ADOPTED REGULATION OF THE

STATE ENVIRONMENTAL COMMISSION

LCB File No. R186-08

Effective December 17, 2008

EXPLANATION – Matter in ***italics*** is new; matter in brackets ~~omitted material~~ is material to be omitted.

AUTHORITY: §1, NRS 445A.425 and 445A.520.

A REGULATION relating to toxic materials; revising the water quality standard for molybdenum; providing an exception; and providing other matters properly relating thereto.

Section 1. NAC 445A.144 is hereby amended to read as follows:

445A.144 1. Except ***for waters which have site-specific standards for toxic materials or*** as otherwise provided in this section, the standards for toxic materials prescribed in subsection 2 are applicable to the waters specified in NAC 445A.123 to 445A.127, inclusive, and 445A.145 to 445A.225, inclusive. The following criteria apply to this section:

(a) If the standards are exceeded at a site and are not economically controllable, the Commission will review and may adjust the standards for the site.

(b) If a standard does not exist for each designated beneficial use, a person who plans to discharge waste must demonstrate that no adverse effect will occur to a designated beneficial use. If the discharge of a substance will lower the quality of the water, a person who plans to discharge waste must meet the requirements of NRS 445A.565.

(c) If a criterion is less than the detection limit of a method that is acceptable to the Division, laboratory results which show that the substance was not detected shall be deemed to show

compliance with the standard unless other information indicates that the substance may be present.

2. The standards for toxic materials are:

Chemical	Municipal or Domestic Supply[1] (µg/l)	Aquatic Life[1,2] (µg/l)	Irrigation[1] (µg/l)	Watering of Livestock[1] (µg/l)
INORGANIC CHEMICALS[3]				
Antimony	146[a]	-	-	-
Arsenic	50[b]	-	100[c]	200[d]
1-hour average	-	340[g,h]	-	-
96-hour average	-	150[g,h]	-	-
Barium	2,000[b]	-	-	-
Beryllium	0[a]	-	100[c]	-
hardness <75 mg/l	-	-	-	-
hardness >= 75 mg/l	-	-	-	-
Boron	-	-	750[a]	5,000[d]
Cadmium	5[b]	-	10[d]	50[d]
1-hour average	-	$(1.136672-\{\ln(\text{hardness})(0.041838)\})*e^{(1.0166\{\ln(\text{hardness})\}-3.924)}$ [g,h]	-	-
96-hour average	-	$(1.101672-\{\ln(\text{hardness})(0.041838)\})*e^{(0.7409\{\ln(\text{hardness})\}-4.719)}$ [g,h]	-	-
Chromium (total)	100[b]	-	100[d]	1,000[d]
Chromium (VI)	-	-	-	-
1-hour average	-	16[g,h]	-	-
96-hour average	-	11[g,h]	-	-
Chromium (III)	-	-	-	-
1-hour average	-	$(0.316) * e^{(0.8190\{\ln(\text{hardness})\}+3.7256)}$ [g,h]	-	-

Chemical	Municipal or Domestic Supply[1] (µg/l)	Aquatic Life[1,2] (µg/l)	Irrigation[1] (µg/l)	Watering of Livestock[1] (µg/l)
96-hour average	-	(0.860) * e (0.8190{ln(hardness)} + 0.6848) g,h	-	-
Copper	-	-	200[d]	500[d]
1-hour average	-	(0.960) * e (0.9422{ln(hardness)} - 1.700) g,h	-	-
96-hour average	-	(0.960) * e (0.8545{ln(hardness)} - 1.702) g,h	-	-
Cyanide	200[a]	-	-	-
1-hour average	-	22[h]	-	-
96-hour average	-	5.2[h]	-	-
Fluoride	-	-	1,000[d]	2,000[d]
Iron			***5,000[d]***	
96-hour average	-	1,000[h]	~~[5,000[d]]~~	-
Lead	50[a,b]	-	5,000[d]	100[d]
1-hour average	-	(1.46203-{ln(hardness)(0.145712)})* e (1.273{ln(hardness)} - 1.460) g,h	-	-
96-hour average	-	(1.46203-{ln(hardness)(0.145712)})* e (1.273{ln(hardness)} - 4.705) g,h	-	-
Manganese	-	-	200[d]	-
Mercury	2[b]	-	-	10[d]
1-hour average	-	1.4[g,h]	-	-
96-hour average	-	0.77[g,h]	-	-
Molybdenum	-	~~[19[e]]~~	-	-
1-hour average	-	***6,160[e]***	-	-
96-hour average	-	***1,650[e]***	-	-
Nickel	13.4[a]	-	200[d]	-
1-hour average	-	(0.998) * e (0.8460{ln(hardness)} + 2.255) g,h	-	-
96-hour average	-	(0.997) * e (0.8460{ln(hardness)} + 0.0584) g,h	-	-
Selenium	50[b]	-	20[d]	50[d]
1-hour average	-	20[a]	-	-

Chemical	Municipal or Domestic Supply[1] (µg/l)	Aquatic Life[1,2] (µg/l)	Irrigation[1] (µg/l)	Watering of Livestock[1] (µg/l)
96-hour average	-	5.0[h]	-	-
Silver				
1-hour average	-	(0.85) * e $^{(1.72\{\ln(\text{hardness})\} - 6.59)}$ [g,h]	-	-
Sulfide (undissociated hydrogen sulfide)				
96-hour average	-	2.0[h]	-	-
Thallium	13[a]	-	-	-
Zinc	-	-	2,000[d]	25,000[d]
1-hour average	-	(0.978) * e $^{(0.8473\{\ln(\text{hardness})\} + 0.884)}$ [g,h]	-	-
96-hour average	-	(0.986) * e $^{(0.8473\{\ln(\text{hardness})\} + 0.884)}$ [g,h]	-	-
ORGANIC CHEMICALS				
Acrolein	320[a]	-	-	-
Aldrin	0[a]	3[a]	-	-
Chlordane	0[a]	2.4[a]	-	-
24-hour average	-	0.0043[a]	-	-
2,4-D	100[a,b]	-	-	-
DDT & metabolites	0[a]	1.1[a]	-	-
24-hour average	-	0.0010[a]	-	-
Demeton	-	0.1[a]	-	-
Dieldrin	0[a]	2.5[a]	-	-
24-hour average	-	0.0019[a]	-	-
Endosulfan	75[a]	0.22[a]	-	-
24-hour average	-	0.056[a]	-	-
Endrin	0.2[b]	0.18[a]	-	-
24-hour average	-	0.0023[a]	-	-
Guthion	-	0.01[a]	-	-

Chemical	Municipal or Domestic Supply[1] (µg/l)	Aquatic Life[1,2] (µg/l)	Irrigation[1] (µg/l)	Watering of Livestock[1] (µg/l)
Heptachlor	-	0.52[a]	-	-
24-hour average	-	0.0038[a]	-	-
Lindane	4[b]	2.0[a]	-	-
24-hour average	-	0.080[a]	-	-
Malathion	-	0.1[a]	-	-
Methoxychlor	100[a,b]	0.03[a]	-	-
Mirex	0[a]	0.001[a]	-	-
Parathion	-	-	-	-
1-hour average	-	0.065[a]	-	-
96-hour average	-	0.013[a]	-	-
Silvex (2,4,5-TP)	10[a,b]	-	-	-
Toxaphene	5[b]	-	-	-
1-hour average	-	0.73[a]	-	-
96-hour average	-	0.0002[a]	-	-
Benzene	5[b]	-	-	-
Monochlorobenzene	488[a]	-	-	-
m-dichlorobenzene	400[a]	-	-	-
o-dichlorobenzene	400[a]	-	-	-
p-dichlorobenzene	75[b]	-	-	-
Ethylbenzene	1,400[a]	-	-	-
Nitrobenzene	19,800[a]	-	-	-
1,2-dichloroethane	5[b]	-	-	-
1,1,1-trichloroethane (TCA)	200[b]	-	-	-
Bis (2-chloroisopropyl) ether	34.7[a]	-	-	-
Chloroethylene (vinyl chloride)	2[b]	-	-	-
1,1-dichloroethylene	7[b]	-	-	-

Chemical	Municipal or Domestic Supply[1] (µg/l)	Aquatic Life[1,2] (µg/l)	Irrigation[1] (µg/l)	Watering of Livestock[1] (µg/l)
Trichloroethylene (TCE)	5[b]	-	-	-
Hexachlorocyclopentadiene	206[a]	-	-	-
Isophorone	5,200[a]	-	-	-
Trihalomethanes (total)[f]	100[b]	-	-	-
Tetrachloromethane (carbon tetrachloride)	5[b]	-	-	-
Phenol	3,500[a]	-	-	-
2,4-dichlorophenol	3,090[a]	-	-	-
Pentachlorophenol	1,010[a]	-	-	-
1-hour average	-	exp{1.005 (pH)-4.830}[a]	-	-
96-hour average	-	exp{1.005 (pH)-5.290}[a]	-	-
Dinitrophenols	70[a]	-	-	-
4,6-dinitro-2-methylphenol	13.4[a]	-	-	-
Dibutyl phthalate	34,000[a]	-	-	-
Diethyl phthalate	350,000[a]	-	-	-
Dimethyl phthalate	313,000[a]	-	-	-
Di-2-ethylhexyl phthalate	15,000[a]	-	-	-
Polychlorinated biphenyls (PCBs)	0[a]	-	-	-
24-hour average	-	0.014[a]	-	-
Fluoranthene (polynuclear aromatic hydrocarbon)	42[a]	-	-	-
Dichloropropenes	87[a]	-	-	-
Toluene	14,300[a]	-	-	-

Footnotes:

(1) Single concentration limits and 24-hour average concentration limits must not be exceeded. One-hour average and 96-hour average concentration limits may be exceeded only once every 3 years. See reference a.

(2) Aquatic life standards apply to surface waters only; “hardness” is expressed as mg/L CaCO3; and “e” refers to the base of the natural logarithm whose value is 2.718.

(3) The standards for metals are expressed as total recoverable, unless otherwise noted.

References:

a. U.S. Environmental Protection Agency, Pub. No. EPA 440/5-86-001, *Quality Criteria for Water* (Gold Book) (1986).

b. Federal Maximum Contaminant Level (MCL), 40 C.F.R. §§ 141.11, ~~[141.12,]~~ 141.61 and 141.62 (1992).

c. U.S. Environmental Protection Agency, Pub. No. EPA 440/9-76-023, *Quality Criteria for Water* (Red Book) (1976).

d. National Academy of Sciences, *Water Quality Criteria* (Blue Book) (1972).

e. ~~[California State Water Resources Control Board, Regulation of Agricultural Drainage to the San Joaquin River: Appendix D, Water Quality Criteria (March 1988 revision).]~~ ***Nevada Division of Environmental Protection, Aquatic Life Water Quality Criteria for Molybdenum, Tetra Tech, Inc., (June 2008)***

f. The criteria for trihalomethanes (total) is the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform). See reference b.

g. This standard applies to the dissolved fraction.

h. U.S. Environmental Protection Agency, *National Recommended Water Quality Criteria*, May 2005.

NOTICE OF ADOPTION OF PROPOSED REGULATION
LCB File No. R186-08
SEC # P2008-17

The State Environmental Commission adopted regulations assigned LCB File No. R186-08 which pertain to chapter 445A of the Nevada Administrative Code.

INFORMATIONAL STATEMENT

Regulation R186-08: Revision of Molybdenum Aquatic Life Water Quality Standard: This regulation amends NAC 445A.144. The regulation makes changes to the aquatic life standard for molybdenum. Other minor editorial changes are made to NAC 445A.144 including revising Section 1 language; changing the location in the table of the Irrigation Standard for Iron; and revising Reference (e).

1. A description of how public comment was solicited, a summary of public response and an explanation of how other interested persons may obtain a copy of the summary. The Nevada Division of Environmental Protection, Bureau of Water Quality Planning held three public workshops on the above referenced regulation at the locations noted below.

Elko, Nevada	**Carson City, Nevada**	**Las Vegas, Nevada**
August 20, 2008 11:00 a.m. – 1:00 p.m. Elko Convention Center Silver Room 700 Moren Way Elko, Nevada 89801	August 27, 2008 1:30 p.m. – 3:30 p.m. Department of Conservation & Natural Resources Richard H. Bryan State Office Building 901 South Stewart Street Humboldt Conference Room, 3rd Floor (South) Carson City, Nevada 89701	August 28, 2008 10:00 a.m. – 12:00 p.m. Division of Environmental Protection Las Vegas Office 2030 East Flamingo Road, Suite 230 Red Rock Conference Room Las Vegas, Nevada 89119

In addition to these workshops, the agency made available for public review two documents titled “Rationale for Proposed Revision to Aquatic Life Water Quality Criteria for Molybdenum” and “Aquatic Life Water Quality Criteria for Molybdenum.” These documents are posted on agencies website at: **http://ndep.nv.gov/admin/public.htm#water_q**

Following this workshop, the State Environmental Commission (SEC) held a public hearing to consider the regulation on November 12, 2008. The hearing was held at the Nevada Department of Wildlife's Conference Room A, 1100 Valley Road, Reno, Nevada. The SEC hearing agenda was posted at the meeting location, at the State Library in Carson City, and at the Offices of the Division of Environmental Protection in Carson City and Las Vegas. Copies of the agenda, the public notice, and the proposed regulation were also made available to all public libraries throughout the state as well as to individuals on the SEC electronic and ground-based mailing lists.

The public notice for the regulation was published on Monday October 13 and 27, 2008, and on November 3rd 2008 in the Las Vegas Review Journal and Reno Gazette Journal newspapers. Information about the regulation was also made available on the SEC website at: **http://www.sec.nv.gov/main/hearing_111208.htm**

2. The number persons who attended the SEC Regulatory Hearing:

(a) Attended November 12, 2008 hearing; 30 (approx.)
(b) Testified on this Petition at the hearing: 1 (1 NDEP Staff)
(c) Submitted to the agency written comments: 0

3. A description of how comment was solicited from affected businesses, a summary of their response, and an explanation of how other interested persons may obtain a copy of the summary.

Comments were solicited from affected businesses as indicated in number 1 above.

4. If the regulation was adopted without changing any part of the proposed regulation, a summary of the reasons for adopting the regulation without change.

The State Environmental Commission adopted the regulation that was presented at the meeting with out any changes.

5. The estimated economic effect of the adopted regulation on the business which it is to regulate and on the public.

This regulation will not have an immediate or long-term adverse economic impact on the public or the business community

6. The estimated cost to the agency for enforcement of the adopted regulation.

There will be no additional cost to the agency for enforcement of the proposed regulation.

7. A description of any regulations of other state or government agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the name of the regulating federal agency.

The regulation does not overlap or duplicate any regulations of other state or government agencies.

8. If the regulation includes provisions which are more stringent than a federal regulation, which regulates the same activity, a summary of such provisions.

The regulation is not more stringent than any local or federal laws and regulations.

9. If the regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

The proposed regulation does not address any fees.