REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No NM0028011

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Village of Jemez Springs
P. O. Box 269
Jemez Springs, NM 87025

14609 Highway 4, approximately 2 miles south of Jemez Springs, Sandoval County, New Mexico,

to receiving waters named Jemez River, thence to the Rio Grande in Segment No. 20.6.4.107 of the Rio Grande Basin, from

Outfall 001: Latitude 35° 43' 36" North, Longitude 106° 42' 48" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, Part III, and Part IV hereof.

This permit supersedes and replaces NPDES Permit No. NM0028011 issued December 14, 2006.

This permit shall become effective on September 1, 2010

This permit and the authorization to discharge shall expire at midnight, August 31, 2015

Issued on July 28, 2010

Miguel I. Flores
Division Director
Water Quality Protection Division (6WQ)

Prepared by

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 0.075 MGD Design Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated wastewater to the Jemez River, in Segment Number 20.6.4.107, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	8.8	Five/Week (*10)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		lbs/day, unless noted			mg/l, unless noted (*1)				
POLLUTANT	STORET CODE	30-DAY AVG	DAILY MAX	7-DAY AVG	30-DAY AVG	DAILY MAX	7-DAY AVG	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report MGD	Report MGD	Report MGD	***	***	***	Continuous	Totalizing Meter
Biochemical Oxygen Demand, 5-day	00310	11.3	N/A	14.1	30	N/A	45	Once/Month	Grab
Total Suspended Solids	00530	11.3	N/A	14.1	30	N/A	45	Once/Month	Grab
E. Coli Bacteria	51040	N/A	N/A	N/A	126 (*2)	410 (*2)	N/A	Once/Month	Grab
Nitrate Nitrogen, Total as N (*8)	00620	Report	N/A	N/A	N/A	Report	N/A	Once/Month	Grab
Nitrate Nitrogen, Total as N (*9)	00620	Report	2.97	N/A	N/A	4.75	N/A	Two/Month (*3)	Grab
Phosphorus, Total (*8)	00665	Report	N/A	N/A	N/A	Report	N/A	Once/Month	Grab
Phosphorus, Total (*9)	00665	Report	0.626	N/A	N/A	1.0	N/A	Two/Month (*3)	Grab
Arsenic, Total	01002	Report	N/A	N/A	Report	N/A	N/A	Once/Two-Months	Grab
Boron, Total	01022	Report	N/A	N/A	Report	N/A	N/A	Once/Two-Months	Grab
Total Residual Chlorine	50060	N/A	N/A	N/A	N/A	19 ug/l	N/A	Daily (*4)	Instantaneous Grab (*4)

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (48 Hr. Static Renewal) (*5)	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/Term (*6, 7)	Grab
Pimephales promelas	Report	Report	Once/Term (*6, 7)	Grab

Footnotes:

*1 See **Appendix A of Part II** of the permit for the required Minimum Quantification Level.

*2 Colony forming units (cfu) per 100 ml.

*3 The first sample event of any reporting period shall be at least 7-days from the second sample event of the previous reporting period. The second sample event of any reporting period shall be at least 10-days from the first sample event of the same reporting period.

*4 The maximum total residual chlorine (TRC) shall be monitored by instantaneous grab sample once per day ONLY when using chlorine for EITHER bacteria control in the effluent OR when chlorine is being used in any of the wastewater treatment systems for cleaning and/or filamentous bacteria control in the settling basins. Prior to final disposal, the effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR 136. If during the term of this permit the minimum quantification level for TRC becomes less than 19 ug/l, then 19 ug/l shall become the effluent limitation. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.

*5 Monitoring and reporting requirements begin on the effective date of this permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

*6 Once per permit term. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5-business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any. (See Part II, Section D).

*7 Sampling for the whole effluent toxicity test shall occur between the first period between November 1 and April 30, after the permit effective date.

*8 Beginning on the effective date of this permit and lasting through one-day prior to four-years after the permit effective date.

*9 Effective on the fourth-year after the permit effective date and lasting until the expiration date of this permit

*10 Samples taken on different days of each week.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the final treatment unit and prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the **Total Nitrogen and Total Phosphorus** effluent limitations specified for discharges in accordance with the following schedule:

ACTIVITY	DATE OF COMPLETION
Commence Construction	30 months after permit effective date
Complete Construction	42 months after permit effective date
Achieve Final Effluent Limitations	48 months after permit effective date

a. The permittee shall submit a progress report outlining the status of the activities during the months of January, April, July, and October until compliance is achieved as stated above.

b. No later than 14 calendar days following the date for compliance for **Total Nitrogen and Total Phosphorus**, the permittee shall submit a written notice of compliance or noncompliance.

c. Where the project completion reported is less than would be required to assure completion of construction by the required date, the report of progress shall also include an explanation for this delay and proposed remedial actions.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.

2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

3. If any 7-day average or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.

4. Any 30-day average, 7-day average, or daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

5. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for five-day Biochemical Oxygen Demand (BOD_5) or for five-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD_5 or $CBOD_5$ values, as applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

6. The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not contained (e.g., storm sewer system, ditch, tributary). Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665- 6595 and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health or the environment shall be provided to EPA and NMED within 5 days of the time the permittee becomes aware of the circumstance.

7. CONTRIBUTING INDUSTRIES

The following pollutants may not be introduced into the treatment facility:

a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;
c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

D. POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

a. The influent loadings, flow and design capacity;
b. The effluent quality and plant performance;
c. The age and expected life of the wastewater treatment facility's equipment;
d. Bypasses and overflows of the tributary sewerage system and treatment works;
e. New developments at the facility;
f. Operator certification and training plans and status;
g. The financial status of the facility;
h. Preventative maintenance programs and equipment conditions and;
i. An overall evaluation of conditions at the facility.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

See list of MQL's at **Appendix A of Part II** below. For pollutants listed on **Appendix A of Part II** below with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached **Appendix A of Part II**. Results of analyses that are less than the listed MQL maybe reported as "non detect" (ND).

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

E. coli Bacteria
TRC

C. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

D. WHOLE EFFLUENT TOXICITY TESTING (48 HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001
REPORTED ON DMR AS FINAL OUTFALL:	001
CRITICAL DILUTION (%):	35%
EFFLUENT DILUTION SERIES (%):	15%, 20%, 26%, 35%, and 47%
COMPOSITE SAMPLE TYPE:	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136

Daphnia pulex acute static renewal 48 hour definitive toxicity test using EPA/821/R/02/012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA/821/R/02/012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and

NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA 821 R 02 012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

(A) toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;

(B) the test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

(C) the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect two flow weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect a second composite sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

i. Pimephales promelas (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

ii. Daphnia pulex

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

d. If retests are required by NMED, enter the following codes:

i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

APPENDIX A of PART II

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
METALS, RADIOACTIVITY, CYANIDE and CHLORINE			
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thalllium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury *1	0.0005		
	0.005		
DIOXIN			
2,3,7,8-TCDD	0.00001		
VOLATILE COMPOUNDS			
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
ACID COMPOUNDS			
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
	BASE/NEUTRAL		
Acenaphthene	10	Dimethyl Phthalate	10
Anthracene	10	Di-n-Butyl Phthalate	10
Benzidine	50	2,4-Dinitrotoluene	10
Benzo(a)anthracene	5	1,2-Diphenylhydrazine	20
Benzo(a)pyrene	5	Fluoranthene	10
3,4-Benzofluoranthene	10	Fluorene	10
Benzo(k)fluoranthene	5	Hexachlorobenzene	5
Bis(2-chloroethyl)Ether	10	Hexachlorobutadiene	10
Bis(2-chloroisopropyl)Ether	10	Hexachlorocyclopentadiene	10
Bis(2-ethylhexyl)Phthalate	10	Hexachloroethane	20
Butyl Benzyl Phthalate	10	Indeno(1,2,3-cd)Pyrene	5
2-Chloronapthalene	10	Isophorone	10
Chrysene	5	Nitrobenzene	10
Dibenzo(a,h)anthracene	5	n-Nitrosodimethylamine	50
1,2-Dichlorobenzene	10	n-Nitrosodi-n-Propylamine	20
1,3-Dichlorobenzene	10	n-Nitrosodiphenylamine	20
1,4-Dichlorobenzene	10	Pyrene	10
3,3'-Dichlorobenzidine	5	1,2,4-Trichlorobenzene	10
Diethyl Phthalate	10		
	PESTICIDES AND PCBS		
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MQL's Revised November 1, 2007)

Footnotes:

*1 Default MQL for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MQL shall be 0.0005.

PART III - STANDARD CONDITIONS FOR NPDES PERMITS

A. GENERAL CONDITIONS

1. INTRODUCTION
In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.

2. DUTY TO COMPLY
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

3. TOXIC POLLUTANTS

   a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.

   b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

4. DUTY TO REAPPLY
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.

5. PERMIT FLEXIBILITY
This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. PROPERTY RIGHTS
This permit does not convey any property rights of any sort, or any exclusive privilege.

7. DUTY TO PROVIDE INFORMATION
The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. CRIMINAL AND CIVIL LIABILITY
Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.

9. OIL AND HAZARDOUS SUBSTANCE LIABILITY
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

10. STATE LAWS
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.

11. SEVERABILITY
The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

B. PROPER OPERATION AND MAINTENANCE

1. NEED TO HALT OR REDUCE NOT A DEFENSE
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

2. DUTY TO MITIGATE
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

3. PROPER OPERATION AND MAINTENANCE

a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. BYPASS OF TREATMENT FACILITIES

a. BYPASS NOT EXCEEDING LIMITATIONS
The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.B.4.b. and 4.c.

b. NOTICE

(1)ANTICIPATED BYPASS
If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

(2)UNANTICIPATED BYPASS
The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.D.7.

c. PROHIBITION OF BYPASS

(1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,

(c) The permittee submitted notices as required by Part III.B.4.b.

(2) The Director may allow an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.B.4.c(1).

5. UPSET CONDITIONS

   a. EFFECT OF AN UPSET
   An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.B.5.b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

   b. CONDITIONS NECESSARY FOR A DEMONSTRATION OF UPSET
   A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   (1) An upset occurred and that the permittee can identify the cause(s) of the upset;

   (2) The permitted facility was at the time being properly operated;

   (3) The permittee submitted notice of the upset as required by Part III.D.7; and,

   (4) The permittee complied with any remedial measures required by Part III.B.2.

   c. BURDEN OF PROOF
   In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. REMOVED SUBSTANCES
   Unless otherwise authorized, solids, sewage sludges, filter backwash, or other pollutants removed in the course of treatment or wastewater control shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

7. PERCENT REMOVAL (PUBLICLY OWNED TREATMENT WORKS)
   For publicly owned treatment works, the 30-day average (or Monthly Average) percent removal for Biochemical Oxygen Demand and Total Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.103.

C. MONITORING AND RECORDS

1. INSPECTION AND ENTRY
   The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit; and

   d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

2. REPRESENTATIVE SAMPLING
   Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. RETENTION OF RECORDS
   The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. RECORD CONTENTS
   Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) and time(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

5. MONITORING PROCEDURES

a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6. FLOW MEASUREMENTS
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

D. REPORTING REQUIREMENTS

1. PLANNED CHANGES

a. INDUSTRIAL PERMITS
The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements listed at Part III.D.10.a.

b. MUNICIPAL PERMITS
Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. ANTICIPATED NONCOMPLIANCE
The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. TRANSFERS
This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. DISCHARGE MONITORING REPORTS AND OTHER REPORTS
Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats. Monitoring results can be submitted electronically in lieu of the paper DMR Form. To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR.epa.gov in-box for further instructions. Until you

are approved for Net DMR, you must report on the Discharge Monitoring Report (DMR) Form EPA. No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA at the address below. Duplicate copies of paper DMR's and all other reports shall be submitted to the appropriate State agency (ies) at the following address (es):

EPA:
Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-W)
U.S. Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

New Mexico:
Program Manager
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
1190 Saint Francis Drive
Santa Fe, NM 87502-5469

5. ADDITIONAL MONITORING BY THE PERMITTEE
If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

6. AVERAGING OF MEASUREMENTS
Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. TWENTY-FOUR HOUR REPORTING

a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

(1) A description of the noncompliance and its cause;

(2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,

(3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. The following shall be included as information which must be reported within 24 hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit;

(2) Any upset which exceeds any effluent limitation in the permit; and,

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

8. OTHER NONCOMPLIANCE
The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B (for industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7.

9. OTHER INFORMATION
Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

10. CHANGES IN DISCHARGES OF TOXIC SUBSTANCES
All existing manufacturing, commercial, mining, and silvacultural permittees shall notify the Director as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) One hundred micrograms per liter (100 µg/L);
(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2, 4-dinitro-phenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Director.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 µg/L);

(2) One milligram per liter (1 mg/L) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or

(4) The level established by the Director.

11. SIGNATORY REQUIREMENTS
All applications, reports, or information submitted to the Director shall be signed and certified.

a. ALL PERMIT APPLICATIONS shall be signed as follows:

(1) FOR A CORPORATION - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(a)A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,

(b)The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) FOR A PARTNERSHIP OR SOLE PROPRIETORSHIP - by a general partner or the proprietor, respectively.

(3) FOR A MUNICIPALITY, STATE, FEDERAL, OR OTHER PUBLIC AGENCY - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a)The chief executive officer of the agency, or

(b)A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

b. ALL REPORTS required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental

matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

(3) The written authorization is submitted to the Director.

c. CERTIFICATION
Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. AVAILABILITY OF REPORTS
Except for applications, effluent data permits, and other data specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

1. CRIMINAL

a. NEGLIGENT VIOLATIONS
The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

b. KNOWING VIOLATIONS
The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. KNOWING ENDANGERMENT
The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than $250,000, or by imprisonment for not more than 15 years, or both.

d. FALSE STATEMENTS
The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.c.4 of the Clean Water Act)

2. CIVIL PENALTIES
The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed $27,500 per day for each violation.

3. ADMINISTRATIVE PENALTIES
The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. CLASS I PENALTY
Not to exceed $11,000 per violation nor shall the maximum amount exceed $27,500.

b. CLASS II PENALTY
Not to exceed $11,000 per day for each day during which the violation continues nor shall the maximum amount exceed $137,500.

F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. ACT means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.

2. ADMINISTRATOR means the Administrator of the U.S. Environmental Protection Agency.

3. APPLICABLE EFFLUENT STANDARDS AND LIMITATIONS means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.

4. APPLICABLE WATER QUALITY STANDARDS means all water quality standards to which a discharge is subject under the Act.

5. BYPASS means the intentional diversion of waste streams from any portion of a treatment facility.

6. DAILY DISCHARGE means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.

7. DAILY MAXIMUM discharge limitation means the highest allowable "daily discharge" during the calendar month.

8. DIRECTOR means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.

9. ENVIRONMENTAL PROTECTION AGENCY means the U.S. Environmental Protection Agency.

10. GRAB SAMPLE means an individual sample collected in less than 15 minutes.

11. INDUSTRIAL USER means a non-domestic discharger, as identified in 40 CFR 403, introducing pollutants to a publicly owned treatment works.

12. MONTHLY AVERAGE (also known as DAILY AVERAGE) discharge limitations means the highest allowable average of "daily discharge(s)" over a calendar month, calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month. When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted by flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = daily concentration, F = daily flow, and n = number of daily samples; daily average discharge =

$$\frac{C_1F_1 + C_2F_2 + ... + C_nF_n}{F_1 + F_2 + ... + F_n}$$

13. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of the Act.

14. SEVERE PROPERTY DAMAGE means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

15. SEWAGE SLUDGE means the solids, residues, and precipitates separated from or created in sewage by the unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes, including wastes from humans, households, commercial establishments, industries, and storm water runoff that are discharged to or otherwise enter a publicly owned treatment works.

16. TREATMENT WORKS means any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a liquid nature to implement Section 201 of the Act, or necessary to recycle or reuse water at

the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power and other equipment, and their appurtenances, extension, improvement, remodeling, additions, and alterations thereof.

17. UPSET means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

18. FOR FECAL COLIFORM BACTERIA, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.

19. The term "MGD" shall mean million gallons per day.

20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).

21. The term "µg/L" shall mean micrograms per liter or parts per billion (ppb).

22. MUNICIPAL TERMS

    a. 7-DAY AVERAGE or WEEKLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

    b. 30-DAY AVERAGE or MONTHLY AVERAGE, other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.

    c. 24-HOUR COMPOSITE SAMPLE consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.

    d. 12-HOUR COMPOSITE SAMPLE consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.

    e. 6-HOUR COMPOSITE SAMPLE consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

    f. 3-HOUR COMPOSITE SAMPLE consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.

MINOR - SEWAGE SLUDGE REQUIREMENTS

INSTRUCTIONS TO PERMITTEES

Select only those Elements and Sections which apply to your sludge reuse or disposal practice.

The sludge conditions do not apply to wastewater treatment lagoons where sludge is not wasted for final reuse/disposal. If the sludge is not removed, the permittee shall indicate on the DMR "No Discharge".

Although reporting is not required at this time, this permit may be modified or revoked and reissued to require an annual DMR.

ELEMENT 1 - LAND APPLICATION

SECTION I: Page 2 - Requirements Applying to All Sewage Sludge Land Application

SECTION II: Page 6 - Requirements Specific to Bulk Sewage Sludge for Application to the Land Meeting Class A or B Pathogen Reduction and the Cumulative Loading Rates in Table 2, or Class B Pathogen Reduction and the Pollutant Concentrations in Table 3

SECTION III: Page 9 - Requirements Specific to Bulk Sewage Sludge Meeting Pollutant Concentrations in Table 3 and Class A Pathogen Reduction Requirements

SECTION IV: Page 10 - Requirements Specific to Sludge Sold or Given Away in a Bag or Other Container for Application to the Land that does not Meet the Pollutant Concentrations in Table 3

ELEMENT 2 - SURFACE DISPOSAL

SECTION I: Page 11 - Requirements Applying to All Sewage Sludge Surface Disposal

SECTION II: Page 15 - Requirements Specific to Surface Disposal Sites Without a Liner and Leachate Collection System

SECTION III: Page 17 - Requirements Specific to Surface Disposal Sites With a Liner and Leachate Collection System

ELEMENT 3 - MUNICIPAL SOLID WASTE LANDFILL DISPOSAL

SECTION I: Page 18 - Requirements Applying to All Municipal Solid Waste Landfill Disposal Activities

ELEMENT 1 - LAND APPLICATION

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2) of the Clean Water Act. If new limits for Molybdenum are promulgated prior to permit expiration, than those limits shall become directly enforceable.

3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

4. The permittee shall give prior notice to EPA (Chief, Permits Branch, Water Management Division, Mail Code 6W-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Part 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Part 122.62(a)(1).

B. Testing Requirements

1. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Element 1, Section I.C.

TABLE 1

Pollutant	Ceiling Concentration (milligrams per kilogram)*
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

2. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by either the Class A or Class B pathogen requirements. Sewage sludge that is applied to a lawn or home garden shall be treated by the Class A pathogen requirements. Sewage sludge that is sold or given away

in a bag shall be treated by Class A pathogen requirements.

a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. All 6 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land. Below are the additional requirements necessary to meet the definition of a Class A sludge. Alternatives 5 and 6 are not authorized to demonstrate compliance with Class A sewage sludge in Texas permits.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 503.32(a)(3)(ii) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(iii) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or give away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

b. Three alternatives are available to demonstrate compliance with Class B sewage sludge. Alternatives 2 and 3 are not authorized to demonstrate compliance with Class B sewage sludge in Texas permits.

Alternative 1 - (i) Seven random samples of the sewage sludge shall be collected for one monitoring episode at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce

Pathogens described in 503 Appendix B.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually approved by the Pathogen Equivalency Committee representing the EPA.

In addition, the following site restrictions must be met if Class B sludge is land applied:

i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

3. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction. If bulk sewage sludge is applied to a home garden, or bagged sewage sludge is applied to the land, only alternative 1 through alternative 8 shall be used.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

All other pollutants shall be monitored at the frequency shown below:

Amount of sewage sludge* (metric tons per 365 day period)	Frequency
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months

15,000 ≤ Sludge	Once/Month

* Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 40 CFR 503.8(b).

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below those listed in Table 3 found in Element I, Section III, the following conditions apply:

1. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Chromium	3000
Copper	1500
Lead	300
Mercury	17
Molybdenum	Monitor
Nickel	420
Selenium	100
Zinc	2800

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Element 1, Section I.B.3.

3. Management Practices

a. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the U.S., as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 404 of the CWA.

b. Bulk sewage sludge shall not be applied within 10 meters of a water of the U.S.

c. Bulk sewage sludge shall be applied at or below the agronomic rate in accordance with recommendations from the following references:

i. STANDARDS 1992, Standards, Engineering Practices and Data, 39th Edition (1992) American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659.

ii. National Engineering Handbook Part 651, Agricultural Waste Management Field Handbook

(1992), P.O. Box 2890, Washington, D.C. 20013.

iii. Recommendations of local extension services or Soil Conservation Services.

iv. Recommendations of a major University's Agronomic Department.

d. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

i. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

ii. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

iii. The annual whole sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Element I, Section III below are met.

4. Notification requirements

a. If bulk sewage sludge is applied to land in a State other than the State in which the sludge is prepared, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

i. The location, by either street address or latitude and longitude, of each land application site.

ii. The approximate time period bulk sewage sludge will be applied to the site.

iii. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge.

iv. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

b. The permittee shall give 60 days prior notice to the Director of any change planned in the sewage sludge practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions, or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR 122.62(a)(1).

c. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site.

The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely effect a National Historic Site, cease use of such area.

5. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR 503.17 for persons who land apply.

a. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 found in Element I, Section III and the applicable pollutant concentration criteria (mg/Kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (kg/ha) listed in Table 2 above.

b. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).

c. A description of how the vector attraction reduction requirements are met.

d. A description of how the management practices listed above in Section II.3 are being met.

e. The recommended agronomic loading rate from the references listed in Section II.3.c. above, as well as the actual agronomic loading rate shall be retained.

f. A description of how the site restrictions in 40 CFR Part 503.32(b)(5) are met for each site on which Class B bulk sewage sludge is applied.

g. The following certification statement:

"I certify, under penalty of law, that the management practices in §503.14 have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

h. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR 503.17(a)(4)(i)(B) or 40 CFR Part 503.17(a)(5)(i)(B) as applicable to the permittees sludge treatment activities.

i. The permittee shall maintain information that describes future geographical areas where sludge may be land applied.

j. The permittee shall maintain information identifying site selection criteria regarding land application sites not identified at the time of permit application submission.

k. The permittee shall maintain information regarding how future land application sites will be managed.

The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR 503.17 for persons who land apply.

a. The location, by either street address or latitude and longitude, of each site on which sludge is applied.

b. The number of hectares in each site on which bulk sludge is applied.

c. The date and time sludge is applied to each site.

d. The cumulative amount of each pollutant in kilograms/hectare listed in Table 2 applied to each site.

e. The total amount of sludge applied to each site in metric tons.

f. The following certification statement:

"I certify, under penalty of law, that the requirements to obtain information in §503.12(e)(2) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel

properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."

g. A description of how the requirements to obtain information in §503.12(e)(2) are met.

6. Reporting Requirements - None.

SECTION III. REQUIREMENTS SPECIFIC TO BULK OR BAGGED SEWAGE SLUDGE MEETING POLLUTANT CONCENTRATIONS IN TABLE 3 AND CLASS A PATHOGEN REDUCTION REQUIREMENTS

For those permittees with sludge that contains concentrations of pollutants below those pollutant limits listed in Table 3 for bulk or bagged (containerized) sewage sludge and also meet the Class A pathogen reduction requirements, the following conditions apply (Note: All bagged sewage sludge must be treated by Class A pathogen reduction requirements.):

1. Pollutant limits - The concentration of the pollutants in the municipal sewage sludge is at or below the values listed.

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Monitor
Nickel	420
Selenium	36
Zinc	2800

* Dry weight basis

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by the Class A pathogen reduction requirements as defined above in Element I, Section I.B.3. All bagged sewage sludge must be treated by Class A pathogen reduction requirements.

3. Management Practices - None.

4. Notification Requirements - None.

5. Recordkeeping Requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

a. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 and the applicable pollutant concentration criteria listed in Table 3.

b. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 503.17(a)(1)(ii) or 503.17(a)(3)(i)(B), whichever

applies to the permittees sludge treatment activities.

c. A description of how the Class A pathogen reduction requirements are met.

d. A description of how the vector attraction reduction requirements are met.

6. Reporting Requirements - None.

SECTION IV. REQUIREMENTS SPECIFIC TO SLUDGE SOLD OR GIVEN AWAY IN A BAG OR OTHER CONTAINER FOR APPLICATION TO THE LAND THAT DOES NOT MEET THE MINIMUM POLLUTANT CONCENTRATIONS

1. Pollutant Limits

Table 4

Pollutant	Annual Pollutant Loading Rate (kilograms per hectare per 365 day period)
Arsenic	2
Cadmium	1.9
Chromium	150
Copper	75
Lead	15
Mercury	0.85
Molybdenum	Monitor
Nickel	21
Selenium	5
Zinc	140

2. Pathogen Control

All sewage sludge that is sold or given away in a bag or other container for application to the land shall be treated by the Class A pathogen requirements as defined above in Section I.B.3.a. above.

3. Management Practices

Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:

a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

c. The annual whole sludge application rate for the sewage sludge that will not cause any of the annual pollutant loading rates in Table 4 above to be exceeded.

4. Notification Requirements - None.

5. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years.

a. The concentration in the sludge of each pollutant listed above in found in Element I, Section I, Table 1.

b. The following certification statement found in §503.17(a)(6)(iii).

"I certify, under penalty of law, that the management practice in §503.14(e), the Class A pathogen requirement in §503.32(a), and the vector attraction reduction requirement in (insert vector attraction reduction option) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practice, pathogen requirements, and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

c. A description of how the Class A pathogen reduction requirements are met.

d. A description of how the vector attraction reduction requirements are met.

e. The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 to be exceeded. See Appendix A to Part 503 - Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge.

6. Reporting Requirements - None.

ELEMENT 2- SURFACE DISPOSAL

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE SURFACE DISPOSAL

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2) of the Clean Water Act.

3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person (owner or operator of a sewage sludge unit) for disposal in a surface disposal site, the permit holder shall provide all necessary information to the parties who receive the sludge to assure compliance with these regulations.

4. The permittee shall give prior notice to EPA (Chief, Permits Branch, Water Management Division, Mail Code 6W-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Part 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Part 122.62(a)(1).

5. The permittee or owner/operator shall submit a written closure and post closure plan to the permitting authority 180 days prior to the closure date. The plan shall include the following information:

(a) A discussion of how the leachate collection system will be operated and maintained for three years after the surface disposal site closes if it has a liner and leachate collection system.

(b) A description of the system used to monitor continuously for methane gas in the air in any

structures within the surface disposal site. The methane gas concentration shall not exceed 25% of the lower explosive limit for methane gas for three years after the sewage sludge unit closes. A description of the system used to monitor for methane gas in the air at the property line of the site shall be included. The methane gas concentration at the surface disposal site property line shall not exceed the lower explosive limit for methane gas for three years after the sewage sludge unit closes.

(c) A discussion of how public access to the surface disposal site will be restricted for three years after it closes.

B. Management Practices

1. An active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time shall close by March 22, 1994.

2. An active sewage sludge unit located in an unstable area shall close by March 22, 1994.

3. An active sewage sludge unit located in a wetland shall close by March 22, 1994.

4. Surface disposal shall not restrict the flow of the base 100-year flood.

5. The run-off collection system for an active sewage sludge unit shall have the capacity to handle run-off from a 25-year, 24-hour storm event.

6. A food crop, feed crop, or a fiber crop shall not be grown on a surface disposal site.

7. Animals shall not be grazed on a surface disposal site.

8. Public access shall be restricted on the active surface disposal site and for three years after the site closes.

9. Placement of sewage sludge shall not contaminate an aquifer. This shall be demonstrated through one of the following:

   (a) Results of a ground-water monitoring program developed by a qualified ground-water scientist.

   (b) A certification by a qualified ground-water scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

10. When a cover is placed on an active surface disposal site, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas during the period that the sewage sludge unit is active. The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas during the period that the sewage sludge unit is active. Monitoring shall be continuous.

C. Testing Requirements

1. Sewage sludge shall be tested at the frequency show below in Element 2, Section I.D. for PCBs. Any sludge exceeding a concentration of 50 mg/Kg shall not be surface disposed.

2. Pathogen Control

All sewage sludge that is disposed of in a surface disposal site shall be treated by either the Class A or Class B pathogen requirements unless sewage sludge is placed on an active surface disposal site, and is covered with soil or other material at the end of each operating day.

(a) Six alternatives are available to demonstrate compliance with Class A sewage sludge. All 6 alternatives require either the density of fecal coliform in the sewage sludge be less than 1000 MPN per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given

away in a bag or other container for application to the land. Below are the additional requirements necessary to meet the definition of a Class A sludge. Alternatives 5 and 6 are not authorized to demonstrate compliance with Class A sewage sludge in Texas permits.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 503.32(a)(3)(ii) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(iii) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or give away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

(b) Four alternatives are available to demonstrate compliance with Class B sewage sludge. Alternatives 2, 3, and 4 are not authorized to demonstrate compliance with Class B sewage sludge in Texas permits.

Alternative 1 - (i) Seven random samples of the sewage sludge shall be collected for one monitoring episode at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce Pathogens described in 503 Appendix B.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually approved by the Pathogen Equivalency Committee representing the EPA.

Alternative 4 - Sewage sludge placed on an active surface disposal site is covered with soil or other

material at the end of each operating day.

3. Vector Attraction Reduction Requirements

All sewage sludge that is disposed of in a surface disposal site shall be treated by one of the following alternatives 1 through 11 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or an anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or an anaerobic treatment process.

Alternative 9 -

(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to

or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

Alternative 11 - Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

4. Methane Gas Control Within a Structure On Site

When cover is placed on an active surface disposal site, the methane gas concentration in the air in any structure shall not exceed 25% of the lower explosive limit (LEL) for methane gas during the period that the disposal site is active.

5. Methane Gas Control at Property Line

The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the LEL for methane gas during the period that the disposal site is active.

D. Monitoring Requirements

Methane Gas in covered structures on site - Continuous

Methane Gas at property line - Continuous

All other pollutants shall be monitored at the frequency shown below:

Amount of sewage sludge* (metric tons per 365 day period)	Frequency
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

* Amount of sewage sludge placed on an active sewage sludge unit (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 40 CFR 503.8(b).

SECTION II. REQUIREMENTS SPECIFIC TO SURFACE DISPOSAL SITES WITHOUT A LINER AND LEACHATE COLLECTION SYSTEM.

1. Pollutant limits - Sewage sludge shall not be applied to a surface disposal site if the concentration of the listed pollutants exceed the corresponding values based on the surface disposal site boundary to the property line distance:

TABLE 5

Unit boundary to property line distance (meters)	Pollutant Concentrations* Arsenic (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)	PCB's (mg/kg)
0 to less than 25	30	200	210	49
25 to less than 50	34	220	240	49
50 to less than 75	39	260	270	49
75 to less than 100	46	300	320	49
100 to less than 125	53	360	390	49
125 to less than 150	62	450	420	49
≥ 150	73	600	420	49

* Dry weight basis

2. Management practices - Listed in Section I.B. above.

3. Notification requirements

   a. The permittee shall assure that the owner of the surface disposal site provide written notification to the subsequent site owners that sewage sludge was placed on the land.

   b. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site.

      The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

4. Recordkeeping requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

   a. The distance of the surface disposal site from the property line and the concentration (mg/Kg) in the sludge of each pollutant listed above in Table 5, as well as the applicable pollutant concentration criteria listed in Table 5.

   b. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 503.27(a)(1)(ii) or 503.27(a)(2)(ii) as applicable to the permittees sludge disposal activities.

   c. A description of how either the Class A or Class B pathogen reduction requirements are met, or whether sewage sludge placed on a surface disposal site is covered with soil or other material at the end of each operating day.

   d. A description of how the vector attraction reduction requirements are met.

   e. Results of a groundwater monitoring program developed by a qualified ground-water scientist, or a certification by a qualified groundwater scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

A qualified groundwater scientist is an individual with a baccalaureate or post graduate degree in the natural sciences or engineering who has sufficient training and experience in groundwater hydrology and related fields, as may be demonstrated by State registration, professional certification or completion of accredited university programs, to make sound professional judgements regarding groundwater monitoring, pollutant fate and transport, and corrective action.

5. Reporting Requirements - None.

SECTION III. <u>REQUIREMENTS SPECIFIC TO SURFACE DISPOSAL SITES WITH A LINER AND LEACHATE COLLECTION SYSTEM.</u>

1. Pollutant limits - None.

2. Management Practices - Listed in Section I.B. above.

3. Notification requirements

   a. The permittee shall assure that the owner of the surface disposal site provide written notification to the subsequent owner of the site that sewage sludge was placed on the land.

   b. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site.

      The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

4. Recordkeeping requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

   a. The following certification statement found in 503.27(a)(1)(ii).

      "I certify, under penalty of law, that the pathogen requirements (define option used) and the vector attraction reduction requirements in (define option used) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine the (pathogen requirements and vector attraction reduction requirements, if appropriate) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

   b. A description of how either the Class A or Class B pathogen reduction requirements are met or whether sewage sludge placed on a surface disposal site is covered with soil or other material at the end of each operating day.

   c. A description of how the vector attraction reduction requirements are met.

   d. Results of a ground-water monitoring program developed by a qualified ground-water scientist, or

      A certification by a qualified ground-water scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

5. Reporting Requirements - None.

ELEMENT 3 - MUNICIPAL SOLID WASTE LANDFILL DISPOSAL

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 40 CFR 258 concerning the quality of the sludge disposed in a municipal solid waste landfill.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2) of the Clean Water Act.

3. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a MSWLF for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.

4. The permittee shall give prior notice to EPA (Chief, Permits Branch, Water Management Division, Mail Code 6W-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Part 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Part 122.62(a)(1).

5. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site.

   The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

6. Recordkeeping requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

   a. The description and results of the tests performed, required by the owner/operator of the MSWLF to demonstrate compliance with the 40 CFR 258 regulations.

   b. A certification that sewage sludge meets the requirements in 40 CFR 258 concerning the quality of the sludge disposed in a municipal solid waste landfill unit.

7. Reporting requirements - None.