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Table A-11. List of Organic Compounds Analyzed in King County Dewatered Biosolids

Pesticides and PCBs	Volatiles	Bases/Neutrals/Acids	
4,4-DDE	1,1-Dichloroethane	1,2-Dichlorobenzene	Benzyl Alcohol
4,4-DDD	1,1-Dichloroethylene	1,2-Diphenylhydrazine	Bis(2-chloroethoxy)methane
4,4-DDT	1,2-Dichloroethane	1,3-Dichlorobenzene	Bis(2-chloroethyl)ether
Aldrin	1,2-Dichloropropane	1,4-Dichlorobenzene	Bis(2-chloroisopropyl)-ether
Alpha-BHC	1,2-Trans-Dichloroethylene	1,2,4-Trichlorobenzene	Bis(2-ethylhexyl)phthalate
Arochlor-1016	1,1,1-Trichloroethane	2-Chloronaphthalene	Butyl Benzyl Phthalate
Arochlor-1221	1,1,2-Trichloroethane	2-Chlorophenol	Carbazole
Arochlor-1232	1,1,2-Trichloroethylene	2-Methylnaphthalene	Chrysene
Arochlor-1242	1,1,2,2-Tetrachloroethane	2-Methylphenol	Coprostanol
Arochlor-1248	2-Butanone (MEK)	2-Nitroaniline	Di-n-Butyl Phthalate
Arochlor-1254	2-Chloroethylvinyl Ether	2-Nitrophenol	Di-n-Octyl Phthalate
Arochlor-1260	2-Hexanone	2,4-Dichlorophenol	Dibenzo(a,h)anthracene
Beta-BHC	4-Methyl-2-Pentanone (MIBK)	2,4-Dimethylphenol	Dibenzofuran
Chlordane	Acetone	2,4-Dinitrophenol	Diethyl Phthalate
Delta-BHC	Acrolein	2,4-Dinitrotoluene	Dimethyl Phthalate
Dieldrin	Acrylonitrile	2,6-Dinitrotoluene	Fluoranthene
Endosulfan I	Benzene	2,4,5-Trichlorophenol	Fluorene
Endosulfan Sulfate	Bromodichloromethane	2,4,6-Trichlorophenol	Hexachlorobenzene
Endosulfan II	Bromoform	3-Nitroaniline	Hexachlorobutadiene
Endrin	Bromomethane	3,3-Dichlorobenzidine	Hexachlorocyclopentadiene
Endrin Aldehyde	Carbon Disulfide	4-Bromophenyl Phenyl Ether	Hexachloroethane
Gamma-BHC	Carbon Tetrachloride	4-chloro-3-methylphenol	Indeno(1,2,3-c,d)pyrene
Heptachlor	Chlorobenzene	4-Chloroaniline	Isophorone
Heptachlor Epoxide	Chlorodibromoethane	4-Chlorophenyl Phenyl Ester	N-Nitroso-di-n-propylamine
Methoxychlor	Chloroethane	4-Methylphenol	N-Nitrosodimethylamine
Toxaphene	Chloroform	4-Nitroaniline	N-Nitrosodiphenylamine
	Chloromethane	4-Nitrophenol	Naphthalene
	Cis-1,3-Dichloropropane	4,6-Dinitro-O-Cresol	Nitrobenzene
	Ethyl Benzene	Acenaphthene	Pentachlorophenol
	Methylene Chloride	Acenaphthylene	Phenanthrene
	Styrene	Aniline	Phenol
	Tetrachloroethylene	Anthracene	Pyrene
	Toluene	Benzidine	
	Total Xylenes	Benzoic Acid	
	Trans-1,3-Dichloropropene	Benzo(a)anthracene	
	Trichlorofluoromethane	Benzo(a)pyrene	
	Vinyl Acetate	Benzo(b)fluoranthene	
	Vinylchloride	Benzo(g,h,i)perylene	
		Benzo(k)fluoranthene	

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Biosolids PCBs

TABLE A-9. 1999 Organic Compound Data for West Point Dewatered Biosolids

		Acids (mg/kg dry)	Volatiles (mg/kg dry)				
Sample Number	Date	Phenol	Toluene	Acetone	Carbon Disulfide	2-Butanone (MEK)	Total Xylenes
L16784-1	8-Nov-99	7.69	0.057	2.842	0.051	0.8	0.024
	1996 Min - max	*10.9 - 12*		*0.440 - 3.71*			

		Neutrals/PAH's (mg/kg dry)						
Sample Number	Date	Acenaphthene *	Anthracene *	Benzo(A) Anthracene *	1,4-Dichloro benezene	Benzo(A) Pyrene *	Bis(2-Ethyl-hexyl)Phthalate	Chrysene *
L16784-1	8-Nov-99	1.06	1.12	1.22	0.65	1.27	88	1.47
	1996 Min - max	*0.51 - 1.18*	*0.71 - 0.83*	*0.77 - 2.37*	*0.42*	*0.9 - 1.5*	*46 - 156*	*0.79 - 3.33*

Sample Number	Date	2-Methyl-naphthalene	Fluoranthene *	Fluorene *	Phenanthrene *	Pyrene *
L16784-1	8-Nov-99	2.58	2.63	0.73	4.58	2.76
	1996 Min - max	*ND*	*1.5 - 4.93*	*0.46 - 0.93*	*1.57 - 6.35*	*2.11 - 6.49*

		Pesticides and PCB's (mg/kg dry)				
Sample Number	Date	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
L16784-1	8-Nov-99	0.108 g	0.215 g	0.149 g	0.245 g	0.142 g
	1996 Min - max			*0.32 - 0.32*	*0.176 - 0.635*	*0.149 - 0.310*

Sample Number	Date	4,4-DDE	4,4-DDD	Chlordane
L16784-1	8-Nov-99	0.027	0.0158	0.5115
	1996 Min - max	*0.031 - 0.041*	*0.027 - 0.029*	

* indicates PAH compound
ND = no data available or the compound was not detected.
1996 Min - max = Minimum and maximum detected values for 1996 trace organic compounds to use as comparison for 1999 data.
In 1999 only one composite sample was analyzed for all 135 organic compounds, as compared to 1996 when monthly samples were analyzed.
g = geometric mean, monthly samples were analyzed in 1999 for some pesticides.

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TABLE A-10. 1999 Organic Compound Data for South Plant Dewatered Biosolids

Volatiles (mg/kg dry)

Sample Number	Date	Toluene	Acetone	Ethylbenezene	Total Xylenes
L16784-2	8-Nov-99	0.063	2.101	0.03	0.044
	1996 Min - max		*1.6 - 5.1*		

Neutrals/PAH's (mg/kg dry)

Sample Number	Date	Bis(2-Ethyl-hexyl)Phthalate	Pyrene *
L16784-2	8-Nov-99	85	0.9
	1996 Min - max	*45 - 180*	*0.67 - 2.71*

Pesticides and PCB's (mg/kg dry)

Sample Number	Date	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	4,4-DDE	Chlordane
L16784-2	8-Nov-99	0.123 g	0.147 g	0.142 g	0.164 g	0.126 g	0.02	0.266
	1996 Min - max			*0.185 - 0.185*	*0.118 - 0.377*		*0.021 - 0.037*	*0.048 - 0.354*

* indicates PAH compound

ND = no data available or the compound was not detected.

1996 Min - max = Minimum and maximum detected values for 1996 trace organic compounds to use as comparison for 1999 data.

In 1999 only one monthly composite sample was analyzed for all 135 organic compounds, as compared to 1996 when monthly samples were analyzed.

g = geometric mean, monthly samples were analyzed in 1999 for some pesticides.

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