



COLORADO

Water Quality
Control Commission

Department of Public Health & Environment

NOTICE OF PUBLIC RULEMAKING HEARING BEFORE THE COLORADO WATER QUALITY CONTROL COMMISSION

SUBJECT:

For consideration of the adoption of revisions to the organic chemical standards in the Basic Standards and Methodologies for Surface Water, Regulation #31 (5 CCR 1002-31) and to the Basic Standards for Ground Water, Regulation #41 (5 CCR 1002-41). Revisions to Regulations #31 and #41 proposed by the Water Quality Control Division, along with proposed Statement of Basis, Specific Statutory Authority and Purpose, are attached to this notice as Exhibits 1 and 2.

In these attachments, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts~~. Any alternative proposals related to the subject of this hearing will also be considered.

SCHEDULE OF IMPORTANT DATES

Party status requests due	01/21/2016 5 pm	Additional information below.
Proponent's prehearing statement due	02/03/2016 5 pm	Additional information below.
Responsive prehearing statement due	03/03/2016 5 pm	Additional information below.
Last date for submittal of motions	03/10/2016 5 pm	Additional information below.
Notify commission office if participating in prehearing conference by phone	03/11/2016 by noon	Send email to cdphe.wqcc@state.co.us with participant(s) name(s)
Prehearing Conference (mandatory for parties)	03/14/2016 1:00 pm	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246
Rebuttal Statement due	03/30/2016 5 pm	Additional information below.
Rulemaking Hearing	04/11/2016 1:00 pm	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246

HEARING SUBMITTALS:

For this hearing, the commission will receive all submittals electronically. Submittals must be provided as PDF documents, except for raw data exhibits which may be provided as Excel workbooks. Submittals may be emailed to cdphe.wqcc@state.co.us, provided via an FTP site, CD or flash drive, or otherwise conveyed to the commission office so as to be received no later than the specified date.

PARTY STATUS:

Party status requests must be in writing and must provide:

- the organization's name,
- one contact person,
- a mailing address,
- a phone number, and
- email addresses of all individuals associated with the party who wish to be notified when new submittals are available on the commission's website for review.

In accordance with section 25-8-104(2)(d), C.R.S., any person who believes that the actions proposed in this notice have the potential to cause material injury to his or her water rights is requested to so indicate, along with an explanation of the alleged harm, in their party status request.

PREHEARING AND REBUTTAL STATEMENTS:

Each party that has proposed revisions must submit a proponent's prehearing statement.

Each prehearing and rebuttal statement must be provided as a separate PDF document from any accompanying written testimony or exhibits.

Following the rebuttal statement due date, no other written materials will be accepted from parties except for good cause shown.

Oral testimony at the hearing should primarily summarize written material previously submitted. The hearing will emphasize commission questioning of parties and other interested persons about their written prehearing submittals. Introduction of written material at the hearing by those with party status will not be permitted unless authorized by the commission.

PREHEARING CONFERENCE:

Attendance at the prehearing conference is mandatory for all persons requesting party status. Parties needing to participate by telephone can call 1-857-216-6700 and enter the conference code 425132.

Following the cut-off date for motions, no motions will be accepted, except for good cause shown.

PUBLIC PARTICIPATION ENCOURAGED:

The commission encourages input from non-parties, either orally at the hearing or in writing prior to the hearing. Written submissions should be emailed to cdphe.wqcc@state.co.us by March 30, 2016.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402, C.R.S., provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the commission adopt the regulatory language as proposed in this notice or alternative amendments, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

Dated this 14th day of December, 2015 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Trisha Oeth, Administrator

EXHIBIT 1
WATER QUALITY CONTROL DIVISION

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION

REGULATION NO. 31

THE BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER
(5 CCR 1002-31)

...

31.11 BASIC STANDARDS APPLICABLE TO SURFACE WATERS OF THE STATE

All surface waters of the state are subject to the following basic standards; however, discharge of substances regulated by permits which are within those permit limitations shall not be a basis for enforcement proceedings under these basic standards:

- (1) Except where authorized by permits, BMPs, 401 certifications, or plans of operation approved by the Division or other applicable agencies, state surface waters shall be free from substances attributable to human-caused point source or nonpoint source discharge in amounts, concentrations or combinations which:
 - (a) for all surface waters except wetlands;
 - (i) can settle to form bottom deposits detrimental to the beneficial uses. Depositions are stream bottom buildup of materials which include but are not limited to anaerobic sludges, mine slurry or tailings, silt, or mud; or
 - (ii) form floating debris, scum, or other surface materials sufficient to harm existing beneficial uses; or
 - (iii) produce color, odor, or other conditions in such a degree as to create a nuisance or harm existing beneficial uses or impart any undesirable taste to significant edible aquatic species or to the water; or
 - (iv) are harmful to the beneficial uses or toxic to humans, animals, plants, or aquatic life; or
 - (v) produce a predominance of undesirable aquatic life; or
 - (vi) cause a film on the surface or produce a deposit on shorelines; and
 - (b) for surface waters in wetlands;
 - (i) produce color, odor, changes in pH, or other conditions in such a degree as to create a nuisance or harm water quality dependent functions or impart any undesirable taste to significant edible aquatic species of the wetland; or

(ii) are toxic to humans, animals, plants, or aquatic life of the wetland.

(2) The radioactive materials in surface waters shall be maintained at the lowest practical level. In no case shall radioactive materials in surface waters be increased by any cause attributable to municipal, industrial, or agricultural practices or discharges to as to exceed the following levels, unless alternative site-specific standards have been adopted pursuant to subsection (4) below:

<u>Radionuclide Standards</u>	
<u>Parameter</u>	<u>Picocuries per Liter</u>
Americium 241*	0.15
Cesium 134	80
Plutonium 239, and 240*	0.15
Radium 226 and 228*	5
Strontium 90*	8
Thorium 230 and 232*	60
Tritium	20,000

*Radionuclide samples for these materials should be analyzed using unfiltered (total) samples. These Human Health based standards are 30-day average values for both plutonium and americium.

(3) The interim organic pollutant standards contained in the following Basic Standards for Organic Chemicals Table are applicable to all surface waters of the state for which the corresponding use classifications have been adopted, unless alternative site-specific standards have been adopted pursuant to sub-section (4) below.

Note that all standards in the Basic Standards for Organic Chemicals Table are being adopted as "interim standards." These interim standards will remain in effect until alternative permanent standards are adopted by the Commission in revisions to this regulation or site-specific standards determinations. Although fully effective with respect to current regulatory applications, these interim standards shall not be considered final or permanent standards subject to antibacksliding or downgrading restrictions.

BASIC STANDARDS FOR ORGANIC CHEMICALS
(in micrograms per liter)

Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Acenaphthene	83-32-9	420	420	--- ¹⁰	1,700	520
Acetochlor	34256-82-1	140	---	---	---	---
Acetone	67-64-1	6300	---	---	---	---
Acrolein	107-02-8	3.5	3.5	9.3	68	21
Acrylamide ^{C, 13}	79-06-1	0.022	---	---	---	---
Acrylonitrile ^C	107-13-1	0.065	0.051	0.25	7,500	2,600
Alachlor	15972-60-8	2 ^M	2	140	---	---
Aldicarb	116-06-3	7 ^M	---	---	---	---
Aldicarb Sulfone	1646-88-4	7 ^M	---	---	---	---
Aldicarb Sulfoxide	1646-87-3	7 ^M	---	---	---	---
Aldrin ^C	309-00-2	0.0021	4.9X10 ⁻⁵	5.0X10 ⁻⁵	1.5	---
Aniline ^C	62-53-3	6.1	---	---	---	---
Anthracene (PAH)	120-12-7	2,100	2,100	40,000	---	---
Aramite ^C	140-57-8	1.4	---	---	---	---
Atrazine	1912-24-9	3 ^M	---	---	---	---
Azobenzene ^C	103-33-3	0.32	---	---	---	---
Benzene ^{C, 12}	71-43-2	2.3 to 5 ^M	2.2	51	5,300	---

BASIC STANDARDS FOR ORGANIC CHEMICALS
(in micrograms per liter)

Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Benzidine ^C	92-87-5	0.00015	8.6X10 ⁻⁵	0.00020	2,500	---
Benzo(a)anthracene (PAH) ^C	56-55-3	0.0048	0.0038	0.018	---	---
Benzo(a)pyrene (PAH) ^{C, 12}	50-32-8	0.0048 to 0.2 ^M	0.0038	0.018	---	---
Benzo(b)fluoranthene (PAH) ^C	205-99-2	0.0048	0.0038	0.018	---	---
Benzo(k)fluoranthene (PAH) ^C	207-08-9	0.0048	0.0038	0.018	---	---
Benzo(g,h,i)perylene (PAH)	191-24-2	---	0.0038	0.018	---	---
Benzotrichloride ^C	98-07-7	0.0027	---	---	---	---
Benzyl chloride ^C	100-44-7	0.21	---	---	---	---
<u>Biphenyl</u> ^C	<u>92-52-4</u>	<u>4.4</u>	<u>3.5</u>	<u>16.3</u>	<u>---</u>	<u>---</u>
Bis(chloromethyl)ether (BCME) ^C	542-88-1	0.00016	0.0001	0.0003	---	---
Bromate ^C	15541-45-4	0.050	---	---	---	---
Bromobenzene	108-86-1	56	---	---	---	---
Bromodichloromethane (HM) ^C	75-27-4	---	0.55	17	11,000	---
Bromoform (HM) ^C	75-25-2	---	4.3	140	---	---
Butyl benzyl phthalate	85-68-7	1,400	1,400	1,900	---	---
Carbofuran ^{C, 12}	1563-66-2	35 to 40 ^M	---	---	---	---
Carbon tetrachloride ^{C, 12}	56-23-5	0.5 to 5 ^M	0.43	3.0	35,200	---
Chlordane ^{C, 12}	57-74-9	0.10 to	0.00080	0.00081	1.2	0.0043

BASIC STANDARDS FOR ORGANIC CHEMICALS
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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
		2 ^M				
Chlordecone ^C	143-50-0	0.0035	---	---	---	---
Chlorethyl ether (BIS-2) ^C	111-44-4	0.032	0.030	0.53	---	---
Chlorobenzene ¹¹	108-90-7	100 ^M	100	1,600	---	---
Chlorodibromomethane (HM) ¹¹	124-48-1	---	54.0	1,700	---	---
Chloroform (HM) ^C	67-66-3	---	3.4	110	28,900	1,240
Chloroisopropyl ether(BIS-2)	108-60-1	280	280	65,000	---	---
4-Chloro-3-methylphenol	59-50-7	210	---	---	30	---
Chloronaphthalene	91-58-7	560	560	--- ¹⁰	2,300	620
Chlorophenol,2-	95-57-8	35	35	150	4,380	2,000
Chlorphrifos	2921-88-2	21	---	---	0.083	0.041
Chrysene (PAH) ^C	218-01-9	0.0048	0.0038	0.018	---	---
DDD ^C	72-54-8	0.15	0.00031	0.00031	0.6	---
DDE ^C	72-55-9	0.1	0.00022	0.00022	1,050	---
DDT ^C	50-29-3	0.1	0.00022	0.00022	0.55	0.001
Dalapon	75-99-0	200 ^M	---	---	---	---
Demeton	8065-48-3	---	---	---	---	0.1
Diazinon	333-41-5	---	---	---	0.17	0.17

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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Dibenzo(a,h)anthracene (PAH) ^C	53-70-3	0.0048	0.0038	0.018	---	---
1,2 Dibromo-3-Chloropropane (DBCP) ^C	96-12-8	0.2 ^M	---	---	---	---
Dibromoethane 1,2 ^{C, 13}	106-93-4	0.018	---	---	---	---
Dicamba	1918-00-9	210	170	860	---	---
Dichloroacetic acid ^C	79-43-6	0.7	---	---	---	---
Dichlorobenzene 1,2 ¹¹	95-50-1	600 ^M	420	1,300	---	---
Dichlorobenzene 1,3	541-73-1	94	94	960	---	---
Dichlorobenzene 1,4 ¹¹	106-46-7	75 ^M	63	190	---	---
Dichlorobenzidine ^C	91-94-1	0.078	0.021	0.028	---	---
Dichloroethane 1,2 ^{C, 12}	107-06-2	0.38 to 5 ^M	0.38	37	118,000	20,000
Dichloroethylene 1,1	75-35-4	7 ^M	7	3,600	---	---
Dichloroethylene 1,2-cis	156-59-2	14 to 70 ^M	---	---	---	---
Dichloroethylene 1,2-trans ¹¹	156-60-5	100 ^M	100	10,000	---	---
Dichloromethane (methylene chloride) ^{C, 12}	75-09-2	5 ^M	4.6	590	---	---
Dichlorophenol 2,4	120-83-2	21	21	290	2,020	365
Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70 ^M	---	---	---	---
Dichloropropane 1,2 ^{C, 12}	78-87-5	0.52 to 5 ^M	0.50	14	23,000	5,700
Dichloropropylene 1,3 ^C	542-75-6	0.35	0.34	21	6,060	244

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		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Dichlorvos ^C	62-73-7	0.12	---	---	---	---
Dieldrin ^C	60-57-1	0.002	5.2X10 ⁻⁵	5.4X10 ⁻⁵	0.24	0.056
Diethyl phthalate	84-66-2	5,600	5,600	44,000	---	---
Diisopropylmethylphosphonate (DIMP)	1445-75-6	8	---	---	---	---
Dimethylphenol 2,4	105-67-9	140	140	850	2,120	---
Dimethyl phthalate	131-11-3	70,000	70,000	1,100,000	---	---
Di-n-butyl phthalate	84-74-2	700	700	4,500	---	---
Dinitrophenol 2,4	51-28-5	14	14	5,300	---	---
Dinitro-o-cresol 4,6	534-52-1	0.27	1.3	28	---	---
Dinitrotoluene 2,4 ^C	121-14-2	0.11	0.11	3.4	---	---
Dinitrotoluene 2,6 ^C	606-20-2	---	---	---	330	230
Dinoseb	88-85-7	7 ^M	---	---	---	---
Dioxane 1,4-	123-91-1	0.35	---	---	---	---
Dioxin (2,3,7,8 TCDD) ^{C, 12}	1746-01-6	2.2x10 ⁻⁷ to 3.0x10 ^{-5, M}	5.0X10 ⁻⁹	5.1X10 ⁻⁹	0.01	0.00001
Diphenylhydrazine 1,2 ^C	122-66-7	0.044	0.036	0.20	270	---
Di(2-ethylhexyl)adipate	103-23-1	400 ^M	---	---	---	---
Diquat ¹²	85-00-7	15 to 20 ^M	---	---	---	---
Endosulfan	115-29-7	42	---	---	0.11	0.056

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		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Endosulfan, alpha	959-98-8	42	--- ¹⁰	---	0.11	0.056
Endosulfan, beta	33213-65-9	42	--- ¹⁰	---	0.11	0.056
Endosulfan sulfate	1031-07-8	42	--- ¹⁰	---	0.11	0.056
Endothall	145-73-3	100 ^M	---	---	---	---
Endrin	72-20-8	2 ^M	--- ¹⁰	---	0.086	0.036
Endrin aldehyde	7421-93-4	2.1	0.29	0.30	---	---
Epichlorohydrin ^C	106-89-8	3.5	---	---	---	---
Ethylbenzene ¹¹	100-41-4	700 ^M	530	2,100	32,000	---
Ethylene dibromide ^{C, 12} (1,2 – dibromoethane)	106-93-4	0.02 to 0.05 ^M	---	---	---	---
Ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol)	111-76-2	700	---	---	---	---
Ethylhexyl phthalate (BIS-2) ^{C, 12} (DEHP)	117-81-7	2.5 to 6 ^M	1.2	2.2	---	---
Fluoranthene (PAH)	206-44-0	280	130	140	3,980	---
Fluorene (PAH)	86-73-7	280	280	5,300	---	---
Folpet ^C	133-07-3	10	---	---	---	---
Furmecyclo ^C	60568-05-0	1.2	---	---	---	---
Glyphosate	1071-83-6	700 ^M	---	---	---	---
Guthion	86-50-0	---	---	---	---	0.01
Heptachlor ^{C, 12}	76-44-8	0.008 to	7.8X10 ⁻⁵	7.9X10 ⁻⁵	0.52	0.0038

BASIC STANDARDS FOR ORGANIC CHEMICALS
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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
		0.4 ^M				
Heptachlor epoxide ^{C, 12}	1024-57-3	0.004 to 0.2 ^M	3.9X10 ⁻⁵	3.9X10 ⁻⁵	0.52	0.0038
Hexachlorobenzene ^{C, 12}	118-74-1	0.022 to 1.0 ^M	0.00028	0.00029	---	---
Hexachlorobutadiene	87-68-3	0.45	0.44	--- ¹⁰	90	9.3
Hexachlorocyclohexane, Alpha ^C	319-84-6	0.0056	0.0026	0.0049	---	---
Hexachlorocyclohexane, Beta	319-85-7	0.019	0.0091	0.017	---	---
Hexachlorocyclohexane, Gamma (Lindane)	58-89-9	0.2 ^M	0.2	--- ¹⁰	0.95	0.08
Hexachlorocyclohexane, Technical ^C	608-73-1	---	0.012	0.041	100	---
Hexachlorocyclopentadiene ^{11, 12} (HCCPD)	77-47-4	42 to 50 ^M	40	--- ¹⁰	7	5
Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-hcdd) ^C	19408-74-3	5.60E-06	---	---	---	---
Hexachloroethane	67-72-1	0.88	0.5	1.2	980	540
Hexanone 2-	591-78-6	35	---	---	---	---
Hydrazine/Hydrazine sulfate ^C	302-01-2	0.012	---	---	---	---
Indeno(1,2,3-cd)pyrene (PAH) ^C	193-39-5	0.0048	0.0038	0.018	---	---
Isophorone ¹¹	78-59-1	140	130	3,600	---	---
Malathion	121-75-5	140	---	---	---	0.1

BASIC STANDARDS FOR ORGANIC CHEMICALS
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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
<u>Methanol</u>	<u>67-56-1</u>	<u>14,000</u>	<u>69,400</u>	<u>261,000</u>	---	---
Methoxychlor ¹²	72-43-5	35 to 40 ^M	--- ¹⁰	---	---	0.03
Methyl bromide (HM)	74-83-9	---	9.8	1,500	---	---
Methyl chloride (HM) ^C	74-87-3	---	5.6	180	---	---
4,4-Methylene bis (N,N'-dimethyl)aniline ^C	101-61-1	0.76	---	---	---	---
Metribuzin	21087-64-9	180	160	1,700	---	---
Mirex	2385-85-5	1.4	---	---	---	0.001
Naphthalene (PAH)	91-20-3	140	140	--- ¹⁰	2,300	620
Nitrobenzene	98-95-3	14	14	2,800	27,000	---
Nitrophenol 4	100-02-7	56	56	9,700	---	---
Nitrosodibutylamine N ^C	924-16-3	0.0065	0.0043	0.012	---	---
Nitrosodiethylamine N ^C	55-18-5	0.00023	0.00023	0.0083	---	---
Nitrosodimethylamine N ^C	62-75-9	0.00069	0.00069	3.0	---	---
N-Nitrosodiethanolamine ^C	1116-54-7	0.013	---	---	---	---
Nitrosodiphenylamine N ^C	86-30-6	7.1	3.3	6.0	---	---
N-Nitroso-N-methylethylamine ^C	10595-95-6	0.0016	---	---	---	---
Nitrosopyrrolidine N ^C	930-55-2	0.017	0.016	36	---	---
N-Nitrosodi-n-propylamine ^C	621-64-7	0.005	0.005	0.50	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS
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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Nonylphenol	84852-15-3 and 25154-52-3	---	---	---	28 (effective 1/1/2011)	6.6 (effective 1/1/2011)
Oxamyl (vydate) ¹²	23135-22-0	175 to 200 ^M	---	---	---	---
PCBs ^{C, 9, 12}	1336-36-3	0.0175 to 0.5 ^M	6.4X10 ⁻⁵	6.4X10 ⁻⁵	2.0	0.014
Parathion	56-38-2	---	---	---	0.065	0.013
Pentachlorobenzene	608-93-5	5.6	1.4	1.5	---	---
Pentachlorophenol ^{C, 12}	87-86-5	0.088 to 1.0 ^M	0.080	0.91	19 ⁶	15 ⁶
Perchlorate	7790-98-9	4.9	---	---	---	---
Phenol	108-95-2	2,100	2,100	--- ¹⁰	10,200	2,560
Picloram	1918-02-1	490	---	---	---	---
Prometon	1610-18-0	100	---	---	---	---
Propylene oxide ^C	75-56-9	0.15	---	---	---	---
Pyrene (PAH)	129-00-0	210	210	4,000	---	---
Quinoline ^C	91-22-5	0.012	---	---	---	---
Simazine	122-34-9	4 ^M	---	---	---	---
Styrene	100-42-5	100 ^M	---	---	---	---
Tetrachlorobenzene 1,2,4,5-	95-94-3	2.1	0.97	1.07	---	---
Tetrachloroethane 1,1,2,2 ^C	79-34-5	0.18	0.17	4	---	2,400

BASIC STANDARDS FOR ORGANIC CHEMICALS
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Parameter	CAS No.	Human Health Based ¹			Aquatic Life Based ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Tetrachloroethylene (PCE) ^C	127-18-4	5 ^M	5	62	5,280	840
<u>Tetrahydrofuran</u>	<u>109-99-9</u>	<u>6.300</u>	<u>31,200</u>	<u>118,000</u>	<u>---</u>	<u>---</u>
Toluene ^{11, 12}	108-88-3	560 to 1,000 ^M	510	5,900	17,500	---
Toxaphene ^{C, 12}	8001-35-2	0.032 to 3 ^M	0.00028	--- ¹⁰	0.73	0.0002
Tributyltin (TBT)	56573-85-4	---	---	---	0.46	0.072
Trichloroacetic acid	76-03-9	0.52	---	---	---	---
Trichlorobenzene 1,2,4- ¹¹	120-82-1	70 ^M	35	--- ¹⁰	250	50
Trichloroethane 1,1,1 (1,1,1-TCA)	71-55-6	200 ^M	---	---	---	---
Trichloroethane 1,1,2 (1,1,2-TCA) ^{11, 12}	79-00-5	2.8 to 5 ^M	2.7	71	9,400	---
Trichloroethylene (TCE) ^C	79-01-6	<u>0.76 to 5^M</u>	<u>2.5-0.6</u>	<u>30-2.8</u>	45,000	21,900
Trichloropropane 1,2,3- ^{C, 13}	96-18-4	3.7E-4	---	---	---	---
Trichlorophenol 2,4,5	95-95-4	700	700	3,600	---	---
Trichlorophenol 2,4,6 ^C	88-06-2	3.2	1.4	2.4	---	970
Trichlorophenoxypropionic acid (2,4,5-tp) (Silvex)	93-72-1	50 ^M	---	---	---	---
Trihalomethanes	(total) ⁷	80	80	---	---	---
Vinyl Chloride ^{C, 12}	75-01-4	0.023 to 2 ^M	0.023	2.3	---	---

BASIC STANDARDS FOR ORGANIC CHEMICALS
(in micrograms per liter)

Parameter	CAS No.	<u>Human Health Based</u> ¹			<u>Aquatic Life Based</u> ⁴	
		Water Supply ²	Water+Fish ³	Fish Ingestion ⁸	Acute	Chronic
Xylenes (total) ¹²	1330-20-7	1,400 to 10,000 ^M	---	---	---	---

1 All standards are chronic or 30-day standards. They are based on information contained in EPA's Integrated Risk Information System (IRIS) and/or EPA lifetime health advisories for drinking water using a 10^{-6} incremental risk factor unless otherwise noted.

2 Only applicable to segments classified for water supply.

3 Applicable to all Class 1 aquatic life segments which also have a water supply classification or Class 2 aquatic life segments which also have a water supply classification designated by the Commission after rulemaking hearing. These class 2 segments will generally be those where fish of a catchable size and which are normally consumed are present, and where there is evidence that fishing takes place on a recurring basis. The Commission may also consider additional evidence that may be relevant to a determination whether the conditions applicable to a particular segment are similar enough to the assumptions underlying the water plus fish ingestion criteria to warrant the adoption of water plus fish ingestion standards for the segment in question.

4 Applicable to all aquatic life segments.

5 PQL's for the constituents listed above can be found at section 61.8((2)(l) of the Regulations for the State Discharge Permit System.

6 Standards are pH dependent. Those listed are calculated for pH = 7.8.

$$\text{Acute} = e^{[1.005(\text{pH})-4.869]}, \text{Chronic} = e^{[1.005(\text{pH})-5.134]}.$$

7 Total trihalomethanes are considered the sum of the concentrations of bromodichloromethane (CAS No. 75-27-4), dibromochloromethane (Chlorodibromomethane(HM), CAS No. 124-48-1), tribromomethane (bromoform, CAS No. 75-25-2) and trichloromethane (chloroform, CAS No. 67-66-3).

8 Applicable to the following segments which do not have a water supply classification: all Class 1 aquatic life segments or Class 2 aquatic life segments designated by the Commission after rulemaking hearing. These class 2 segments will generally be those where fish of a catchable size and which are normally consumed are present, and where there is evidence that fishing takes place on a recurring basis. The Commission may also consider additional evidence that may be relevant to a determination whether the conditions applicable to a particular segment are similar enough to the assumptions underlying the fish ingestion criteria to warrant the adoption of fish ingestion standards for the segment in question.

9 PCBs are a class of chemicals which include aroclors, 1242, 1254, 1221, 1232, 1248,1260 and 1016, CAS numbers 53469-21-9, 11097-69-1, 11104-28-2, 11141-16-5, 12672-29-6, 11096-82-5, and 12674-11-2 respectively. The aquatic life criteria apply to this set of PCBs. The human health criteria apply to total PCBs, i.e. the sum of all congener or all isomer analyses.

10 The chronic aquatic life standard is more stringent than the associated Water+Fish or Fish Ingestion standard, and therefore no Water+Fish or Fish Ingestion standard has been adopted.

11 The Water+Fish and Fish Ingestions standards for these compounds have been calculated using a relative source contribution (RSC).

12 Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

13 Mutagenic compound, age dependent factors were used in calculating standard.

C Carcinogens classified by the EPA as A, B1, or B2.

M Drinking water MCL.

CAS No. - Chemical Abstracts Service Registry Number.

(HM) – Halomethanes

(PAH) - Polynuclear Aromatic Hydrocarbons.

...

31.52 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL 11, 2016 RULEMAKING; FINAL ACTION MAY 9, 2016; EFFECTIVE DATE JUNE 30, 2016

The provisions of sections 25-8-202(1)(b), 25-8-204; and 25-8-402, C.R.S., provide the specific statutory authority for adoption. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

A. Basic Standards for Organic Chemicals

In this rulemaking, the Commission adopted revised and new organic chemical standards in section 31.11(3). In an effort to keep ground water and surface water organic chemical standards consistent, the changes to section 41.5(C)(3) were considered during the same hearing that addressed changes to the statewide surface water organic chemical standards in Regulation No. 31 (Basic Standards and Methodologies for Surface Water).

In adopting these new and revised organic chemical standards, the Commission continued to rely on its past policy decisions and precedence documented in Commission Policy 96-2. Additionally, as per Departmental policy, the Commission has relied on the United States Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) as its first tier source of toxicological data. Review of the IRIS data that had been updated since the last revisions to 41.5(C)(3) indicated that the water quality standard for tetrachloroethylene (TCE), needed to be revised. This review also identified new compounds in the IRIS data that the Commission elected to adopt as water quality standards, these were: biphenyl, methanol, and tetrahydrofuran.

EXHIBIT 2
WATER QUALITY CONTROL DIVISION

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-41

REGULATION NO. 41

THE BASIC STANDARDS FOR GROUND WATER

...

41.5 GROUND WATER QUALITY STANDARDS

The water quality standards specified in subsection B below are deemed necessary and appropriate to protect ground water uses as specified in section 41.4, and shall be adopted to protect such classified uses. The standards specified in subsections A and C apply to all State ground waters, unless alternative site-specific standards have been adopted for a specified area pursuant to subsection D below.

A. Narrative Standards

1. Ground Water shall be free from pollutants not listed in the tables referred to in section 41.5(B), which alone or in combination with other substances, are in concentrations shown to be:
 - a. Carcinogenic, mutagenic, teratogenic, or toxic to human beings, and/or,
 - b. A danger to the public health, safety, or welfare.
2. Determinations made pursuant to section 41.7 of specific numerical limitations under this subsection shall be based upon the best scientific information currently available.

B. Numeric Standards

1. The numeric standards shall be measured as total concentrations unless otherwise specified in Tables 1 through 4.
2. When a ground water has a multi-use classification, the most restrictive standard for a parameter shall apply.
3. The following numeric standards shall apply:
 - a. "Domestic Use-Quality" - The Human Health and Secondary Drinking Water Standards listed in Tables 1 and 2, respectively, except as specified in section 41.5(B)5 or 41.5(B)(6).
 - b. "Agricultural Use - Quality" - The Agricultural Standards listed in Table 3, except as specified in section 41.5(B)5.

- c. "Surface Water Quality Protection" - The standards necessary to prevent the exceedance of surface waters standards.
 - d. "Potentially Usable Quality" - appropriate standards considering those factors listed in section 41.4(B)(4)(d).
4. The TDS limitation listed in Table 4 shall apply to the following classes:
- "Agricultural Use - Quality"
- "Surface Water Quality Protection"
- "Potentially Usable Quality"
5. For ground water classified "Domestic Use - Quality" or "Agricultural Use - Quality," where a table value is exceeded by the background level, the applicable standard for that parameter shall be either 1) the table value or 2) the background level for that parameter. This determination shall be made considering the increased risk to public health, crops, or livestock associated with the background levels, the extent of the exceedance above the table value, the degree to which the pollution is deemed correctable and subject to treatment; and the economic reasonableness of such treatment requirements.
6. The Commission may adopt site-specific standards in lieu of those listed in Tables 1 and 2 taking into account the factors prescribed in Section 25-8-204(4), C.R.S. and section 41.4. The downgrading factors described in Regulation No. 31, section 6(2)(B) of the Basic Standards and Methodology for Surface Water shall not apply to the establishment of site-specific standards under this subsection.

C. Statewide Standards

1. Radioactive materials and Organic pollutants in ground waters shall not exceed the following levels, unless alternative, site-specific standards for these substances have been adopted by the Commission:
- a. For radioactive materials and organic pollutants listed in subsections 2 and 3 below, levels shall not exceed those specified in those subsections.
 - b. For all other radioactive materials and organic pollutants, they shall be maintained at the lowest practical level.
 - c. Where site-specific standards have been adopted, they shall apply in lieu of the standards set forth in this subsection.
2. Radioactive Materials Standards:

Radioactive Materials Standards¹

Parameter	Standard
Americium ²	0.15
Cesium 134	80
Plutonium 239 ² , and 240 ²	0.15
Radium 226 ² and 228 ²	5
Strontium 90 ²	8
Thorium 230 ² and 232 ²	60

Tritium	20,000
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pCi/l = Picocuries Per Liter

¹ In site-specific cases, when it has been demonstrated that there are negligible differences between the results of dissolved (filtered) samples and total (unfiltered) samples, then dissolved results may be utilized for implementing the radioactive material standards.

² Radionuclide samples for these materials should be analyzed using unfiltered (total) samples.

3. Interim Organic Pollutant Standards:

Note that all standards in table A are being adopted as “interim standards.” These interim standards will remain in effect until alternative permanent standards are adopted by the Commission in revisions to this regulation or site-specific standards determinations. Although fully effective with respect to current regulatory applications, these interim standards shall not be considered final or permanent standards subject to restrictions such as antibacksliding or downgrading.

<p align="center">TABLE A</p> <p align="center">GROUND WATER ORGANIC CHEMICAL STANDARDS</p> <p align="center">(in micrograms per liter)</p>		
Parameter	CAS No.	STANDARD¹
Acenaphthene	83-32-9	420
Acetochlor	34256-82-1	140
Acetone	67-64-1	6300
Acrolein	107-02-8	3.5
Acrylamide ^{C,8}	79-06-1	0.022
Acrylonitrile ^C	107-13-1	0.065
Alachlor	15972-60-8	2.0 ^M
Aldicarb	116-06-3	7.0 ^M
Aldicarb Sulfone	1646-88-4	7.0 ^M
Aldicarb Sulfoxide	1646-87-3	7.0 ^M
Aldrin ^C	309-00-2	0.0021
Aniline ^C	62-53-3	6.1
Anthracene (PAH)	120-12-7	2100

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD ¹
Aramite ^C	140-57-8	1.4
Atrazine	1912-24-9	3.0 ^M
Azobenzene ^C	103-33-3	0.32
Benzene ^{C,2}	71-43-2	5.0 ^M
Benzidine ^C	92-87-5	0.00015
Benzo(a)anthracene (PAH) ^C	56-55-3	0.0048
Benzo(a)pyrene (PAH) ^{C, 6}	50-32-8	0.0048 to 0.2 ^M
Benzo(b)fluoranthene (PAH) ^C	205-99-2	0.0048
Benzo(k)fluoranthene (PAH) ^C	207-08-9	0.0048
Benzotrichloride ^C	98-07-7	0.0027
Benzyl chloride ^C	100-44-7	0.21
Bis(chloromethyl)ether (BCME) ^C	542-88-1	0.00016
<u>Biphenyl</u>	<u>92-52-4</u>	<u>4.4</u>
Bromate ^C	15541-45-4	0.05
Bromobenzene	108-86-1	56
Bromodichloromethane (THM) ^{C, 7}	75-27-4	0.56
Bromoform (THM) ^{C, 7}	75-25-2	4
Butyl benzyl phthalate	85-68-7	1,400
Carbofuran ⁶	1563-66-2	35 to 40 ^M
Carbon tetrachloride ^{C, 6}	56-23-5	0.5 to 5 ^M
Chlordane ^{C, 6}	57-74-9	0.10 to 2 ^M
Chlordecone ^C	143-50-0	.0035

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD ¹
Chlorethyl ether (BIS-2) ^C	111-44-4	0.032
4-Chloro-3-methylphenol	59-50-7	210
Chlorobenzene	108-90-7	100 ^M
Chloroform (THM) ^{C, 7}	67-66-3	3.5
Chloroisopropyl ether (BIS-2)	108-60-1	280
Chloronaphthalene	91-58-7	560
Chlorophenol, 2-	95-57-8	35
Chlorphrifos	2921-88-2	21
Chrysene (PAH) ^C	218-01-9	0.0048
Dalapon	75-99-0	200 ^M
DDD ^C	72-54-8	0.15
DDE ^C	72-55-9	0.1
DDT ^C	50-29-3	0.1
Di(2-ethylhexyl)adipate	103-23-1	400 ^M
Dibenzo(a,h)anthracene (PAH) ^C	53-70-3	0.0048
1,2-Dibromo-3-Chloropropane (DBCP)	96-12-8	0.2 ^M
Dibromochloromethane (THM) ^{3, 7}	124-48-1	14
Dibromoethane 1,2 ^C	106-93-4	0.018
Dicamba	1918-00-9	210
Dichloroacetic acid ^C	79-43-6	0.7
Dichlorobenzene 1,2	95-50-1	600 ^M
Dichlorobenzene 1,3	541-73-1	94

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD ¹
Dichlorobenzene 1,4	106-46-7	75 ^M
Dichloroethane 1,2 ^{C, 6}	107-06-2	0.38 to 5 ^M
Dichloroethylene 1,1	75-35-4	7 ^M
Dichloroethylene 1,2-cis ⁶	156-59-2	14 to 70 ^M
Dichloroethylene 1,2-trans ⁶	156-60-5	140 or 100 ^M
Dichloromethane (methylene chloride) ^{C, 6, 8}	75-09-2	5.6 or 5 ^M
Dichlorophenol 2,4	120-83-2	21
Dichlorophenoxyacetic acid (2,4-D)	94-75-7	70 ^M
Dichloropropane 1,2 ^{C, 6}	78-87-5	0.52 to 5 ^M
Dichlorvos ^C	62-73-7	0.12
Diclorobenzidine ^C	91-94-1	0.078
Dieldrin ^C	60-57-1	0.002
Diethyl phthalate	84-66-2	5,600
Diisopropylmethylphosphonate (DIMP) ⁴	1445-75-6	8
Dimethylphenol 2,4	105-67-9	140
Di-n-butyl phthalate	84-74-2	700
Dinitro-o-cresol 4,6	534-52-1	0.27
Dinitrophenol 2,4	51-28-5	14
Dinitrotoluene 2,4 ^C	121-14-2	0.11
Dinoseb	88-85-7	7 ^M
Dioxane 1,4- ^C	123-91-1	0.35
Dioxin (2,3,7,8 TCDD) ^{C, 6}	1746-01-6	2.2x10 ⁻⁷ to 3.0x10 ^{-5, M}

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD¹
Diphenylhydrazine 1,2 ^C	122-66-7	0.044
Diquat ⁶	85-00-7	15 to 20 ^M
Endosulfan	115-29-7	42
Endosulfan sulfate	1031-07-8	42
Endosulfan, alpha	959-98-8	42
Endosulfan, beta	33213-65-9	42
Endothall	145-73-3	100 ^M
Endrin	72-20-8	2 ^M
Endrin aldehyde	7421-93-4	2.1
Epichlorohydrin ^C	106-89-8	3.5
Ethylbenzene	100-41-4	700 ^M
Ethylene Dibromide ^{C, 6} (1,2-dibromoethane)	106-93-4	0.02 to 0.05 ^M
Ethylene glycol monobutyl ether (EGBE) (2-Butoxyethanol)	111-76-2	700
Ethylhexyl phthalate (BIS-2) ^{C, 6} (DEHP)	117-81-7	2.5 to 6 ^M
Fluoranthene (PAH)	206-44-0	280
Fluorene (PAH)	86-73-7	280
Folpet ^C	133-07-3	10
Furmecyclo ^C	60568-05-0	1.2
Glyphosate	1071-83-6	700 ^M
Heptachlor ^{C, 6}	76-44-8	0.008 to 0.4 ^M
Heptachlor epoxide ^{C, 6}	1024-57-3	0.004 to 0.2 ^M

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD¹
Hexachlorobenzene ^{C, 6}	118-74-1	0.022 to 1.0 ^M
Hexachlorobutadiene	87-68-3	0.45
Hexachlorocyclohexane, Alpha ^C	319-84-6	0.0056
Hexachlorocyclohexane, Gamma (Lindane)	58-89-9	0.2 ^M
Hexachlorocyclopentadiene ⁶ 50 ^M	77-47-4	42 to 50 ^M
Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-hcdd) ^C	19408-74-3	5.60E-06
Hexachloroethane ^C	67-72-1	0.88
Hexanone 2	591-78-6	35
Hydrazine/Hydrazine sulfate ^C	302-01-2	0.012
Indeno (1,2,3-cd) pyrene (PAH) ^C	193-39-5	0.0048
Isophorone ³	78-59-1	140
Malathion	121-75-5	140
<u>Methanol</u>	<u>67-56-1</u>	<u>14,000</u>
Methoxychlor ⁶	72-43-5	35 to 40 ^M
Methylene bis(N,N'-dimethyl)aniline 4,4' ^C	101-61-1	0.76
Metribuzin	21087-64-9	180
Mirex	2385-85-5	1.4
Naphthalene (PAH)	91-20-3	140
Nitrobenzene	98-95-3	14
Nitrophenol 4	100-02-7	56
Nitrosodimethylamine N ^C (NDMA)	62-75-9	0.00069

TABLE A
GROUND WATER ORGANIC CHEMICAL STANDARDS
(in micrograms per liter)

Parameter	CAS No.	STANDARD ¹
Nitrosodiphenylamine N ^C	86-30-6	7.1
N-Nitrosodiethanolamine ^C	1116-54-7	0.013
N-Nitrosodi-n-propylamine ^C	621-64-7	0.005
N-Nitroso-N-Methylethylamine ^C	10595-95-6	0.0016
Oxamyl (vydate) ⁶	23135-22-0	175 to 200 ^M
PCBs ^{C, 5, 6}	1336-36-3	0.0175 to 0.5 ^M
Pentachlorobenzene	608-93-5	5.6
Pentachlorophenol ^{C, 6}	87-86-5	0.088 to 1.0 ^M
Perchlorate	7790-98-9	4.9
Phenol	108-95-2	2,100
Picloram	1918-02-1	490
Prometon	1610-18-0	100
Propylene oxide ^C	75-56-9	0.15
Pyrene (PAH)	129-00-0	210
Quinoline ^C	91-22-5	0.012
Simazine	122-34-9	4 ^M
Styrene	100-42-5	100 ^M
Tetrachlorobenzene 1,2,4,5	95-94-3	2.1
Tetrachloroethane 1,1,2,2	79-34-5	0.18
Tetrachloroethylene (PCE) ⁶	127-18-4	17 or 5 ^M
<u>Tetrahydrofuran</u>	<u>109-99-9</u>	<u>6,300</u>
Toluene ⁶	108-88-3	560 to 1,000 ^M

<p style="text-align: center;">TABLE A</p> <p style="text-align: center;">GROUND WATER ORGANIC CHEMICAL STANDARDS</p> <p style="text-align: center;">(in micrograms per liter)</p>		
Parameter	CAS No.	STANDARD¹
Total Trihalomethanes (TTHMs) ⁷	N/A	80 ^M
Toxaphene ^{C, 6}	8001-35-2	0.032 to 3 ^M
Trichlorobenzene 1,2,4	120-82-1	70 ^M
Trichloroacetic acid ^C	76-03-9	0.52
Trichloroethane 1,1,1 (1,1,1-TCA) ⁶	71-55-6	14,000 or 200 ^M
Trichloroethane 1,1,2 ^{3, 6} (1,1,2-TCA)	79-00-5	2.8 to 5 ^M
Trichloroethylene (TCE) ⁶	79-01-6	<u>0.76</u> to 5 ^M
Trichloropropane 1,2,3 ^{C, 8}	96-18-4	3.7E-4
Trichlorophenol 2,4,5	95-95-4	700
Trichlorophenol 2,4,6 ^C	88-06-2	3.2
Trichlorophenoxypropionic acid (2,4,5-tp) (Silvex)	93-72-1	50 ^M
Vinyl Chloride ^{C, 6}	75-01-4	0.023 to 2 ^M
Xylenes (total) ⁶	1330-20-7	1,400 to 10,000 ^M

Notes and Abbreviations:

¹ All standards are chronic or 30-day standards. They are based on information contained in EPA's Integrated Risk Information System (IRIS) and/or EPA lifetime health advisories for drinking water using a 10⁻⁶ incremental risk factor unless otherwise noted.

² The standard for Benzene has been established at the MCL (q.v. 41.17)

³ Standards for Group C compounds that have both published toxicity and carcinogenic risk data are calculated based on toxicity data and then adjusted downward using an uncertainty factor of 10.

⁴ The Diisopropylmethylphosphonate (DIMP) standard was adopted in 1993 (q.v. 41.16)

⁵ PCBs are a class of chemicals that include aroclors, 1242, 1254, 1221, 1232, 1248, 1260, and 1016, CAS numbers 53469-21-9, 11097-69-1, 11104-28-2, 11141-16-5, 12672-29-6, 11096-82-5, and 12674-11-2 respectively. The human-health criteria apply to total PCBs, i.e. the sum of all congener or all isomer analyses.

⁶ Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The

Commission intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows:

- For trichloroethylene (TCE), where ground water quality exceeds the first number in the range due to a release of TCE that occurred prior to May 1, 2016, clean-up levels for the entire contaminant plume shall be no more restrictive than the maximum contaminant level established under the federal Safe Drinking Water Act.
- Where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004, (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective.
- Wherever the Commission has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.
- When the first number in the range is higher than the maximum contaminant level, the implementing agency must establish the protection level, either the first number in the range or the second number in the range, that is determined by the implementing agency to be consistent with the current and reasonably anticipated future uses of the ground water.
- The implementing agency has determined that setting the protection level to the second number in the range is consistent with the current and reasonably anticipated future uses of the groundwater, factoring in site-specific information, such as: existing prohibitions on groundwater use; whether the location is within the boundaries of an existing or reasonably anticipated public water supply; the proximity of the site to existing and reasonably anticipated water wells; whether or not the aquifer can produce water at a rate capable of supporting the anticipated use; or it can be demonstrated that access to groundwater is prohibited, unavailable or present at insufficient quantities for reliable use.

The Commission does not intend the adoption of this range of standards to result in changes to clean-up requirements previously established by an implementing agency, unless such change is mandated by the implementing agency pursuant to its independent statutory authority.

⁷ For aquifer storage and recovery facilities, if the source of this chemical in ground water is potable water provided by a drinking water system with a Colorado PWSID that meets all applicable federal Safe Drinking Water Act and corresponding State requirements at the time that it is utilized for aquifer storage and recovery or artificial recharge, then the separate total trihalomethane standard will apply to the ground water in question, rather than the individual standards for bromodichloromethane, bromoform, chloroform, and/or dibromochloromethane. For any parameter for which there is a Maximum Containment Level (MCL) established by the Safe Drinking Water Act, as identified in Table A with Footnote "M", the MCL shall apply as the standard for groundwater when potable water is used for ASR or artificial recharge.

⁸ Mutagenic compound, age dependent factors were used in calculating standard.

N/A – not applicable

^c Carcinogens classified by the EPA as A, B1, or B2.

^M Drinking water MCL.

CAS No. - Chemical Abstracts Service Registry Number

THM - Halomethanes

4. Whenever the practical quantitation limit, or PQL, for a pollutant is higher (less stringent) than a standard listed in subsection 2 or 3 above, the PQL shall be used in regulating specific activities. ~~These PQL's shall be approved by the Water Quality Control Division unless an alternate PQL has been established by the applicable implementing agency.~~ PQL's may be established by the applicable implementing agency or in consultation with the Water Quality Control Division.
5. Nothing in this regulation shall be interpreted to preclude:
 - a. An agency responsible for implementation of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601, et seq., as amended, from selecting a remedial action and a point of compliance that are more or less stringent than would be achieved by compliance with the statewide numerical standards established in this subsection, or alternative site-specific standards adopted by

the Commission, where a determination is made that such a variation is authorized pursuant to the applicable provisions of CERCLA; or

- b. An agency responsible for implementation of Subtitle C of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901, et seq., as amended, or the Colorado Hazardous Waste Act, C.R.S. 25-15-101, et seq., as amended, from applying background levels or establishing "alternate concentration limits" and a point of compliance that differ from the statewide numerical standards established in this subsection, or alternative site-specific standards adopted by the Commission, for purposes of establishing hazardous waste management or corrective action requirements, where a determination is made that such background levels or alternate concentration limits are authorized by the regulations adopted pursuant to these statutory authorities; or
- c. An agency responsible for implementation of a storage tank (ST) program, pursuant to C.R.S. 25-18-101 et seq., as amended, from issuing a regulatory determination, including a point of compliance, that is more or less stringent than would be achieved by compliance with the statewide numerical standards established in this subsection, or alternative site-specific standards adopted by the Commission, where a determination is made that the ground water quality protection criteria identified in applicable ST regulations are satisfied.

6. Interim Narrative Standard

- a. The "Interim Narrative Standard" in 41.5(C)(6)(b)(i) below is applicable to all ground water, to which standards have not already been assigned in the state, with the exception of those areas where the total dissolved solids (TDS) are equal to or exceed 10,000 mg/l. This standard is applicable independent of and in addition to the statewide standards for radioactive materials and organic pollutants established in this section 41.5.C.
 - b. i. Until such time as use classifications and numerical standards are adopted for the ground water on a site-specific basis throughout the state, and subject to the provisions of subsection (ii) below, ground-water quality shall be maintained for each parameter at whichever of the following levels is less restrictive:
 - (A) existing ambient quality as of January 31, 1994, or
 - (B) that quality which meets the most stringent criteria set forth in Tables 1 through 4 of "The Basic Standards for Ground Water."
 - ii. The interim standard shall not be interpreted or applied as defining or limiting the potential need for remediation of contaminated ground water where remedial requirements are established under state or federal law. It is the Commission's intent that, to the maximum degree technically feasible and economically reasonable, remedial efforts should be directed at cleaning up ground water contaminated by human activities to a degree such that it is usable for all existing and potential beneficial uses; this interim narrative standard is not intended to define when such remediation is or is not feasible. Where contamination already exists, this interim standard is merely intended to assure that conditions are not allowed to deteriorate further pending remedial action. The appropriate level of clean-up to be achieved may be addressed by this Commission in a future classification and standard-setting proceeding, or by other agencies with jurisdiction over remedial actions.

- iii. In applying this interim narrative standard, the Commission intends that agencies with authority to implement this standard will exercise their best professional judgment as to what constitutes adequate information to determine or estimate existing ambient quality, taking into account the location, sampling date, and quality of all available data. Data generated subsequent to January 31, 1994, shall be presumed to be representative of existing quality as of January 31, 1994, if the available information indicates that there have been no new or increased sources of ground water contamination initiated in the area in question subsequent to that date. If available information is not adequate to otherwise determine or estimate existing ambient quality as of January 31, 1994, such ground water quality for each parameter shall be assumed to be no worse than the most stringent levels provided for in Tables 1 through 4 of "The Basic Standards for Ground Water," unless the Commission has adopted alternative numerical standards for a given specified area.

D. Site-specific radioactive materials and organic pollutant standards

1. In determining whether to adopt site-specific standards to apply in lieu of the statewide standards established in subsection C above, the Commission shall first determine the appropriate ground water classifications within a specified area, in accordance with section 41.4.
2. The Commission shall then determine whether numerical standards other than some or all of the statewide standards established in subsection C above would be more appropriate for protection of the classified uses, taking into account the factors prescribed in section 25-8-204(4), C.R.S. and section 41.4. The downgrading factors described in Regulation No. 31, section 6(2)(B) of the Basic Standards and Methodologies for Surface Water shall not apply to the establishment of site-specific standards under this subsection.

...

41.27 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; APRIL 11, 2016 RULEMAKING; FINAL ACTION MAY 9, 2016; EFFECTIVE DATE JUNE 30, 2016

The provisions of sections 25-8-202(1)(b); 25-8-204; 25-8-402, C.R.S., provide the specific statutory authority for adoption. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

1. Statewide Standards - Interim Organic Pollutant Standards

The Commission adopted revised and new organic chemical standards in section 41.5(C)(3). In an effort to keep ground water and surface water organic chemical standards consistent, the changes to section 41.5(C)(3) were considered during the same hearing that addressed changes to the statewide surface water organic chemical standards in Regulation No. 31 (Basic Standards and Methodologies for Surface Water).

In adopting these new and revised organic chemical standards, the Commission continued to rely on its past policy decisions and precedence documented in Commission Policy 96-2. Additionally, as per Departmental policy, the Commission has relied on the United States Environmental Protection Agency's (EPA) Integrated Risk Information System (IRIS) as its first tier source of toxicological data. Review of the IRIS data that had been updated since the last revisions to 41.5(C)(3) indicated that the water quality standard for tetrachloroethylene (TCE), needed to be revised. This review also identified new compounds in the IRIS data that the Commission elected to adopt as water quality standards, these were: biphenyl, methanol, and tetrahydrofuran.

2. Table A, Footnote 6

The Commission amended Footnote 6 to Table A in section 41.5(C)(3) to clarify the standards implementation intent of the Commission when a human health based standard is a higher numeric value than the maximum contaminant level in a range between the human health based standard and the maximum contaminant level.

The Commission's intent in implementing the revised TCE standard was added to the footnote to allow cleanup decisions made prior to this rulemaking to not be effected by the revision. The Commission deleted implementation language for organic chemicals, other than TCE, that was deemed no longer necessary.

The Commission added to the footnote and explanation of its intent with how an implementing agency can establish a protection level when there is site-specific information that demonstrates that there is no current or reasonably anticipated future uses of groundwater.

3. Practical Quantification Limitations (PQLs)

The Commission heard testimony that the provision that the Practical Quantification Limitations (PQLs) used by the groundwater standards implementing agencies must be approved by the WQCD is no longer necessary. The groundwater implementing agencies have their own PQLs or PQL equivalents established under their own authorities. Therefore, section 41.5(C)(4) was amended to remove the requirement of the WQCD approving PQL's for the groundwater standards implementing agency.