

Combined Target Analyte List for MCP Analytical Protocols (Effective January 1, 2026)

The individual Target Analyte Lists that have been developed for all Compendium of Analytical Methods (CAM) Protocols have been included in this Combined Target Analyte List. This list includes potential contaminants that are readily-analyzable by the subject protocol. The combined list was developed to provide a single reference source for analytes that are commonly encountered at disposal sites with a cross-reference to the appropriate analytical method(s). The Combined Target Analyte List will be updated as additional protocols are added to or protocol-specific Target Analyte Lists are revised in the Compendium of Quality Assurance and Quality Control Requirements and Performance Standards for Selected Analytical Methods ([Compendium of Analytical Methods \(CAM\) | Mass.gov](#)).

The MCP Method 1 Groundwater Standards, listed at 310 CMR 40.0974(2), and the MCP Method 1 Soil Standards, listed at 310 CMR 40.0975(6), are used to evaluate the risk of harm posed by oil or hazardous materials at a disposal site. This list of groundwater/soil standards, developed by the Department for over one hundred commonly encountered organic and inorganic contaminants, takes into account a defined set of conservative potential exposure pathways likely to be encountered at most disposal sites. The MCP Method 1 Groundwater/Soil Standards list is continually reviewed and updated by the Department. When compounds are added to the MCP Method 1 Groundwater/Soil Standards list that are suitable for analysis by the MCP Analytical Protocols, the Combined Target Analyte List will be updated accordingly.

Protocol-specific MCP Target Analyte Lists specify the minimum number of analytes that should be reported for MCP decision-making for the assessment of disposal sites with an indeterminate characterization or history. Notwithstanding, if in the professional judgment of the data user and based upon the specific conditions and/or characteristics of a disposal site, a protocol-specific Target Analyte List may be modified. However, any modification of the analyte list must be documented and justified by the data user.

It should be noted that if site-specific contaminants of concern are identified that are not included on a protocol-specific Target Analyte List, then these additional analytes must also be incorporated into the sampling plan and analytical program with appropriate calibration and QA/QC verification. In every case, the Reporting Limit/Lower Limit of Quantitation (based on the concentration of the lowest calibration standard) for each contaminant of concern must be less than or equal to the MCP standards or criteria that the contaminant concentrations are being compared to (e.g., Method 1 Standards, background determination, etc.). In some cases, this may require analytical modifications, such as increased sampling weight or volume, to increase sensitivity. All such modifications must be reported by the data user.

Target Analyte	Analyte Type	CASRN	Analytical Method
Acenaphthene	Semi-Volatile	83329	8270E, EPH
Acenaphthylene	Semi-Volatile	208968	8270E, EPH
Acetone	Volatile	67641	8260D, TO-15
Acetophenone	Semi-Volatile	98862	8270E
Aldrin	Chlorinated Pesticide	309002	8081B
Aliphatic Hydrocarbons, C ₁₉ -C ₃₆	Semi-Volatile	n/a	EPH
Aliphatic Hydrocarbons, C ₅ -C ₈	Volatile	n/a	VPH, APH
Aliphatic Hydrocarbons, C ₉ -C ₁₂	Volatile	n/a	VPH, APH
Aliphatic Hydrocarbons, C ₉ -C ₁₈	Semi-Volatile	n/a	EPH
Amino-2,6-dinitrotoluene- 4 (4 - Am - DNT)	Nitroaromatics & Nitramines	1946510	8330A
Amino-4,6-dinitrotoluene - 2 (2 - Am - DNT)	Nitroaromatics & Nitramines	35572782	8330A
Amyl Methyl Ether, tert- (TAME)	Volatile	994058	8260D
Aniline	Semi-Volatile	62533	8270E
Anthracene	Semi-Volatile	120127	8270E, EPH
Antimony	Metal	7440360	6010D, 6020B, 7010
Aroclor 1016	PCB	12674112	8082A
Aroclor 1221	PCB	11104282	8082A
Aroclor 1232	PCB	11141165	8082A
Aroclor 1242	PCB	53469219	8082A
Aroclor 1248	PCB	12672296	8082A
Aroclor 1254	PCB	11097691	8082A
Aroclor 1260	PCB	11096825	8082A
Aroclor 1262	PCB	37324235	8082A
Aroclor 1268	PCB	11100144	8082A
Aromatic Hydrocarbons C ₉ -C ₁₀	Volatile	n/a	VPH, APH
Aromatic Hydrocarbons C ₁₁ -C ₂₂	Semi-Volatile	n/a	EPH
Arsenic	Metal	7440382	6010D, 6020B, 7010
Azobenzene	Semi-Volatile	103333	8270E
Barium	Metal	7440393	6010D, 6020B, 7010
Benzo(a)anthracene	Semi-Volatile	56553	8270E, EPH
Benzene	Volatile	71432	8260D, VPH, APH, TO-15
Benzo(a)pyrene	Semi-Volatile	50328	8270E, EPH
Benzo(b)fluoranthene	Semi-Volatile	205992	8270E, EPH
Benzo(g,h,i)perylene	Semi-Volatile	191242	8270E, EPH
Benzo(k)fluoranthene	Semi-Volatile	207089	8270E, EPH
Beryllium	Metal	7440417	6010D, 6020B, 7010
BHC, alpha-	Chlorinated Pesticide	319846	8081B
BHC, beta-	Chlorinated Pesticide	319857	8081B
BHC, gamma- (Lindane)	Chlorinated Pesticide	58899	8081B
BHC, delta -	Chlorinated Pesticide	319868	8081B
Biphenyl, 1,1'-	Semi-Volatile	92524	8270E
bis(2-Chloroethoxy)methane	Semi-Volatile	111911	8270E
bis(2-Chloroethyl)ether	Semi-Volatile	111444	8270E
bis(2-Chloroisopropyl)ether	Semi-Volatile	108601	8270E
bis(2-Ethylhexyl) phthalate	Semi-Volatile	117817	8270E
Bromobenzene	Volatile	108861	8260D
Bromochloromethane	Volatile	74975	8260D
Bromodichloromethane	Volatile	75274	8260D, TO-15
Bromoform	Volatile	75252	8260D, TO-15
Bromomethane	Volatile	74839	8260D, TO-15
Bromophenyl phenyl ether - 4	Semi-Volatile	101553	8270E
Butadiene, 1,3-	Volatile	106990	APH

Target Analyte	Analyte Type	CASRN	Analytical Method
Butylbenzene, n-	Volatile	104518	8260D
Butylbenzene, sec-	Volatile	135988	8260D
Butylbenzene, tert-	Volatile	98066	8260D
Butyl benzyl phthalate	Semi-Volatile	85687	8270E
Cadmium	Metal	7440439	6010D, 6020B, 7010
Carbon Disulfide	Volatile	75150	8260D
Carbon Tetrachloride	Volatile	56235	8260D, TO-15
Chlordane (nos), multi-component mixture	Chlorinated Pesticide	57749	8081B
Chloroaniline, 4-	Semi-Volatile	106478	8270E
Chlorobenzene	Volatile	108907	8260D, TO-15
Chlorodibromomethane	Volatile	124481	8260D, TO-15
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	PFAS	763051929	1633
Chloroethane	Volatile	75003	8260D
Chloroform	Volatile	67663	8260D, TO-15
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	PFAS	756426581	1633
Chloromethane	Volatile	74873	8260D
Chloronaphthalene, 2-	Semi-Volatile	91587	8270E
Chlorophenol, 2-	Semi-Volatile	95578	8270E
Chlorotoluene, 2-	Volatile	95498	8260D
Chlorotoluene, 4-	Volatile	106434	8260D
Chromium (Total)	Metal	7440473	6010D, 6020B, 7010
Chromium (Hexavalent)	Metal	18540299	7196A, 7199
Chrysene	Semi-Volatile	218019	8270E, EPH
Cyanide, Total	Miscellaneous Wet Chemical	57125	9012B, 9014, SM4500 CN
Cyanide, Physiologically Available (PAC)	Miscellaneous Wet Chemical	N/A	9012B, 9014, SM4500 CN
DDD, 4,4'-	Chlorinated Pesticide	72548	8081B
DDE, 4,4'-	Chlorinated Pesticide	72559	8081B
DDT, 4,4'-	Chlorinated Pesticide	50293	8081B
Diamino-4-nitrotoluene - 2,6 (2,6- Dam-4NT)	Nitroaromatics & Nitramines	59299753	8330A
Diamino-6-nitrotoluene-2,4 (2,4-Dam-6NT)	Nitroaromatics & Nitramines	6629294	8330A
Dibenz(a,h)anthracene	Semi-Volatile	53703	8270E, EPH
Dibenzofuran	Semi-Volatile	132649	8270E
1,2-Dibromo-3-chloropropane	Volatile	96128	8260D
Dibromoethane, 1,2- (EDB), Ethylene Dibromide	Volatile	106934	8260D, TO-15
Dibromomethane	Volatile	74953	8260D
Dichloro-6-methoxybenzoic acid, 2,5- (Dicamba)	Chlorinated Herbicide	1918009	8151A
Dichlorobenzene, 1,2- (o-DCB)	Volatile/Semi-Volatile	95501	8260D, 8270E, TO-15
Dichlorobenzene, 1,3- (m-DCB)	Volatile/Semi-Volatile	541731	8260D, 8270E, TO-15
Dichlorobenzene, 1,4- (p-DCB)	Volatile/Semi-Volatile	106467	8260D, 8270E, TO-15
Dichlorobenzidine, 3,3'-	Semi-Volatile	91941	8270E
Dichlorodifluoromethane (Freon 12)	Volatile	75718	8260D
Dichloroethane, 1,1-	Volatile	75343	8260D, TO-15
Dichloroethane 1,2-	Volatile	107062	8260D, TO-15
Dichloroethylene, cis-1,2-	Volatile	156592	8260D, TO-15
Dichloroethylene, trans-1,2-	Volatile	156605	8260D, TO-15
Dichloroethylene, 1,1-	Volatile	75354	8260D, TO-15
Dichlorophenol, 2,4-	Semi-Volatile	120832	8270E
Dichlorophenoxy acetic acid, 2,4- (2,4-D)	Chlorinated Herbicide	94757	8151A
Dichlorophenoxy butyric acid, 2,4- (2,4-DB)	Chlorinated Herbicide	94826	8151A

Target Analyte	Analyte Type	CASRN	Analytical Method
2-(2,4-Dichlorophenoxy) propionic acid (Dichloroprop)	Chlorinated Herbicide	120365	8151A
Dichloropropane, 1,2-	Volatile	78875	8260D, TO-15
Dichloropropane, 1,3-	Volatile	142289	8260D
Dichloropropane, 2,2-	Volatile	594207	8260D
Dichloropropene, 1,1 -	Volatile	563586	8260D
Dichloropropene, cis-1,3-	Volatile	10061015	8260D, TO-15
Dichloropropene, trans-1,3-	Volatile	10061026	8260D, TO-15
2,2-Dichloro propionic acid (Dalapon)	Chlorinated Herbicide	75990	8151A
Dieldrin	Chlorinated Pesticide	60571	8081B
Diethyl Ether	Volatile	60297	8260D
Diethyl phthalate	Semi-Volatile	84662	8270E
Diisopropyl Ether (DIPE)	Volatile	108203	8260D
Dimethyl phthalate	Semi-Volatile	131113	8270E
Dimethylphenol, 2,4-	Semi-Volatile	105679	8270E
Di-n-butylphthalate	Semi-Volatile	84742	8270E
Dinitrobenzene, 1,3 – (DNB)	Nitroaromatics & Nitramines	99650	8330A
Dinitrophenol, 2,4-	Semi-Volatile	51285	8270E
2,4-Dinitro-6-sec-butylphenol (Dinoseb)	Chlorinated Herbicide	88857	8151A
Dinitrotoluene, 2,4- (2,4 - DNT)	Semi-Volatile, Nitroaromatics & Nitramines	121142	8270E, 8330A
Dinitrotoluene, 2,6- (2,6 - DNT)	Semi-Volatile, Nitroaromatics & Nitramines	606202	8270E, 8330A
Di-n-octylphthalate	Semi-Volatile	117840	8270E
Dioxane, 1,4-	Volatile, Semi-Volatile	123911	8260D, 8270E, TO-15
Endosulfan I	Chlorinated Pesticide	959988	8081B
Endosulfan II	Chlorinated Pesticide	33213659	8081B
Endosulfan Sulfate	Chlorinated Pesticide	1031078	8081B
Endrin	Chlorinated Pesticide	72208	8081B
Endrin Ketone	Chlorinated Pesticide	53494705	8081B
Ethylbenzene	Volatile	100414	8260D, VPH, APH, TO-15
Ethyl tert-Butyl Ether (ETBE)	Volatile	637923	8260D
Fluoranthene	Semi-Volatile	206440	8270E, EPH
Fluorene	Semi-Volatile	86737	8270E, EPH
Heptachlor	Chlorinated Pesticide	76448	8081B
Heptachlor Epoxide	Chlorinated Pesticide	1024573	8081B
Hexachlorobenzene	Semi-Volatile/Chlorinated Pesticide	118741	8270E, 8081B
Hexachlorobutadiene	Volatile/Semi-Volatile	87683	8260D, 8270E, TO-15
Hexachloroethane	Semi-Volatile	67721	8270E
Hexafluoropropylene oxide dimer acid (HFPO-DA)	PFAS	13252136	1633
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX [Cyclonite])	Nitroaromatics & Nitramines	121824	8330A
Hexanone, 2- (MNBK)	Volatile	591786	8260D
Indeno(1,2,3-c,d)pyrene	Semi-Volatile	193395	8270E, EPH
Isophorone	Semi-Volatile	78591	8270E
Isopropylbenzene (Cumene)	Volatile	98828	8260D
Isopropyltoluene, p-	Volatile	99876	8260D
Lead	Metal	7439921	6010D, 6020B, 7010
Mercury	Metal	7439979	7470A, 7471B
Methoxychlor	Chlorinated Pesticide	72435	8081B
Methyl-4-chlorophenoxy, 2- acetic acid (MCPA)	Chlorinated Herbicide	94746	8151A
2-(2-Methyl-4-chlorophenoxy) propionic acid (MCPP)	Chlorinated Herbicide	93652	8151A
Methyl Ethyl Ketone (MEK)	Volatile	78933	8260D, TO-15
Methyl Isobutyl Ketone (MIBK)	Volatile	108101	8260D, TO-15
Methyl Tertiary Butyl Ether (MtBE)	Volatile	1634044	8260D, VPH, APH, TO-15

Target Analyte	Analyte Type	CASRN	Analytical Method
Methylene Chloride	Volatile	75092	8260D, TO-15
Methylnaphthalene, 2-	Semi-Volatile	91576	8270E, EPH
Methylphenol, 2-	Semi-Volatile	95487	8270E
Methylphenol, 3-	Semi-Volatile	108394	8270E
Methylphenol, 4-	Semi-Volatile	106445	8270E
Methyl-2,4,6-trinitrophenylnitramine (Tetryl)	Nitroaromatics & Nitramines	479458	8330A
Naphthalene	Volatile/Semi-Volatile	91203	8260D, 8270E, EPH, VPH, APH, TO-15
Nickel	Metal	7440020	6010D, 6020B, 7010
Nitrobenzene (NB)	Semi-Volatile/ Nitroaromatics & Nitramines	98953	8270E, 8330A
Nitroglycerin	Nitroaromatics & Nitramines	55630	8330A
Nitrophenol, 2-	Semi-Volatile	88755	8270E
Nitrophenol, 4-	Semi-Volatile	100027	8270E
Nitrotoluene, - 2- (2 - NT)	Nitroaromatics & Nitramines	88722	8330A
Nitrotoluene, 3- (3 - NT)	Nitroaromatics & Nitramines	99081	8330A
Nitrotoluene, 4- (4 - NT)	Nitroaromatics & Nitramines	99990	8330A
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	PFAS	151772586	1633
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	Nitroaromatics & Nitramines	2691410	8330A
Pentachlorophenol	Semi-Volatile/Chlorinated Herbicide	87865	8270E, 8151A
Pentaerythritol tetranitrate (PETN)	Nitroaromatics & Nitramines	78115	8330A
Perfluorobutanoic acid (PFBA)	PFAS	375224	1633
Perfluorobutanesulfonic acid (PFBS)	PFAS	375735	1633
Perfluorodecanoic acid (PFDA)	PFAS	335762	1633
Perfluorodecanesulfonic acid (PFDS)	PFAS	335773	1633
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 fluorotelomer sulfonic acid; 8:2 FTS)	PFAS	39108344	1633
Perfluorododecanoic acid (PFDaA)	PFAS	307551	1633
Perfluorododecanesulfonic acid (PFDaS)	PFAS	79780395	1633
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	PFAS	113507827	1633
Perfluoroheptanoic acid (PFHpA)	PFAS	375859	1633
Perfluoroheptanesulfonic acid (PFHpS)	PFAS	375928	1633
3-Perfluoroheptyl propanoic acid (7:3 Fluorotelomer carboxylic acid; 7:3 FTCA)	PFAS	812704	1633
Perfluorohexanoic acid (PFHxA)	PFAS	307244	1633
Perfluorohexanesulfonic acid (PFHxS)	PFAS	355464	1633
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 fluorotelomer sulfonic acid; 4:2 FTS)	PFAS	757124724	1633
Perfluoro-3-methoxypropanoic acid (PFMPA)	PFAS	377731	1633
Perfluoro-4-methoxybutanoic acid (PFMBA)	PFAS	863090895	1633
Perfluorooctanoic acid (PFOA)	PFAS	335671	1633
2H,2H,3H,3H-Perfluorooctanoic acid (5:3 Fluorotelomer carboxylic acid; 5:3 FTCA)	PFAS	914637493	1633
Perfluorooctanesulfonic acid (PFOS)	PFAS	1763231	1633
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 fluorotelomer sulfonic acid; 6:2 FTS)	PFAS	27619972	1633
Perfluorooctanesulfonamide (PFOSA)	PFAS	754916	1633
N-methyl perfluorooctanesulfonamide (NMeFOSA)	PFAS	31506328	1633
N-ethyl perfluorooctanesulfonamide (NEtFOSA)	PFAS	4151502	1633
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA)	PFAS	2355319	1633

Target Analyte	Analyte Type	CASRN	Analytical Method
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA)	PFAS	2991506	1633
N-methyl perfluorooctanesulfonamidoethanol (NMeFOSE)	PFAS	24448097	1633
N-ethyl perfluorooctanesulfonamidoethanol (NEtFOSE)	PFAS	1691992	1633
Perfluorononanoic acid (PFNA)	PFAS	375951	1633
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	PFAS	919005144	1633
Perfluorononanesulfonic acid (PFNS)	PFAS	68259121	1633
Perfluoropentanoic acid (PFPeA)	PFAS	2706903	1633
Perfluoropentanesulfonic acid (PFPeS)	PFAS	2706914	1633
3-Perfluoropropyl propanoic acid (3:3 Fluorotelomer carboxylic acid; 3:3 FTCA)	PFAS	356025	1633
Perfluorotetradecanoic acid (PFTeDA)	PFAS	376067	1633
Perfluorotridecanoic acid (PFTTrDA)	PFAS	72629948	1633
Perfluoroundecanoic acid (PFUnA)	PFAS	2058948	1633
Perchlorate	Miscellaneous Wet Chemical	14797730	6850, 6860, 331.0, 332.0
Phenanthrene	Semi-Volatile	85018	8270E, EPH
Phenol	Semi-Volatile	108952	8270E
Picric Acid (Trinitrophenol)	Nitroaromatics & Nitramines	88891	8330A
Propylbenzene, n-	Volatile	103651	8260D
Pyrene	Semi-Volatile	129000	8270E, EPH
Selenium	Metal	7782492	6010D, 6020B, 7010
Silver	Metal	7440224	6010D, 6020B, 7010
Styrene	Volatile	100425	8260D, TO-15
Tetrachloroethane, 1,1,1,2-	Volatile	630206	8260D
Tetrachloroethane, 1,1,2,2-	Volatile	79345	8260D, TO-15
Tetrachloroethylene	Volatile	127184	8260D, TO-15
Tetrahydrofuran (THF)	Volatile	109999	8260D
Thallium	Metal	7440280	6010D, 6020B, 7010
Toluene	Volatile	108883	8260D, VPH, APH, TO-15
Trichlorobenzene, 1,2,4-	Volatile/Semi-Volatile	120821	8260D, 8270E, TO-15
Trichlorobenzene, 1,2,3-	Volatile	87616	8260D
Trichloroethane, 1,1,1-	Volatile	71556	8260D, TO-15
Trichloroethane, 1,1,2-	Volatile	79005	8260D, TO-15
Trichloroethylene	Volatile	79016	8260D, TO-15
Trichlorofluoromethane (Freon 11)	Volatile	75694	8260D
Trichlorophenol, 2,4,5-	Semi-Volatile	95954	8270E
Trichlorophenol, 2,4,6-	Semi-Volatile	88062	8270E
Trichlorophenoxy acetic acid, 2,4,5-(2,4,5-T)	Chlorinated Herbicide	93765	8151A
Trichlorophenoxy propionic acid, 2,4,5-(2,4,5-TP, Silvex)	Chlorinated Herbicide	93721	8151A
Trichloropropane, 1,2,3-	Volatile	96184	8260D
Trimethylbenzene, 1,2,4-	Volatile	95636	8260D
Trimethylbenzene, 1,3,5-	Volatile	108678	8260D
Trinitrobenzene, 1,3,5- (1,3,5-TNB)	Nitroaromatics & Nitramines	99354	8330A
Trinitrotoluene, 2,4,6- (TNT)	Nitroaromatics & Nitramines	118967	8330A
Vanadium	Metal	7440622	6010D, 6020B, 7010
Vinyl Chloride	Volatile	75014	8260D, TO-15
Xylene, m-	Volatile	108383	8260D, VPH, APH, TO-15
Xylene, o-	Volatile	95476	8260D, VPH, APH, TO-15
Xylene, p-	Volatile	106423	8260D, VPH, APH, TO-15
Zinc	Metal	7440666	6010D, 6020B, 7010