

**Criteria for determining the need for  
Permits to Construct and Operate  
under the  
Chemical Accident Prevention Program  
(CAPP)**

1. If a new facility proposes to use, store, produce or otherwise handle any highly hazardous substance in excess of the listed threshold quantity, they will likely need to obtain permits from CAPP prior to construction and commencement of operation. (Refer to the table that follows for substances and threshold quantities.)
2. If a new facility proposes to manufacture explosives for sale in any quantity, they will likely need to obtain permits from CAPP prior to construction and commencement of operation. Explosives are substances that are classified as division 1.1, 1.2, 1.3, 1.4, or 1.5 in the federal Department of Transportation's Table of Hazardous Materials, codified at 49 CFR 172.101 (contact NDEP if further clarification is required).
3. If either statement 1 or 2 above is met, contact CAPP for determination: Mark Zusy, P.E., CAPP Supervisor, (775) 687-9479, or e-mail: [mzusy@ndep.nv.gov](mailto:mzusy@ndep.nv.gov).
4. Mining facilities, transportation activities, and some LP Gas operations are exempt from these requirements.

**Excerpts from:  
NEVADA ADMINISTRATIVE CODE**

**NAC 459.9523 "C.A.S." defined.** ([NRS 459.3818](#)) "C.A.S." means the Chemical Abstracts Service.  
(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99)

**NAC 459.952465 "Explosive" defined.** ([NRS 459.3818](#)) "Explosive" means a chemical classified as an explosive pursuant to subsections 2 and 3 of [NAC 459.9533](#).  
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

**NAC 459.95255 "Highly hazardous substance" defined.** ([NRS 459.3818](#)) "Highly hazardous substance" means a chemical listed in subsection 1 of [NAC 459.9533](#), regardless of the amount or quantity of the chemical present.  
(Added to NAC by Environmental Comm'n by R137-04, eff. 2-15-2005)

**Table of Substances**

**NAC 459.9533 Tabulated values for threshold quantity, two release quantity and toxic endpoints; classification of substance as explosive. (NRS 459.3816, 459.3818, 459.3833)**

1. The following table sets forth the list of highly hazardous substances and the parameters associated with carrying out C.A.P.P.:

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Acetaldehyde	Ethanal		75-07-0	2,500	1,000	1	F	
Acetylene	Ethyne		74-86-2	10,000	1,000	3	F	
Acrolein	2-Propenol		107-02-8	150	1	1 & 2	T	0.0011
Acrylonitrile	2-Propenenitrile		107-13-1	20,000	100	1 & 2	T	0.076
Acrylyl chloride	2-Propenoyl chloride		814-68-6	250	100	2	T	0.00090
Alkylaluminums				5,000	50*	3		
Allyl alcohol	2-Propen-1-ol		107-18-6	15,000	100	1 & 2	T	0.036
Allyl chloride	3-chloropropene		107-05-1	1,000	100	3	T	0.1252
Allylamine	2-Propen-1-amine		107-11-9	1,000	500	2	T	0.0032
Ammonia	Anhydrous Ammonia	Anhydrous	7664-41-7	5,000	100	1 & 2	T	0.14
Ammonia	Ammonia solution Ammonium hydroxide	20 wt% to 44 wt%	7664-41-7	20,000 note 2	1,000	1	T	0.14
Ammonia	Ammonia solution Ammonium hydroxide	concentration greater than 44% ammonia by weight	7664-41-7	10,000 note 2	1,000	1	T	0.14
Ammonium perchlorate			7790-98-9	7,500	75*	3		
Ammonium permanganate			7787-36-2	7,500	75*	3		
Arsenous trichloride			7784-34-1	15,000	1	1 & 2	T	0.010
Arsine	Arsenic Hydride		7784-42-1	100	10	3	T	0.0019
bis(Chloromethyl) Ether	Chloromethyl Ether		542-88-1	100	10	1 & 2	T	0.00025
Boron trichloride			10294-34-5	2,500	100	3	T	0.010
Boron trifluoride			7637-07-2	250	25	3	T	0.028
Boron trifluoride w/Methyl Ether		1:1 ratio	353-42-4	15,000	1,000	2	T	0.023
Bromine			7726-95-6	1,500	500	2	T	0.0065
Bromine chloride			13863-41-7	1,500	10	3	T	0.00472
Bromine pentafluoride			7789-30-2	2,500	100	3	T	0.00715

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Bromine trifluoride			7787-71-5	15,000	1000	3	T	0.0025
Bromotrifluor-ethylene			598-73-2	10,000	1,000	3	F	
1,3-Butadiene			106-99-0	10,000	10	1	F	
Butane			106-97-8	10,000	1,000	3	F	
1-Butene			106-98-9	10,000	1,000	3	F	
2-Butene			107-01-7	10,000	1,000	3	F	
Butene			25167-67-3	10,000	1,000	3	F	
2-Butene-cis			590-18-1	10,000	1,000	3	F	
2-Butene-trans			624-64-6	10,000	1,000	3	F	
Butyl hydroperoxide (Tertiary)			75-91-2	5,000	50*	3		
Butyl perbenzoate (Tertiary)			614-45-9	7,500	75*	3		
Carbon disulfide			75-15-0	20,000	100	1 & 2	T	0.16
Carbon oxysulfide	Carbon Oxide Sulfide		463-58-1	10,000	100	1	F	
Carbonyl fluoride			353-50-4	2,500	10	3	T	0.00972
Cellulose nitrate		concentration greater than 12.6% nitrogen	9004-70-0	2,500	25*	3		
Chlorine			7782-50-5	1,500	10	1 & 2	T	0.0087
Chlorine dioxide			10049-04-4	1,000	100	3	T	0.0028
Chlorine monoxide			7791-21-1	10,000	1,000	3	F	
Chlorine pentafluoride			13637-63-3	1,000	10	3	T	0.003
Chlorine trifluoride			7790-91-2	1,000	100	3	T	0.0038
Chlorodiethyl-aluminum	Diethyl-aluminum Chloride		96-10-6	5,000	50*	3		
1-Chloro-2,4-Dinitrobenzene			97-00-7	5,000	50*	3		
Chloroform			67-66-3	20,000	10	1 & 2	T	0.49
Chloromethyl methyl ether			107-30-2	500	10	1 & 2	T	0.0018
Chloropicrin			76-06-2	500	50	3	T	0.00134
Chloropicrin/ Methylbromide mix				1,500	500	3	T	0.00078
Chloropicrin/ Methylchloride mix				1,500	500	3	T	
1-Chloropropylene			590-21-6	10,000	1,000	3	F	
2-Chloropropylene			557-98-2	10,000	1,000	3	F	

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Crotonaldehyde	2-Butenal		4170-30-3	20,000	100	1 & 2	T	0.029
Crotonaldehyde, (E)-	2-Butenal, (E)-		123-73-9	20,000	100	1 & 2	T	0.029
Cumene Hydroperoxide			80-15-9	5,000	10	1		
Cyanogen	Ethanedinitrile		460-19-5	2,500	100	1	F	
Cyanogen chloride			506-77-4	500	10	1	T	0.030
Cyanuric fluoride			675-14-9	100	10	3	T	0.00017
Cyclohexylamine	Cyclohex-animine		108-91-8	15,000	1,000	2	T	0.16
Cyclopropane			75-19-4	10,000	1,000	3	F	
Diacetyl peroxide		concentration greater than 70%	110-22-5	5,000 note 2	50*	3		
Diazomethane			334-88-3	500	10	3		
Dibenzoyl peroxide			94-36-0	7,500	75*	3		
Diborane			19287-45-7	100	10	3	T	0.0011
Dibutyl peroxide (tertiary)			110-05-4	5,000	50*	3		
Dichloro acetylene			7572-29-4	250	10	3		
Dichlorosilane			4109-96-0	2,500	100	3	F	
Diethylzinc			557-20-0	10,000	100*	3		
Difluoroethane			75-37-6	10,000	1,000	3	F	
Diisopropyl peroxydicarbonate			105-64-6	7,500	75*	3		
Dilauroyl peroxide			105-74-8	7,500	75*	3		
Dimethyl sulfide			75-18-3	100	10	3	T	1.27
Dimethylamine		anhydrous	124-40-3	2,500	1,000	1	F	
Dimethyl-dichlorosilane			75-78-5	1,000	500	2	T	0.026
1,1-Dimethylhydrazine			57-14-7	1,000	10	1 & 2	T	0.012
2,2-Dimethylpropane			463-82-1	10,000	1,000	3	F	
2,4-Dinitroanaline			97-02-9	5,000	50*	3		
Epichlorohydrin			106-89-8	20,000	100	1 & 2	T	0.076
Ethane			74-84-0	10,000	1,000	3	F	
Ethyl acetylene	1-Butyne		107-00-6	10,000	1,000	3	F	
Ethyl chloride			75-00-3	10,000	100	1	F	
Ethyl ether			60-29-7	10,000	100	1	F	
Ethyl mercaptan	Ethanethiol		75-08-1	10,000	1,000	3	F	
Ethyl nitrite			109-95-5	5,000	50*	3	F	

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Ethylamine	Ethanamine		75-04-7	7,500	100	1	F	
Ethylene	Ethene		74-85-1	10,000	1,000	3	F	
Ethylene fluorohydrin			371-62-0	100	10	2	T	0.0008
Ethylene oxide	Oxirane		75-21-8	5,000	10	1 & 2	T	0.090
Ethylenediamine			107-15-3	20,000	5,000	1 & 2	T	0.49
Ethyleneimine	Aziridine		151-56-4	1,000	1	1 & 2	T	0.018
Fluorine			7782-41-4	100	10	1 & 2	T	0.0039
Formaldehyde		concentration of 37% or greater by weight	50-00-0	1,000 note 2	100	1 & 2	T	0.012
Furan			110-00-9	500	100	1 & 2	T	0.0012
Hexafluoroacetone			684-16-2	5,000	10	3	T	0.0068
Hydrazine			302-01-2	15,000	1	1 & 2	T	0.011
Hydrochloric acid		37% or greater	7647-01-0	15,000 note 2	1,000	3	T	0.030
Hydrofluoric acid		50% or greater	7664-39-3	1,000 note 2	100	1	T	0.016
Hydrogen			1333-74-0	10,000	1,000	3	F	
Hydrogen bromide			10035-10-6	5,000	10	3	T	0.01
Hydrogen chloride		Anhydrous	7647-01-0	5,000	100	3	T	0.030
Hydrogen cyanide	Hydrocyanic acid	Anhydrous	74-90-8	1,000	10	1 & 2	T	0.011
Hydrogen fluoride		Anhydrous	7664-39-3	1,000	100	1 & 2	T	0.016
Hydrogen peroxide		concentration of 52% or greater by weight	7722-84-1	7,500 note 2	1,000	2		
Hydrogen selenide			7783-07-5	150	10	2	T	0.00066
Hydrogen sulfide			7783-06-4	1,500	100	1 & 2	T	0.042
Hydroxylamine			7803-49-8	2,500	25*	3		
Iron, pentacarbonyl			13463-40-6	250	100	2	T	0.00044
Isobutane	1,1-dimethyl ethane		75-28-5	10,000	1,000	3	F	
Isobutyronitrile			78-82-0	20,000	1,000	2	T	0.14
Isopentane			78-78-4	10,000	1,000	3	F	
Isoprene			78-79-5	10,000	100	1	F	
Isopropyl chloride	2 - chloropropane		75-29-6	10,000	1,000	3	F	
Isopropyl chloroformate			108-23-6	15,000	1,000	2	T	0.10
Isopropyl formate			625-55-8	500	100	3	T	0.0014
Isopropylamine			75-31-0	5,000	1,000	3	F	

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Ketene			463-51-4	100	10	3	T	0.18
Methacrylaldehyde			78-85-3	1,000	500	3	T	0.007
Methacryloyl chloride			920-46-7	150	100	2	T	0.0006
Methacryloyloxyethyl isocyanate			30674-80-7	100	10	3	T	0.00063
Methane			74-82-8	10,000	1,000	3	F	
Methyl acrylonitrile	Meth-acrylonitrile		126-98-7	250	25	3	T	0.0027
Methyl bromide			74-83-9	2,500	500	3	T	0.194
3-Methyl-1-butene	Isopentene		563-45-1	10,000	1,000	3	F	
2-Methyl-1-butene			563-46-2	10,000	1,000	3	F	
Methyl chloride			74-87-3	15,000	100	1	T	0.82
Methyl chloroformate			79-22-1	500	100	3	T	0.0019
Methyl disulfide			624-92-0	100	10	3	T	0.19
Methyl ether			115-10-6	10,000	1,000	3	F	
Methyl ethyl ketone peroxide	Ethyl methyl ketone peroxide	concentration greater than 60%	1338-23-4	5,000 note 2	10	1		
Methyl fluoroacetate			453-18-9	100	10	3	T	0.00025
Methyl fluorosulfate			421-20-5	100	10	3	T	0.00023
Methyl formate			107-31-3	10,000	1,000	3	F	
Methyl hydrazine			60-34-4	100	10	1 & 2	T	0.0094
Methyl iodide			74-88-4	7,500	100	1	T	0.29
Methyl isocyanate			624-83-9	250	10	1 & 2	T	0.0012
Methyl mercaptan			74-93-1	5,000	100	1 & 2	T	0.049
Methyl thiocyanate			556-64-9	20,000	10,000	2	T	0.085
Methyl vinyl ketone			78-94-4	100	10	2	T	0.00007
Methylamine	Methanamine	Anhydrous	74-89-5	1,000	100	1	F	
2-Methylpropene			115-11-7	10,000	1,000	3	F	
Methyltrichlorosilane			75-79-6	500	50	3	T	0.018
Nickel carbonyl			13463-39-3	150	10	1 & 2	T	0.00067
Nitric acid		80% or greater	7697-37-2	15,000 note 2	1,000	1 & 2	T	0.026
Nitric acid		concentration of 94.5% or greater by weight	7697-37-2	500 note 2	50	3	T	0.026
Nitric oxide	Nitrogen oxide		10102-43-9	250	10	1 & 2	T	0.031
Nitroaniline	para Nitroaniline		100-01-6	5,000	50*	3		

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Nitrogen dioxide			10102-44-0	250	10	1 & 2	T	0.0282
Nitrogen oxides		NO; NO <sub>2</sub> ; N <sub>2</sub> O <sub>5</sub> ; N <sub>2</sub> O	10102-44-0	250	10	3	T	0.0282
Nitrogen tetroxide			10544-72-6	250	10	1	T	0.0564
Nitrogen trifluoride			7783-54-2	5,000	1,000	3	T	0.29
Nitrogen trioxide			10544-73-7	250	10	3	T	0.016
Nitromethane			75-52-5	2,500	25*	3		
Oleum	Fuming sulfuric acid	65 wt% or greater of SO <sub>3</sub>	8014-95-7	1,000	500	3	T	0.010
Osmium tetroxide			20816-12-0	100	10	3	T	0.001
Oxygen difluoride	Fluorine monoxide		7783-41-7	100	10	3		
Ozone			10028-15-6	100	10	3		
Pentaborane			19624-22-7	100	10	3	T	0.00026
1,3-Pentadimene			504-60-9	10,000	100	1	F	
Pentane			109-66-0	10,000	1,000	3	F	
1-Pentene			109-67-1	10,000	1,000	3	F	
2-Pentene, (E)-			646-04-8	10,000	1,000	3	F	
2-Pentene, (Z)-			627-20-3	10,000	1,000	3	F	
Peracetic acid	Peroxyacetic acid	concentration greater than 60% acetic acid	79-21-0	1,000 note 2	500	2	T	0.0045
Perchloric acid		concentration greater than 60% by weight	7601-90-3	5,000 note 2	50*	3		
Perchloromethyl mercaptan			594-42-3	150	100	1 & 2	T	0.0076
Perchloryl fluoride			7616-94-6	5,000	100	3	T	0.042
Phosgene	Carbonyl chloride		75-44-5	100	10	1 & 2	T	0.00081
Phosphine	Hydrogen phosphide		7803-51-2	100	10	3	T	0.0035
Phosphorus oxychloride	Phosphoryl chloride		10025-87-3	1,000	500	3	T	0.0030
Phosphorus trichloride			7719-12-2	1,000	500	3	T	0.028
Piperidine			110-89-4	15,000	1,000	2	T	0.022
Propadiene	1,2 Propadiene		463-49-0	10,000	1,000	3	F	
Propane			74-98-6	10,000	1,000	3	F	
Propargyl bromide	3-Bromopropyne		106-96-7	100	10	2	T	0.00003
Propionitrile			107-12-0	10,000	10	1 & 2	T	0.0037

Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (I) or Flam (F)	Toxic Endpoint (mg/L)
Propyl chloroformate			109-61-5	15,000	500	2	T	0.010
Propyl nitrate			627-13-4	100	25*	3		
Propylene	1 Propene		115-07-1	10,000	1,000	3	F	
Propylene oxide			75-56-9	10,000	100	1 & 2	T	0.59
Propylencimine			75-55-8	10,000	1	1 & 2	T	0.12
Propyne	1-Propyne		74-99-7	10,000	1,000	3	F	
Sarin			107-44-8	100	10	2	T	0.00006
Selenium hexafluoride			7783-79-1	1,000	1	1	T	0.0016
Silane			7803-62-5	10,000	1,000	3	F	
Stibine	Antimony hydride		7803-52-3	500	10	3	T	0.0026
Sulfur dioxide		Anhydrous	7446-09-5	1,000	100	3	T	0.0078
Sulfur pentafluoride			5714-22-7	250	10	3	T	0.001
Sulfur tetrafluoride			7783-60-0	250	10	3	T	0.0092
Sulfur trioxide	Sulfuric Anhydride		7446-11-9	1,000	100	2	T	0.010
Tellurium hexafluoride			7783-80-4	250	10	3	T	0.0009
Tetrafluoroethylene			116-14-3	5,000	1,000	3	F	
Tetrafluorohydrazine			10036-47-2	5,000	500	3	T	0.0213
Tetramethyl Lead			75-74-1	1,000	100	2	T	0.0040
Tetramethylsilane			75-76-3	10,000	1,000	3	F	
Tetranitromethane			509-14-8	10,000	10	2	T	0.0040
Thionyl chloride			7719-09-7	250	100	3	T	0.0097
Titanium tetrachloride			7550-45-0	2,500	1,000	1 & 2	T	0.020
Toluene 2,4-diisocyanate			584-84-9	10,000	100	1 & 2	T	0.0070
Toluene 2,6-diisocyanate			91-08-7	10,000	100	1 & 2	T	0.0070
Toluene diisocyanate			26471-62-5	10,000	100	1 & 2	T	0.0070
Trichloro (chloromethyl) silane			1558-25-4	100	10	3	T	0.0003
Trichloro (dichlorophenyl) silane			27137-85-5	2,500	500	2	T	0.008
Trichlorosilane			10025-78-2	5,000	500	3	F	
Trifluoro-chloroethylene			79-38-9	10,000	500	3	F	
Trimethoxysilane			2487-90-3	1,500	500	3	T	0.01
Trimethylamine			75-50-3	10,000	100	1	F	



Chemical Name	Alternate Chemical Name	Mixture Description	CAS Number	Threshold Quantity (lbs)	Two Release Quantity (lbs)	Two Release Source note 1	Tox (T) or Flam (F)	Toxic Endpoint (mg/L)
Trimethylchlorosilane			75-77-4	10,000	500	2	T	0.050
Vinyl acetate monomer			108-05-4	15,000	1,500	3	T	0.26
Vinyl acetylene			689-97-4	10,000	1,000	3	F	
Vinyl chloride			75-01-4	10,000	1	1	F	
Vinyl ethyl ether			109-92-2	10,000	1,000	3	F	
Vinyl fluoride			75-02-5	10,000	1,000	3	F	
Vinyl methyl ether			107-25-5	10,000	1,000	3	F	
Vinylidene chloride			75-35-4	10,000	100	1	F	
Vinylidene fluoride			75-38-7	10,000	1,000	3	F	

Table Notes:

Note 1: For Two Release Source Column: 1 = RQ as listed in 40 C.F.R. Part 302; 2 = RQ as listed in 40 C.F.R. Part 355; 3 = Two Release Quantity as determined in "Technical Basis Document for C.A.P.P. Two Release Quantities and Toxic Endpoints."

Note 2: The threshold quantity must be applied to the fraction of the chemical in the actual mixture.

\* These substances must be involved in a fire or explosion to qualify as a release pursuant to subparagraph (2) of paragraph (a) of subsection 1 of [NAC 459.95323](#).

2. Except as otherwise provided in subsection 3, a substance must be classified as an explosive if the substance is classified as division 1.1, 1.2, 1.3, 1.4 or 1.5 in column 3 of the Table of Hazardous Materials in 49 C.F.R. § 172.101, which is adopted by reference pursuant to [NAC 459.95528](#).

3. The list of explosives as classified pursuant to subsection 2 excludes those substances described in 18 U.S.C. § 845(a).

4. If a substance:

(a) Is listed as a highly hazardous substance pursuant to subsection 1; and

(b) Is also classified as an explosive pursuant to subsection 2 which is not excluded pursuant to subsection 3, the substance must be treated as a highly hazardous substance for the purposes of [NAC 459.952](#) to [459.95528](#), inclusive, if the substance is present in the process in excess of the threshold quantity set forth for the substance pursuant to subsection 1.

(Added to NAC by Environmental Comm'n by R121-98, eff. 5-27-99; A by R041-01, 10-25-2001; R137-04, 2-15-2005)