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Appendix 2B
Revised Look-Up Table Values

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APPENDIX 2B

Revised LUT Cleanup Values

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

Data Grouping	Parameter Name	Screening Level - Revised LUT Soil ^e	Units
Aroclors	Aroclor 1016 ^a	17	µg/kg
Aroclors	Aroclor 1221 ^a	33	µg/kg
Aroclors	Aroclor 1232 ^a	17	µg/kg
Aroclors	Aroclor 1242 ^a	17	µg/kg
Aroclors	Aroclor 1248 ^a	17	µg/kg
Aroclors	Aroclor 1254 ^a	17	µg/kg
Aroclors	Aroclor 1260 ^a	17	µg/kg
Aroclors	Aroclor 1262 ^a	33	µg/kg
Aroclors	Aroclor 5432 ^a	50	µg/kg
Aroclors	Aroclor 5442 ^a	50	µg/kg
Aroclors	Aroclor 5460 ^a	50	µg/kg
Aroclors	PCB-1268 (Aroclor 1268)	33	µg/kg
Aroclors	PCBTEQM	6.5131	pg/g
Dioxins and Furans	DIOXTEQM ^{b,c}	4.6	pg/g
Energetics	1,3,5-Trinitrobenzene	400	µg/kg
Energetics	1,3-Dinitrobenzene	400	µg/kg
Energetics	2,4,6-Trinitrotoluene	400	µg/kg
Energetics	2,4-diamino-6-nitrotoluene	1000	µg/kg
Energetics	2,4-Dinitrotoluene	170	µg/kg
Energetics	2,6-diamino-4-nitrotoluene	1000	µg/kg
Energetics	2,6-Dinitrotoluene	170	µg/kg
Energetics	2-Amino-4,6-dinitrotoluene	400	µg/kg
Energetics	2-Nitrotoluene	400	µg/kg
Energetics	3-Nitrotoluene	400	µg/kg
Energetics	4-Amino-2,6-dinitrotoluene	400	µg/kg
Energetics	4-Nitrotoluene	400	µg/kg
Energetics	HMX	400	µg/kg
Energetics	Nitrobenzene	170	µg/kg
Energetics	Nitroglycerin	2000	µg/kg
Energetics	Perchlorate	1.63	µg/kg
Energetics	PETN	2000	µg/kg
Energetics	RDX	300	µg/kg
Energetics	Tetryl	400	µg/kg
General Chemistry	Actinolite ^f	1	PERCENT
General Chemistry	Amosite	1	PERCENT
General Chemistry	Anthophyllite	1	PERCENT
General Chemistry	Chrysotile	1	PERCENT
General Chemistry	Crocidolite	1	PERCENT
General Chemistry	Cyanides, Total	0.6	mg/kg
General Chemistry	Fluoride	10.2	mg/kg
General Chemistry	Nitrogen, Nitrate (as N)	22.3	mg/kg
General Chemistry	Tremolite	1	PERCENT
Herbicides	2,4,5-T (Trichlorophenoxyacetic Acid)	1.2	µg/kg
Herbicides	2,4-D (Dichlorophenoxyacetic acid)	5.8	µg/kg
Herbicides	2,4-Dichlorophenoxybutyric acid	2.4	µg/kg
Herbicides	Dalapon	12.5	µg/kg
Herbicides	Dicamba	1.3	µg/kg
Herbicides	Dichloroprop	2.4	µg/kg
Herbicides	Dinoseb	3.3	µg/kg
Herbicides	MCPA	761	µg/kg

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Herbicides	MCPP	377	µg/kg
Herbicides	Silvex (2,4,5-TP)	0.63	µg/kg
Metals	Aluminum	58600	mg/kg
Metals	Antimony	30	mg/kg
Metals	Arsenic	46	mg/kg
Metals	Barium	371	mg/kg
Metals	Beryllium	2.2	mg/kg
Metals	Boron	34	mg/kg
Metals	Cadmium	1.7	mg/kg
Metals	Chromium	94	mg/kg
Metals	Chromium VI	2	mg/kg
Metals	Cobalt	44	mg/kg
Metals	Copper	119	mg/kg
Metals	Lead	49	mg/kg
Metals	Lithium	91	mg/kg
Metals	Manganese	1120	mg/kg
Metals	Mercury	0.13	mg/kg
Metals	Molybdenum	3.2	mg/kg
Metals	Nickel	132	mg/kg
Metals	Potassium	14400	mg/kg
Metals	Selenium	1	mg/kg
Metals	Silver	380	mg/kg
Metals	Sodium	1780	mg/kg
Metals	Strontium	163	mg/kg
Metals	Thallium	1.2	mg/kg
Metals	Vanadium	175	mg/kg
Metals	Zinc	215	mg/kg
Metals	Zirconium	19	mg/kg
Pesticides	4,4'-DDD	0.48	µg/kg
Pesticides	4,4'-DDE	8.6	µg/kg
Pesticides	4,4'-DDT	13	µg/kg
Pesticides	Aldrin	0.24	µg/kg
Pesticides	Alpha-BHC	0.24	µg/kg
Pesticides	Beta-BHC	0.23	µg/kg
Pesticides	Chlordane	7	µg/kg
Pesticides	Chlordane (Technical)	7	µg/kg
Pesticides	Delta-BHC	0.22	µg/kg
Pesticides	Dieldrin	0.48	µg/kg
Pesticides	Endosulfan I	0.24	µg/kg
Pesticides	Endosulfan II	0.48	µg/kg
Pesticides	Endosulfan Sulfate	0.48	µg/kg
Pesticides	Endrin	0.48	µg/kg
Pesticides	Endrin Aldehyde	0.7	µg/kg
Pesticides	Endrin ketone	0.7	µg/kg
Pesticides	gamma-BHC	0.24	µg/kg
Pesticides	Heptachlor	0.24	µg/kg
Pesticides	Heptachlor Epoxide	0.24	µg/kg
Pesticides	Methoxychlor	2.4	µg/kg
Pesticides	Mirex	0.5	µg/kg
Pesticides	Toxaphene	8.8	µg/kg
Phthalates	Bis(2-ethylhexyl)phthalate	61	µg/kg
Phthalates	Butyl benzyl phthalate	100	µg/kg
Phthalates	Diethyl phthalate	27	µg/kg

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Phthalates	Dimethyl phthalate	27	µg/kg
Phthalates	Di-n-butyl phthalate	27	µg/kg
Phthalates	Di-n-octyl phthalate	27	µg/kg
Polycyclic Aromatic Hydrocarbon	1-Methylnaphthalene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	2-Methylnaphthalene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	Acenaphthene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	Acenaphthylene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	Anthracene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	Benzo(a)anthracene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Benzo(a)pyrene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Benzo(b)fluoranthene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Benzo(ghi)perylene	2.5	µg/kg
Polycyclic Aromatic Hydrocarbon	Benzo(k)fluoranthene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Chrysene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Dibenzo(a,h)anthracene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Fluoranthene	5.2	µg/kg
Polycyclic Aromatic Hydrocarbon	Fluorene	3.8	µg/kg
Polycyclic Aromatic Hydrocarbon	Indeno(1,2,3-cd)pyrene	1.67	µg/kg
Polycyclic Aromatic Hydrocarbon	Naphthalene	3.6	µg/kg
Polycyclic Aromatic Hydrocarbon	PAHTEQM ^d	110	µg/kg
Polycyclic Aromatic Hydrocarbon	Phenanthrene	3.9	µg/kg
Polycyclic Aromatic Hydrocarbon	Pyrene	5.6	µg/kg
Semivolatile Organic Compound	1,2-Diphenylhydrazine/Azobenzene	170	µg/kg
Semivolatile Organic Compound	2,4,5-Trichlorophenol	170	µg/kg
Semivolatile Organic Compound	2,4,6-Trichlorophenol	170	µg/kg
Semivolatile Organic Compound	2,4-Dichlorophenol	170	µg/kg
Semivolatile Organic Compound	2,4-Dimethylphenol	170	µg/kg
Semivolatile Organic Compound	2,4-Dinitrophenol	330	µg/kg
Semivolatile Organic Compound	2-Chloronaphthalene	170	µg/kg
Semivolatile Organic Compound	2-Chlorophenol	170	µg/kg
Semivolatile Organic Compound	2-Methylphenol	170	µg/kg
Semivolatile Organic Compound	2-Nitroaniline	170	µg/kg
Semivolatile Organic Compound	2-Nitrophenol	170	µg/kg
Semivolatile Organic Compound	3,3'-Dichlorobenzidine	420	µg/kg
Semivolatile Organic Compound	3,5-Dimethyl phenol	170	µg/kg
Semivolatile Organic Compound	3-Nitroaniline	170	µg/kg
Semivolatile Organic Compound	4,6-Dinitro-2-methylphenol	210	µg/kg
Semivolatile Organic Compound	4-Bromophenyl phenyl ether	170	µg/kg
Semivolatile Organic Compound	4-Chloro-3-methylphenol	170	µg/kg
Semivolatile Organic Compound	4-Chloroaniline	170	µg/kg
Semivolatile Organic Compound	4-Chlorophenyl phenyl ether	170	µg/kg
Semivolatile Organic Compound	4-Methylphenol	170	µg/kg
Semivolatile Organic Compound	4-Nitroaniline	420	µg/kg
Semivolatile Organic Compound	4-Nitrophenol	420	µg/kg
Semivolatile Organic Compound	Aniline	210	µg/kg
Semivolatile Organic Compound	Benzidine	830	µg/kg
Semivolatile Organic Compound	Benzoic acid	660	µg/kg
Semivolatile Organic Compound	Benzyl alcohol	170	µg/kg
Semivolatile Organic Compound	bis(2-Chloroethoxy)methane	170	µg/kg
Semivolatile Organic Compound	Bis(2-chloroethyl)ether	170	µg/kg
Semivolatile Organic Compound	Bis(2-chloroisopropyl)ether	170	µg/kg
Semivolatile Organic Compound	Carbazole	170	µg/kg
Semivolatile Organic Compound	Dibenzofuran	170	µg/kg

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Data Grouping	Parameter Name	Screening Level - Revised LUT Soil ^e	Units
Semivolatile Organic Compound	Diisopropyl ether	10	µg/kg
Semivolatile Organic Compound	Hexachlorobenzene	170	µg/kg
Semivolatile Organic Compound	Hexachlorocyclopentadiene	420	µg/kg
Semivolatile Organic Compound	Hexachloroethane	170	µg/kg
Semivolatile Organic Compound	Hydrazine	5	µg/kg
Semivolatile Organic Compound	Isophorone	170	µg/kg
Semivolatile Organic Compound	Monomethyl Hydrazine	25	µg/kg
Semivolatile Organic Compound	m-Terphenyl	170	µg/kg
Semivolatile Organic Compound	n-Nitrosodimethylamine	10	µg/kg
Semivolatile Organic Compound	n-Nitroso-di-n-propylamine	170	µg/kg
Semivolatile Organic Compound	n-Nitrosodiphenylamine	170	µg/kg
Semivolatile Organic Compound	Pentachlorophenol	170	µg/kg
Semivolatile Organic Compound	Phenol	170	µg/kg
Semivolatile Organic Compound	tert-Amyl methyl ether	5	µg/kg
Semivolatile Organic Compound	tert-Butyl alcohol	50	µg/kg
Semivolatile Organic Compound	tert-Butyl ethyl ether	5	µg/kg
Semivolatile Organic Compound	Unsymmetrical Dimethyl Hydrazine	25	µg/kg
Total Petroleum Hydrocarbons	Diesel Range Organics (C12-C14)	1000000	µg/kg
Total Petroleum Hydrocarbons	Diesel Range Organics (C15-C20)	1000000	µg/kg
Total Petroleum Hydrocarbons	Diesel Range Organics (C21-C30)	1000000	µg/kg
Total Petroleum Hydrocarbons	Diesel Range Organics (C8-C11)	1000000	µg/kg
Total Petroleum Hydrocarbons	Diesel Range Organics (C8-C30)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C10-C25)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C10-C28)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C11-C14)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C11-C15)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C12-C14)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C12-C18)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C13-C22)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C14-C20)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C15-C20)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C20-C30)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C21-C30)	1000000	µg/kg
Total Petroleum Hydrocarbons	EFH (C24-C28)	Not applicable	Not applicable
Total Petroleum Hydrocarbons	GRO (C4-C12)	1000000	µg/kg
Total Petroleum Hydrocarbons	GRO (C6-C10)	1000000	µg/kg
Total Petroleum Hydrocarbons	GRO (C6-C12)	1000000	µg/kg
Total Petroleum Hydrocarbons	GRO (C6-C14)	1000000	µg/kg
Total Petroleum Hydrocarbons	GRO (C7-C12)	1000000	µg/kg
Total Petroleum Hydrocarbons	GRO (C8-C11)	1000000	µg/kg
Total Petroleum Hydrocarbons	ORO (C23-C32)	1000000	µg/kg
Total Petroleum Hydrocarbons	ORO (C24-C36)	1000000	µg/kg
Total Petroleum Hydrocarbons	ORO (C31-C40)	1000000	µg/kg
Total Petroleum Hydrocarbons	TOTAL EFH(C8-C30)	1000000	µg/kg
Total Petroleum Hydrocarbons	TOTAL EFH(C8-C40)	1000000	µg/kg
Volatile Organic Compound	1,1,1,2-Tetrachloroethane	5	µg/kg
Volatile Organic Compound	1,1,1-Trichloroethane	5	µg/kg
Volatile Organic Compound	1,1,2,2-Tetrachloroethane	5	µg/kg
Volatile Organic Compound	1,1,2-Trichloro-1,2,2-trifluoroethane	5	µg/kg
Volatile Organic Compound	1,1,2-Trichloroethane	5	µg/kg
Volatile Organic Compound	1,1-Dichloroethane	5	µg/kg
Volatile Organic Compound	1,1-Dichloroethene	5	µg/kg
Volatile Organic Compound	1,1-Dichloropropene	5	µg/kg

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Volatile Organic Compound	1,2,3-Trichlorobenzene	5	µg/kg
Volatile Organic Compound	1,2,3-Trichloropropane	5	µg/kg
Volatile Organic Compound	1,2,4-Trichlorobenzene	5	µg/kg
Volatile Organic Compound	1,2,4-Trimethylbenzene	5	µg/kg
Volatile Organic Compound	1,2-Dibromo-3-chloropropane	10	µg/kg
Volatile Organic Compound	1,2-Dibromoethane (EDB)	5	µg/kg
Volatile Organic Compound	1,2-Dichlorobenzene	5	µg/kg
Volatile Organic Compound	1,2-Dichloroethane	5	µg/kg
Volatile Organic Compound	1,2-Dichloropropane	5	µg/kg
Volatile Organic Compound	1,3,5-Trimethylbenzene	5	µg/kg
Volatile Organic Compound	1,3-Dichlorobenzene	5	µg/kg
Volatile Organic Compound	1,3-Dichloropropane	5	µg/kg
Volatile Organic Compound	1,4-Dichlorobenzene	5	µg/kg
Volatile Organic Compound	1,4-Dioxane (P-Dioxane)	10	µg/kg
Volatile Organic Compound	2,2-Dichloropropane	5	µg/kg
Volatile Organic Compound	2-Butanone (MEK)	20	µg/kg
Volatile Organic Compound	2-Chloro-1,1,1-trifluoroethane	10	µg/kg
Volatile Organic Compound	2-Chloroethyl vinyl ether	10	µg/kg
Volatile Organic Compound	2-Chlorotoluene	5	µg/kg
Volatile Organic Compound	2-Hexanone	10	µg/kg
Volatile Organic Compound	4-Chlorotoluene	10	µg/kg
Volatile Organic Compound	4-Methyl-2-pentanone (MIBK)	10	µg/kg
Volatile Organic Compound	Acetone	61000000	µg/kg
Volatile Organic Compound	Benzene	5	µg/kg
Volatile Organic Compound	Bromobenzene	5	µg/kg
Volatile Organic Compound	Bromochloromethane	5	µg/kg
Volatile Organic Compound	Bromodichloromethane	5	µg/kg
Volatile Organic Compound	Bromoform	5	µg/kg
Volatile Organic Compound	Bromomethane	5	µg/kg
Volatile Organic Compound	Carbon tetrachloride	5	µg/kg
Volatile Organic Compound	Chlorobenzene	5	µg/kg
Volatile Organic Compound	Chloroethane	5	µg/kg
Volatile Organic Compound	Chloromethane	5	µg/kg
Volatile Organic Compound	Chlorotrifluoroethylene	10	µg/kg
Volatile Organic Compound	cis-1,2-Dichloroethene	5	µg/kg
Volatile Organic Compound	cis-1,3-Dichloropropene	5	µg/kg
Volatile Organic Compound	Dibromochloromethane	5	µg/kg
Volatile Organic Compound	Dibromomethane	5	µg/kg
Volatile Organic Compound	Dichlorodifluoromethane	5	µg/kg
Volatile Organic Compound	Ethanol	700	µg/kg
Volatile Organic Compound	Ethylbenzene	5	µg/kg
Volatile Organic Compound	Formaldehyde	1870	µg/kg
Volatile Organic Compound	Hexachlorobutadiene	5	µg/kg
Volatile Organic Compound	Isopropanol	1000	µg/kg
Volatile Organic Compound	Isopropylbenzene	5	µg/kg
Volatile Organic Compound	m,p-Xylenes	5	µg/kg
Volatile Organic Compound	Methanol	700	µg/kg
Volatile Organic Compound	Methylene chloride	10	µg/kg
Volatile Organic Compound	Methyl-tert-butyl Ether (MTBE)	5	µg/kg
Volatile Organic Compound	n-butylbenzene	5	µg/kg
Volatile Organic Compound	n-Propylbenzene	5	µg/kg
Volatile Organic Compound	o-Xylene	5	µg/kg
Volatile Organic Compound	p-Isopropyltoluene	5	µg/kg

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Data Grouping	Parameter Name	Screening Level - Revised LUT Soil ^e	Units
Volatile Organic Compound	sec-Butylbenzene	5	µg/kg
Volatile Organic Compound	Styrene	5	µg/kg
Volatile Organic Compound	tert-Butylbenzene	5	µg/kg
Volatile Organic Compound	Tetrachloroethene	5	µg/kg
Volatile Organic Compound	Toluene	5	µg/kg
Volatile Organic Compound	trans-1,2-Dichloroethene	5	µg/kg
Volatile Organic Compound	trans-1,3-Dichloropropene	5	µg/kg
Volatile Organic Compound	Trichloroethene	5	µg/kg
Volatile Organic Compound	Trichlorofluoromethane	5	µg/kg
Volatile Organic Compound	Trichloromethane (Chloroform)	5	µg/kg
Volatile Organic Compound	Vinyl chloride	5	µg/kg

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.

^e Alternative cleanups may implement soil, sediment, and soil gas remedial goals that vary; for the purpose of this document, screening values shown are reduced to soil media.

^f Actinolite, a general chemistry parameter, reports different screening values for soil and sediment; this table defers to the soil screening value to maintain comparison to the AOC LUT values.

µg/kg = microgram(s) per kilogram

µg/m³ = microgram(s) per cubic meter

BHC = hexachlorocyclohexane

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

DIOXINTEQM = dioxins and furans toxic equivalency

GRO = gasoline range organic

LUT = Look-up Table

mg/kg = milligram(s) per kilogram

MRL = method reporting limit

PAHTEQM = PAHs toxic equivalency

PCB = polychlorinated biphenyl

PETN = pentaerythritol tetranitrate

pg/g = picogram(s) per gram

RDX = cyclotrimethylenetrinitramine