Date & Time Collected 02/10/86

NAME Method 625 Acid Compounds
Category

DATA FILE 2CU02058C02 DATE EXTRACTED 02/12/86 ANALYST MJK VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	3
6A	57A	2-nitrophenol	ND				

2 5 35

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
478 AS1	d5-phenol	63
358 AS2	2-fluorophenol	68
1116 AS3	2,4,6-tribromophenol	43
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058
Continued From Above

SAMPLE ID 860143

FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/10/86 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-05B

Results by Sample

SAMPLE ID 860143

FRACTION 02A TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

DATA FILE 2CU02038C02 DATE EXTRACTED 02/12/86 ANALYST MJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860143

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2
5
38

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>60B</u> BS1	d5-nitrobenzene <u>74</u>
<u>88A</u> BS2	2-fluorobiphenyl <u>64</u>
<u>148A</u> BS3	d14-terphenyl <u>74</u>
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860143

FRACTION 02A TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-058

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860143 FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/10/86 Category _____

CHRD # 2U02058C02 DATE ANALYZED 02/26/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
------	----------	--------	------------	----------

No PCBs _____

LAB # 86-02-058
 Analytical Serv REPORT
 Results by Sample

SAMPLE ID 860143 FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/10/86 Category

DATA FILE 20U02038C02 DATE EXTRACTED 02/12/86 ANALYST MJL VERIFIED BY LAK
 CONC. FACTOR DATE INJECTED 02/26/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1C16	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058
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SAMPLE ID 860143 FRACTION Q2A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/10/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.
All results reported in micrograms/liter unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID 860144

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 02/10/86 Category _____

DATA FILE 20U02058C03 DATE EXTRACTED 02/12/86 ANALYST _____ M/J/L VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	38A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	39A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	477	phenol	2
6A	57A	2-nitrophenol	ND				

2 543

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
472	AS1	45-phenol 69
353	AS2	2-fluorophenol 74
1116	AS3	2,4,6-tribromophenol 59
	AS4	43-phenol _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

SAMPLE ID 860144

FRACTION 03A TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

DATA FILE 2CU02058C03
CONC. FACTOR 1

DATE EXTRACTED 02/12/86
DATE INJECTED 02/26/86

ANALYST M.J.L.
INSTRUMENT F2

VERIFIED BY LAK
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	166B	bis(2-ethylhexyl)phthalate	2 BL
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	132B	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

SAMPLE ID 860144 FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/10/86 Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

2 546

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>607</u> BS1	d5-nitrobenzene <u>94</u>
<u>884</u> BS2	2-fluorobiphenyl <u>80</u>
<u>1484</u> BS3	d14-terphenyl <u>51</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

LAB # 86-02-058

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Results by Sample

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SAMPLE ID 860144

FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/10/86 Category

CHRO # 2302038603

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/26/86

SAMPLE SIZE 1

CONF REF
LEVEL CMPD

RESULT

COMPOUND

SCAN

No PCBs

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID 860144

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected 02/10/86 Category _____

DATA FILE 2CU02058C03
CONC. FACTOR _____

DATE EXTRACTED 02/12/86
DATE INJECTED 02/26/86

ANALYST _____ MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A

TEST CODE MS 608

Date & Time Collected 02/10/86

NAME Pesticides & PCBs by GC/MS

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

SAMPLE ID 860146

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86 Category _____

DATA FILE 2CU02058C01 DATE EXTRACTED 02/12/86 ANALYST _____ M/JL _____ VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT _____ F2 _____ COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
28A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
31A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
32A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
33A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
34A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>478</u> AS1	d5-phenol	<u>62</u>
<u>358</u> AS2	2-fluorophenol	<u>91</u>
<u>1116</u> AS3	2,4,6-tribromophenol	<u>46</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-058

SAMPLE ID 860146

FRACTION 04A
Date & Time Collected 02/10/86

TEST CODE M625 B NAME Method 625 Base/Neutrals
Category

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	166Z	bis(2-ethylhexyl)phthalate	6 BL
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

DATA FILE 2CV02058C04 DATE EXTRACTED 02/12/86 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/27/86 INSTRUMENT FZ COMPOUNDS DETECTED 1

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category _____

14B	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

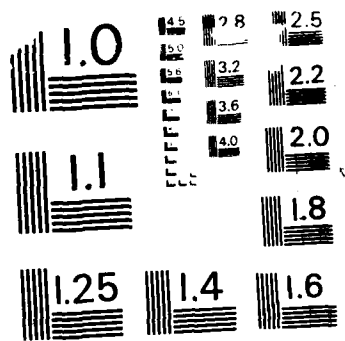
2 554

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>60B</u> 851	d5-nitrobenzene <u>60</u>
<u>88A</u> 852	2-fluorobiphenyl <u>56</u>
<u>148B</u> 853	d14-terphenyl <u>64</u>
854	d10-biphenyl _____

DEFINITIONS FOR THIS REPORT.

AN _____ was number or retention time on chromatogram.
 _____ results reported in ug/l unless otherwise specified.
 _____ detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 _____ 2-fluoranthrene and benzo(k)fluoranthene co-elute.
 _____ anthracene and chrysene co-elute in high concentrations.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS - 1963 -

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058
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SAMPLE ID 860146

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 02/10/86 Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID 860146

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 02/10/86 Category

CHRD # 2U02058C04
SAMPLE SIZE 1

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/26/86

SCAN

COMPOUND

RESULT

CONF REF
LEVEL CMPD

No PCBs

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 RECEIVED: 02/11/86 Results by Sample

SAMPLE ID 860146 FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
 Date & Time Collected 02/10/86 Category _____

DATA FILE 26U02038C04 DATE EXTRACTED 02/12/86 ANALYST WJL VERIFIED BY LAK
 CONC. FACTOR _____ DATE INJECTED 02/26/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT

Results by Sample

LAB # 86-02-058

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SAMPLE ID 860146

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 2CD02058003

DATE EXTRACTED 02/12/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

INSTRUMENT F2

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>479</u> AS1	d3-phenol	<u>73</u>
<u>361</u> AS2	2-fluorophenol	<u>79</u>
<u>1114</u> AS3	2,4,6-tribromophenol	<u>70</u>
AS4	d3-phenol	_____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	ANALYST INSTRUMENT	WJL F2	VERIFIED BY LAK	COMPOUNDS DETECTED
1B	1B	acenaphthene	ND	41B	61B				ND
4B	5B	benzidine	ND	43B	62B				ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B				ND
33B	9B	hexachlorobenzene	ND	13B	66B				ND
36B	12B	hexachloroethane	ND	15B	67B				ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B				4 BL
16B	20B	2-chloronaphthalene	ND	29B	69B				ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B				ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B				ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B				ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B				ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B				ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B				ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B				ND
31B	39B	fluoranthene	ND	2B	77B				ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B				ND

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058
Continued From Above

SAMPLE ID duplicate analysis BNA FRACTION 05B TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category _____

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>607</u> BS1	45-nitrobenzene <u>98</u>
<u>882</u> BS2	2-fluorobiphenyl <u>80</u>
<u>1482</u> BS3	d14-terphenyl <u>46</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID duplicate analysis BNA FRACTION Q5B TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category _____

CHRD # 2D02058C02
SAMPLE SIZE 1

VERIFIED BY LAK

DATE ANALYZED 02/26/86 UNITS ug/l

CONF REF
LEVEL CMPD

SCAN COMPOUND

RESULT

No PCBs

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID duplicate analysis BNA FRACTION 05B TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category _____

DATA FILE 2CD02058C03
CONC. FACTOR _____

DATE EXTRACTED 02/12/86
DATE INJECTED 02/26/86

ANALYST _____

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058
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SAMPLE ID duplicate analysis BNA FRACTION 05B TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.
All results reported in micrograms/liter unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

DATA FILE 2CM02058C03

DATE EXTRACTED 02/12/86

ANALYST _____

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

INSTRUMENT F2

COMPOUNDS DETECTED 11

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	87	7A	58A	4-nitrophenol	57
8A	22A	4-chloro-3-methylphenol	82	5A	59A	2,4-dinitrophenol	10
1A	24A	2-chlorophenol	78	4A	60A	2-methyl-4,6-dinitrophenol	140
2A	31A	2,4-dichlorophenol	82	9A	64A	pentachlorophenol	260
3A	34A	2,4-dimethylphenol	57	10A	65A	phenol	63
6A	57A	2-nitrophenol	70				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
479	AS1	d5-phenol
360	AS2	2-fluorophenol
1115	AS3	2,4,6-tribromophenol
AS4		d3-phenol

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in % unless otherwise specified.

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REPORT

LAB # 86-02-058

Results by Sample

Continued From Above

SAMPLE ID Matrix spike BNA

FRACTION OSA

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID matrix spike BNA FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category _____

DATA FILE 2CM02058C02 DATE EXTRACTED 02/12/86 ANALYST _____ M/JL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/26/86 INSTRUMENT _____ F2 COMPOUNDS DETECTED 43

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT	
1B	992	1B	acenaphthene	41B	210	61B	N-nitrosodimethylamine	23
4B	1001	5B	benzidine	43B	1074	62B	N-nitrosodiphenylamine	77
46B	708	8B	1,2,4-trichlorobenzene	42B	590	63B	N-nitrosodi-n-propylamine	61
33B	1176	7B	hexachlorobenzene	13B	1667	66B	bis(2-ethylhexyl)phthalate	67
36B	601	12B	hexachloroethane	15B	1567	67B	butyl benzyl phthalate	27
11B	473	18B	bis(2-chloroethyl)ether	26B	1325	68B	di-butyl phthalate	60
16B	877	20B	2-chloronaphthalene	29B	1794	69B	di-n-octyl phthalate	53
20B	552	25B	1,2-dichlorobenzene	24B	1062	70B	diethyl phthalate	70
21B	522	26B	1,3-dichlorobenzene	25B	952	71B	dimethyl phthalate	68
22B	529	27B	1,4-dichlorobenzene	5B	1652	72B	benzo(a)anthracene A	77
23B	1649	28B	3,3'dichlorobenzidine	6B	1990	73B	benzo(a)pyrene	79
27B	1024	35B	2,4-dinitrotoluene	7B	1895	74B	benzo(b)fluoranthene *	75
28B	962	36B	2,6-dinitrotoluene	9B	1901	75B	benzo(k)fluoranthene *	74
29B		37B	1,2-diphenylhydrazine	18B	1662	76B	chrysene A	75
31B	1421	39B	fluoranthene	2B	966	77B	acenaphthylene	65
17B	1075	40B	4-chlorophenyl phenyl ether	3B	1232	78B	anthracene B	79

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Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

14B	1132	41B	4-bromophenyl phenyl ether	74	8B	2558	79B	benzo(ghi)perylene	89	
12B	571	42B	bis(2-chloroisopropyl)ether	61	32B	1073	80B	fluorene	73	
10B	679	43B	bis(2-chloroethoxy)methane	61	44B	1228	81B	phenanthrene B	73	
34B	746	52B	hexachlorobutadiene	78	19B	2440	82B	dibenzo(a,h)anthracene	98	
35B		53B	hexachlorocyclopentadiene	ND	37B	2430	83B	indeno(1,2,3-cd)pyrene	83	
2	38B	646	54B	isophorone	62	45B	1458	84B	pyrene	64
57	39B	717	55B	naphthalene	61					
570	40B	611	56B	nitrobenzene	61					

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>608</u> BS1	d5-nitrobenzene <u>90</u>
<u>884</u> BS2	2-fluorobiphenyl <u>72</u>
<u>1483</u> BS3	d14-terphenyl <u>60</u>
BS4	d10-biphenyl _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in % unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

REPORT

LAB # 86-02-058

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SAMPLE ID Matrix spike BNA

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category _____

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

REPORT

LAB # 86-02-058

SAMPLE ID matrix spike BNA

FRACTION 05A
Date & Time Collected not specified

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Category _____

DATA FILE 2CM02058C03
CONC. FACTOR _____

DATE EXTRACTED 02/12/86
DATE INJECTED 02/26/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Results by Sample

REPORT

LAB # 86-02-058

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SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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SAMPLE ID reagent blank 625 FRACTION 05C TEST CODE M625 A NAME Method 625 Acid Compounds Date & Time Collected not specified Category

DATA FILE 2CB0205BC02 DATE EXTRACTED 02/12/86 ANALYST HJL VERIFIED BY LAK
 CONC. FACTOR 1 DATE INJECTED 02/27/86 INSTRUMENT F2 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

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SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
357 AS1	d5-phenol	64
476 AS2	2-fluorophenol	61
1114 AS3	2,4,6-tribromophenol	48
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.
 SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.

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Results by Sample

LAB # 86-02-058

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SAMPLE ID reagent blank 625

FRACTION OSC

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category _____

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv
Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625 FRACTION 05C TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected not specified Category _____

DATA FILE 2CB0205BC03 DATE EXTRACTED 02/12/86 ANALYST _____ VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 02/27/86 INSTRUMENT F2 COMPOUNDS DETECTED 3

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	167Q	bis(2-ethylhexyl)phthalate	3
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1326	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>604</u> BS1	d5-nitrobenzene <u>86</u>
<u>881</u> BS2	2-fluorobiphenyl <u>78</u>
<u>1484</u> BS3	d14-terphenyl <u>82</u>
BS4	d10-biphenyl _____

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
 All results reported in ug/l unless otherwise specified.
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
 * = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-058

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SAMPLE ID reagent blank 625

FRACTION OSC

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID reagent blank 625 FRACTION OSC TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected not specified Category

CHRD # 2802038C03 DATE ANALYZED 02/27/86 UNITS ug/l VERIFIED BY LAK
SAMPLE SIZE 1

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
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No PCBs

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RECEIVED: 02/11/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625

FRACTION 05C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS
Date & Time Collected not specified Category

DATA FILE 2CB0205BC05
CONC. FACTOR

DATE EXTRACTED 02/12/86
DATE INJECTED 02/27/86

ANALYST MJL

VERIFIED BY LAK
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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RECEIVED: 02/11/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-058

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B | DUP_NS
02B | DUP_NS
03B | DUP_NS
04B | DUP_NS

PAGE 1
RECEIVED: 02/11/86

Analytical Serv
02/27/86 18:08:50

LAB # 86-02-060

REPORT Radian
TO Bl. 4
Austin
ATTEN Larry French
CLIENT PLANT 4
COMPANY Plant 4
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services
BY 8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766
ATTEN
PHONE (512) 454-4797

Carl Smith
CERTIFIED BY
CONTACT CONOVER

WORK ID groundwater
TAKEN NR. AM
TRANS Fed Ex
TYPE
P. O. # 212-027-27-40
INVOICE under separate cover

**Unknown compound eluting here.
Second column confirmation performed for EPA 601 on -01, -02,
-03, -05; for EPA 602 on -03.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit.
Potential error for such low values ranges between
50 and 100%.

@ Indicates that spike recovery for this analysis on the
specific matrix was not within acceptable limits indicating
an interferent present.

SAMPLE IDENTIFICATION

01 860141
02 860142
03 860143
04 860145
05 860146

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPES
AS GA Arsenic, low level
BA E Barium, ICPES
CD E Cadmium, ICPES
CR E Chromium, ICPES
DG3020 Digestion by Method 3020
DG6010 Digestion by Method 6010
GC 601 EPA Method 601/GC
GC 602 EPA Method 602/GC
HC IR Hydrocarbons in soil
HG CA Mercury, Cold Vapor
ONG IR Oil and Grease, Infrared
PB GA Lead, low level
SE GA Selenium, low level

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG E ug/ml	<.002	0.004*	<.002		0.006*
AS GA ug/ml	0.002*	0.007*	0.005*		<.002
BA E ug/ml	0.068	0.12	0.021		0.040
CD E ug/ml	<.002	0.003*	<.002		<.002
CR E ug/ml	0.005*	0.034	0.005*		0.006*
DC3020 date complete	02/14/86	02/14/86	02/14/86		02/14/86
DC6010 date complete	02/14/86	02/14/86	02/14/86		02/14/86
HC IR ug/g	<1.0 mg/L	<1.0 mg/L	<1.0 mg/L	1.0 mg/L	
HG CA ug/ml	<.0002	<.0002	<.0002		<.0002
ONG IR mg/L	<1.0	<1.0	<1.0		
PB GA ug/ml	0.033	0.27	0.040		0.028
SE GA ug/ml	0.003*	<.002	<.002		<.002

PAGE 3 Analytical Serv REPORT LAB # 86-02-060
 RECEIVED: 02/11/86 Results by Sample

SAMPLE ID 860141 FRACTION 01E TEST CODE GC 601 NAME EPA Method 601/GC
 Date & Time Collected 02/10/86 Category

DATA FILE _____ G DATE INJECTED 02/12/86 ANALYST _____ RP VERIFIED BY MCL
 CONC. FACTOR _____ INSTRUMENT _____ g COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	3	Trichloroethene	0.93
_____	Bromomethane	ND	4	Dibromochloromethane *	0.42
_____	Vinyl Chloride	ND	_____	1, 1, 2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1, 3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1, 1-Dichloroethene	ND	_____	1, 1, 2, 2-Tetrachloroethane #	ND
_____	1, 1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1, 2-Dichloroethene	ND	_____	Chlorobenzene	ND
1	Chloroform	4.25	_____	1, 3-Dichlorobenzene	ND
_____	1, 2-Dichloroethane	ND	_____	1, 2-Dichlorobenzene	ND
_____	1, 1, 1-Trichloroethane	ND	_____	1, 4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
2	Bromodichloromethane	1.87	_____		
_____	1, 2-Dichloropropane	ND	_____		
_____	trans-1, 3-Dichloropropene	ND	_____		

PAGE 4 Analytical Serv REPORT LAB # 86-02-060
RECEIVED: 02/11/86 Results by Sample Continued From Above

SAMPLE ID 860141 FRACTION O1E TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/10/86 Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-060

SAMPLE ID 860141

FRACTION 01G TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/10/86 Category

DATA FILE _____ DATE INJECTED 02/11/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
1	Toluene	2.96 ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

2 587

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-060

SAMPLE ID 860142

FRACTION 02E TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/10/86

Category

DATA FILE	CONC. FACTOR	DATE INJECTED	ANALYST INSTRUMENT	MCL	VERIFIED BY	COMPOUNDS DETECTED
	9	02/13/86		9		3
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	
—	Chloromethane	ND	4	Trichloroethene	0.92	
—	Bromomethane	ND	5	Dibromochloromethane *	0.72	
—	Vinyl Chloride	ND	—	1, 1, 2-Trichloroethane *	ND	
—	Chloroethane	ND	—	cis-1, 3-Dichloropropene *	ND	
1	Methylene Chloride	0.74	—	2-Chloroethylvinyl Ether	ND	
—	Trichlorofluoromethane	ND	—	Bromoform	ND	
—	1, 1-Dichloroethene	ND	—	1, 1, 2, 2-Tetrachloroethane #	ND	
—	1, 1-Dichloroethane	ND	—	Tetrachloroethylene #	ND	
—	trans-1, 2-Dichloroethene	ND	—	Chlorobenzene	ND	
2	Chloroform	3.77	—	1, 3-Dichlorobenzene	ND	
—	1, 2-Dichloroethane	ND	—	1, 2-Dichlorobenzene	ND	
—	1, 1, 1-Trichloroethane	ND	—	1, 4-Dichlorobenzene	ND	
—	Carbon Tetrachloride	ND	—			
3	Bromodichloromethane	1.81	—			
—	1, 2-Dichloropropane	ND	—			
—	trans-1, 3-Dichloropropene	ND	—			

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CORPORATION

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Analytical Serv
Results by Sample
REPORT
LAB # 86-02-060
Continued From Above
SAMPLE ID 860142
FRACTION 02E
TEST CODE GC 601
NAME EPA Method 601/GC
Date & Time Collected 02/10/86
Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/11/86

Analytical Serv REPORT
Results by Sample

LAB # 86-02-060

SAMPLE ID 860142

FRACTION 02G TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/10/86 Category

DATA FILE D DATE INJECTED 02/12/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
1	Toluene	0.90 ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

2 590

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79).

Analytical Serv REPORT
Results by Sample

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SAMPLE ID 860143 FRACTION 03E TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/10/86 Category _____

DATA FILE _____ G _____ DATE INJECTED 02/13/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ 9 _____ COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	<u>3</u>	Trichloroethene	<u>6.40</u>
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	<u>4</u>	Tetrachloroethylene #	<u>0.17</u>
<u>1</u>	trans-1,2-Dichloroethene	<u>0.15**</u>	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
<u>2</u>	1,1,1-Trichloroethane	<u>2.07</u>	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

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Analytical Serv

REPORT

LAB # 86-02-060

Results by Sample

Continued From Above

SAMPLE ID 860143

FRACTION 03E TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/10/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-060

SAMPLE ID 860143

FRACTION 03G TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/10/86 Category

DATA FILE D DATE INJECTED 02/12/86 ANALYST RP VERIFIED BY MCL
CONC. FACTOR INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
1	Toluene	10.4	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

2 593

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv REPORT
Results by Sample

LAB # 86-02-060

SAMPLE ID 860146 FRACTION 05B TEST CODE GC 601 NAME EPA Method 601/GC
Date & Time Collected 02/10/86 Category _____

DATA FILE _____ G DATE INJECTED 02/13/86 ANALYST _____ RP VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ a COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	<u>2</u>	Trichloroethene	<u>26.4</u>
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	<u>3</u>	Tetrachloroethylene #	<u>1.31</u>
<u>1</u>	trans-1,2-Dichloroethene <u>8.48**</u>	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-060

Continued From Above

SAMPLE ID 860146

FRACTION 05B TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/10/86

Category _____

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).
*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/11/86 Results by Sample

SAMPLE ID 860146 FRACTION 05D TEST CODE GC 602 NAME EPA Method 602/GC
Date & Time Collected 02/10/86 Category

DATA FILE _____ DATE INJECTED 02/12/86 ANALYST _____ RP _____ VERIFIED BY MCL
CONC. FACTOR _____ INSTRUMENT _____ d _____ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
1	Toluene	4.13 ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

2 596

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/L unless otherwise specified.
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/11/86

Analytical Serv

NonReported Work

REPORT

LAB # 86-02-060

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01F	:	DUP601	01H	:	DUP602	01D	:	DUP_NS
02F	:	DUP601	02H	:	DUP602	02D	:	DUP_NS
03F	:	DUP601	03H	:	DUP602	03D	:	DUP_NS
05C	:	DUP601	05E	:	DUP602		:	

RADIAN
CORPORATION

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MEMORANDUM

08 September 1986

RC No. 212-027-27-02

TO: Debra Richmann
FROM: Neal Amick *Neal Amick*
SUBJECT: Analysis of Soil and Water Samples for Methyl Ethyl Ketone - Air Force Plant #4

Soil and water samples were analyzed for MEK by EPA SW-846 Method 8015. A list of the samples and the results are presented in Table 1. Water samples were analyzed by direct injection into a gas chromatograph equipped with a flame ionization detector. The soil sample was analyzed by extracting with carbon disulfide and injecting an aliquot of the extract into the gas chromatograph.

For each day of analysis, a three-point calibration curve was determined by carefully preparing standard solutions of known concentrations. A quality control sample was independently prepared and analyzed to ensure accurate quantitation. The quality control sample was analyzed to be within 10% of the expected results for each day of analysis.

The extraction efficiency for the soil analysis was checked by spiking an aliquot of the soil with MEK and analyzing. A recovery of 89% was obtained. No sample had MEK concentrations above the minimum detection level, which was 1.0 ug/mL for the water samples and 1.0 ug/g for the soil samples.

The instrument parameters were set as follows:

Instrument: Tracor 560 with FID
Column: 1% SP1000 on Carboxpack B, 6' x 2 mm I.D.
Carrier Flow: N₂ at 20 cc/minute
Oven Temperature: 80°C programmed to 150°C at 10°C/minute

TABLE 1. ANALYTICAL RESULTS FOR METHYL ETHYL KETONE - AIR FORCE PLANT #4

A. Water Samples

Sample I.D.		Results (ug/mL)
860129A	HM - 74	<1.0
860129B	HM - 74	<1.0
860168A	HM - 72	<1.0
860168B	HM - 72	<1.0
860173A	HM - 75	<1.0
860173B	HM - 75	<1.0
860199A	HM - 73	<1.0
860199B	HM - 73	<1.0

B. Soil Samples

Sample I.D.		Results (ug/g)
860019	HM - 106A	<1.0
860021A	HM - 106C	<1.0
860021B	HM - 106C	<1.0

END

DATE

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