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Appendix 2A
AOC Look-Up Table Values

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APPENDIX 2A

AOC LUT Cleanup Values

NASA Supplemental EIS for Soil Cleanup Activities, SSFL, Ventura, California

Data Grouping	Parameter Name	Screening Level - AOC LUT	Units	Source
Aroclors	Aroclor 1016 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1221 ^a	33	µg/kg	LUT
Aroclors	Aroclor 1232 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1242 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1248 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1254 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1260 ^a	17	µg/kg	LUT
Aroclors	Aroclor 1262 ^a	33	µg/kg	LUT
Aroclors	Aroclor 1268 ^a	33	µg/kg	LUT
Aroclors	Aroclor 5432 ^a	50	µg/kg	LUT
Aroclors	Aroclor 5442 ^a	50	µg/kg	LUT
Aroclors	Aroclor 5460 ^a	50	µg/kg	LUT
Dioxins and Furans	DIOXINTEQM ^{b,c}	0.912	pg/g	LUT
Energetics	1,3,5-Trinitrobenzene	400	µg/kg	RL
Energetics	1,3-Dinitrobenzene	400	µg/kg	RL
Energetics	2,4,6-Trinitrotoluene	400	µg/kg	RL
Energetics	2,4-diamino-6-nitrotoluene	1,000	µg/kg	RL
Energetics	2,4-Dinitrotoluene	170	µg/kg	RL
Energetics	2,6-diamino-4-nitrotoluene	1,000	µg/kg	RL
Energetics	2,6-Dinitrotoluene	170	µg/kg	RL
Energetics	2-Amino-4,6-dinitrotoluene	400	µg/kg	RL
Energetics	2-Nitrotoluene	400	µg/kg	RL
Energetics	3-Nitrotoluene	400	µg/kg	RL
Energetics	4-Amino-2,6-dinitrotoluene	400	µg/kg	RL
Energetics	4-Nitrotoluene	400	µg/kg	RL
Energetics	HMX	400	µg/kg	RL
Energetics	Nitrobenzene	170	µg/kg	RL
Energetics	Nitroglycerin	2,000	µg/kg	RL
Energetics	Perchlorate	1.63	µg/kg	LUT
Energetics	PETN	2,000	µg/kg	RL
Energetics	RDX	300	µg/kg	LUT
Energetics	Tetryl	400	µg/kg	RL
General Chemistry	Actinolite	1	percent	RL
General Chemistry	Amosite	1	percent	RL
General Chemistry	Anthophyllite	1	percent	RL
General Chemistry	Chrysotile	1	percent	RL
General Chemistry	Crocidolite	1	percent	RL
General Chemistry	Cyanide	0.6	mg/kg	LUT
General Chemistry	Fluoride	10.2	mg/kg	LUT
General Chemistry	Nitrogen, Nitrate (as N)	22.3	mg/kg	LUT
General Chemistry	Tremolite	1	percent	RL
Herbicides	2,4,5-T	1.2	µg/kg	LUT
Herbicides	2,4,5-TP	0.63	µg/kg	LUT
Herbicides	2,4-D	5.8	µg/kg	LUT
Herbicides	2,4-DB	2.4	µg/kg	LUT
Herbicides	2,4-DP (Dichloroprop)	2.4	µg/kg	LUT
Herbicides	Dalapon	12.5	µg/kg	LUT

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Herbicides	Dicamba	1.3	µg/kg	LUT
Herbicides	Dinoseb	3.3	µg/kg	LUT
Herbicides	MCPA	761	µg/kg	LUT
Herbicides	MCPP (Mecoprop)	377	µg/kg	LUT
Herbicides	Pentachlorophenol	170	µg/kg	LUT
Metals	Aluminum	58,600	mg/kg	LUT
Metals	Antimony	0.86	mg/kg	LUT
Metals	Arsenic	46	mg/kg	LUT
Metals	Barium	371	mg/kg	LUT
Metals	Beryllium	2.2	mg/kg	LUT
Metals	Boron	34	mg/kg	LUT
Metals	Cadmium	0.7	mg/kg	LUT
Metals	Chromium	94	mg/kg	LUT
Metals	Chromium VI	2	mg/kg	LUT
Metals	Cobalt	44	mg/kg	LUT
Metals	Copper	119	mg/kg	LUT
Metals	Lead	49	mg/kg	LUT
Metals	Lithium	91	mg/kg	LUT
Metals	Manganese	1,120	mg/kg	LUT
Metals	Mercury	0.13	mg/kg	LUT
Metals	Methyl Mercury	0.05	µg/kg	LUT
Metals	Molybdenum	3.2	mg/kg	LUT
Metals	Nickel	132	mg/kg	LUT
Metals	Potassium	14,400	mg/kg	LUT
Metals	Selenium	1	mg/kg	LUT
Metals	Silver	0.2	mg/kg	LUT
Metals	Sodium	1,780	mg/kg	LUT
Metals	Strontium	163	mg/kg	LUT
Metals	Thallium	1.2	mg/kg	LUT
Metals	Vanadium	175	mg/kg	LUT
Metals	Zinc	215	mg/kg	LUT
Metals	Zirconium	19	mg/kg	LUT
Pesticides	Aldrin	0.24	µg/kg	LUT
Pesticides	Alpha-BHC	0.24	µg/kg	LUT
Pesticides	Beta-BHC	0.23	µg/kg	LUT
Pesticides	Chlordane	7	µg/kg	LUT
Pesticides	Delta-BHC	0.22	µg/kg	LUT
Pesticides	Dieldrin	0.48	µg/kg	LUT
Pesticides	Endosulfan I	0.24	µg/kg	LUT
Pesticides	Endosulfan II	0.48	µg/kg	LUT
Pesticides	Endosulfan Sulfate	0.48	µg/kg	LUT
Pesticides	Endrin	0.48	µg/kg	LUT
Pesticides	Endrin Aldehyde	0.7	µg/kg	LUT
Pesticides	Endrin Ketone	0.7	µg/kg	LUT
Pesticides	Gamma-BHC (Lindane)	0.24	µg/kg	LUT
Pesticides	Heptachlor	0.24	µg/kg	LUT
Pesticides	Heptachlor Epoxide	0.24	µg/kg	LUT

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Data Grouping	Parameter Name	Screening Level - AOC LUT	Units	Source
Pesticides	Methoxychlor	2.4	µg/kg	LUT
Pesticides	Mirex	0.5	µg/kg	LUT
Pesticides	p,p-DDD	0.48	µg/kg	LUT
Pesticides	p,p-DDE	8.6	µg/kg	LUT
Pesticides	p,p-DDT	13	µg/kg	LUT
Pesticides	Toxaphene	8.8	µg/kg	LUT
Phthalates	Bis(2-ethylhexyl)phthalate	61	µg/kg	LUT
Phthalates	Butyl benzyl phthalate	100	µg/kg	LUT
Phthalates	Diethyl phthalate	27	µg/kg	LUT
Phthalates	Dimethyl phthalate	27	µg/kg	LUT
Phthalates	Di-n-butyl phthalate	27	µg/kg	LUT
Phthalates	Di-n-octyl phthalate	27	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	1-Methylnaphthalene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	2-Methylnaphthalene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Acenaphthene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Acenaphthylene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Anthracene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Benzo(ghi)perylene	2.5	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Fluoranthene	5.2	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Fluorene	3.8	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Naphthalene	3.6	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	PAHTEQM ^d	4.47	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Phenanthrene	3.9	µg/kg	LUT
Polycyclic Aromatic Hydrocarbon	Pyrene	5.6	µg/kg	LUT
Semivolatile Organic Compound	1,2-Diphenylhydrazine/Azobenzene	170	µg/kg	RL
Semivolatile Organic Compound	2,4,5-Trichlorophenol	170	µg/kg	RL
Semivolatile Organic Compound	2,4,6-Trichlorophenol	170	µg/kg	RL
Semivolatile Organic Compound	2,4-Dichlorophenol	170	µg/kg	RL
Semivolatile Organic Compound	2,4-Dimethylphenol	170	µg/kg	RL
Semivolatile Organic Compound	2,4-Dinitrophenol	330	µg/kg	RL
Semivolatile Organic Compound	2-Chloronaphthalene	170	µg/kg	RL
Semivolatile Organic Compound	2-Chlorophenol	170	µg/kg	RL
Semivolatile Organic Compound	2-Methylphenol	170	µg/kg	RL
Semivolatile Organic Compound	2-Nitroaniline	170	µg/kg	RL
Semivolatile Organic Compound	2-Nitrophenol	170	µg/kg	RL
Semivolatile Organic Compound	3,3'-Dichlorobenzidine	420	µg/kg	RL
Semivolatile Organic Compound	3,5-Dimethylphenol	170	µg/kg	RL
Semivolatile Organic Compound	3-Nitroaniline	170	µg/kg	RL
Semivolatile Organic Compound	4,6-Dinitro-2-methylphenol	210	µg/kg	RL
Semivolatile Organic Compound	4-Bromophenyl phenyl ether	170	µg/kg	RL
Semivolatile Organic Compound	4-Chloro-3-methylphenol	170	µg/kg	RL
Semivolatile Organic Compound	4-Chloroaniline	170	µg/kg	RL
Semivolatile Organic Compound	4-Chlorophenyl phenyl ether	170	µg/kg	RL
Semivolatile Organic Compound	4-Methylphenol	170	µg/kg	RL
Semivolatile Organic Compound	4-Nitroaniline	420	µg/kg	RL
Semivolatile Organic Compound	4-Nitrophenol	420	µg/kg	RL
Semivolatile Organic Compound	Aniline	210	µg/kg	RL

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Data Grouping	Parameter Name	Screening Level - AOC LUT	Units	Source
Semivolatile Organic Compound	Benzidine	830	µg/kg	RL
Semivolatile Organic Compound	Benzoic acid	660	µg/kg	LUT
Semivolatile Organic Compound	Benzyl alcohol	170	µg/kg	RL
Semivolatile Organic Compound	bis(2-Chloroethoxy)methane	170	µg/kg	RL
Semivolatile Organic Compound	Bis(2-chloroethyl)ether	170	µg/kg	RL
Semivolatile Organic Compound	Bis(2-chloroisopropyl)ether	170	µg/kg	RL
Semivolatile Organic Compound	Carbazole	170	µg/kg	RL
Semivolatile Organic Compound	Dibenzofuran	170	µg/kg	RL
Semivolatile Organic Compound	Dichloroprop	2.4	µg/kg	RL
Semivolatile Organic Compound	Diisopropyl ether	10	µg/kg	RL
Semivolatile Organic Compound	Hexachlorobenzene	170	µg/kg	RL
Semivolatile Organic Compound	Hexachlorocyclopentadiene	420	µg/kg	RL
Semivolatile Organic Compound	Hexachloroethane	170	µg/kg	RL
Semivolatile Organic Compound	Hydrazine	5	µg/kg	RL
Semivolatile Organic Compound	Isophorone	170	µg/kg	RL
Semivolatile Organic Compound	Monomethyl Hydrazine	25	µg/kg	RL
Semivolatile Organic Compound	m-Terphenyl	170	µg/kg	RL
Semivolatile Organic Compound	n-Nitrosodimethylamine	10	µg/kg	LUT
Semivolatile Organic Compound	n-Nitroso-di-n-propylamine	170	µg/kg	RL
Semivolatile Organic Compound	n-Nitrosodiphenylamine	170	µg/kg	RL
Semivolatile Organic Compound	Phenol	170	µg/kg	LUT
Semivolatile Organic Compound	tert-Amyl methyl ether	5	µg/kg	RL
Semivolatile Organic Compound	tert-Butyl alcohol	50	µg/kg	RL
Semivolatile Organic Compound	tert-Butyl ethyl ether	5	µg/kg	RL
Semivolatile Organic Compound	Unsymmetrical Dimethyl Hydrazine	25	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C10-C25)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C10-C28)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C12-C14)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C12-C18)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C13-C22)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	EFH (C15-C20)	5,000	µg/kg	LUT
Total Petroleum Hydrocarbon	EFH (C21-C30)	5,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C4-C12)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C6-C10)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C6-C12)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C6-C14)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C7-C12)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	GRO (C8-C11)	1,000	µg/kg	RL
Total Petroleum Hydrocarbon	ORO (C23-C32)	10,000	µg/kg	RL
Total Petroleum Hydrocarbon	ORO (C31-C40)	10,000	µg/kg	RL
Total Petroleum Hydrocarbon	o-Terphenyl	7	mg/kg	LUT
Total Petroleum Hydrocarbon	TOTAL EFH (C8-C30)	10,000	µg/kg	RL
Total Petroleum Hydrocarbon	TOTAL EFH (C8-C40)	10,000	µg/kg	RL
Volatile Organic Compound	1,1,1,2-Tetrachloroethane	5	µg/kg	RL
Volatile Organic Compound	1,1,1-Trichloroethane	5	µg/kg	RL
Volatile Organic Compound	1,1,2,2-Tetrachloroethane	5	µg/kg	RL
Volatile Organic Compound	1,1,2-Trichloro-1,2,2-trifluoroethane	5	µg/kg	RL

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Data Grouping	Parameter Name	Screening Level - AOC LUT	Units	Source
Volatile Organic Compound	1,1,2-Trichloroethane	5	µg/kg	RL
Volatile Organic Compound	1,1-Dichloroethane	5	µg/kg	RL
Volatile Organic Compound	1,1-Dichloroethene	5	µg/kg	LUT
Volatile Organic Compound	1,1-Dichloropropene	5	µg/kg	RL
Volatile Organic Compound	1,2,3-Trichlorobenzene	5	µg/kg	RL
Volatile Organic Compound	1,2,3-Trichloropropane	5	µg/kg	RL
Volatile Organic Compound	1,2,4-Trichlorobenzene	5	µg/kg	RL
Volatile Organic Compound	1,2,4-Trimethylbenzene	5	µg/kg	RL
Volatile Organic Compound	1,2-Dibromo-3-chloropropane	10	µg/kg	RL
Volatile Organic Compound	1,2-Dibromoethane (EDB)	5	µg/kg	RL
Volatile Organic Compound	1,2-Dichlorobenzene	5	µg/kg	RL
Volatile Organic Compound	1,2-Dichloroethane	5	µg/kg	RL
Volatile Organic Compound	1,2-Dichloropropane	5	µg/kg	RL
Volatile Organic Compound	1,3,5-Trimethylbenzene	5	µg/kg	RL
Volatile Organic Compound	1,3-Dichlorobenzene	5	µg/kg	RL
Volatile Organic Compound	1,3-Dichloropropane	5	µg/kg	RL
Volatile Organic Compound	1,4-Dichlorobenzene	5	µg/kg	RL
Volatile Organic Compound	1,4-Dioxane (P-Dioxane)	10	µg/kg	LUT
Volatile Organic Compound	2,2-Dichloropropane	5	µg/kg	RL
Volatile Organic Compound	2-Butanone (Methyl ethyl ketone)	20	µg/kg	RL
Volatile Organic Compound	2-Chloro-1,1,1-trifluoroethane	10	µg/kg	RL
Volatile Organic Compound	2-Chloroethyl vinyl ether	10	µg/kg	RL
Volatile Organic Compound	2-Chlorotoluene	5	µg/kg	RL
Volatile Organic Compound	2-Hexanone	10	µg/kg	LUT
Volatile Organic Compound	4-Chlorotoluene	10	µg/kg	RL
Volatile Organic Compound	4-Methyl-2-pentanone (MIBK)	10	µg/kg	RL
Volatile Organic Compound	Acetone	20	µg/kg	LUT
Volatile Organic Compound	Benzene	5	µg/kg	LUT
Volatile Organic Compound	Bromobenzene	5	µg/kg	RL
Volatile Organic Compound	Bromochloromethane	5	µg/kg	RL
Volatile Organic Compound	Bromodichloromethane	5	µg/kg	RL
Volatile Organic Compound	Bromoform	5	µg/kg	RL
Volatile Organic Compound	Bromomethane	5	µg/kg	RL
Volatile Organic Compound	Carbon tetrachloride	5	µg/kg	RL
Volatile Organic Compound	Chlorobenzene	5	µg/kg	RL
Volatile Organic Compound	Chloroethane	5	µg/kg	RL
Volatile Organic Compound	Chloromethane	5	µg/kg	RL
Volatile Organic Compound	Chlorotrifluoroethylene	10	µg/kg	RL
Volatile Organic Compound	cis-1,2-Dichloroethene	5	µg/kg	LUT
Volatile Organic Compound	cis-1,3-Dichloropropene	5	µg/kg	RL
Volatile Organic Compound	Dibromochloromethane	5	µg/kg	RL
Volatile Organic Compound	Dibromomethane	5	µg/kg	RL
Volatile Organic Compound	Dichlorodifluoromethane	5	µg/kg	RL
Volatile Organic Compound	Ethanol	0.7	mg/kg	LUT
Volatile Organic Compound	Ethylbenzene	5	µg/kg	LUT
Volatile Organic Compound	Formaldehyde	1,870	µg/kg	LUT
Volatile Organic Compound	Hexachlorobutadiene	5	µg/kg	LUT

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Data Grouping	Parameter Name	Screening Level - AOC LUT	Units	Source
Volatile Organic Compound	Isopropanol	1,000	µg/kg	RL
Volatile Organic Compound	Isopropylbenzene	5	µg/kg	RL
Volatile Organic Compound	m,p-Xylenes	5	µg/kg	RL
Volatile Organic Compound	Methanol	0.7	mg/kg	LUT
Volatile Organic Compound	Methylene chloride	10	µg/kg	LUT
Volatile Organic Compound	Methyl-tert-butyl Ether (MTBE)	5	µg/kg	RL
Volatile Organic Compound	n-butylbenzene	5	µg/kg	RL
Volatile Organic Compound	n-Propylbenzene	5	µg/kg	RL
Volatile Organic Compound	o-Xylene	5	µg/kg	RL
Volatile Organic Compound	p-Isopropyltoluene	5	µg/kg	RL
Volatile Organic Compound	sec-Butylbenzene	5	µg/kg	RL
Volatile Organic Compound	Styrene	5	µg/kg	RL
Volatile Organic Compound	tert-Butylbenzene	5	µg/kg	RL
Volatile Organic Compound	Tetrachloroethene	5	µg/kg	LUT
Volatile Organic Compound	Toluene	5	µg/kg	LUT
Volatile Organic Compound	trans-1,2-Dichloroethene	5	µg/kg	RL
Volatile Organic Compound	trans-1,3-Dichloropropene	5	µg/kg	RL
Volatile Organic Compound	Trichloroethene	5	µg/kg	LUT
Volatile Organic Compound	Trichlorofluoromethane	5	µg/kg	RL
Volatile Organic Compound	Trichloromethane (Chloroform)	5	µg/kg	RL
Volatile Organic Compound	Vinyl chloride	5	µg/kg	LUT

Notes:

^a Individual PCB coplanars and congeners are not listed in the table as they are accounted for under the Aroclor parameters.

^b DIOXINTEQM is listed in the LUT as 2,3,7,8-TCDD TEQ.

^c Individual dioxins and furans congeners included in the TEQ calculation (DIOXINTEQM) are not listed in the table; results were compared against the calculated TEQ, which takes the individual congeners into account.

^d PAHTEQM is listed in the LUT as benzo(a)pyrene TEQ. Benzo(a)pyrene equivalence was developed based on the sum of carcinogenic PAHs.

To evaluate benzo(a)pyrene equivalence, carcinogenic PAHs need to meet background study MRLs.

µg/kg = microgram(s) per kilogram

AOC = Administrative Order on Consent

BHC = hexachlorocyclohexane

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

DIOXINTEQM = dioxins and furans toxic equivalency

EFH = extractable fuel hydrocarbon

GRO = gasoline range organic

LUT = Look-up Table

mg/kg = milligram(s) per kilogram

MRL = method reporting limit

ORO = oil range organic

PAHTEQM = PAHs toxic equivalency

PETN = pentaerythritol tetranitrate

pg/g = picogram(s) per gram

RDX = cyclotrimethylenetrinitramine

RL = reporting limit

TEQ = toxic equivalence quotient