NPDES PERMIT NO. NM0029505
STATEMENT OF BASIS

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

San Juan Coal Company
La Plata Mine
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ISSUING OFFICE

U. S. Environmental Agency
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DATE PREPARED

November 6, 2019

PERMIT ACTION

Proposed reissuance of the current National Pollutant Discharge Elimination System (NPDES) permit issued September 10, 2014, with an effective date of November 1, 2014, and an expiration date of October 31, 2019.

40 CFR CITATIONS

Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations, revised as of May 30, 2014.

RECEIVING WATER – BASIN

The facility discharges into an unnamed intermittent stream in Waterbody Segment 20.6.4.98.

DOCUMENT ABBREVIATIONS:

In the document that follows, various abbreviations are used. They are as follows:

BAT - best available technology economically achievable
BMP – best management plan
BOD – five-day biochemical oxygen demand
BPJ - best professional judgment
CD – critical dilution
CFR – Code of Federal Regulations
cfs – cubic feet per second
CIU - Categorical Industrial User's
COD – chemical oxygen demand
COE – United States Corp of Engineers
CWA – Clean Water Act
DMR – discharge monitoring report
EPA – United States Environmental Protection Agency
ESA - Endangered Species Act
FC- fecal coliform
FWS – United States Fish and Wildlife Service
MGD – million gallons per day
NMAC – New Mexico Administrative Code
NMED – New Mexico Environment Department
NMIP New Mexico NPDES Permit Implementation Procedures
NMWQS - New Mexico State Standards for Interstate and Intrastate Surface Waters
NPDES – National Pollutant Discharge Elimination System
MQL - minimum quantification level
O&G – oil and grease
POTW – Publicly Owned Treatment Works
RP – reasonable potential
SIC - standard industrial classification
SIU - Significant Industrial User's
su – standard units
SWQB – Surface Water Quality Bureau
TDS – total dissolved solids
TMDL – total maximum daily load
TOC – total organic carbon
TRC – total residual chlorine
TSS – total suspended solids
UAA – use attainability analysis
WET - whole effluent toxicity
WQCC – New Mexico Water Quality Control Commission
WWTP – wastewater treatment plant

I. PROPOSED CHANGES FROM PREVIOUS PERMIT

The changes from the current permit issued September 10, 2014, with an effective date of November 1, 2014, and an expiration date of October 31, 2019 are:

1. Limitations and monitoring requirements as well as a compliance schedule for total aluminum are added in the draft permit for Outfalls 015, 016 and 028.

II. APPLICANT ACTIVITY

Under the Standard Industrial Classification (SIC) Code 1221, the applicant operates coal mining. Based on information provided in the application, the facility is engaged in the reclamation of previous western alkaline surface coal mining operation. La Plata mine is a remote, inactive, unstaffed, and fully reclaimed mine site. The requirements found in 40 CFR 434, Subpart H (reclamation activities in western alkaline coal mining) have been applied to discharges from reclamation areas.

III. DISCHARGE LOCATION

As described in the application, the facility is located 15 miles north of Farmington in San Juan County, New Mexico. Discharges are into unnamed intermittent stream in Stream Segment 20.6.4.98. Outfall locations and names of receiving stream are listed in Table 1 below:

Table 1: Outfall Locations

Outfalls	Latitude	Longitude	Receiving Water
003	36º59’21.563”	108º8’13.257”W	La Plata River
004	36º59’22.001”	108º8’15.863”W	La Plata River
005	36º59’36.597”	108º7’23.443”W	La Plata River
006	36º58’33.398”	108º9’43.997”W	La Plata River
012	36º58’25.620”	108º9’38.902”W	La Plata River
015	36º58’51.649”	108º10’45.338”W	La Plata River
016	36º59’5.556”	108º10’57.047”W	La Plata River
018	36º59’16.475”	108º10’33.078”W	La Plata River
019	36º58’40.658”	108º 9’28.277”W	La Plata River
020	36º58’45.650”	108º 8’47.398”W	La Plata River
021	36º58’59.567”	108º 8’7.206”W	La Plata River
022	36º59’6.159”	108º 7’49.621”W	La Plata River
023	36º59’12.373”	108º 7’50.035”W	La Plata River
026	36º59’35.364”	108º 7’22.572” W	La Plata River
027	36º59’29.701”	108º 7’27.480”W	La Plata River
028	36º59’16.994”	108º 7’48.777”W	La Plata River
029	36º59’14.435”	108º 7’50.956”W	La Plata River
030	36º59’33.990”	108º 8’19.309”W	La Plata River
031	36º59’27.484”	108º 8’17.103”W	La Plata River
032	36º58’59.074”	108º 8’1.737”W	La Plata River
A	36º59’7.384”	108º 10’48.290”W	La Plata River

B	36º58’34.100”	108º 9’51.643”W	La Plata River
C	36º59’14.532”	108º 8’4.797”W	La Plata River
D	36º59’3.538”	108º 8’22.027”W	La Plata River
E	36º59’4.520”	108º 8’6.783”W	La Plata River
F	36º59’22.310”	108º 7’43.208”W	La Plata River
G	36º59’28.220”	108º 7’36.560”W	La Plata River
H	36º59’33.970”	108º 7’28.911”W	La Plata River
I	36º59’11.073”	108º 8’4.290”W	La Plata River
J	36º59’10.711”	108º 8’2.491”W	La Plata River
K	36º59’16.185”	108º 8’7.657”W	La Plata River
M	36º59’44.398”	108º 8’19.134”W	La Plata River
N	36º59’16.193”	108º 7’49.543”W	La Plata River
O	36º59’15.310”	108º 7’50.153”W	La Plata River
P	36º59’13.583”	108º 7’49.825”W	La Plata River

IV. RECEIVING WATER STANDARDS

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC approved on August 11, 2017). The designated uses of intermittent waters under 20.6.4.98 NMAC are livestock watering, wildlife habitat, marginal warmwater aquatic life, and primary contact.

V. DISCHARGE DESCRIPTION AND OPERATIONS

The entire La Plata Mine is no longer an active mine. The La Plata Mine is 100 percent in reclamation status. The site remains subject to the Sediment Control Plan. The sole activities that currently take place on the mine are on-going monitoring of the completed revegetation and reclamation and research regarding geomorphic reclamation practices. The permittee requested that consistent with 40 CFR §434.82 and the current NPDES Permit, this permit renewal should not require sampling for discharges from reclamation areas as long as the facility’s sediment control plan is in place. The facility stated that the exemption from effluent limitations is essential for the application of geomorphic reclamation practices to improve landform stability and restore the hydrologic balance at the mine and associated watersheds. In geomorphic reclamation, drainages in reclaimed areas are designed to mimic the hydrologic function of naturally occurring drainages in proximate undisturbed areas.

When the reclamation or performance bond under the Surface Mining Control and Reclamation Act of 1977 (SMCRA) has been released, discharges from that area are no longer regulated under the NPDES program. The permittee may request to terminate the corresponding NPDES discharge points to that specific drainage area.

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2C received by EPA on June 5, 2019 are presented below in Table 1:

TABLE 1: OUTFALLS 015, 016, & 028 POLLUTANTS

Parameter	Max, Outfall 015	Max, Outfall 016	Max, Outfall 028
Average Flow, million gallons/day (MGD)	0.68	0.23	0.37
pH, minimum, standard units (SU)	6.8	7.4	7.2
pH, maximum, standard units (SU)	8.0	7.9	8.1
Total Suspended Solids (TSS)	24,300 mg/l	34,500 mg/l	41,100 mg/l
Flouride		0.7 mg/l	1 mg/l
Sulfate			19 mg/l
Aluminum, Total	407 mg/l	1,440 mg/l	1,200 mg/l
Iron, Total	286 mg/l	1,280 mg/l	1,520 mg/l
Magnesium, Total		550 mg/l	457 mg/l
Manganese, Total	119 mg/l		
Selenium, Total			0.029 mg/l
Mercury, Total			0.0023 mg/l

A summary of available pollutant data from January 2015 through September 2019, taken from DMRs shows that Outfall 028 had 2 exceedances of permit limit on 6/30/18. One was for Selenium, total recoverable, and the other was for Mercury, total.

VI. TENTATIVE DETERMINATION

On the basis of preliminary staff review and after consultation with the State of New Mexico, the EPA has made a tentative determination to reissue the permit for the discharges described in the application.

VII. PROPOSED PERMIT CONDITIONS

The specific effluent limitations and/or conditions will be found in the proposed permit.

VIII. DRAFT PERMIT RATIONALE

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under 40 CFR 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. REASON FOR PERMIT ACTION

The current permit was issued September 10, 2014, with an effective date of November 1, 2014, and an expiration date of October 31, 2019. The permit renewal application and addendum were received on June 5, 2019 and January 22, 2020, respectively. It is proposed that the current permit be reissued for a 5-year term following regulations promulgated at 40 CFR 122.46(a**).**

B. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at 40 CFR 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to 40 CFR 122.44(a) or on State water quality standards and requirements pursuant to 40 CFR 122.44(d), whichever are more stringent.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants which may include BOD, TSS, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

2. Permit Requirements

The Western Alkaline Coal Mining Subcategory addresses drainage from coal mining operations from reclamation areas, brushing and grabbing areas, topsoil stockpiling areas, and regraded areas in the arid and semiarid western United States. Because the permittee has ceased surface mining and the above ground areas previously surface mined have been reclaimed, effluent guidelines in 40 CFR Part 434, subpart H are incorporated into the proposed permit. In accordance with the provision in 40 CFR 434.82 (BPT) and 434.83 (BAT), the permittee is required to submit a site-specific Sediment Control Plan (SCP) that is designed to prevent an increase in the average annual sediment yield from pre-mined, undisturbed conditions. Because SCP requirements were developed and submitted in the La Plata Mine Surface Mining Control and Reclamation Act (SMCRA) permit issued by the New Mexico Mining & Mineral Division (MMD), on June 24, 2009, and to both the USEPA and NMED concurrently, the permittee is not required to resubmit another copy of SCP, rather the permittee shall keep a copy and continue to comply with the requirements of its SCP for La Plata Mine.

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Water quality based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state WQS. Effluent limitations and/or conditions established in the draft permit are in compliance with applicable State WQS and applicable State water quality management plans to assure that surface WQS of the receiving waters are protected and maintained, or attained.

2. Implementation

The NPDES permits contain technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. Mine drainages discharge due to precipitation events from reclamation areas to unnamed intermittent streams in Waterbody Segment 20.6.4.98 NMAC and thence to the La Plata River.

3. State Water Quality Standards

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC approved on August 11, 2017).

4. Permit Action - Water Quality-Based Limits

According to the NMIP and “Small Business Exemption” defined in Form 2C, the permittee must provide test analyses for: aluminum (dissolved), aluminum (total recoverable), antimony (dissolved), arsenic (dissolved), nickel (dissolved), selenium (dissolved), thallium (dissolved), zinc (dissolved), cyanide (total recoverable), phenols and 2,3,7,8-TCDD (Dioxin). This renewal application does not include some of those analyses in addition to other required information or data on Form 2C V-1 thru V-3. EPA does not request these information/data during this permit application review because the discharges are intermittent and possibly caused by stormwater events. In addition, it is uncertain when the next discharge would happen at all the outfalls in a reasonable amount of time; to address the missing data, the permit will instead require the pollutants be tested at each outfall when discharge occurs. Upon receiving the test results, EPA will re-evaluate them and may propose modification to the permit, if necessary, to protect the State WQS. Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology based). State WQS that are more stringent than effluent limitation guidelines are as follows:

(a) Toxics

For discharges into an unnamed intermittent stream in Waterbody Segment 20.6.4.98, applicable water quality criteria apply at end-of-pipe with a default 4Q3 low flow at 0.0 cubic feet per second (cfs). In order to implement this WQS, the end-of-pipe discharge will have to meet applicable standards. There have been no continuous discharges. The La Plata Mine is 100 percent in reclamation status.

The facility submitted supplemental information to EPA on January 22, 2020, includes effluent data for Outfalls 015, 016 and 028 as shown in Table 1. The EPA conducted the RP screening analysis in accordance to the March 15, 2012 NMIP. The results of the RP screening (see Appendix A) show that discharges exceeded the State of New Mexico water quality standards (NMWQS) consistent with the designated uses for the receiving water for total recoverable selenium and total mercury at Outfall 028. The previous permit established total recoverable selenium limit of 5 ug/L (for daily maximum and 30-day average) and total mercury limit of 0.77 ug/L (for daily maximum and 30-day average) for Outfall 028. These will be continued in the draft permit. The total recoverable selenium and total mercury limits with monitoring frequency of once per month, when discharging, in the previous permit will also be continued in the draft permit.

The toxic analysis, also, shows RPs exist for total aluminum at Outfalls 015, 016 and 028. As a result, the draft permit includes WQ-based effluent limitations and monitoring requirements, as well as a three-year compliance schedule for total aluminum.

(e) Monitoring Frequencies for Limited Parameters

The monitoring frequency for total aluminum, total mercury and total recoverable selenium shall be 1/month when discharging. Flow shall also be estimated once per month, when discharging.

5. Aquatic Toxicity Testing

This draft permit does not propose the Whole Effluent Toxicity (WET) testing because discharges from coal mine classified as “reclamation area” operations will not be required to have WET testing per page 44 of the NMIP.

IX. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the State WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the State. This permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standards in accordance with 40 CFR 122.44(d). Modification of the permit is subject to the provisions of 40 CFR 124.5.

X. IMPAIRED WATER- 303(D) LIST

The site discharges into an unnamed intermittent stream in Waterbody Segment 20.6.4.98 which is not listed in EPA approved State 2018-2020 303(d) impaired water list. Therefore, no additional requirements to what has been addressed in Section VIII above are proposed. The facility is also required to continue to implement a sediment control plan to reduce discharge of sediment.

XI. ANTIDEGRADATION

The New Mexico 20.6.4.8 NMAC "Antidegradation Policy and Implementation Plan" sets forth

the requirements to protect designated uses through implementation of the State water quality standards. The limitations and monitoring requirements set forth in the proposed permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements are protective of the assimilative capacity of the receiving waters, and are protective of the designated uses of that water.

XII. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet Anti-backsliding provisions of the Clean Water Act, Section 402(o) and 40CFR122.44(l)(2)(i)(B), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance.

XIII. ENDANGERED SPECIES

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened (T) and endangered (E) species and designated critical habitat. According to the most recent county listing of species, for the State of New Mexico as listed on the IPAC website https://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action, the following species may be present in the San Juan county where the proposed NPDES discharge occurs: Southwestern willow flycatcher (*Empidonax traillii extimus)* (E), Colorado pikeminnow (*Ptychocheilus lucius*) (E), Razorback sucker (*Xyrauchen texanus*) (E), Knowlton cactus (*Pediocactus knowltoni*) (E), Mancos milk-vetch *(Astragalus humillimus)* (E), Mesa Verde cactus *(Sclerocactus mesae-verdae)* (T), Zuni Bluehead Sucker (*Catostomus discobolus yarrowi*) (E), Canada Lynx *(Lynx canadensis)* (T) and Yellow-Billed Cuckoo (*Coccyzus americanus*) (T).

During the reissuance of this permit in 2014, EPA determined that the reissuance of Permit No. NM0029505 will have "no effect" on listed threatened and endangered species nor will adversely modify designated critical habitat. The Canada Lynx (Lynx canadensis) is a proposed threatened and was not among the species considered during the last permit issuance.

The Canada Lynx is a medium-sized cat with long legs, large, well-furred paws, long tufts on the ears, and a short, black-tipped tail. The distribution of lynx in North America is closely associated with the distribution of North American boreal forest. In Canada and Alaska, lynx inhabit the classic boreal forest ecosystem known as the taiga. The range of lynx populations extends south from the classic boreal forest zone into the subalpine forest of the western United States, and the boreal/hardwood forest ecotone in the eastern United States. Forests with boreal features extend south into the contiguous United States along the North Cascade and Rocky Mountain Ranges in the west, the western Great Lakes Region, and northern Maine. Within these general forest types, lynx is most likely to persist in areas that receive deep snow and have high-density populations of snowshoe hares, the principal prey of lynx. In all regions within the range of lynx in the contiguous U.S., timber harvest, recreation and their related activities are the predominant land use affecting lynx habitat. The permit does not authorize activities that may cause destruction of the lynx habitat, and issuance of the permit will have no effect on this species. Based on information available, EPA concludes that the reissuance of the NPDES permit will have no effect on this specie.

XIV. VARIANCE REQUESTS

No variance requests have been received.

XV. CERTIFICATION

The permit is in the process of certification by the State agency following regulations promulgated at 40 CFR 124.53. A draft permit and draft public notice will be sent to the District Engineer, Corps of Engineers; to the Regional Director of the U.S. Fish and Wildlife Service; and to the National Marine Fisheries Service prior to the publication of that notice.

XVI. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVI. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by 40 CFR 124.9:

A. PERMIT(S)

NPDES Permit No. NM0029505 issued September 10, 2014, with an effective date of November 1, 2014, and an expiration date of October 31, 2019.

B. APPLICATION(S)

EPA Application Form 1 and Form 2C and addendum were received by EPA on June 5, 2019 and January 22, 2020, respectively.

C. STATE WATER QUALITY REFERENCES

The general and specific stream standards are provided in "New Mexico State Standards for Interstate and Intrastate Surface Waters," (20.6.4 NMAC approved on August 11, 2017).

Procedures for Implementing National Pollutant Discharge Elimination System Permits in New Mexico, March 15, 2012.

State of New Mexico 303(d) List for Assessed Stream and River Reaches, 2018 - 2020.

D. 40 CFR CITATION(S) - 40 CFR Part 434 for Coal Mining Point Source Category.

E. MISCELLANEOUS REFERENCES

http://ecos.fws.gov/ipac/wizard/trustResourceList!prepare.action

http://www.wildlife.state.nm.us/conservation/threatened_endangered_species/documents/ZuniBlueheadSuckerRecoveryPlan.pdf

http://www.wildearthguardians.org/site/DocServer/Factsheet_Zuni_bluehead_sucker.pdf?docID=2142&AddInterest=1103

Hughes, J. 1999. Yellow-billed cuckoo (*Coccyzus americanus*). Pp. 1-28 in A Poole, F Gill, eds. *The Birds of North America*, Vol. 418. Philadelphia, PA: The Birds of North America.

http://animaldiversity.ummz.umich.edu/accounts/Coccyzus_americanus/

Appendix A

		CALCULATIONS OF NEW MEXICO WATER QUALITY-BASED EFFLUENT LIMITATIONS	
NMAC 20.6.4.	**NMWQS as of January 14, 2011**	(EPA approved site-specific criteria for aluminum, cadmium, and zinc on April 30, 2012)	
Calculations Specifications:		Excel **Revised as of July 10, 2012**	
Prepared By:	QuangNguyen	27-Jan-20 9:14 AM	
STEP 1:	REFERENCE IMPLEMENTATION PROCEDURES	**APPENDIX A**	
	INPUT FACILITY AND RECEIVING STREAM DATA	**of FACT SHEET**	
	LIST SOURCE OF DATA INPUT		
IMPLEMENTATION PROCEDURES			
The State of New Mexico Standards for Interstate and Intrastate Surface Waters are implemented in this spread sheet			
by using procedures established in the current "Procedures for Implementing NPDES Permits in New Mexico"			
FACILTY		DATA INPUT	
Permittee		La Plata Mine-Outfall #15	
NPDES Permit No.		NM0029505	
Outfall No.(s)			
Plant Effluent Flow (MGD)		0.68	For industrial and federal facility, use the highest monthly average flow
Plant Effluent Flow (cfs)		1.054	for the past 24 months. For POTWs, use the design flow.
RECEIVING STREAM		DATA INPUT	
Receiving Stream Name		Unnamed Intermittent Stream	
Basin Name		San Juan Basin	
Waterbody Segment Code No.		98	
Is a publicly owned lake or reservoir (enter "1" if it's a lake, "0" if not)		0	
Are acute aquatic life criteria considered (1= yes, 0= no)	(MUST enter "1" for 2005 Standards)	1	
Are chronic aquatic life criteria considered (1= yes, 0=no)		0	
Are domestic water supply criteria considered (1= yes, 0=no)		0	
Are irrigation water supply criteria considered (1= yes, 0=no)		0	
Livestock watering and wildlife habitat criteria applied to all streams			
USGS Flow Station		USGS	
WQ Monitoring Station No.		SJR	
Receiving Stream TSS (mg/l)		771	For intermittent stream, enter effluent TSS
Receiving Stream Hardness (mg/l as CaCOs)	RANGE: 0 - 400	20	For intermittent stream, enter effluent Hardness (If no data, 20 mg/l is used)
Receiving Stream Critical Low Flow (4Q3) (cfs)		0	Enter "0" for intermittent stream and lake.
Receiving Stream Harmonic Mean Flow (cfs)		0.01	Enter harmonic mean or modified harmonic mean flow data or 0.001 if no data is available
Avg. Receiving Water Temperature (C)			
pH (Avg), Receiving Stream			
Fraction of stream allowed for mixing (F)		1	Enter 1, if stream morphology data is not available or for intermittent streams.
Fraction of Critical Low Flow		0	

STEP 2: INPUT AMBIENT AND EFFLUENT DATA

CALCULATE IN-STREAM WASTE CONCENTRATIONS

DATA INPUT — Input pollutant geometric mean concentration as micro-gram per liter (ug/l or ppb)

unless other unit is specified for the parameter.

Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, input "1/2 DL" for calculation.

Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, no data is inputted.

If a less than MQL vakue is reported, input either the reported value or "0" for calculation.

The following formular is used to calculate the Instream Waste Concentration (Cd)

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Cd = [(F*Qa*Ca) + (Qe*2.13*Ce)] / (F*Qa + Qe)

Where:

Cd = Instream Waste Concentration

F = Fraction of stream allowed for mixing (see "Procedures for Implementing NPDES Permits in New Mexico")

Ce = Reported concentration in effluent

Ca = Ambient stream concentration upstream of discharge

Qe = Plant effluent flow

Qa = Critical low flow of stream at discharge point expressed as the 4Q3 or harmonic mean flow for human health criteria

The following formular convert metals reported in total form to dissolved form if criteria are in dissolved form

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Kp = Kpo * (TSS**a) — Kp = Linear partition coefficient; Kpo and a can be found in table below

C/Ct = 1/ (1 + Kp*TSS* 10^-6) — TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)

Total Metal Criteria (Ct) = Cr / (C/Ct) — C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value

		Stream Linear Partition Coefficient					Lake Linear Partition Coefficient				
Total Metals	Total Value	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Stream	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Lake
Arsenic		480000	-0.73	3747.067714	0.257136224	0	480000	-0.73	3747.067714	0.257136224	0
Chromium III		3360000	-0.93	6940.307387	0.157456089	0	2170000	-0.27	360541.3261	0.00358452	0
Copper		1040000	-0.74	7596.492258	0.145838594	0	2850000	-0.9	7186.144069	0.15289311	0
Lead		2800000	-0.8	13725.06876	0.086340665	0	2040000	-0.53	60185.42714	0.021095727	0
Nickel		490000	-0.57	11080.90125	0.104784734	0	2210000	-0.76	14132.88895	0.084058638	0
Silver		2390000	-1.03	2539.404539	0.338079873	0	2390000	-1.03	2539.404539	0.338079873	0
Zinc		1250000	-0.7	11911.65067	0.098194376	0	3340000	-0.68	36353.77289	0.034448596	0

The following formular is used to calculate hardness dependent criteria

(Please refer to State Water Quality Standards for details)

		Dissolved WQC (ug/l)	
Aluminum (T)	Acute	e(1.3695[ln(hardness)]+1.8308)	377.4565069	If Stream pH < 6.5, enter 750 in cell O113
	Chronic	e(1.3695[ln(hardness)]+0.9161)	151.2229667	If Stream pH < 6.5, enter 87 in cell P113
Cadmium (D)	Acute	e(0.8968[ln(hardness)]-3.5699)*CF1	0.418091688	CF1 = 1.136672 - 0.041838*ln(hardness)
	Chronic	e(0.7647[ln(hardness)]-4.2180)*CF2	0.142116028	CF2 = 1.101672 - 0.041838*ln(hardness)

										Dissolved						
										WQC (ug/l)						
Chromium III (D)			Acute			0.316 e(0.819[ln(hardness)]+3.7256)				152.4888787						
			Chronic			0.860 e(0.819[ln(hardness)]+0.6848)				19.8356702						
Copper (D)			Acute			0.960 e(0.9422[ln(hardness)]-1.700)				2.949857764						
			Chronic			0.960 e(0.8545[ln(hardness)]-1.702)				2.263769249						
Lead (D)			Acute			e(1.273[ln(hardness)]-1.46)*CF3				10.79154489		CF3 = 1.46203 - 0.145712*ln(hardness)				
			Chronic			e(1.273[ln(hardness)]-4.705)*CF4				0.420531012		CF4 = 1.46203 - 0.145712*ln(hardness)				
Manganese (D)			Acute			e(0.3331[ln(hardness)]+6.4676)				1746.691001						
			Chronic			e(0.3331[ln(hardness)]+5.8743)				965.048559						
Nickel (D)			Acute			0.998 e(0.846[ln(hardness)]+2.255)				119.9874916						
			Chronic			0.997 e(0.846[ln(hardness)]+0.0584)				13.32690594						
Silver (D)			Acute			0.85 e(1.72[ln(hardness)]-6.59)				0.201924903						
Zinc (D)			Acute			0.978 e(0.9094[ln(hardness)]+0.9095)				37.02425804						
			Chronic			0.986 e(0.90947[ln(hardness)]+0.6235)				28.04834719						
						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
POLLUTANTS				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
				Conc.	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Radioactivity, Nutrients, and Chlorine																
Aluminum, total		7429-90-5	2.5		349000	743370	743370	743370	736383.44	1E+100	5000	1E+100	377.4565069	151.22297	1E+100	N/A
Barium, dissolved		7440-39-3	100			0	0	0	0	2000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Boron, dissolved		7440-42-8	100			0	0	0	0	1E+100	750	5000	1E+100	1E+100	1E+100	N/A
Cobalt, dissolved		7440-48-4	50			0	0	0	0	1E+100	50	1000	1E+100	1E+100	1E+100	N/A
Uranium, dissolved		7440-61-1	0.1			#VALUE!	#VALUE!	#VALUE!	#VALUE!	30	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Vanadium, dissolved		7440-62-2	50			0	0	0	0	1E+100	100	100	1E+100	1E+100	1E+100	N/A
Ra-226 and Ra-228 (pCi/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	5	1E+100	30	1E+100	1E+100	1E+100	N/A
Strontium (pCi/l)						0	0	0	0	8	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Tritium (pCi/l)						0	0	0	0	20000	1E+100	20000	1E+100	1E+100	1E+100	N/A
Gross Alpha (pCi/l)						0	0	0	0	15	1E+100	15	1E+100	1E+100	1E+100	N/A
Asbestos (fibers/l)						0	0	0	0	7000000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Total Residual Chlorine		7782-50-5	33			0	0	0	0	1E+100	1E+100	11	19	11	1E+100	N/A
Nitrate as N (mg/l)						0	0	0	0	10	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Nitrite + Nitrate (mg/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	132	1E+100	1E+100	1E+100	N/A
METALS AND CYANIDE																
Antimony, dissolved (P)		7440-36-0	60			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	640	N/A
Arsenic, dissolved (P)		7440-38-2	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	10	100	200	340	150	9	N/A
Beryllium, dissolved		7440-41-7	0.5			0	0	0	0	4	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Cadmium, dissolved		7440-43-9	1			0	0	0	0	5	10	50	0.418091688	0.142116	1E+100	N/A
Chromium (III), dissolved		16065-83-1	10			0	0	0	0	1E+100	1E+100	1E+100	152.4888787	19.83567	1E+100	N/A
Chromium (VI), dissolved		18540-29-9	10			0	0	0	0	1E+100	1E+100	1E+100	16	11	1E+100	N/A
Chromium, dissolved		7440-47-3				#VALUE!	#VALUE!	#VALUE!	#VALUE!	100	100	1000	1E+100	1E+100	1E+100	N/A
Copper, dissolved		7440-50-8	0.5			0	0	0	0	1300	200	500	2.949857764	2.2637692	1E+100	N/A
Lead, dissolved		7439-92-1	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	15	5000	100	10.79154489	0.420531	1E+100	N/A
Manganese, dissolved		7439-96-5				#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	1E+100	1746.691001	965.04856	1E+100	N/A

					Instream Waste Concentration				Livestock&	Acute	Chronic	Human	Need		
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS			Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Mercury, dissolved	7439-97-6	0.005			0	0	0	0	1E+100	1E+100	1E+100	1.4	0.77	1E+100	N/A
Mercury, total	7439-97-6	0.005			#VALUE!	#VALUE!	#VALUE!	#VALUE!	2	1E+100	0.77	1E+100	1E+100	1E+100	N/A
Molybdenum, dissolved	7439-98-7				0	0	0	0	1E+100	1000	1E+100	1E+100	1E+100	1E+100	N/A
Molybdenum, total recoverable	7439-98-7				0	0	0	0	1E+100	1E+100	1E+100	7920	1895	1E+100	N/A
Nickel, dissolved (P)	7440-02-0	0.5			0	0	0	0	700	1E+100	1E+100	119.9874916	13.326906	4600	N/A
Selenium, dissolved (P)	7782-49-2	5			0	0	0	0	50	130	50	1E+100	1E+100	4200	N/A
Selenium, dis (SO4 >500 mg/l)		5			0	0	0	0	50	250	50	1E+100	1E+100	4200	N/A
Selenium, total recoverable	7782-49-2	5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	5	20	5	1E+100	N/A
Silver, dissolved	7440-22-4	0.5			0	0	0	0	1E+100	1E+100	1E+100	0.201924903	1E+100	1E+100	N/A
Thalllium, dissolved (P)	7440-28-0	0.5			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	0.47	N/A
Zinc, dissolved	7440-66-6	20			0	0	0	0	10500	2000	25000	37.02425804	28.048347	26000	N/A
Cyanide, total recoverable	57-12-5	10			0	0	0	0	200	1E+100	5.2	22	5.2	140	N/A
Dioxin	1764-01-6	0.00001			0	0	0	0	3.00E-05	1E+100	1E+100	1E+100	1E+100	5.1E-08	N/A
VOLATILE COMPOUNDS															
Acrolein	107-02-8	50			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	9	N/A
Acrylonitrile	107-13-0	20			0	0	0	0	0.65	1E+100	1E+100	1E+100	1E+100	2.5	N/A
Benzene	71-43-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	510	N/A
Bromoform	75-25-2	10			0	0	0	0	44	1E+100	1E+100	1E+100	1E+100	1400	N/A
Carbon Tetrachloride	56-23-5	2			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	16	N/A
Chlorobenzene	108-90-7	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	1600	N/A
Clorodibromomethane	124-48-1	10			0	0	0	0	4.2	1E+100	1E+100	1E+100	1E+100	130	N/A
Chloroform	67-66-3	50			0	0	0	0	57	1E+100	1E+100	1E+100	1E+100	4700	N/A
Dichlorobromomethane	75-27-4	10			0	0	0	0	5.6	1E+100	1E+100	1E+100	1E+100	170	N/A
1,2-Dichloroethane	107-06-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	370	N/A
1,1-Dichloroethylene	75-35-4	10			0	0	0	0	7	1E+100	1E+100	1E+100	1E+100	7100	N/A
1,2-Dichloropropane	78-87-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	150	N/A
1,3-Dichloropropylene	542-75-6	10			0	0	0	0	3.5	1E+100	1E+100	1E+100	1E+100	210	N/A
Ethylbenzene	100-41-4	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	2100	N/A
Methyl Bromide	74-83-9	50			0	0	0	0	49	1E+100	1E+100	1E+100	1E+100	1500	N/A
Methylene Chloride	75-09-2	20			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	5900	N/A
1,1,2,2-Tetrachloroethane	79-34-5	10			0	0	0	0	1.8	1E+100	1E+100	1E+100	1E+100	40	N/A
Tetrachloroethylene	127-18-4	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	33	N/A
Tolune	108-88-3	10			0	0	0	0	1000	1E+100	1E+100	1E+100	1E+100	15000	N/A
1,2-trans-Dichloroethylene	156-60-5	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	10000	N/A
1,1,1-Trichloroethane	71-55-6				0	0	0	0	200	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
1,1,2-Trichloroethane	79-00-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	160	N/A
Trichloroethylene	79-01-6	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	300	N/A
Vinyl Chloride	75-01-4	10			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	24	N/A
ACID COMPOUNDS															
2-Chlorophenol	95-57-8	10			0	0	0	0	175	1E+100	1E+100	1E+100	1E+100	150	N/A
2,4-Dichlorophenol	120-83-2	10			0	0	0	0	105	1E+100	1E+100	1E+100	1E+100	290	N/A
2,4-Dimethylphenol	105-67-9	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	850	N/A
4,6-Dinitro-o-Cresol	534-52-1	50			0	0	0	0	14	1E+100	1E+100	1E+100	1E+100	280	N/A

				Instream Waste Concentration										
		Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Livestock& Wildlife	Acute Aquatic	Chronic Aquatic	Human Health	Need TMDL
POLLUTANTS		Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No. MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
2,4-Dinitrophenol	51-28-5 50			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	5300	N/A
Pentachlorophenol	87-86-5 50			0	0	0	0	1	1E+100	1E+100	19	15	30	N/A
Phenol	108-95-2 10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	860000	N/A
2,4,6-Trichlorophenol	88-06-2 10			0	0	0	0	32	1E+100	1E+100	1E+100	1E+100	24	N/A
BASE/NEUTRAL														
Acenaphthene	83-32-9 10			0	0	0	0	2100	1E+100	1E+100	1E+100	1E+100	990	N/A
Anthracene	120-12-7 10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	40000	N/A
Benzidine	92-87-5 50			0	0	0	0	0.0015	1E+100	1E+100	1E+100	1E+100	0.002	N/A
Benzo(a)anthracene	56-55-3 5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(a)pyrene	50-32-8 5			0	0	0	0	0.2	1E+100	1E+100	1E+100	1E+100	0.18	N/A
3,4-Benzofluoranthene	205-99-2 10			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(k)fluoranthene	207-08-9 5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Bis(2-chloroethyl)Ether	111-44-4 10			0	0	0	0	0.3	1E+100	1E+100	1E+100	1E+100	5.3	N/A
Bis(2-chloroisopropyl)Ether	108-60-1 10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	65000	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7 10			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	22	N/A
Butyl Benzyl Phthalate	85-68-7 10			0	0	0	0	7000	1E+100	1E+100	1E+100	1E+100	1900	N/A
2-Chloronapthalene	91-58-7 10			0	0	0	0	2800	1E+100	1E+100	1E+100	1E+100	1600	N/A
Chrysene	218-01-9 5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Dibenzo(a,h)anthracene	53-70-3 5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
1,2-Dichlorobenzene	95-50-1 10			0	0	0	0	600	1E+100	1E+100	1E+100	1E+100	1300	N/A
1,3-Dichlorobenzene	541-73-1 10			0	0	0	0	469	1E+100	1E+100	1E+100	1E+100	960	N/A
1,4-Dichlorobenzene	106-46-7 10			0	0	0	0	75	1E+100	1E+100	1E+100	1E+100	190	N/A
3,3'-Dichlorobenzidine	91-94-1 5			0	0	0	0	0.78	1E+100	1E+100	1E+100	1E+100	0.28	N/A
Diethyl Phthalate	84-66-2 10			0	0	0	0	28000	1E+100	1E+100	1E+100	1E+100	44000	N/A
Dimethyl Phthalate	131-11-3 10			0	0	0	0	350000	1E+100	1E+100	1E+100	1E+100	1100000	N/A
Di-n-Butyl Phthalate	84-74-2 10			0	0	0	0	3500	1E+100	1E+100	1E+100	1E+100	4500	N/A
2,4-Dinitrotoluene	121-14-2 10			0	0	0	0	1.1	1E+100	1E+100	1E+100	1E+100	34	N/A
1,2-Diphenylhydrazine	122-66-7 20			0	0	0	0	0.44	1E+100	1E+100	1E+100	1E+100	2	N/A
Fluoranthene	206-44-0 10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	140	N/A
Fluorene	86-73-7 10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	5300	N/A
Hexachlorobenzene	118-74-1 5			0	0	0	0	1	1E+100	1E+100	1E+100	1E+100	0.0029	N/A
Hexachlorobutadiene	87-68-3 10			0	0	0	0	4.5	1E+100	1E+100	1E+100	1E+100	180	N/A
Hexachlorocyclopentadiene	77-47-4 10			0	0	0	0	50	1E+100	1E+100	1E+100	1E+100	1100	N/A
Hexachloroethane	67-72-1 20			0	0	0	0	25	1E+100	1E+100	1E+100	1E+100	33	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5 5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Isophorone	78-59-1 10			0	0	0	0	368	1E+100	1E+100	1E+100	1E+100	9600	N/A
Nitrobenzene	98-95-3 10			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	690	N/A
n-Nitrosodimethylamine	62-75-9 50			0	0	0	0	0.0069	1E+100	1E+100	1E+100	1E+100	30	N/A
n-Nitrosodi-n-Propylamine	621-64-7 20			0	0	0	0	0.05	1E+100	1E+100	1E+100	1E+100	5.1	N/A
n-Nitrosodiphenylamine	86-30-6 20			0	0	0	0	71	1E+100	1E+100	1E+100	1E+100	60	N/A
Nonylphenol	84852-15-3			0	0	0	0	1E+100	1E+100	1E+100	28	6.6	1E+100	N/A
Pyrene	129-00-0 10			0	0	0	0	1050	1E+100	1E+100	1E+100	1E+100	4000	N/A
1,2,4-Trichlorobenzene	120-82-1 10			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	70	N/A

						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS				Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
PESTICIDES AND PCBS																
Aldrin		309-00-2	0.01			0	0	0	0	0.021	1E+100	1E+100	3	1E+100	0.0005	N/A
Alpha-BHC		319-84-6	0.05			0	0	0	0	0.056	1E+100	1E+100	1E+100	1E+100	0.049	N/A
Beta-BHC		319-85-7	0.05			0	0	0	0	0.091	1E+100	1E+100	1E+100	1E+100	0.17	N/A
Gamma-BHC		58-89-9	0.05			0	0	0	0	0.2	1E+100	1E+100	0.95	1E+100	1.8	N/A
Chlordane		57-74-9	0.2			0	0	0	0	2	1E+100	1E+100	2.4	0.0043	0.0081	N/A
4,4'-DDT and derivatives		50-29-3	0.02			0	0	0	0	1	1E+100	0.001	1.1	0.001	0.0022	N/A
Dieldrin		60-57-1	0.02			0	0	0	0	0.022	1E+100	1E+100	0.24	0.056	0.00054	N/A
Diazinon		333-41-5				0	0	0	0	1E+100	1E+100	1E+100	0.17	0.17	1E+100	N/A
Alpha-Endosulfan		959-98-8	0.01			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Beta-Endosulfan		33213-65-9	0.02			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Endosulfan sulfate		1031-7-8	0.1			0	0	0	0	62	1E+100	1E+100	1E+100	1E+100	89	N/A
Endrin		72-20-8	0.02			0	0	0	0	2	1E+100	1E+100	0.086	0.036	0.06	N/A
Endrin Aldehyde		7421-93-4	0.1			0	0	0	0	10.5	1E+100	1E+100	1E+100	1E+100	0.3	N/A
Heptachlor		76-44-8	0.01			0	0	0	0	0.4	1E+100	1E+100	0.52	0.0038	0.00079	N/A
Heptachlor Epoixde		1024-57-3	0.01			0	0	0	0	0.2	1E+100	1E+100	0.52	0.0038	0.00039	N/A
PCBs		1336-36-3	0.2			0	0	0	0	0.5	1E+100	0.014	2	0.014	0.00064	N/A
Toxaphene		8001-35-2	0.3			0	0	0	0	3	1E+100	1E+100	0.73	0.0002	0.0028	N/A

STEP 3: SCAN POTENTIAL INSTREAM WASTE CONCENTRATIONS AGAINST WATER QUALITY CRITERIA

AND ESTABLISH EFFLUENT LIMITATIONS FOR ALL APPLICABLE PARAMETERS

No limits are established if the receiving stream is not designated for the particular uses.

No limits are established if the potential instream waste concentrations are less than the chronic water quality criteria.

The most applicable stringent criteria are used to establish effluent limitations for a given parameter.

Water quality criteria apply at the end-of-pipe for acute aquatic life criteria and discharges to public lakes.

If background concentration exceeds the water quality criteria, water quality criteria apply. And "Need TMDL" shown to the next column of Avg. Mass

Monthly avg concentration = daily max. / 1.5.

APPLICABLE WATER QUALITY-BASED LIMITS

The following formular is used to calculate the allowable daily maximum effluent cincentration

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Daily Max. Conc. = Cs + (Cs - Ca)(F*Qa/Qe)

Monthly Avg. Conc. = Daily Max. Conc. / 1.5

Where:

Cs = Applicable water quality standard

Ca = Ambient stream concentration

F = Fraction of stream allowed for mixing (1.0 is assigned to domestic water supply and human health uses)

Qe = Plant effluent flow

Qa = Criteria Low flow (4Q3) or Harmonic Mean flow for Human Health Criteria

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Radioactivity, Nutrients, and Chlorine, as Total														
Aluminum, Total	7429-90-5	01105	N/A	N/A	N/A	377.456507	N/A	N/A	377.4565069	251.6376713	377.4565069	251.63767	2.14063134	1.427087561
Barium, Total	7440-39-3	01007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron, Total	7440-42-8	01022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt, Total	7440-48-4	01037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium, Total	7440-61-1	22706	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Vanadium, Total	7440-62-2	01087	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ra-226 and Ra-228 (pCi/l)		11503	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Strontium (pCi/l)		13501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tritium (pCi/l)		04124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross Alpha (pCi/l)		80029	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asbestos (fibers/l)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Residual Chlorine	7782-50-5	50060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate as N (mg/l)		00620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrite + Nitrate (mg/l)		00630	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
METALS AND CYANIDE, as Total														
Antimony, Total (P)	7440-36-0	01097	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic, Total (P)	7440-38-2	1002	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Beryllium, Total	7440-41-7	01012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium, Total	7440-43-9	01027	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (III), dissolved	16065-83-1	01033	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (VI), dissolved	18540-29-9	01034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium, Total	7440-47-3	01034	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Copper, Total	7440-50-8	01042	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead, Total	7439-92-1	01051	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Manganese, dissovled	7439-96-5	01056	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Mercury, Total	7439-97-6	71900	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, Total	7439-97-6	71900	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Molybdenum, dissolved	7439-98-7	1060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum, total recoverable	7439-98-7	01062	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, Total (P)	7440-02-0	01067	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (P)	7782-49-2	01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (SO4 >500 mg/l)		01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total recoverable	7782-49-2	01147	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Silver, Total	7440-22-4	01077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thalllium, Total (P)	7440-28-0	01059	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc, Total	7440-66-6	1092	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide, total recoverable	57-12-5	00720	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIOXIN														0
2,3,7,8-TCDD	1764-01-6	34675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOLATILE COMPOUNDS														
Acrolein	107-02-8	34210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acrylonitrile	107-13-0	34215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	71-43-2	34030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform	75-25-2	32104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	56-23-5	32102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Chlorobenzene	108-90-7	34301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clorodibromomethane	124-48-1	32105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	67-66-3	32106	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorobromomethane	75-27-4	32101	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	107-06-2	34531	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	75-35-4	34501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	78-87-5	34541	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropylene	542-75-6	34561	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	34371	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Bromide	74-83-9	34413	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	75-09-2	34423	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	79-34-5	34516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	127-18-4	34475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tolune	108-88-3	34010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-trans-Dichloroethylene	156-60-5	34546	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	71-55-6		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	79-00-5	34511	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	79-01-6	39180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	75-01-4	39175	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ACID COMPOUNDS														
2-Chlorophenol	95-57-8	34586	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	120-83-2	34601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	105-67-9	34606	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,6-Dinitro-o-Cresol	534-52-1	34657	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	51-28-5	34616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	87-86-5	39032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	108-95-2	34694	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	88-06-2	34621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BASE/NEUTRAL														
Acenaphthene	83-32-9	34205	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anthracene	120-12-7	34220	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzidine	92-87-5	39120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	56-55-3	34526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	50-32-8	34247	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,4-Benzofluoranthene	205-99-2	34230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	207-08-9	34242	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethyl)Ether	111-44-4	34273	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroisopropyl)Ether	108-60-1	34283	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	39100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Butyl Benzyl Phthalate	85-68-7	34292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Chloronapthalene	91-58-7	34581	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	218-01-9	34320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	53-70-3	34556	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	95-50-1	34536	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Daily Avg Load lb/day
1,3-Dichlorobenzene	541-73-1	34566	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	106-46-7	34571	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	91-94-1	34631	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diethyl Phthalate	84-66-2	34336	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl Phthalate	131-11-3	34341	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Di-n-Butyl Phthalate	84-74-2	39110	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	121-14-2	34611	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Diphenylhydrazine	122-66-7	34346	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluoranthene	206-44-0	34376	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluorene	86-73-7	34381	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobenzene	118-74-1	39700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	87-68-3	34391	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	77-47-4	34386	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	67-72-1	34396	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	34403	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isophorone	78-59-1	34408	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	98-95-3	34447	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodimethylamine	62-75-9	34438	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodi-n-Propylamine	621-64-7	34428	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodiphenylamine	86-30-6	34433	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nonylphenol	84852-15-3		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pyrene	129-00-0	34469	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	120-82-1	34551	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PESTICIDES AND PCBS														
Aldrin	309-00-2	39330	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-BHC	319-84-6	39337	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-BHC	319-85-7	39338	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gamma-BHC	58-89-9	39340	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlordane	57-74-9	39350	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT and derivatives	50-29-3	39300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	60-57-1	39380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diazinon	333-41-5	39570	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-Endosulfan	959-98-8	34361	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-Endosulfan	33213-65-9	34356	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan sulfate	1031-7-8	34351	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin	72-20-8	39390	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin Aldehyde	7421-93-4	34366	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	76-44-8	39410	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor Epoixde	1024-57-3	39420	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs	1336-36-3	39516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	8001-35-2	39400	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	CALCULATIONS OF NEW MEXICO WATER QUALITY-BASED EFFLUENT LIMITATIONS		
NMAC 20.6.4.	**NMWQS as of January 14, 2011**	(EPA approved site-specific criteria for aluminum, cadmium, and zinc on April 30, 2012)	
Calculations Specifications:	Excel	**Revised as of July 10, 2012**	
Prepared By:	QuangNguyen	27-Jan-20	9:23 AM
STEP 1:	REFERENCE IMPLEMENTATION PROCEDURES	**APPENDIX A**	
	INPUT FACILITY AND RECEIVING STREAM DATA	**of FACT SHEET**	
	LIST SOURCE OF DATA INPUT		

IMPLEMENTATION PROCEDURES

The State of New Mexico Standards for Interstate and Intrastate Surface Waters are implemented in this spread sheet by using procedures established in the current "Procedures for Implementing NPDES Permits in New Mexico"

FACILTY		DATA INPUT	
Permittee		La Plata Mine-Outfall #16	
NPDES Permit No.		NM0029505	
Outfall No.(s)			
Plant Effluent Flow (MGD)		0.23	For industrial and federal facility, use the highest monthly average flow
Plant Effluent Flow (cfs)		0.3565	for the past 24 months. For POTWs, use the design flow.

RECEIVING STREAM		DATA INPUT	
Receiving Stream Name		Unnamed Intermittent Stream	
Basin Name		San Juan Basin	
Waterbody Segment Code No.		98	
Is a publicly owned lake or reservoir (enter "1" if it's a lake, "0" if not)		0	
Are acute aquatic life criteria considered (1= yes, 0= no)	(MUST enter "1" for 2005 Standards)	1	
Are chronic aquatic life criteria considered (1= yes, 0=no)		0	
Are domestic water supply criteria considered (1= yes, 0=no)		0	
Are irrigation water supply criteria considered (1= yes, 0=no)		0	
Livestock watering and wildlife habitat criteria applied to all streams			
USGS Flow Station		USGS	
WQ Monitoring Station No.		SJR	
Receiving Stream TSS (mg/l)		771	For intermittent stream, enter effluent TSS
Receiving Stream Hardness (mg/l as CaCOs)	RANGE: 0 - 400	20	For intermittent stream, enter effluent Hardness (If no data, 20 mg/l is used)
Receiving Stream Critical Low Flow (4Q3) (cfs)		0	Enter "0" for intermittent stream and lake.
Receiving Stream Harmonic Mean Flow (cfs)		0.01	Enter harmonic mean or modified harmonic mean flow data or 0.001 if no data is available
Avg. Receiving Water Temperature (C)			
pH (Avg), Receiving Stream			
Fraction of stream allowed for mixing (F)		1	Enter 1, if stream morphology data is not available or for intermittent streams.
Fraction of Critical Low Flow		0	

STEP 2: INPUT AMBIENT AND EFFLUENT DATA

CALCULATE IN-STREAM WASTE CONCENTRATIONS

DATA INPUT — Input pollutant geometric mean concentration as micro-gram per liter (ug/l or ppb)

unless other unit is specified for the parameter.

Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, input "1/2 DL" for calculation.

Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, no data is inputted.

If a less than MQL vakue is reported, input either the reported value or "0" for calculation.

The following formular is used to calculate the Instream Waste Concentration (Cd)

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Cd = [(F*Qa*Ca) + (Qe*2.13*Ce)] / (F*Qa + Qe)

Where:

Cd = Instream Waste Concentration

F = Fraction of stream allowed for mixing (see "Procedures for Implementing NPDES Permits in New Mexico")

Ce = Reported concentration in effluent

Ca = Ambient stream concentration upstream of discharge

Qe = Plant effluent flow

Qa = Critical low flow of stream at discharge point expressed as the 4Q3 or harmonic mean flow for human health criteria

The following formular convert metals reported in total form to dissolved form if criteria are in dissolved form

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Kp = Kpo * (TSS**a) — Kp = Linear partition coefficient; Kpo and a can be found in table below

C/Ct = 1/ (1 + Kp*TSS* 10^-6) — TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)

Total Metal Criteria (Ct) = Cr / (C/Ct) — C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value

		Stream Linear Partition Coefficient					Lake Linear Partition Coefficient				
Total Metals	Total Value	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Stream	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Lake
Arsenic		480000	-0.73	3747.067714	0.257136224	0	480000	-0.73	3747.067714	0.257136224	0
Chromium III		3360000	-0.93	6940.307387	0.157456089	0	2170000	-0.27	360541.3261	0.00358452	0
Copper		1040000	-0.74	7596.492258	0.145838594	0	2850000	-0.9	7186.144069	0.15289311	0
Lead		2800000	-0.8	13725.06876	0.086340665	0	2040000	-0.53	60185.42714	0.021095727	0
Nickel		490000	-0.57	11080.90125	0.104784734	0	2210000	-0.76	14132.88895	0.084058638	0
Silver		2390000	-1.03	2539.404539	0.338079873	0	2390000	-1.03	2539.404539	0.338079873	0
Zinc		1250000	-0.7	11911.65067	0.098194376	0	3340000	-0.68	36353.77289	0.034448596	0

The following formular is used to calculate hardness dependent criteria

(Please refer to State Water Quality Standards for details)

			Dissolved WQC (ug/l)	
Aluminum (T)	Acute	e(1.3695[ln(hardness)]+1.8308)	377.4565069	If Stream pH < 6.5, enter 750 in cell O113
	Chronic	e(1.3695[ln(hardness)]+0.9161)	151.2229667	If Stream pH < 6.5, enter 87 in cell P113
Cadmium (D)	Acute	e(0.8968[ln(hardness)]-3.5699)*CF1	0.418091688	CF1 = 1.136672 - 0.041838*ln(hardness)
	Chronic	e(0.7647[ln(hardness)]-4.2180)*CF2	0.142116028	CF2 = 1.101672 - 0.041838*ln(hardness)

										Dissolved						
										WQC (ug/l)						
Chromium III (D)			Acute			0.316 e(0.819[ln(hardness)]+3.7256)				152.4888787						
			Chronic			0.860 e(0.819[ln(hardness)]+0.6848)				19.8356702						
Copper (D)			Acute			0.960 e(0.9422[ln(hardness)]-1.700)				2.949857764						
			Chronic			0.960 e(0.8545[ln(hardness)]-1.702)				2.263769249						
Lead (D)			Acute			e(1.273[ln(hardness)]-1.46)*CF3				10.79154489		CF3 = 1.46203 - 0.145712*ln(hardness)				
			Chronic			e(1.273[ln(hardness)]-4.705)*CF4				0.420531012		CF4 = 1.46203 - 0.145712*ln(hardness)				
Manganese (D)			Acute			e(0.3331[ln(hardness)]+6.4676)				1746.691001						
			Chronic			e(0.3331[ln(hardness)]+5.8743)				965.048559						
Nickel (D)			Acute			0.998 e(0.846[ln(hardness)]+2.255)				119.9874916						
			Chronic			0.997 e(0.846[ln(hardness)]+0.0584)				13.32690594						
Silver (D)			Acute			0.85 e(1.72[ln(hardness)]-6.59)				0.201924903						
Zinc (D)			Acute			0.978 e(0.9094[ln(hardness)]+0.9095)				37.02425804						
			Chronic			0.986 e(0.90947[ln(hardness)]+0.6235)				28.04834719						
						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
POLLUTANTS				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
				Conc.	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Radioactivity, Nutrients, and Chlorine																
Aluminum, total		7429-90-5	2.5		491600	1047108	1047108	1047108	1018537.52	1E+100	5000	1E+100	377.4565069	151.22297	1E+100	N/A
Barium, dissolved		7440-39-3	100			0	0	0	0	2000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Boron, dissolved		7440-42-8	100			0	0	0	0	1E+100	750	5000	1E+100	1E+100	1E+100	N/A
Cobalt, dissolved		7440-48-4	50			0	0	0	0	1E+100	50	1000	1E+100	1E+100	1E+100	N/A
Uranium, dissolved		7440-61-1	0.1			#VALUE!	#VALUE!	#VALUE!	#VALUE!	30	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Vanadium, dissolved		7440-62-2	50			0	0	0	0	1E+100	100	100	1E+100	1E+100	1E+100	N/A
Ra-226 and Ra-228 (pCi/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	5	1E+100	30	1E+100	1E+100	1E+100	N/A
Strontium (pCi/l)						0	0	0	0	8	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Tritium (pCi/l)						0	0	0	0	20000	1E+100	20000	1E+100	1E+100	1E+100	N/A
Gross Alpha (pCi/l)						0	0	0	0	15	1E+100	15	1E+100	1E+100	1E+100	N/A
Asbestos (fibers/l)						0	0	0	0	7000000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Total Residual Chlorine		7782-50-5	33			0	0	0	0	1E+100	1E+100	11	19	11	1E+100	N/A
Nitrate as N (mg/l)						0	0	0	0	10	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Nitrite + Nitrate (mg/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	132	1E+100	1E+100	1E+100	N/A
METALS AND CYANIDE																
Antimony, dissolved (P)		7440-36-0	60			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	640	N/A
Arsenic, dissolved (P)		7440-38-2	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	10	100	200	340	150	9	N/A
Beryllium, dissolved		7440-41-7	0.5			0	0	0	0	4	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Cadmium, dissolved		7440-43-9	1			0	0	0	0	5	10	50	0.418091688	0.142116	1E+100	N/A
Chromium (III), dissolved		16065-83-1	10			0	0	0	0	1E+100	1E+100	1E+100	152.4888787	19.83567	1E+100	N/A
Chromium (VI), dissolved		18540-29-9	10			0	0	0	0	1E+100	1E+100	1E+100	16	11	1E+100	N/A
Chromium, dissolved		7440-47-3				#VALUE!	#VALUE!	#VALUE!	#VALUE!	100	100	1000	1E+100	1E+100	1E+100	N/A
Copper, dissolved		7440-50-8	0.5			0	0	0	0	1300	200	500	2.949857764	2.2637692	1E+100	N/A
Lead, dissolved		7439-92-1	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	15	5000	100	10.79154489	0.420531	1E+100	N/A
Manganese, dissolved		7439-96-5				#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	1E+100	1746.691001	965.04856	1E+100	N/A

					Instream Waste Concentration				Livestock&	Acute	Chronic	Human	Need		
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS			Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Mercury, dissolved	7439-97-6	0.005			0	0	0	0	1E+100	1E+100	1E+100	1.4	0.77	1E+100	N/A
Mercury, total	7439-97-6	0.005			#VALUE!	#VALUE!	#VALUE!	#VALUE!	2	1E+100	0.77	1E+100	1E+100	1E+100	N/A
Molybdenum, dissolved	7439-98-7				0	0	0	0	1E+100	1000	1E+100	1E+100	1E+100	1E+100	N/A
Molybdenum, total recoverable	7439-98-7				0	0	0	0	1E+100	1E+100	1E+100	7920	1895	1E+100	N/A
Nickel, dissolved (P)	7440-02-0	0.5			0	0	0	0	700	1E+100	1E+100	119.9874916	13.326906	4600	N/A
Selenium, dissolved (P)	7782-49-2	5			0	0	0	0	50	130	50	1E+100	1E+100	4200	N/A
Selenium, dis (SO4 >500 mg/l)		5			0	0	0	0	50	250	50	1E+100	1E+100	4200	N/A
Selenium, total recoverable	7782-49-2	5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	5	20	5	1E+100	N/A
Silver, dissolved	7440-22-4	0.5			0	0	0	0	1E+100	1E+100	1E+100	0.201924903	1E+100	1E+100	N/A
Thalllium, dissolved (P)	7440-28-0	0.5			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	0.47	N/A
Zinc, dissolved	7440-66-6	20			0	0	0	0	10500	2000	25000	37.02425804	28.048347	26000	N/A
Cyanide, total recoverable	57-12-5	10			0	0	0	0	200	1E+100	5.2	22	5.2	140	N/A
Dioxin	1764-01-6	0.00001			0	0	0	0	3.00E-05	1E+100	1E+100	1E+100	1E+100	5.1E-08	N/A
VOLATILE COMPOUNDS															
Acrolein	107-02-8	50			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	9	N/A
Acrylonitrile	107-13-0	20			0	0	0	0	0.65	1E+100	1E+100	1E+100	1E+100	2.5	N/A
Benzene	71-43-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	510	N/A
Bromoform	75-25-2	10			0	0	0	0	44	1E+100	1E+100	1E+100	1E+100	1400	N/A
Carbon Tetrachloride	56-23-5	2			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	16	N/A
Chlorobenzene	108-90-7	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	1600	N/A
Clorodibromomethane	124-48-1	10			0	0	0	0	4.2	1E+100	1E+100	1E+100	1E+100	130	N/A
Chloroform	67-66-3	50			0	0	0	0	57	1E+100	1E+100	1E+100	1E+100	4700	N/A
Dichlorobromomethane	75-27-4	10			0	0	0	0	5.6	1E+100	1E+100	1E+100	1E+100	170	N/A
1,2-Dichloroethane	107-06-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	370	N/A
1,1-Dichloroethylene	75-35-4	10			0	0	0	0	7	1E+100	1E+100	1E+100	1E+100	7100	N/A
1,2-Dichloropropane	78-87-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	150	N/A
1,3-Dichloropropylene	542-75-6	10			0	0	0	0	3.5	1E+100	1E+100	1E+100	1E+100	210	N/A
Ethylbenzene	100-41-4	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	2100	N/A
Methyl Bromide	74-83-9	50			0	0	0	0	49	1E+100	1E+100	1E+100	1E+100	1500	N/A
Methylene Chloride	75-09-2	20			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	5900	N/A
1,1,2,2-Tetrachloroethane	79-34-5	10			0	0	0	0	1.8	1E+100	1E+100	1E+100	1E+100	40	N/A
Tetrachloroethylene	127-18-4	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	33	N/A
Tolune	108-88-3	10			0	0	0	0	1000	1E+100	1E+100	1E+100	1E+100	15000	N/A
1,2-trans-Dichloroethylene	156-60-5	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	10000	N/A
1,1,1-Trichloroethane	71-55-6				0	0	0	0	200	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
1,1,2-Trichloroethane	79-00-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	160	N/A
Trichloroethylene	79-01-6	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	300	N/A
Vinyl Chloride	75-01-4	10			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	24	N/A
ACID COMPOUNDS															
2-Chlorophenol	95-57-8	10			0	0	0	0	175	1E+100	1E+100	1E+100	1E+100	150	N/A
2,4-Dichlorophenol	120-83-2	10			0	0	0	0	105	1E+100	1E+100	1E+100	1E+100	290	N/A
2,4-Dimethylphenol	105-67-9	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	850	N/A
4,6-Dinitro-o-Cresol	534-52-1	50			0	0	0	0	14	1E+100	1E+100	1E+100	1E+100	280	N/A

				Instream Waste Concentration										
			Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Livestock&	Acute	Chronic	Human	Need
POLLUTANTS			Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Wildlife	Aquatic	Aquatic	Health	TMDL
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	Criteria ug/l	Criteria ug/l	Criteria ug/l	Criteria ug/l	
2,4-Dinitrophenol	51-28-5	50			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	5300	N/A
Pentachlorophenol	87-86-5	50			0	0	0	0	1	1E+100	1E+100	19	15	30	N/A
Phenol	108-95-2	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	860000	N/A
2,4,6-Trichlorophenol	88-06-2	10			0	0	0	0	32	1E+100	1E+100	1E+100	1E+100	24	N/A
BASE/NEUTRAL															
Acenaphthene	83-32-9	10			0	0	0	0	2100	1E+100	1E+100	1E+100	1E+100	990	N/A
Anthracene	120-12-7	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	40000	N/A
Benzidine	92-87-5	50			0	0	0	0	0.0015	1E+100	1E+100	1E+100	1E+100	0.002	N/A
Benzo(a)anthracene	56-55-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(a)pyrene	50-32-8	5			0	0	0	0	0.2	1E+100	1E+100	1E+100	1E+100	0.18	N/A
3,4-Benzofluoranthene	205-99-2	10			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(k)fluoranthene	207-08-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Bis(2-chloroethyl)Ether	111-44-4	10			0	0	0	0	0.3	1E+100	1E+100	1E+100	1E+100	5.3	N/A
Bis(2-chloroisopropyl)Ether	108-60-1	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	65000	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	10			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	22	N/A
Butyl Benzyl Phthalate	85-68-7	10			0	0	0	0	7000	1E+100	1E+100	1E+100	1E+100	1900	N/A
2-Chloronapthalene	91-58-7	10			0	0	0	0	2800	1E+100	1E+100	1E+100	1E+100	1600	N/A
Chrysene	218-01-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Dibenzo(a,h)anthracene	53-70-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
1,2-Dichlorobenzene	95-50-1	10			0	0	0	0	600	1E+100	1E+100	1E+100	1E+100	1300	N/A
1,3-Dichlorobenzene	541-73-1	10			0	0	0	0	469	1E+100	1E+100	1E+100	1E+100	960	N/A
1,4-Dichlorobenzene	106-46-7	10			0	0	0	0	75	1E+100	1E+100	1E+100	1E+100	190	N/A
3,3'-Dichlorobenzidine	91-94-1	5			0	0	0	0	0.78	1E+100	1E+100	1E+100	1E+100	0.28	N/A
Diethyl Phthalate	84-66-2	10			0	0	0	0	28000	1E+100	1E+100	1E+100	1E+100	44000	N/A
Dimethyl Phthalate	131-11-3	10			0	0	0	0	350000	1E+100	1E+100	1E+100	1E+100	1100000	N/A
Di-n-Butyl Phthalate	84-74-2	10			0	0	0	0	3500	1E+100	1E+100	1E+100	1E+100	4500	N/A
2,4-Dinitrotoluene	121-14-2	10			0	0	0	0	1.1	1E+100	1E+100	1E+100	1E+100	34	N/A
1,2-Diphenylhydrazine	122-66-7	20			0	0	0	0	0.44	1E+100	1E+100	1E+100	1E+100	2	N/A
Fluoranthene	206-44-0	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	140	N/A
Fluorene	86-73-7	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	5300	N/A
Hexachlorobenzene	118-74-1	5			0	0	0	0	1	1E+100	1E+100	1E+100	1E+100	0.0029	N/A
Hexachlorobutadiene	87-68-3	10			0	0	0	0	4.5	1E+100	1E+100	1E+100	1E+100	180	N/A
Hexachlorocyclopentadiene	77-47-4	10			0	0	0	0	50	1E+100	1E+100	1E+100	1E+100	1100	N/A
Hexachloroethane	67-72-1	20			0	0	0	0	25	1E+100	1E+100	1E+100	1E+100	33	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Isophorone	78-59-1	10			0	0	0	0	368	1E+100	1E+100	1E+100	1E+100	9600	N/A
Nitrobenzene	98-95-3	10			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	690	N/A
n-Nitrosodimethylamine	62-75-9	50			0	0	0	0	0.0069	1E+100	1E+100	1E+100	1E+100	30	N/A
n-Nitrosodi-n-Propylamine	621-64-7	20			0	0	0	0	0.05	1E+100	1E+100	1E+100	1E+100	5.1	N/A
n-Nitrosodiphenylamine	86-30-6	20			0	0	0	0	71	1E+100	1E+100	1E+100	1E+100	60	N/A
Nonylphenol	84852-15-3				0	0	0	0	1E+100	1E+100	1E+100	28	6.6	1E+100	N/A
Pyrene	129-00-0	10			0	0	0	0	1050	1E+100	1E+100	1E+100	1E+100	4000	N/A
1,2,4-Trichlorobenzene	120-82-1	10			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	70	N/A

						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS				Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
PESTICIDES AND PCBS																
Aldrin		309-00-2	0.01			0	0	0	0	0.021	1E+100	1E+100	3	1E+100	0.0005	N/A
Alpha-BHC		319-84-6	0.05			0	0	0	0	0.056	1E+100	1E+100	1E+100	1E+100	0.049	N/A
Beta-BHC		319-85-7	0.05			0	0	0	0	0.091	1E+100	1E+100	1E+100	1E+100	0.17	N/A
Gamma-BHC		58-89-9	0.05			0	0	0	0	0.2	1E+100	1E+100	0.95	1E+100	1.8	N/A
Chlordane		57-74-9	0.2			0	0	0	0	2	1E+100	1E+100	2.4	0.0043	0.0081	N/A
4,4'-DDT and derivatives		50-29-3	0.02			0	0	0	0	1	1E+100	0.001	1.1	0.001	0.0022	N/A
Dieldrin		60-57-1	0.02			0	0	0	0	0.022	1E+100	1E+100	0.24	0.056	0.00054	N/A
Diazinon		333-41-5				0	0	0	0	1E+100	1E+100	1E+100	0.17	0.17	1E+100	N/A
Alpha-Endosulfan		959-98-8	0.01			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Beta-Endosulfan		33213-65-9	0.02			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Endosulfan sulfate		1031-7-8	0.1			0	0	0	0	62	1E+100	1E+100	1E+100	1E+100	89	N/A
Endrin		72-20-8	0.02			0	0	0	0	2	1E+100	1E+100	0.086	0.036	0.06	N/A
Endrin Aldehyde		7421-93-4	0.1			0	0	0	0	10.5	1E+100	1E+100	1E+100	1E+100	0.3	N/A
Heptachlor		76-44-8	0.01			0	0	0	0	0.4	1E+100	1E+100	0.52	0.0038	0.00079	N/A
Heptachlor Epoixde		1024-57-3	0.01			0	0	0	0	0.2	1E+100	1E+100	0.52	0.0038	0.00039	N/A
PCBs		1336-36-3	0.2			0	0	0	0	0.5	1E+100	0.014	2	0.014	0.00064	N/A
Toxaphene		8001-35-2	0.3			0	0	0	0	3	1E+100	1E+100	0.73	0.0002	0.0028	N/A

STEP 3: SCAN POTENTIAL INSTREAM WASTE CONCENTRATIONS AGAINST WATER QUALITY CRITERIA AND ESTABLISH EFFLUENT LIMITATIONS FOR ALL APPLICABLE PARAMETERS

No limits are established if the receiving stream is not designated for the particular uses.

No limits are established if the potential instream waste concentrations are less than the chronic water quality criteria.

The most applicable stringent criteria are used to establish effluent limitations for a given parameter.

Water quality criteria apply at the end-of-pipe for acute aquatic life criteria and discharges to public lakes.

If background concentration exceeds the water quality criteria, water quality criteria apply. And "Need TMDL" shown to the next column of Avg. Mass

Monthly avg concentration = daily max. / 1.5.

APPLICABLE WATER QUALITY-BASED LIMITS

The following formular is used to calculate the allowable daily maximum effluent cincentration See the current "Procedures for Implementing NPDES Permits in New Mexico"

Daily Max. Conc. = Cs + (Cs - Ca)(F*Qa/Qe) Monthly Avg. Conc. = Daily Max. Conc. / 1.5

Where:
Cs = Applicable water quality standard
Ca = Ambient stream concentration
F = Fraction of stream allowed for mixing (1.0 is assigned to domestic water supply and human health uses)
Qe = Plant effluent flow
Qa = Criteria Low flow (4Q3) or Harmonic Mean flow for Human Health Criteria

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Radioactivity, Nutrients, and Chlorine, as Total														
Aluminum, Total	7429-90-5	01105	N/A	N/A	N/A	377.456507	N/A	N/A	377.4565069	251.6376713	377.4565069	251.63767	0.72403707	0.482691381
Barium, Total	7440-39-3	01007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron, Total	7440-42-8	01022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt, Total	7440-48-4	01037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium, Total	7440-61-1	22706	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Vanadium, Total	7440-62-2	01087	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ra-226 and Ra-228 (pCi/l)		11503	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Strontium (pCi/l)		13501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tritium (pCi/l)		04124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross Alpha (pCi/l)		80029	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asbestos (fibers/l)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Residual Chlorine	7782-50-5	50060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate as N (mg/l)		00620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrite + Nitrate (mg/l)		00630	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
METALS AND CYANIDE, as Total														
Antimony, Total (P)	7440-36-0	01097	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic, Total (P)	7440-38-2	1002	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Beryllium, Total	7440-41-7	01012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium, Total	7440-43-9	01027	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (III), dissolved	16065-83-1	01033	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (VI), dissolved	18540-29-9	01034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium, Total	7440-47-3	01034	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Copper, Total	7440-50-8	01042	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead, Total	7439-92-1	01051	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Manganese, dissovled	7439-96-5	01056	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Mercury, Total	7439-97-6	71900	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, Total	7439-97-6	71900	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Molybdenum, dissolved	7439-98-7	1060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum, total recoverable	7439-98-7	01062	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, Total (P)	7440-02-0	01067	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (P)	7782-49-2	01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (SO4 >500 mg/l)		01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total recoverable	7782-49-2	01147	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Silver, Total	7440-22-4	01077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thalllium, Total (P)	7440-28-0	01059	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc, Total	7440-66-6	1092	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide, total recoverable	57-12-5	00720	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIOXIN														0
2,3,7,8-TCDD	1764-01-6	34675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOLATILE COMPOUNDS														
Acrolein	107-02-8	34210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acrylonitrile	107-13-0	34215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	71-43-2	34030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform	75-25-2	32104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	56-23-5	32102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

				Limits	Limits	Limits	Limits	Limits	Limits	ug/l	ug/l	ug/l	ug/l	lb/day	lb/day
Chlorobenzene	108-90-7	34301		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clorodibromomethane	124-48-1	32105		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	67-66-3	32106		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorobromomethane	75-27-4	32101		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	107-06-2	34531		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	75-35-4	34501		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	78-87-5	34541		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropylene	542-75-6	34561		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	34371		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Bromide	74-83-9	34413		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	75-09-2	34423		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	79-34-5	34516		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	127-18-4	34475		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tolune	108-88-3	34010		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-trans-Dichloroethylene	156-60-5	34546		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	71-55-6			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	79-00-5	34511		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	79-01-6	39180		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	75-01-4	39175		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ACID COMPOUNDS															
2-Chlorophenol	95-57-8	34586		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	120-83-2	34601		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	105-67-9	34606		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,6-Dinitro-o-Cresol	534-52-1	34657		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	51-28-5	34616		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	87-86-5	39032		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	108-95-2	34694		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	88-06-2	34621		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BASE/NEUTRAL															
Acenaphthene	83-32-9	34205		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anthracene	120-12-7	34220		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzidine	92-87-5	39120		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	56-55-3	34526		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	50-32-8	34247		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,4-Benzofluoranthene	205-99-2	34230		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	207-08-9	34242		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethyl)Ether	111-44-4	34273		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroisopropyl)Ether	108-60-1	34283		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	39100		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Butyl Benzyl Phthalate	85-68-7	34292		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Chloronapthalene	91-58-7	34581		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	218-01-9	34320		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	53-70-3	34556		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	95-50-1	34536		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET		Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Daily Avg Load lb/day
1,3-Dichlorobenzene	541-73-1	34566		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	106-46-7	34571		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	91-94-1	34631		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diethyl Phthalate	84-66-2	34336		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl Phthalate	131-11-3	34341		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Di-n-Butyl Phthalate	84-74-2	39110		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	121-14-2	34611		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Diphenylhydrazine	122-66-7	34346		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluoranthene	206-44-0	34376		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluorene	86-73-7	34381		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobenzene	118-74-1	39700		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	87-68-3	34391		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	77-47-4	34386		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	67-72-1	34396		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	34403		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isophorone	78-59-1	34408		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	98-95-3	34447		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodimethylamine	62-75-9	34438		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodi-n-Propylamine	621-64-7	34428		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodiphenylamine	86-30-6	34433		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nonylphenol	84852-15-3			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pyrene	129-00-0	34469		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	120-82-1	34551		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PESTICIDES AND PCBS															
Aldrin	309-00-2	39330		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-BHC	319-84-6	39337		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-BHC	319-85-7	39338		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gamma-BHC	58-89-9	39340		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlordane	57-74-9	39350		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT and derivatives	50-29-3	39300		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	60-57-1	39380		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diazinon	333-41-5	39570		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-Endosulfan	959-98-8	34361		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-Endosulfan	33213-65-9	34356		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan sulfate	1031-7-8	34351		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin	72-20-8	39390		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin Aldehyde	7421-93-4	34366		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	76-44-8	39410		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor Epoixde	1024-57-3	39420		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs	1336-36-3	39516		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	8001-35-2	39400		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

		CALCULATIONS OF NEW MEXICO WATER QUALITY-BASED EFFLUENT LIMITATIONS		
NMAC 20.6.4.	**NMWQS as of January 14, 2011**	(EPA approved site-specific criteria for aluminum, cadmium, and zinc on April 30, 2012)		
Calculations Specifications:		Excel	**Revised as of July 10, 2012**	
Prepared By:	QuangNguyen	27-Jan-20	9:31 AM	
STEP 1:	REFERENCE IMPLEMENTATION PROCEDURES	**APPENDIX**	**A**	
	INPUT FACILITY AND RECEIVING STREAM DATA		**of FACT SHEET**	
	LIST SOURCE OF DATA INPUT			
IMPLEMENTATION PROCEDURES				
The State of New Mexico Standards for Interstate and Intrastate Surface Waters are implemented in this spread sheet				
by using procedures established in the current "Procedures for Implementing NPDES Permits in New Mexico"				
FACILTY			DATA INPUT	
Permittee			La Plata Mine-Outfall #28	
NPDES Permit No.			NM0029505	
Outfall No.(s)				
Plant Effluent Flow (MGD)			0.37	For industrial and federal facility, use the highest monthly average flow
Plant Effluent Flow (cfs)			0.5735	for the past 24 months. For POTWs, use the design flow.
RECEIVING STREAM			DATA INPUT	
Receiving Stream Name			Unnamed Intermittent Stream	
Basin Name			San Juan Basin	
Waterbody Segment Code No.			98	
Is a publicly owned lake or reservoir (enter "1" if it's a lake, "0" if not)			0	
Are acute aquatic life criteria considered (1= yes, 0= no)	(MUST enter "1" for 2005 Standards)		1	
Are chronic aquatic life criteria considered (1= yes, 0=no)			0	
Are domestic water supply criteria considered (1= yes, 0=no)			0	
Are irrigation water supply criteria considered (1= yes, 0=no)			0	
Livestock watering and wildlife habitat criteria applied to all streams				
USGS Flow Station			USGS	
WQ Monitoring Station No.			SJR	
Receiving Stream TSS (mg/l)			771	For intermittent stream, enter effluent TSS
Receiving Stream Hardness (mg/l as CaCOs)		RANGE: 0 - 400	20	For intermittent stream, enter effluent Hardness (If no data, 20 mg/l is used)
Receiving Stream Critical Low Flow (4Q3) (cfs)			0	Enter "0" for intermittent stream and lake.
Receiving Stream Harmonic Mean Flow (cfs)			0.01	Enter harmonic mean or modified harmonic mean flow data or 0.001 if no data is available
Avg. Receiving Water Temperature (C)				
pH (Avg), Receiving Stream				
Fraction of stream allowed for mixing (F)			1	Enter 1, if stream morphology data is not available or for intermittent streams.
Fraction of Critical Low Flow			0	

STEP 2: INPUT AMBIENT AND EFFLUENT DATA

CALCULATE IN-STREAM WASTE CONCENTRATIONS

DATA INPUT — Input pollutant geometric mean concentration as micro-gram per liter (ug/l or ppb)

unless other unit is specified for the parameter.

Effluent value reported as "< detection level" (DL) but the DL is greater than MQL, input "1/2 DL" for calculation.

Effluent value reported as "< detection level" (DL) and the DL is smaller than MQL, no data is inputted.

If a less than MQL value is reported, input either the reported value or "0" for calculation.

The following formular is used to calculate the Instream Waste Concentration (Cd)

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Cd = [(F*Qa*Ca) + (Qe*2.13*Ce)] / (F*Qa + Qe)

Where:

Cd = Instream Waste Concentration

F = Fraction of stream allowed for mixing (see "Procedures for Implementing NPDES Permits in New Mexico")

Ce = Reported concentration in effluent

Ca = Ambient stream concentration upstream of discharge

Qe = Plant effluent flow

Qa = Critical low flow of stream at discharge point expressed as the 4Q3 or harmonic mean flow for human health criteria

The following formular convert metals reported in total form to dissolved form if criteria are in dissolved form

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Kp = Kpo * (TSS**a) — Kp = Linear partition coefficient; Kpo and a can be found in table below

C/Ct = 1/ (1 + Kp*TSS* 10^-6) — TSS = Total suspended solids concentration found in receiving stream (or in effluent for intermittent stream)

Total Metal Criteria (Ct) = Cr / (C/Ct) — C/Ct = Fraction of metal dissolved; and Cr = Dissolved criteria value

		Stream Linear Partition Coefficient					Lake Linear Partition Coefficient				
Total Metals	Total Value	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Stream	Kpo	alpha (a)	Kp	C/Ct	Dissolved Value in Lake
Arsenic		480000	-0.73	3747.067714	0.257136224	0	480000	-0.73	3747.067714	0.257136224	0
Chromium III		3360000	-0.93	6940.307387	0.157456089	0	2170000	-0.27	360541.3261	0.00358452	0
Copper		1040000	-0.74	7596.492258	0.145838594	0	2850000	-0.9	7186.144069	0.15289311	0
Lead		2800000	-0.8	13725.06876	0.086340665	0	2040000	-0.53	60185.42714	0.021095727	0
Nickel		490000	-0.57	11080.90125	0.104784734	0	2210000	-0.76	14132.88895	0.084058638	0
Silver		2390000	-1.03	2539.404539	0.338079873	0	2390000	-1.03	2539.404539	0.338079873	0
Zinc		1250000	-0.7	11911.65067	0.098194376	0	3340000	-0.68	36353.77289	0.034448596	0

The following formular is used to calculate hardness dependent criteria

(Please refer to State Water Quality Standards for details)

		Dissolved WQC (ug/l)	
Aluminum (T)	Acute	e(1.3695[ln(hardness)]+1.8308)	377.4565069	If Stream pH < 6.5, enter 750 in cell O113
	Chronic	e(1.3695[ln(hardness)]+0.9161)	151.2229667	If Stream pH < 6.5, enter 87 in cell P113
Cadmium (D)	Acute	e(0.8968[ln(hardness)]-3.5699)*CF1	0.418091688	CF1 = 1.136672 - 0.041838*ln(hardness)
	Chronic	e(0.7647[ln(hardness)]-4.2180)*CF2	0.142116028	CF2 = 1.101672 - 0.041838*ln(hardness)

										Dissolved						
										WQC (ug/l)						
Chromium III (D)			Acute			0.316 e(0.819[ln(hardness)]+3.7256)				152.4888787						
			Chronic			0.860 e(0.819[ln(hardness)]+0.6848)				19.8356702						
Copper (D)			Acute			0.960 e(0.9422[ln(hardness)]-1.700)				2.949857764						
			Chronic			0.960 e(0.8545[ln(hardness)]-1.702)				2.263769249						
Lead (D)			Acute			e(1.273[ln(hardness)]-1.46)*CF3				10.79154489		CF3 = 1.46203 - 0.145712*ln(hardness)				
			Chronic			e(1.273[ln(hardness)]-4.705)*CF4				0.420531012		CF4 = 1.46203 - 0.145712*ln(hardness)				
Manganese (D)			Acute			e(0.3331[ln(hardness)]+6.4676)				1746.691001						
			Chronic			e(0.3331[ln(hardness)]+5.8743)				965.048559						
Nickel (D)			Acute			0.998 e(0.846[ln(hardness)]+2.255)				119.9874916						
			Chronic			0.997 e(0.846[ln(hardness)]+0.0584)				13.32690594						
Silver (D)			Acute			0.85 e(1.72[ln(hardness)]-6.59)				0.201924903						
Zinc (D)			Acute			0.978 e(0.9094[ln(hardness)]+0.9095)				37.02425804						
			Chronic			0.986 e(0.90947[ln(hardness)]+0.6235)				28.04834719						
						Instream Waste Concentration						Livestock&	Acute	Chronic	Human	Need
POLLUTANTS				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
				Conc.	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Radioactivity, Nutrients, and Chlorine																
Aluminum, total		7429-90-5	2.5		371300	790869	790869	790869	777315.118	1E+100	5000	1E+100	377.4565069	151.22297	1E+100	N/A
Barium, dissolved		7440-39-3	100			0	0	0	0	2000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Boron, dissolved		7440-42-8	100			0	0	0	0	1E+100	750	5000	1E+100	1E+100	1E+100	N/A
Cobalt, dissolved		7440-48-4	50			0	0	0	0	1E+100	50	1000	1E+100	1E+100	1E+100	N/A
Uranium, dissolved		7440-61-1	0.1			#VALUE!	#VALUE!	#VALUE!	#VALUE!	30	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Vanadium, dissolved		7440-62-2	50			0	0	0	0	1E+100	100	100	1E+100	1E+100	1E+100	N/A
Ra-226 and Ra-228 (pCi/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	5	1E+100	30	1E+100	1E+100	1E+100	N/A
Strontium (pCi/l)						0	0	0	0	8	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Tritium (pCi/l)						0	0	0	0	20000	1E+100	20000	1E+100	1E+100	1E+100	N/A
Gross Alpha (pCi/l)						0	0	0	0	15	1E+100	15	1E+100	1E+100	1E+100	N/A
Asbestos (fibers/l)						0	0	0	0	7000000	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Total Residual Chlorine		7782-50-5	33			0	0	0	0	1E+100	1E+100	11	19	11	1E+100	N/A
Nitrate as N (mg/l)						0	0	0	0	10	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Nitrite + Nitrate (mg/l)						#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	132	1E+100	1E+100	1E+100	N/A
METALS AND CYANIDE																
Antimony, dissolved (P)		7440-36-0	60			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	640	N/A
Arsenic, dissolved (P)		7440-38-2	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	10	100	200	340	150	9	N/A
Beryllium, dissolved		7440-41-7	0.5			0	0	0	0	4	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
Cadmium, dissolved		7440-43-9	1			0	0	0	0	5	10	50	0.418091688	0.142116	1E+100	N/A
Chromium (III), dissolved		16065-83-1	10			0	0	0	0	1E+100	1E+100	1E+100	152.4888787	19.83567	1E+100	N/A
Chromium (VI), dissolved		18540-29-9	10			0	0	0	0	1E+100	1E+100	1E+100	16	11	1E+100	N/A
Chromium, dissolved		7440-47-3				#VALUE!	#VALUE!	#VALUE!	#VALUE!	100	100	1000	1E+100	1E+100	1E+100	N/A
Copper, dissolved		7440-50-8	0.5			0	0	0	0	1300	200	500	2.949857764	2.2637692	1E+100	N/A
Lead, dissolved		7439-92-1	0.5			#VALUE!	#VALUE!	#VALUE!	#VALUE!	15	5000	100	10.79154489	0.420531	1E+100	N/A
Manganese, dissolved		7439-96-5				#VALUE!	#VALUE!	#VALUE!	#VALUE!	1E+100	1E+100	1E+100	1746.691001	965.04856	1E+100	N/A

					Instream Waste Concentration				Livestock&	Acute	Chronic	Human	Need		
		Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Wildlife	Aquatic	Aquatic	Health	TMDL
POLLUTANTS		Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
	CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
Mercury, dissolved	7439-97-6	0.005			0	0	0	0	1E+100	1E+100	1E+100	1.4	0.77	1E+100	N/A
Mercury, total	7439-97-6	0.005		0.62	1.3206	1.3206	1.3206	1.29796761	2	1E+100	0.77	1E+100	1E+100	1E+100	N/A
Molybdenum, dissolved	7439-98-7				0	0	0	0	1E+100	1000	1E+100	1E+100	1E+100	1E+100	N/A
Molybdenum, total recoverable	7439-98-7				0	0	0	0	1E+100	1E+100	1E+100	7920	1895	1E+100	N/A
Nickel, dissolved (P)	7440-02-0	0.5			0	0	0	0	700	1E+100	1E+100	119.9874916	13.326906	4600	N/A
Selenium, dissolved (P)	7782-49-2	5			0	0	0	0	50	130	50	1E+100	1E+100	4200	N/A
Selenium, dis (SO4 >500 mg/l)		5			0	0	0	0	50	250	50	1E+100	1E+100	4200	N/A
Selenium, total recoverable	7782-49-2	5		4.85	10.3305	10.3305	10.3305	10.1534563	1E+100	1E+100	5	20	5	1E+100	N/A
Silver, dissolved	7440-22-4	0.5			0	0	0	0	1E+100	1E+100	1E+100	0.201924903	1E+100	1E+100	N/A
Thalllium, dissolved (P)	7440-28-0	0.5			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	0.47	N/A
Zinc, dissolved	7440-66-6	20			0	0	0	0	10500	2000	25000	37.02425804	28.048347	26000	N/A
Cyanide, total recoverable	57-12-5	10			0	0	0	0	200	1E+100	5.2	22	5.2	140	N/A
Dioxin	1764-01-6	0.00001			0	0	0	0	3.00E-05	1E+100	1E+100	1E+100	1E+100	5.1E-08	N/A
VOLATILE COMPOUNDS															
Acrolein	107-02-8	50			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	9	N/A
Acrylonitrile	107-13-0	20			0	0	0	0	0.65	1E+100	1E+100	1E+100	1E+100	2.5	N/A
Benzene	71-43-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	510	N/A
Bromoform	75-25-2	10			0	0	0	0	44	1E+100	1E+100	1E+100	1E+100	1400	N/A
Carbon Tetrachloride	56-23-5	2			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	16	N/A
Chlorobenzene	108-90-7	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	1600	N/A
Clorodibromomethane	124-48-1	10			0	0	0	0	4.2	1E+100	1E+100	1E+100	1E+100	130	N/A
Chloroform	67-66-3	50			0	0	0	0	57	1E+100	1E+100	1E+100	1E+100	4700	N/A
Dichlorobromomethane	75-27-4	10			0	0	0	0	5.6	1E+100	1E+100	1E+100	1E+100	170	N/A
1,2-Dichloroethane	107-06-2	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	370	N/A
1,1-Dichloroethylene	75-35-4	10			0	0	0	0	7	1E+100	1E+100	1E+100	1E+100	7100	N/A
1,2-Dichloropropane	78-87-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	150	N/A
1,3-Dichloropropylene	542-75-6	10			0	0	0	0	3.5	1E+100	1E+100	1E+100	1E+100	210	N/A
Ethylbenzene	100-41-4	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	2100	N/A
Methyl Bromide	74-83-9	50			0	0	0	0	49	1E+100	1E+100	1E+100	1E+100	1500	N/A
Methylene Chloride	75-09-2	20			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	5900	N/A
1,1,2,2-Tetrachloroethane	79-34-5	10			0	0	0	0	1.8	1E+100	1E+100	1E+100	1E+100	40	N/A
Tetrachloroethylene	127-18-4	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	33	N/A
Tolune	108-88-3	10			0	0	0	0	1000	1E+100	1E+100	1E+100	1E+100	15000	N/A
1,2-trans-Dichloroethylene	156-60-5	10			0	0	0	0	100	1E+100	1E+100	1E+100	1E+100	10000	N/A
1,1,1-Trichloroethane	71-55-6				0	0	0	0	200	1E+100	1E+100	1E+100	1E+100	1E+100	N/A
1,1,2-Trichloroethane	79-00-5	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	160	N/A
Trichloroethylene	79-01-6	10			0	0	0	0	5	1E+100	1E+100	1E+100	1E+100	300	N/A
Vinyl Chloride	75-01-4	10			0	0	0	0	2	1E+100	1E+100	1E+100	1E+100	24	N/A
ACID COMPOUNDS															
2-Chlorophenol	95-57-8	10			0	0	0	0	175	1E+100	1E+100	1E+100	1E+100	150	N/A
2,4-Dichlorophenol	120-83-2	10			0	0	0	0	105	1E+100	1E+100	1E+100	1E+100	290	N/A
2,4-Dimethylphenol	105-67-9	10			0	0	0	0	700	1E+100	1E+100	1E+100	1E+100	850	N/A
4,6-Dinitro-o-Cresol	534-52-1	50			0	0	0	0	14	1E+100	1E+100	1E+100	1E+100	280	N/A

POLLUTANTS	CAS No.	MQL	Ambient Conc Ca (ug/l)	Effluent Conc. Ce (ug/l)	Acute Aquatic 2.13*Ce	Domestic Supply Cd,dom (ug/l)	Chronic Aquatic Cd (ug/l)	Human Health Cd,hh (ug/l)	Domestic Criteria ug/l	Irrigation Criteria ug/l	Wildlife Criteria ug/l	Aquatic Criteria ug/l	Aquatic Criteria ug/l	Health Criteria ug/l	TMDL
2,4-Dinitrophenol	51-28-5	50			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	5300	N/A
Pentachlorophenol	87-86-5	50			0	0	0	0	1	1E+100	1E+100	19	15	30	N/A
Phenol	108-95-2	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	860000	N/A
2,4,6-Trichlorophenol	88-06-2	10			0	0	0	0	32	1E+100	1E+100	1E+100	1E+100	24	N/A
BASE/NEUTRAL															
Acenaphthene	83-32-9	10			0	0	0	0	2100	1E+100	1E+100	1E+100	1E+100	990	N/A
Anthracene	120-12-7	10			0	0	0	0	10500	1E+100	1E+100	1E+100	1E+100	40000	N/A
Benzidine	92-87-5	50			0	0	0	0	0.0015	1E+100	1E+100	1E+100	1E+100	0.002	N/A
Benzo(a)anthracene	56-55-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(a)pyrene	50-32-8	5			0	0	0	0	0.2	1E+100	1E+100	1E+100	1E+100	0.18	N/A
3,4-Benzofluoranthene	205-99-2	10			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Benzo(k)fluoranthene	207-08-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Bis(2-chloroethyl)Ether	111-44-4	10			0	0	0	0	0.3	1E+100	1E+100	1E+100	1E+100	5.3	N/A
Bis(2-chloroisopropyl)Ether	108-60-1	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	65000	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	10			0	0	0	0	6	1E+100	1E+100	1E+100	1E+100	22	N/A
Butyl Benzyl Phthalate	85-68-7	10			0	0	0	0	7000	1E+100	1E+100	1E+100	1E+100	1900	N/A
2-Chloronapthalene	91-58-7	10			0	0	0	0	2800	1E+100	1E+100	1E+100	1E+100	1600	N/A
Chrysene	218-01-9	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Dibenzo(a,h)anthracene	53-70-3	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
1,2-Dichlorobenzene	95-50-1	10			0	0	0	0	600	1E+100	1E+100	1E+100	1E+100	1300	N/A
1,3-Dichlorobenzene	541-73-1	10			0	0	0	0	469	1E+100	1E+100	1E+100	1E+100	960	N/A
1,4-Dichlorobenzene	106-46-7	10			0	0	0	0	75	1E+100	1E+100	1E+100	1E+100	190	N/A
3,3'-Dichlorobenzidine	91-94-1	5			0	0	0	0	0.78	1E+100	1E+100	1E+100	1E+100	0.28	N/A
Diethyl Phthalate	84-66-2	10			0	0	0	0	28000	1E+100	1E+100	1E+100	1E+100	44000	N/A
Dimethyl Phthalate	131-11-3	10			0	0	0	0	350000	1E+100	1E+100	1E+100	1E+100	1100000	N/A
Di-n-Butyl Phthalate	84-74-2	10			0	0	0	0	3500	1E+100	1E+100	1E+100	1E+100	4500	N/A
2,4-Dinitrotoluene	121-14-2	10			0	0	0	0	1.1	1E+100	1E+100	1E+100	1E+100	34	N/A
1,2-Diphenylhydrazine	122-66-7	20			0	0	0	0	0.44	1E+100	1E+100	1E+100	1E+100	2	N/A
Fluoranthene	206-44-0	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	140	N/A
Fluorene	86-73-7	10			0	0	0	0	1400	1E+100	1E+100	1E+100	1E+100	5300	N/A
Hexachlorobenzene	118-74-1	5			0	0	0	0	1	1E+100	1E+100	1E+100	1E+100	0.0029	N/A
Hexachlorobutadiene	87-68-3	10			0	0	0	0	4.5	1E+100	1E+100	1E+100	1E+100	180	N/A
Hexachlorocyclopentadiene	77-47-4	10			0	0	0	0	50	1E+100	1E+100	1E+100	1E+100	1100	N/A
Hexachloroethane	67-72-1	20			0	0	0	0	25	1E+100	1E+100	1E+100	1E+100	33	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	5			0	0	0	0	0.048	1E+100	1E+100	1E+100	1E+100	0.18	N/A
Isophorone	78-59-1	10			0	0	0	0	368	1E+100	1E+100	1E+100	1E+100	9600	N/A
Nitrobenzene	98-95-3	10			0	0	0	0	18	1E+100	1E+100	1E+100	1E+100	690	N/A
n-Nitrosodimethylamine	62-75-9	50			0	0	0	0	0.0069	1E+100	1E+100	1E+100	1E+100	30	N/A
n-Nitrosodi-n-Propylamine	621-64-7	20			0	0	0	0	0.05	1E+100	1E+100	1E+100	1E+100	5.1	N/A
n-Nitrosodiphenylamine	86-30-6	20			0	0	0	0	71	1E+100	1E+100	1E+100	1E+100	60	N/A
Nonylphenol	84852-15-3				0	0	0	0	1E+100	1E+100	1E+100	28	6.6	1E+100	N/A
Pyrene	129-00-0	10			0	0	0	0	1050	1E+100	1E+100	1E+100	1E+100	4000	N/A
1,2,4-Trichlorobenzene	120-82-1	10			0	0	0	0	70	1E+100	1E+100	1E+100	1E+100	70	N/A

						Instream Waste Concentration										
				Ambient	Effluent	Acute	Domestic	Chronic	Human	Domestic	Irrigation	Livestock& Wildlife	Acute Aquatic	Chronic Aquatic	Human Health	Need TMDL
POLLUTANTS				Conc	Conc.	Aquatic	Supply	Aquatic	Health	Criteria	Criteria	Criteria	Criteria	Criteria	Criteria	
		CAS No.	MQL	Ca (ug/l)	Ce (ug/l)	2.13*Ce	Cd,dom (ug/l)	Cd (ug/l)	Cd,hh (ug/l)	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
PESTICIDES AND PCBS																
Aldrin		309-00-2	0.01			0	0	0	0	0.021	1E+100	1E+100	3	1E+100	0.0005	N/A
Alpha-BHC		319-84-6	0.05			0	0	0	0	0.056	1E+100	1E+100	1E+100	1E+100	0.049	N/A
Beta-BHC		319-85-7	0.05			0	0	0	0	0.091	1E+100	1E+100	1E+100	1E+100	0.17	N/A
Gamma-BHC		58-89-9	0.05			0	0	0	0	0.2	1E+100	1E+100	0.95	1E+100	1.8	N/A
Chlordane		57-74-9	0.2			0	0	0	0	2	1E+100	1E+100	2.4	0.0043	0.0081	N/A
4,4'-DDT and derivatives		50-29-3	0.02			0	0	0	0	1	1E+100	0.001	1.1	0.001	0.0022	N/A
Dieldrin		60-57-1	0.02			0	0	0	0	0.022	1E+100	1E+100	0.24	0.056	0.00054	N/A
Diazinon		333-41-5				0	0	0	0	1E+100	1E+100	1E+100	0.17	0.17	1E+100	N/A
Alpha-Endosulfan		959-98-8	0.01			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Beta-Endosulfan		33213-65-9	0.02			0	0	0	0	62	1E+100	1E+100	0.22	0.056	89	N/A
Endosulfan sulfate		1031-7-8	0.1			0	0	0	0	62	1E+100	1E+100	1E+100	1E+100	89	N/A
Endrin		72-20-8	0.02			0	0	0	0	2	1E+100	1E+100	0.086	0.036	0.06	N/A
Endrin Aldehyde		7421-93-4	0.1			0	0	0	0	10.5	1E+100	1E+100	1E+100	1E+100	0.3	N/A
Heptachlor		76-44-8	0.01			0	0	0	0	0.4	1E+100	1E+100	0.52	0.0038	0.00079	N/A
Heptachlor Epoixde		1024-57-3	0.01			0	0	0	0	0.2	1E+100	1E+100	0.52	0.0038	0.00039	N/A
PCBs		1336-36-3	0.2			0	0	0	0	0.5	1E+100	0.014	2	0.014	0.00064	N/A
Toxaphene		8001-35-2	0.3			0	0	0	0	3	1E+100	1E+100	0.73	0.0002	0.0028	N/A

STEP 3: SCAN POTENTIAL INSTREAM WASTE CONCENTRATIONS AGAINST WATER QUALITY CRITERIA

AND ESTABLISH EFFLUENT LIMITATIONS FOR ALL APPLICABLE PARAMETERS

No limits are established if the receiving stream is not designated for the particular uses.

No limits are established if the potential instream waste concentrations are less than the chronic water quality criteria.

The most applicable stringent criteria are used to establish effluent limitations for a given parameter.

Water quality criteria apply at the end-of-pipe for acute aquatic life criteria and discharges to public lakes.

If background concentration exceeds the water quality criteria, water quality criteria apply. And "Need TMDL" shown to the next column of Avg. Mass

Monthly avg concentration = daily max. / 1.5.

APPLICABLE WATER QUALITY-BASED LIMITS

The following formular is used to calculate the allowable daily maximum effluent cincentration

See the current "Procedures for Implementing NPDES Permits in New Mexico"

Daily Max. Conc. = Cs + (Cs - Ca)(F*Qa/Qe)

Monthly Avg. Conc. = Daily Max. Conc. / 1.5

Where:

Cs = Applicable water quality standard

Ca = Ambient stream concentration

F = Fraction of stream allowed for mixing (1.0 is assigned to domestic water supply and human health uses)

Qe = Plant effluent flow

Qa = Criteria Low flow (4Q3) or Harmonic Mean flow for Human Health Criteria

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Radioactivity, Nutrients, and Chlorine, as Total														
Aluminum, Total	7429-90-5	01105	N/A	N/A	N/A	377.456507	N/A	N/A	377.4565069	251.6376713	377.4565069	251.63767	1.16475529	0.776503526
Barium, Total	7440-39-3	01007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron, Total	7440-42-8	01022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt, Total	7440-48-4	01037	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium, Total	7440-61-1	22706	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Vanadium, Total	7440-62-2	01087	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ra-226 and Ra-228 (pCi/l)		11503	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Strontium (pCi/l)		13501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tritium (pCi/l)		04124	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross Alpha (pCi/l)		80029	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Asbestos (fibers/l)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Residual Chlorine	7782-50-5	50060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate as N (mg/l)		00620	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrite + Nitrate (mg/l)		00630	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
METALS AND CYANIDE, as Total														
Antimony, Total (P)	7440-36-0	01097	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic, Total (P)	7440-38-2	1002	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Beryllium, Total	7440-41-7	01012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium, Total	7440-43-9	01027	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (III), dissolved	16065-83-1	01033	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (VI), dissolved	18540-29-9	01034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium, Total	7440-47-3	01034	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Copper, Total	7440-50-8	01042	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead, Total	7439-92-1	01051	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Manganese, dissovled	7439-96-5	01056	N/A	N/A	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Mercury, Total	7439-97-6	71900	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury, Total	7439-97-6	71900	N/A	N/A	0.77	N/A	N/A	N/A	0.77	0.77	0.77	0.77	0.00237607	0.002376066
Molybdenum, dissolved	7439-98-7	1060	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum, total recoverable	7439-98-7	01062	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel, Total (P)	7440-02-0	01067	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (P)	7782-49-2	01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total (SO4 >500 mg/l)		01147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, Total recoverable	7782-49-2	01147	N/A	N/A	5	N/A	N/A	N/A	5	5	5	5	0.015429	0.015429
Silver, Total	7440-22-4	01077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thalllium, Total (P)	7440-28-0	01059	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc, Total	7440-66-6	1092	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide, total recoverable	57-12-5	00720	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DIOXIN														0
2,3,7,8-TCDD	1764-01-6	34675	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
VOLATILE COMPOUNDS														
Acrolein	107-02-8	34210	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acrylonitrile	107-13-0	34215	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	71-43-2	34030	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform	75-25-2	32104	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	56-23-5	32102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET	Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Monthly Avg Load lb/day
Chlorobenzene	108-90-7	34301	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Clorodibromomethane	124-48-1	32105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	67-66-3	32106	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorobromomethane	75-27-4	32101	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	107-06-2	34531	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	75-35-4	34501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	78-87-5	34541	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropylene	542-75-6	34561	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	100-41-4	34371	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Bromide	74-83-9	34413	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	75-09-2	34423	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	79-34-5	34516	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	127-18-4	34475	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tolune	108-88-3	34010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-trans-Dichloroethylene	156-60-5	34546	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	71-55-6		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	79-00-5	34511	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	79-01-6	39180	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	75-01-4	39175	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ACID COMPOUNDS														
2-Chlorophenol	95-57-8	34586	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol	120-83-2	34601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dimethylphenol	105-67-9	34606	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,6-Dinitro-o-Cresol	534-52-1	34657	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrophenol	51-28-5	34616	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	87-86-5	39032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phenol	108-95-2	34694	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4,6-Trichlorophenol	88-06-2	34621	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BASE/NEUTRAL														
Acenaphthene	83-32-9	34205	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Anthracene	120-12-7	34220	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzidine	92-87-5	39120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)anthracene	56-55-3	34526	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(a)pyrene	50-32-8	34247	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,4-Benzofluoranthene	205-99-2	34230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzo(k)fluoranthene	207-08-9	34242	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroethyl)Ether	111-44-4	34273	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-chloroisopropyl)Ether	108-60-1	34283	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bis(2-ethylhexyl)Phthalate	117-81-7	39100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Butyl Benzyl Phthalate	85-68-7	34292	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2-Chloronapthalene	91-58-7	34581	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chrysene	218-01-9	34320	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibenzo(a,h)anthracene	53-70-3	34556	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	95-50-1	34536	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POLLUTANTS	CAS No.	STORET		Domestic Limits	Irrigation Limits	Livestock or Wildlife Limits	Acute Aquatic Limits	Chronic Aquatic Limits	Human Health Limits	Daily Max Conc ug/l	Monthly Avg Conc ug/l	Daily Max Total ug/l	Mon. Avg Total ug/l	Daily Max Load lb/day	Daily Avg Load lb/day
1,3-Dichlorobenzene	541-73-1	34566		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	106-46-7	34571		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	91-94-1	34631		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diethyl Phthalate	84-66-2	34336		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dimethyl Phthalate	131-11-3	34341		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Di-n-Butyl Phthalate	84-74-2	39110		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dinitrotoluene	121-14-2	34611		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Diphenylhydrazine	122-66-7	34346		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluoranthene	206-44-0	34376		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluorene	86-73-7	34381		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobenzene	118-74-1	39700		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorobutadiene	87-68-3	34391		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachlorocyclopentadiene	77-47-4	34386		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachloroethane	67-72-1	34396		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Indeno(1,2,3-cd)Pyrene	193-39-5	34403		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Isophorone	78-59-1	34408		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	98-95-3	34447		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodimethylamine	62-75-9	34438		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodi-n-Propylamine	621-64-7	34428		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Nitrosodiphenylamine	86-30-6	34433		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nonylphenol	84852-15-3			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pyrene	129-00-0	34469		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4-Trichlorobenzene	120-82-1	34551		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PESTICIDES AND PCBS															
Aldrin	309-00-2	39330		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-BHC	319-84-6	39337		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-BHC	319-85-7	39338		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gamma-BHC	58-89-9	39340		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlordane	57-74-9	39350		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDT and derivatives	50-29-3	39300		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	60-57-1	39380		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Diazinon	333-41-5	39570		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alpha-Endosulfan	959-98-8	34361		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beta-Endosulfan	33213-65-9	34356		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan sulfate	1031-7-8	34351		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin	72-20-8	39390		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endrin Aldehyde	7421-93-4	34366		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	76-44-8	39410		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor Epoixde	1024-57-3	39420		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCBs	1336-36-3	39516		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	8001-35-2	39400		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A