

ADEQ Inventory No.	513667	Permit No.	AZ0026514
LTF No.	90178	Place ID No.	185727

# AUTHORIZATION TO DISCHARGE UNDER THE ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Arizona Revised Statutes (A.R.S.) Title 49, Chapter 2, Article 3.1; the Federal Water Pollution Control Act, (33 U.S.C. §1251 et seq., as amended), and Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 9 and 10, and amendments thereto,

Gold Paradise Peak, Inc. Senator Mine Adit 1650 S. Amphlet Blvd. Suite 200 San Mateo, CA 94402

is authorized to discharge treated acid mine drainage located at south of Walker Road and Senator Highway in unincorporated area in Yavapai County to the Hassayampa River in the Middle Gila River Basin at:

Outfall No.	Latitude	Longitude	Legal
001	34° 25 37.43 N	112° 25′ 53.51 W	Township 12.5 N, Range 2W, Section 3

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein, and in the attached "Standard AZPDES Permit Conditions."

Annual Registration Fee [A.R.S. 49-255.01 and A.A.C. R18-14-104]

The annual registration fee for this permit is payable to ADEQ each year. For the purposes of the annual fees, this permit is a Major permit. If the facility is not yet constructed or is incapable of discharge at this time, the permittee may be eligible for reduced fees under rule. Send all correspondence requesting reduced fees to the Water Quality Division of ADEQ. Please reference the permit number, LTF number and why reduced fees are requested under rule.

This permit shall become effective on \_\_\_\_\_ December 16, 2021

This permit and the authorization to discharge shall expire on December 17, 2026

Signed \_ Dec 10, 2021

Randall Matas, Deputy Director Water Quality Division Arizona Department of Environmental Quality

2021.

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## PART I – EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### A. Effluent Limitations and Monitoring Requirements

The Permittee shall limit and monitor discharges from Outfall 001 as specified in Table 1 which follows. Discharge of process wastewater is prohibited under this permit. These requirements are based on a design capacity of 0.041 MGD.

	Maximum Allowable Discharge Limitations				Monitoring Requirement	
Parameter	Mass Limits (1)		Concentration Limits		(2)(3)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monitoring Frequency	Sample Type
Discharge Flow (MGD)(7)	REPORT (3)	REPORT			Continuous	Metered
Cadmium (5)(6)(7)	0.081 g/day	0.164 g/day	0.527 μg/L	1.06 μg/L	1x /Quarter	8-hour composite (4)
Copper (5)(6)(7)	3.72 g/day	4.00 g/day	24.0 μg/L	29.3 μg/L	1x /Quarter	8-hour composite
Hardness (CaCO <sub>3</sub> ) - receiving water (5)			REPORT	REPORT	1x /Quarter	8-hour composite
Hardness (CaCO <sub>3</sub> ) - effluent (5)			REPORT	REPORT	1x /Quarter	8-hour composite
Lead (5)(6)	1.39 g/day	2.78 g/day	8.96 μg/L	17.9 μg/L	1x /Quarter	8-hour composite
Mercury (6)(8)	0.16 g/day	0.31 g/day	1.00 μg/L	2.00 μg/L	1x /Quarter	8-hour composite
Total Suspended Solids (TSS)	3.1 kg/day	4.6 kg/day	20 mg/L	30 mg/L	1x /Quarter	8-hour composite
Zinc (5)(6)(7)	29.3 g/day	58.8 g/day	189 µg/L	379 μg/L	1x /Quarter	8-hour composite
рН (9)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.       1x/Quarter       Discrete				Discrete	

Table 1 - E	Effluent Limitations and Monitoring Requirement	S
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#### Footnotes

- 1 Mass values are to be calculated and reported using the following formulas: 1) Mass in kilograms per day = 3.785 x flow in MGD x concentration in mg/L, and 2) mass in grams per day = 3.785 x flow in MGD x concentration in μg/L.
- 2 Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.C, Table 3 of the permit. See Part IV of the permit.
- 3 Monitoring and reporting required. No limit set at this time. In addition to the average and maximum flows reported on the Discharge Monitoring forms, daily discharge flow shall be recorded on the **Discharge Flow Record** provided in Appendix B. See Part II.B for reporting requirements.
- 4 For the purposes of this permit, an "8-hour composite" sample has been defined as a flow-proportioned mixture of not less than three discrete samples (aliquots) obtained at equal time intervals during an 8-hour period. The volume of each aliquot shall be directly proportional to the discharge flow rate at the time of sampling.
- 5 Limits listed are based on the average receiving water hardness of 400 mg/L as CaCO<sub>3</sub>. The receiving water must be tested for hardness at the same time that these metal samples are taken. If no receiving water is present at the time of sampling, the effluent must be tested for hardness instead. Please see the hardness definition in Appendix A, Part B. Note: When reporting the hardness on the Discharge Monitoring report, enter Code "9" (Conditional Monitoring) for either the effluent or receiving water hardness that was <u>not</u> tested.

- 6 All metals effluent limits are for total recoverable metals.
- 7 Limits for cadmium, copper, and zinc are consistent with the 2002 Hassayampa Total Maximum Daily Load allocations which was based upon a baseline flow of 0.063 cubic feet per second or 0.041 MGD.
- 8 The permitee shall use an ADHS-certified low-level mercury analytical method to achieve a reporting limit below 0.01 μg/L (A&Wc surface water quality standard). See Part II.A.6 of the permit.
- 9 pH must be measured at the time of sampling and does not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.

#### B. Trace Substance Monitoring

The permittee shall monitor discharges from Outfall 001 as specified in Table 2. Monitoring results above the Assessment Levels (ALs) listed below do not constitute a permit violation, but may trigger evaluation of Reasonable Potential (RP) by ADEQ. The permittee shall use an approved analytical method with a Limit of Quantitation (LOQ) lower than the AL values as described in Part II.A.4.

	Assessment Levels (1) (2)	Monitoring Requ	irements (3)
Parameter	Concentration	Monitoring Frequency	Sample Type
Antimony (2)	30 μg/L	1x/Quarter	8-hr. Composite
Arsenic (2)	30 µg/L	1x/Quarter	8-hr. Composite
Beryllium (2)	84 μg/L	1x/Quarter	8-hr. Composite
Chromium, total (2)(6)	Report [µg/L] (8)	1x/Quarter	8-hr. Composite
Chromium VI (2) (6)	11 μg/L	1x/Quarter	Discrete
Cyanide	5.2 μg/L	1x/Quarter	Discrete
Hardness (CaCO <sub>3</sub> ) - effluent (7)	Report [mg/L]	1x/Quarter	8-hr. Composite
Hardness (CaCO <sub>3</sub> ) - receiving water (7)	Report [mg/L]	1x/Quarter	8-hr. Composite
Hydrogen sulfide (4)	2 μg/L	1x/Quarter	Discrete
Iron (2)	1,000 μg/L	1x/Quarter	8-hr. Composite
Manganese (2)	10,000 μg/L	1x/Quarter	8-hr. Composite
Nickel (2)(5)	168 μg/L	1x/Quarter	8-hr. Composite
Selenium (2)	2 μg/L	1x/Quarter	8-hr. Composite
Silver (2)(5)	34.9 μg/L	1x/Quarter	8-hr. Composite
Sulfides (4)	Report [µg/L] (6)	1x/Month (6)	Discrete
Temperature - receiving water (5) (7)	Report [°C] (5)	2x /Month	Discrete
Thallium (2)	7.2 μg/L	1x/Quarter	8-hr. Composite

Table 2 – Assessment Level Monitoring

#### **Footnotes**

- 1 Concentration values are calculated based on Arizona Water Quality Standards. Monitoring and reporting required.
- 2 All metals effluent Assessment Levels are for total recoverable metals, except for chromium VI, for which the assessment levels listed are dissolved.
- 3 Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.C, Table 3 of the permit. See Part IV of the permit.
- 4 With a detection limit no higher than 100 μg/L, any detection of sulfides shall trigger quarterly monitoring for hydrogen sulfide for the remainder of the permit term. Monitoring for hydrogen sulfide is only required if sulfide is detected.

- 5 Assessment levels listed are based on hardness value of 400 mg/L as CaCO<sub>3</sub>, which is the maximum value that can be used. The receiving water must be tested for hardness at the same time that these metal samples are taken. If no receiving water is present at the time of sampling, the effluent must be tested for hardness instead. Please see the hardness definition in Appendix A, Part B. Note: When reporting the hardness on the Discharge Monitoring report, enter Code "9" (Conditional Monitoring) for either the effluent or receiving water hardness that was not tested.
- 6 If total chromium exceeds 8 μg/L, the permittee must conduct sampling for chromium VI for the remainder of the permit. Otherwise, monitoring for chromium III and/or chromium VI is not required.
- 7 Temperature must be measured at the time of sampling and do not require use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.

## C. Whole Effluent Toxicity Monitoring

The permittee shall monitor discharges from Outfall 001 for Whole Effluent Toxicity (WET) as specified in Table 3 which follows. If toxicity is detected above an Action Level specified as follows, the permittee must perform follow-up testing and, as applicable, follow the TIE/TRE processes in Part IV.E of the permit.

	Action Levels	Levels		ents
Effluent Characteristic (1)	Daily Maximum (2) (3)	Monthly Median (3)	Monitoring Frequency	Sample Type
Chronic Toxicity <i>Pseudokirchneriella subcapitata</i> (Green algae) (4)	1.6 TUc	1.0 TUc	1x/Quarter	8-hr Composite
Chronic Toxicity <i>Pimephales promelas</i> (Fathead minnow)	1.6 TUc	1.0 TUc	1x/Quarter	8-hr Composite
Chronic Toxicity <i>Ceriodaphnia dubia</i> (Water flea)	1.6 TUc	1.0 TUc	1x/Quarter	8-hr Composite

Table 3 – Whole Effluent Toxicity Monitoring

### **Footnotes**

- 1 See Part III for additional requirements for testing and reporting Whole Effluent Toxicity (WET).
- 2 Since completion of one chronic WET test takes more than 24 hours, the daily maximum is considered to be the highest allowable test result.
- 3 If chronic toxicity is detected above the Action Levels in this table or an acute test fails, the permittee must perform follow-up testing. See Part III for details.
- 4 Formerly known as Selenastrum capricornutum or Raphidocelis subcapitata.

### D. Surface Water Quality Standards

- 1. The discharge shall be free from pollutants in amounts or combinations that:
  - a. Settle to form bottom deposits that inhibit or prohibit the habitation, growth or propagation of aquatic life;
  - b. Cause objectionable odor in the area in which the surface water is located;
  - c. Cause off-flavor in aquatic organisms;
  - d. Are toxic to humans, animals, plants or other organisms;
  - e. Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth or propagation of other aquatic life or that impair recreational uses;
  - f. Change the color of the surface water from natural background levels or color.

- 2. The discharge shall be free from oil, grease and other pollutants that float as debris, foam, or scum; or that cause a film or iridescent appearance on the surface of the water; or that cause a deposit on a shoreline, bank or aquatic vegetation.
- 3. The discharge shall not cause an increase in the ambient water temperature of more than 1.0 degrees Celsius.
- 4. The discharge shall not cause the dissolved oxygen concentration in the receiving water to fall below 7 mg/L, unless the percent saturation of oxygen remains equal to or greater than 90%.
- 5. The discharge shall not cause the receiving water to exceed 25 mg/L for suspended sediment concentration.

# PART II – MONITORING AND REPORTING

# A. Sample Collection and Analysis

- 1. Samples taken for the monitoring requirements specified in Part I shall be collected at the following locations: Effluent samples shall be taken downstream from the last treatment process and prior to mixing with the receiving waters.
- 2. The permittee is responsible for the quality and accuracy of all data required under this permit.
- 3. The permittee shall keep a Quality Assurance (QA) Manual on site that describes the sample collection and analyses processes. If the permittee collects samples or conducts sample analyses in house, the permittee shall develop a QA Manual that addresses these activities. If a third party collects and/or analyzes samples on behalf of the permittee, the permittee shall obtain a copy of the applicable QA procedures. The QA Manual shall be available for review by ADEQ upon request. The QA Manual shall be updated as necessary to reflect current conditions, and shall describe the following:
  - a. Project Management, including:
    - i. Purpose of sample collection and sample frequency;
    - ii. When and where samples will be collected;
    - iii. How samples will be collected;
    - iv. Laboratory(s) that will perform analyses;
    - v. Any field tests to be conducted (detail methods and specify equipment, including a description of any needed calibrations); and
    - vi. Pollutants or analytes being measured and for each, the permit-specific limits, Assessment Levels, or thresholds, (e.g. the associated detection limits needed.)
  - b. Sample collection procedures including:
    - i. Equipment to be used;
    - ii. Type and number of samples to be collected including QA/QC samples (i.e., background samples, duplicates, and equipment or field blanks);
    - iii. Types, sizes and number of sample bottles needed;
    - iv. Preservatives and holding times for the samples (see methods under 40 CFR 136 or 9 A.A.C. 14, Article 6 or any condition within this permit that specifies a Chain of Custody procedures.
  - c. Specify approved analytical method(s) to be used and include;
    - i. Limits of Detection (LOD) and Limits of Quantitation (LOQs);
    - ii. Required quality control (QC) results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and

- iii. Corrective actions to be taken by the permittee or the laboratory as a result of problems identified during QC checks.
- d. How the permittee will perform data review; complete DMRs and records used to report results to ADEQ; resolve data quality issues; and identify limitations on the use of the data.
- 4. Sample collection, preservation and handling shall be performed as described in 40 CFR 136 including the referenced Edition of *Standard Methods for the Examination of Water and Wastewater*, or by procedures referenced in A.R.S. Title 9, Chapter 14 of the Arizona Department of Health Services (ADHS) Laboratory Licensure rules. The permittee shall outline the proper procedures in the QA Manual, and samples taken for this permit must conform to these procedures whether collection and handling is performed directly by the permittee or contracted to a third-party.
- 5. Analytical requirements
  - a. The permittee shall use a laboratory licensed by the ADHS Office of Laboratory Licensure and Certification that has demonstrated proficiency within the last 12 months under A.A.C. R9-14-609, for each parameter to be sampled under this permit. However, this requirement does not apply to parameters which require analysis at the time of sample accordance with A.C.C. 36-495.02(A)(3). (These parameters may include flow, dissolved oxygen, pH, temperature, and total residual chlorine.)
  - b. The permittee must utilize analytical methods specified in this permit. If no test procedure is specified, the permittee shall analyze the pollutant using:
    - i. A test procedure listed in 40 CFR 136 which is also approved under A.A.C. R9-14-610;
    - ii. An alternative test procedure approved by EPA as provided in 40 CFR 136 and which is also approved under A.A.C. R9-14-610;
    - iii. A test procedure listed in 40 CFR 136, with modifications allowed by EPA or approved as a method alteration by ADHS under A.A.C. R9-14-610C; or
  - iv. If no test procedure for a pollutant is available under (4)(b)(i) through (4)(b)(iii) above, any Method approved under A.A.C. R9-14-610(B) for wastewater may be used, except the use of field kits is not allowed unless otherwise specified in this permit. If there is no approved wastewater method for a parameter, any other method identified in 9 A.A.C. 14, Article 6 that will achieve appropriate detection and reporting limits may be used for analyses.
  - c. For results to be considered valid, all analytical work, including those tests conducted by the permittee at the time of sampling (see Part II.A.4.a), shall meet quality control standards specified in the approved methods.
  - d. The permittee shall use analytical methods with a Limit of Quantitation (LOQ) that is lower than the effluent limitations, Assessments Levels, Action Levels, or other water quality criteria, if any, specified in this permit. If all methods have LOQs higher than the applicable water quality criteria, the Permittee shall use the approved analytical method with the lowest LOQ.
  - e. The permittee shall use a standard calibration curve when applicable to the method, where the lowest standard point is equal to or less than the LOQ.
- 6. Mercury Monitoring The permittee shall use an ADHS-certified low-level mercury analytical method such as EPA method 245.7 or 1631E to achieve a reporting limit at or below the discharge limitations or assessment levels for mercury as specified in this permit. The permittee shall also use a "clean hands/dirty hands" sampling technique such as EPA Method 1669 if necessary to achieve these reporting limits.

 Metals Analyses - In accordance with 40 CFR 122.45(c), all effluent metals concentrations, with the exception of chromium VI, shall be measured as "total recoverable metals". Discharge Limits and Assessment Levels in this permit, if any, are for total metals, except for chromium VI for which the levels listed are dissolved.

# B. Reporting of Monitoring Results

- 1. The permittee shall report monitoring results on Discharge Monitoring Report (DMR) to the ADEQ electronic submission portal MyDEQ. The permittee shall submit results of all monitoring required by this permit in a format that will allow direct comparison with the limitations and requirements of this permit. If no discharge occurs during a reporting period, the permittee shall specify "No discharge" on the DMR. The results of all discharge analyses conducted during the monitoring period shall be included in determinations of the monthly average and daily maximums reported on the DMRs if the analyses were by methods specified in Part II.A above, as applicable.
- 2. DMRs and attachments are to be submitted by the 28th day of the month following the end of a monitoring period. For example, if the monitoring period ends January 31<sup>st</sup>, the permittee shall submit the DMR by February 28<sup>th</sup>. The permittee shall electronically submit all compliance monitoring data and reports using the myDEQ electronic portal provided by ADEQ. If the facility is not yet constructed, the permittee shall note "Not constructed" on the DMRs. The permittee shall notify ADEQ within 30 days of commencing full operations, whether discharging or not. The notification shall be made in a letter and submitted with the DMRs for the first monitoring period in which the facility begins full operations. The reports required to be electronically submitted include, but are not limited to, the following:
  - a. Discharge Monitoring Reports
  - b. Whole Effluent Toxicity (WET) reports
  - c. Original copies of laboratory results
  - d. AZPDES discharge flow records (See Appendix B)
  - e. Bench sheets or similar documentation for field testing parameters
  - f. Construction schedule items
- 3. If requested to participate, the permittee shall submit the results of the annual NPDES DMR/QA Study to ADEQ and ADHS for all laboratories used in monitoring compliance with this permit by December 31<sup>st</sup> of each year. The permittee shall also conduct any proficiency testing required by the NPDES DMR-QA Study for those parameters listed in the study that the permittee analyzes in house or tests in the field at the time of sampling (these parameters may include pH and total residual chlorine). All results of the NPDES DMR-QA Study shall be submitted to the email and addresses listed below, or submit by any other alternative mode as specified by ADEQ:

Arizona Department of Environmental Quality	Arizona Department of Health Services
Email: AZPDES@azdeq.gov	Attn: Office of Laboratory Licensure and Certification
	250 North 17 <sup>th</sup> Avenue
	Phoenix, AZ 85007

- 4. For the purposes of reporting, the permittee shall use the Limit of Quantitation.
- 5. For parameters with Daily Maximum Limits or Daily Maximum Assessment Levels in this permit, the permittee shall review the results of all samples collected during the reporting period and report as follows:

For Daily Maximum Limits/Assessment Levels	The Permittee shall Report on the DMR
When the maximum value of any analytical result is greater than or equal to the LOQ	The maximum value of all analytical results
When the maximum value detected is greater than or equal to the laboratory's LOD but less than the LOQ	NODI (Q)
When the maximum value is less than the laboratory's LOD	NODI (B)

#### Table 4 – DMR Reporting Requirements for Daily Maximum Limits and Assessment Levels

## 6. For parameters with Monthly Average Limits or Monthly Average Assessment Levels in this permit, the permittee shall review the results of all samples collected during the reporting period and report.

4			
	For Monthly Average Limits/Asse	ssment Levels	The Permitte the DMR
	If only one sample is collected	When the value detected is greater than or equal to the LOQ	The analytica

#### Table 5 – DMR Reporting Requirements for Monthly Average Limits / Assessment Levels

For Monthly Average Limits/Assess	The Permittee shall Report on the DMR	
If only one sample is collected during the reporting period	When the value detected is greater than or equal to the LOQ	The analytical result
(monthly, quarterly, annually, etc.) (In this case, the sample result <b>is</b> the monthly average.)	When the value detected is greater than or equal to the laboratory's LOD, but less than the LOQ	NODI (Q)
the monthly average.	When the value is less than the laboratory's LOD	NODI (B)
If more than one sample is collected during the reporting period	<ul> <li>All samples collected in the same calendar month must be averaged.</li> <li>When all results are greater than or equal to the LOQ, all values are averaged</li> <li>If some results are less than the LOQ, use the LOD value in the averaging</li> <li>Use '0' for values less than the LOD</li> </ul>	The highest monthly average which occurred during the reporting period

- 7. For all field testing, or if the information below is not included on the laboratory reports required by Part II.B.2, the permittee shall attach a bench sheet or similar documentation to each DMR that includes, for all analytical results during the reporting period the following:
  - a. the analytical result,
  - b. the number or title of the approved analytical method, preparation and analytical procedure utilized by the field personnel or laboratory, and the LOD and LOQ for the analytical method for the parameter, and
  - c. any applicable data qualifiers using the most current revision of the Arizona Data Qualifiers (available online at: http://www.azdhs.gov)

## C. Twenty-four Hour Reporting of Noncompliance

1. The permittee shall orally report any noncompliance which may endanger the environment or human health within 24 hours from the time the permittee becomes aware of the event to:

## ADEQ 24 hour hotline at (602) 771-1440

by phone call or voice mail by 9 a.m. on the first business day following the noncompliance. The permittee shall also submit an electronic report to the Surface Water Inspection and Compliance Unit within 5 days of the noncompliance event using the myDEQ electronic submission portal provided by ADEQ. The permittee shall include in the written notification: a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is

expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- 2. The following instances of noncompliance are subject to the 24-hour and 5-day reporting requirements:
  - a. An exceedance of any maximum daily limit for the parameters listed in Part 1.A. Table 1, Part 1.B. Table 2, and Part 1.B. Table 3.
  - b. Any unanticipated bypass which exceeds any effluent limitations in the permit.
  - c. Any upset which exceeds any effluent limitation in the permit.
- 3. The permittee shall retain records the following monitoring records:
  - a. Date, exact location and time of sampling or measurements performed, preservatives used;
  - b. Individual(s) who performed the sampling or measurements;
  - c. Date(s) the analyses were performed;
  - d. Laboratory(s) which performed the analyses;
  - e. Analytical techniques or methods used;
  - f. Chain of custody forms;
  - g. Any comments, case narrative or summary of results produced by the laboratory. These comments should identify and discuss QA/QC analyses performed concurrently during sample analyses and should specify whether analyses met project requirements and 40 CFR 136. If results include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, sample receipt condition, or holding times and preservation, these records must also be retained.
  - h. Summary of data interpretation and any corrective action taken by the permittee.

## PART III – WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. General Conditions

- 1. The permittee shall conduct chronic (acute or both) toxicity tests on an 8-hour composite samples of the final effluent at the frequencies specified in Part 1.
- 2. Final effluent samples must be taken following all treatment processes, including chlorination and dechlorination, and prior to mixing with the receiving water. The required WET tests must be performed on unmodified samples of final effluent. WET tests conducted on samples that are dechlorinated after collection are not acceptable for compliance with this permit.
- 3. Chemical testing for all the parameters listed in Parts I.A and B of this permit whose required sample type is a composite shall be performed on a split of one composite sample taken for an acute WET test or a split of at least one of the three composite samples taken for one chronic WET test. For those parameters listed in Parts I.A and B of this permit whose required sample type is discrete, the testing shall be performed on a discrete sample collected concurrently with one sample, discrete or composite, collected for an acute or chronic WET test.
- 4. Definitions related to toxicity are found in Appendix A.

### B. Chronic Toxicity

The permittee shall conduct short-term chronic toxicity tests on three species: the waterflea, *Ceriodaphnia dubia* (survival and reproduction test); the fathead minnow, *Pimephales promelas* (larval survival and growth test); and the green alga, *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum* or *Raphidocelis subcapitata*) (growth test). Since completion of the chronic WET test for *Ceriodaphnia dubia* and *Pimephales promelas* requires a minimum of three samples be taken for permit

renewals, the chronic WET test will not be required during any given monitoring period in which the discharge(s) does not occur over seven consecutive calendar days and is (are) not repeated more frequently than every thirty days, except as specified in Part I.D (chronic WET testing for effluent characterization is required whether discharging or not). The discharge does not have to be continuous to fall under this requirement.

- 2. The permittee must follow the USEPA 4th edition manual, "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821-R-02-013) for all chronic compliance toxicity testing.
- 3. The chronic toxicity action levels are any one test result greater than 1.6 TUc or any calculated monthly median value greater than 1.0 TUc. If chronic toxicity is detected above these values, follow-up testing is required per Part IV, Section E. A chronic toxicity unit (TUc) shall be calculated as TUc = 100/NOEC.
- 4. The chronic WET test shall be conducted using a series of five dilutions and a control. The following dilution series must be used: 12.5, 25, 50, 75, and 100% effluent.

## C. Quality Assurance

- 1. Effluent samples must be maintained between 0 and 6°C from collection until utilized in the toxicity testing procedure. When a composite sample is required, each aliquot making up the composite must be chilled after collection and throughout the compositing period. The single allowable exception is when a grab sample is delivered to the performing laboratory for test initiation no later than 4 hours following the time of collection.
- Control and dilution water should be receiving water or lab water as appropriate, as described in the 40 CFR Part 136.3 approved method. If the dilution water used is different from the culture water, a second control, using culture water shall also be used.
- 3. Reference toxicity tests, (a check of the laboratory and test organisms' performance), shall be conducted at least 1 time in a calendar month for each toxicity test method conducted in the laboratory during that month. Additionally, any time the laboratory changes its source of test organisms, a reference toxicity test must be conducted before or in conjunction with the first WET test performed using the organisms from the newer source. Reference toxicant testing must be conducted using the same test conditions as the effluent toxicity tests (ie., same test duration, etc.).
- 4. If either the reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the 40 CFR Part 136.3 approved WET methods, then the permittee must re-sample and re-test within 14 days of receipt of the test results. The re-sampling and re-testing requirements include laboratory induced error in performing the test method.
- 5. The chronic reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method (see Section 10, Table 6 in EPA/821-R-02-013). There are five possible outcomes based on the PMSD result.

- a. Unqualified Pass- The test's PMSD is within bounds and there is no significant difference between the means for the control and the effluent. The regulatory authority would conclude that there is no toxicity.
- b. Unqualified Fail- The test's PMSD is larger than the lower bound (but not greater than the upper bound) in Table 6 and there is a significant difference between the means for the control and the effluent. The regulatory authority would conclude that there is toxicity.
- c. Lacks Test Sensitivity- The test's PMSD exceeds the upper bound in Table 6 and there is no significant difference between the means for the control and the effluent. The test is considered invalid. An effluent sample must be collected and another toxicity test must be conducted within 14 days of receipt of the test results.
- d. Lack Test Sensitivity- The test's PMSD exceeds the upper bound in Table 6 and there is a significant difference between the means for the control and the effluent. The test is considered valid. The regulatory authority will conclude that there is toxicity.
- e. Very Small but Significant Difference- The relative difference between the means for the control and effluent is smaller than the lower bound in Table 6 and this difference is statistically significant. The test is acceptable and the NOEC should be determined.

## D. Toxicity Identification Evaluation (TIE)/Toxicity Reduction Evaluation (TRE) Process

- 1. If chronic toxicity is detected above a WET action level or Limit specified in this permit and the source of toxicity is known (for instance, a temporary plant upset), the permittee shall conduct one follow-up test within two weeks of receipt of the sample results that exceeded the action level. The permittee shall use the same test and species as the failed toxicity test. For intermittent discharges, the follow-up test shall be conducted whether discharging or not. If toxicity is detected in the follow-up, the permittee shall immediately begin developing a TRE plan and submit the plan to ADEQ for review and approval within 30 days after receipt of the toxic result. Requirements for the development of a TRE are listed in paragraph 3 below. The permittee must implement the TRE plan as approved and directed by ADEQ.
- 2. If chronic toxicity is detected above an action level or Limit specified in this permit and the source of toxicity is <u>unknown</u>, the permittee shall begin additional toxicity monitoring within two weeks of receipt of the sample results that exceeded the action level. The permittee shall conduct one WET test approximately every other week until either a test exceeds an action level (or limit) or four tests have been completed. The follow-up tests must use the same test and species as the failed toxicity test. For intermittent discharges, the first follow-up test shall be conducted whether discharging or not; the subsequent three follow-up tests shall be conducted during the next three discharge events.
  - a. If none of the four tests exceed a WET action level or limit, then the permittee may return to the routine WET testing frequency specified in this permit.
  - b. If a WET action level or limit is exceeded in any of the additional tests, the permittee shall immediately begin developing a TRE plan and submit the plan to ADEQ for review and approval within 30 days after receipt of the toxic result. Requirements for the development of a TRE are listed

in subsection 3, below. The permittee must implement the TRE plan as approved and directed by ADEQ.

- 3. The permittee shall use the EPA guidance manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants*, 1999 (EPA/833/B-99/002) in preparing a TRE plan. The TRE plan shall include, at a minimum, the following:
  - a. Further actions to investigate and identify the causes of toxicity, if unknown. The permittee may initiate a TIE as part of the TRE process using the following EPA manuals as guidance: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I,* 1992 (EPA/600/6-91/005F); *Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures,* 2<sup>nd</sup> Edition, 1991 (EPA/600/6-91/003); *Methods for Aquatic Toxicity Identification Evaluations: Phase II, Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity,* 1993 (EPA/600/R-92/080); and *Methods for Aquatic Toxicity Identification Evaluations: Phase III, Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity,* 1993 (EPA/600/R-92/081).
  - b. Action the permittee will take to mitigate the impact of the discharge and to prevent the recurrence of toxicity; and
  - c. A schedule for implementing these actions.

# E. WET Reporting

- 1. The permittee shall report chronic toxicity results on DMRs inToxicity Units Chronic (TUc). The TUc for DMR reporting shall be calculated as TUc= 100/NOEC.
- In addition to reporting WET results on DMRs, the permittee shall submit a copy of the full lab report(s) for all WET testing conducted during the monitoring period covered by the DMR. The lab report should report TUc as 100/NOEC and as 100/IC<sub>25</sub>. If the lab report does not contain any of the following items, then these must also be supplied in a separate attachment to the report: 1) sample collection and test initiation dates, 2) the results of the effluent analyses for all parameters required to be tested concurrently with WET testing as defined in Part I.A and B, Tables 1 and 2, and Part III.A.3 of this permit, and 3) copies of completed "AZPDES Discharge Flow Records" (refer to Appendix B) for the months in the WET monitoring period.
- 3. WET lab reports and any required additional attachments shall be submitted to ADEQ by the 28<sup>th</sup> day of the month following the end of the WET monitoring period, or upon request.

## PART IV – SPECIAL CONDITIONS

## A. Best Management Practices

- 1. The permittee shall develop and implement an Operation and Maintenance Plan (O&M Plan) to ensure the proper operation and maintenance of the constructed wetlands to effectively treat the acid discharge. The O&M Plan shall, at a minimum, shall include:
  - a. Startup procedures to establish the flora and fauna associated with treatment processes, including more frequent inspection and monitoring, as needed.
  - b. Written procedures describing the operational parameters necessary to achieve adequate treatment of the effluent, including but not limited to:
    - i. Water depth control settings;
    - ii. Operational range of water levels, including acceptable ranges of fluctuations;
    - iii. Wastewater application schedules (if part of the treatment design);
    - iv. Discharge schedule to or from the wetland (if applicable);

- v. Sediment removal and proper disposal of any generated wastes; and
- vi. Process control monitoring.
- c. Documentation of routine inspection, preventative maintenance, and repairs. Inspections shall be completed, at a minimum, monthly and the results and any corrective actions shall be maintained. Inspections shall, at a minimum, address the following items:
  - i. Cleaning and maintaining inlet and outlet structures, valves, and monitoring devices;
  - ii. Sediment accumulation and removal as needed;
  - iii. Vegetation Management;
  - iv. Vector and pest control; and
  - v. Dikes and berms.
  - vi. Structural integrity of the wetland liners to prevent the treated and untreated adit discharges from contacting or comingling with tailings or wastewater materials.
  - vii. Stormwater controls to prevent stormwater run-on and run-off of stormwater which could impact the treatment processes.
  - viii. Assessment of pollutant loading in the wetland soils and plants to ensure proper functioning.
  - ix. Site security to limit access to the treatment processes.
- The permitee shall submit annual report to ADEQ by January 31st of each year to azpdes@azdeq.gov summarizing compliance with the best management practices including any corrective actions taken under Part V.c. of the permit

### B. Design and Construction of Treatment Facility

- 1. The Permittee shall execute a plan to design and construct a treatment facility and appurtenances needed to treat the acid mine drainage from the Senator Mine Adit.
- 2. All reporting required in this part shall be submitted to ADEQ as a DMR Attachment, as described in Part II.B. of the Permit.

No.	Due Date	Requirement	Comments
1.	January 28 <sup>th</sup>	Submit a status report updating	The progress reports shall discuss all actions taken
	and July 28 <sup>th</sup>	ADEQ on the Permittee's	place to date and discuss whether time frames have
	of each year	progress toward construction	been met. If time frames have not been met, the
	until	of the treatment facility.	report shall explain why and describe what actions will
	completion		be taken to ensure future target dates will be met.
2.	May 25,	Submit documentation that the	Documentation shall include photographs illustrating
	2022	access road and temporary	the temporary bridge and access road.
		bridge has been constructed.	
3.	July 20,	Submit documentation to	Reclamation of the tailing shall include but is not
	2022	demonstrate that the tailing	limited to:
		reclamation has been	<ul> <li>Recontouring of the tailing piles;</li> </ul>
		completed.	<ul> <li>Construction of erosion bench;</li> </ul>
			Construction of the stormwater diversion
			channel; and
			<ul> <li>Installation of new sediment wattles.</li> </ul>
4.	October 19,	Submit documentation to	Construction of the wetland cell shall include, but is
	2022	demonstrate that construction	not limited to:
		of the wetland cells have been	Construction of stormwater diversion
		constructed.	channels and spillway;

	Construction of five wetland cells; and	
	<ul> <li>Installation of plant materials.</li> </ul>	

#### C. Ambient Water Quality Sampling

1. Beginning the effective date of the permit, the permitee shall monitor the Hassayampa River as specified in Tables 6 and 7 below.

Location	DEQ #	Latitude and Longitude
Hassayampa River above Senator Mine	100465	Latitude: 34.4275 Longitude: -112.430833
Hassayampa River at Senator Mine Adit	101084	Latitude: 34.426694 Longitude: -112.430833
Hassayampa River below Senator Mine	100466	Latitude: 34.426139 Longitude: -112.4335

#### Table 6 – Ambient Surface Water Monitoring Locations

#### Table 7 – Ambient Surface Water Monitoring Requirements

		Monitoring Requirements	
Parameter			
	Reporting Units	Monitoring Frequency	Sample Type
Flow Rate	cfs	1x/Quarter	Measured
рН (1)	S.U.	1x/Quarter	Measured
Hardness (CaCO <sub>3</sub> ) (2)	mg/L	1x/Quarter	Discrete
Cadmium (Total Recoverable and Dissolved) (3)	ug/L	1x/Quarter	Discrete
Copper (Total Recoverable and Dissolved) (3)	ug/L	1x/Quarter	Discrete
Zinc (Total Recoverable and Dissolved) (3)	ug/L	1x/Quarter	Discrete

#### **Footnotes**

- 1 pH is a field parameter that must be measured at the time of sampling and does not require the use of a certified laboratory. Measurements must be obtained in accordance with the applicable method and must meet all method quality assurance/quality control requirements to be considered valid data.
- 2 Hardness shall be measured in unfiltered samples.
- 3 The applicable Arizona Water Quality Standards for the Aquatic and Wildlife (cold water) (A&Wc) designated use for the hardness-dependent metals are based upon the hardness of the receiving water at the time of sampling. The chronic A&Wc standards for dissolved cadmium, copper, lead, and zinc shall be submitted with the dissolved cadmium, copper, and zinc results.

- 2. Ambient surface water sample collection and analysis shall be conducted as specified in Part II.A, Sections 1 through 5. In addition, field sampling standard operating procedures (SOPs) shall be developed and maintained which include the following:
  - a. sampling locations, including depth and distance from water edge;
  - b. sampling and field protocols for each parameter or parametric group, including sampling methods, equipment and containers, sample preservation and holding times, and a description of analysis to be conducted in the field or outside of a laboratory;
  - c. sample identification and custody protocols to be used;
  - d. quality control protocols, including the number and type of field quality control samples including the field blanks, field duplicate samples, and double volume quality control samples specified in Section 4 below;
  - e. a list of the field equipment to be used;
  - f. procedures for testing, inspecting, and maintaining the field equipment; and
  - g. field instrument calibration procedures that describe how and when field sampling and analytical instruments will be calibrated.

The field sampling SOP(s) shall be consistent with current professional practices for ambient surface water quality sampling such as those presented in the relevant sections of ADEQ's *"Standard Operating Procedures for Surface Water Sampling"* (available at <u>www.azdeq.gov</u>) or similar guidance documents. All procedures pertaining to field equipment shall be consistent with the equipment manufacturers' recommendations.

- 3. Quality Control Samples
  - a. The permittee shall submit to their lab on an annual basis a "blind" field duplicate of the sample collected at ADEQ ID# 100466 downstream of the outfalls.
  - b. The permittee shall submit to their lab on an annual basis a "blind" field blank. The field blank is to be collected by pouring filtered, distilled water directly into one of the clean sample bottles used for field sampling.
  - c. The permittee shall submit to their lab on an annual basis a double volume laboratory Quality Control sample. The laboratory QC samples will be labeled "lab QC" on the sample labels and are to be analyzed for all parameters.
  - d. Results from the quality control samples specified above shall be included in the Ambient Surface Water Monitoring Annual Report specified in Part IV.A.5.b.

- 4. Recordkeeping and Reporting
  - a. The permittee shall record all field sampling activities on field sheets or in a hardbound notebook, or electronically. Non-electronic entries shall be legible, written in permanent ink, and contain accurate information. The following information shall be recorded.
    - i. weather conditions at time of sampling
    - ii. date and time of sampling or measurements performed
    - iii. location of sampling, including distance from water edge and water and sampling depths field measurements and equipment used
    - iv. field equipment calibration dates and measurements
    - v. sampling equipment used to collect samples
    - vi. quality control samples collected, if any
    - vii. condition/color/characteristics of water and sediments in the stream bed and banks
    - viii. name(s) of sampling personnel
  - b. Ambient monitoring data shall be submitted to ADEQ by January 31<sup>st</sup> of the following year using the surface water data submission template, which is provided by ADEQ. Permittees are responsible for filling out the required fields. In addition to the data submission template the Permitees shall use the provided ADEQ site numbers. The template files shall be submitted to <u>swdata@azdeq.gov</u> and <u>azpdes@azdeq.gov</u>.

### D. Reopener

 This permit may be modified per the provisions of A.A.C. R18-9-B906, and R18-9-A905 which incorporates 40 CFR Part 122. This permit may be reopened based on newly available information; to add conditions or limits to address demonstrated effluent toxicity; to implement any EPA-approved new Arizona water quality standard; or to re-evaluate reasonable potential (RP), if Assessment Levels in this permit are exceeded.

## Appendix A - Part A: Acronyms

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
AZPDES	Arizona Pollutant Discharge Elimination System
A.R.S.	Arizona Revised Statutes
CFR	Code of Federal Regulations
CFU	Colony Forming Units
Director	The Director of ADEQ or any authorized representative thereof
DMR	Discharge Monitoring Report
EPA	The U.S. Environmental Protection Agency
kg/day	Kilograms per day
MGD	Million Gallons per Day
mg/L	Milligrams per Liter, also equal to parts per million (ppm)
MPN	Most Probable Number
NPDES	National Pollutant Discharge Elimination System
PFU	Plaque-Forming Unit
QA	Quality Assurance
SSU	Sewage Sludge Unit
TBEL	Technology-based Effluent Limitation
μg/L	Micrograms per Liter, also equal to parts per billion (ppb)
WQBEL	Water quality-based Effluent Limitation

# Appendix A - Part B: Definitions

Acute Toxicity Test	A test used to determine the concentration of effluent or ambient waters that produces an adverse effect (lethality) on a group of test organisms during a short-term exposure 9e.g., 24, 48, or 96 hours). Acute toxicity is measured using statistical procedures (e.g., pint estimate techniques or hypothesis testing) and is reported as PASS/FAIL or in TUas, where TUa = $100LC_{50}$ .
Acute-to Chronic Ratio (ACR)	Is the ratio of the acute toxicity of an effluent or a toxicant to its chronic toxicity. It is used as a factor for estimating chronic toxicity on the basis of acute toxicity data, or for estimating acute toxicity on the basis of chronic toxicity data.
Chronic Toxicity Test	A test in which sublethal effects (e.g., reduced growth or reproduction) are measured in addition to lethality. Chronic toxicity is measured as TUc = 100/NOEC or TUc = 100/Ecp or 100/ICp. The ICp and ECp value should be the approximate equivalent of the NOEC calculated by hypothesis testing for each test method.
Composite Sample	A sample that is formed by combining a series of individual, discrete samples of specific volumes at specified intervals. Composite samples characterize the quality of a discharge over a given period of time. Although, composite samples can be time-weighted or flow-weighted, this permit requires the collection of flow-proportional composite samples. This means that samples are collected and combined using aliquots in

	proportion to flow rather than time. Also see Flow-Proportional Composite.
Daily Maximum Concentration Limit	The maximum allowable discharge of a pollutant in a calendar day as measured on any single discrete sample or composite sample.
Daily Maximum Mass Limit	The maximum allowable total mass of a pollutant discharged in a calendar day.
Discrete or Grab Sample	An individual sample of at least 100 mL collected from a single location, or over a period of time not exceeding 15 minutes.
Effect Concentration Point (ECP)	A point estimate of the toxicant (or effluent) concentration that would cause an observable adverse effect (e.g., survival or fertilization) in a given percent of the test organisms, calculated from a continuous model (e.g., USEPA Probit Model).
Flow Proportional Composite Sample	A sample that combines discrete samples collected over time, based on the flow of the discharge being sampled. There are two methods used to collect this type of sample. One collects a constant sample volume at time intervals that vary based on stream flow. The other collects discrete samples that are proportioned into aliquots of varying volumes based on stream flow, at constant time intervals (i.e. flow-weighted composite sample).
Hardness	The sum of the calcium and magnesium concentrations, expressed as calcium carbonate (CACO <sub>3</sub> ) in milligrams per liter.
Hypothesis Testing	A statistical technique (e.g., Dunnetts test) that determines what concentration is statistically different from the control. Endpoints determined from hypothesis testing are NOEC and LOEC. The two hypotheses commonly tested in WET are: Null hypothesis (H <sub>0</sub> ): The effluent is not toxic. Alternative hypothesis (H <sub>a</sub> ): The effluent is toxic.
Inhibition Concentration (IC)	A point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth) calculated from a continuous model (e.g., USEPA Interpolation Method). IC25 is a point estimate of the toxicant concentration that would cause a 25% reduction in a non-lethal biological measurement.
LC50	The toxicant (or effluent) concentration that would cause death in 50 percent of the test organisms.
Limit of Quantitation (LOQ)	The minimum levels, concentrations, or quantities of a target variable such as an analyte that can be reported with a specific degree of confidence. The calibration point shall be at or below the LOQ. The LOQ is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all of the method-specified sample weights, volumes, and processing steps have been followed.
Limit of Detection (LOD)	An analyte and matrix-specific estimate of the minimum amount of a substance that the analytical process can reliably detect with a 99% confidence level. This may be laboratory dependent and is developed according to R9014-615(C)(7).
Method Detection Limit (MDL)	See LOD
Mixing Zone	An area where an effluent discharge undergoes initial dilution and may be extended to cover the secondary mixing in the ambient waterbody. A

mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented.           Monthly or Weekly Average Concentration Limit         Other than for bacteriological testing, means the highest allowable average calculated as an arithmetic mean of consecutive measurements made during calendar month or week, respectively. The "monthly or weekly average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as '0'' or non-detect then input a "1' into the calculation for the geometric mean.           No Observed Effect Concentration (NOEC)         The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).           Point Estimate Techniques         As Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration at which adverse effects (e.g., fertilization, growth or survival) occurred. For example, concentration at which a 25 percent reduction in fertilization occurred. Any water which, during during manufacturing or process (past or present), comes into direct contact with, or results from the product, or use of any raw material, intermediate product, finished product, byproduct or waste product.           Reference Toxicant Test         A toxicity test conducted with the addition of a known toxicant to indicate the sensitivity of the organisms being used and demonstrate a laboratory's ability to obtain consistent results with the test method. Reference toxic		
Monthly or Weekly Average         Other than for bacteriological testing, means the highest allowable average calculated as an arithmetic mean of conscutive measurements made during calendar month or week, respectively. The "monthly or weekly average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as '0' or non-detect then input a '1' into the calculation for the geometric mean.           No Observed Effect Concentration         The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are ng statistically significant different from the controls).           Point Estimate Techniques         As Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration at which adverse effect (e.g., fertilization, growth or survival) occurred. For example, concentration, at which the solues (or the observed) responses are ng statistically significant. For example, concentration, at which a 25 percent reduction in fertilization occurred.           Process Wastewater         As Water which, during during manufacturing or process (past or present), comes into direct contact with, or results from the product, or byproduct or waste product.           Reference Toxicant Test         A toxicity test conducted with the addition of a known toxicant to indicate the sensitivity of the organisms being used and demonstrate a laboratory's ability to othater, leachate, or other liquid that drains over any part of a land surface and runs off of the routine QA/QC program to evaluate the performance		mixing zone is an allocated impact zone where water quality criteria can be exceeded as long as acutely toxic conditions are prevented.
Monthly or Weekly Average Concentration Limitaverage calculated as an arithmetic mean of consecutive measurements made during calendar month or week, respectively. The "monthly or weekly average concentration limit" for E. coli bacteria means the highest allowable average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect then input a "1" into the calculation for the geometric mean.No Observed Effect Concentration (NOEC)The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., bhe highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).Point Estimate TechniquesAs Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration at which adverse effects (e.g., fertilization, growth or survival) occurred.Process WastewaterAny water which, during during manufacturing or process (past or present), comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.Reference Toxicant TestA toxicity test conducted with the addition of a known toxicant to indicate user any of the routine QA/QC program to evaluate the performance of laboratory personnel and test organisms.RunoffSignificant DifferenceDefined as statistically significant difference (e.g., 95% confidence level) in the case of WET, comparing only two test or replicate observations. In the case of WET, comparing only two sets of		
Monthly or Weekly Average Concentration Limitmade during calendar month or week, respectively. The "monthly or weekly average concentration limit" for <i>E. coll</i> bacteria means the highest allowable average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect 		
Monthly or Weekly Average         weekly average concentration limit" for <i>E. coll</i> bactria means the highest allowable average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect then input a "1" into the calculation for the geometric mean.           No Observed Effect Concentration (NOEC)         The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).           Point Estimate Techniques         As Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration at which diverse effects (e.g., fertilization, growth or survival) occurred. For example, concentration at which a 25 percent reduction in fertilization occurred.           Process Wastewater         Any water which, during during manufacturing or process (past or present), comes into direct contact with, or results from the product, finished product, byproduct or waste product.           Reference Toxicant Test         A toxicity test conducted with the addition of a known toxicant to indicate the sensitivity of the organisms being used and demonstrate a laboratory's ability to obtain consistent results with the test method. Reference toxicant data are part of the routine QA/QC program to evaluate the performance of laboratory personnel and test organisms.           Runoff         Significant Difference         A statistically significant difference (e.g., 95% confidence level) in the m	oncentration Limit	5
Monthly of Veeksy Average         allowable average calculated as the geometric mean of a minimum of four (4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect then input a "1" into the calculation for the geometric mean.           No Observed Effect Concentration (NOEC)         The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).           Point Estimate Techniques         As Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration or twich adverse effects (e.g., fertilization, growth or survival) occurred. For example, concentration at which a 25 percent reduction in fertilization occurred.           Process Wastewater         Any water which, during during manfacturing or process (past or present), comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.           Reference Toxicant Test         A toxicity test conducted with the addition of a known toxicant to indicate the sensitivity of the organisms being used and demonstrate a laboratory's ability to obtain consistent results with the test method. Reference toxicant data are part of the routine QA/QC program to evaluate the performance of laboratory personnel and test organisms.           Runoff         Rainwater, leachate, or other liquid that drains over any part of a land surface and runs off of the land surface.		
Concentration Limit(4) measurements made during a calendar month or week, respectively. The geometric mean is the nth root of the product of n numbers. For either method (CFU or MPN), when data are reported as "0" or non-detect then input a "1" into the calculation for the geometric mean.No Observed Effect Concentration (NOEC)The highest tested concentration of effluent or toxicant, that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).Point Estimate TechniquesAs Probit, Interpolation Method, Spearman-Karber are used to determine the effluent concentration at which adverse effects (e.g., fertilization, growth or survival) occurred. For example, concentration at which a 25 percent reduction in fertilization occurred.Process WastewaterAny water which, during during manufacturing or process (past or present), comes into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct or waste product.Reference Toxicant TestA toxicity test conducted with the addition of a known toxicant to indicate tesnsitivity of the organisms being used and demonstrate a laboratory's ability to obtain consistent results with the test method. Reference toxicant data are part of the routine QA/QC program to evaluate the performance of laboratory personnel and test organisms.RunoffSubmitUsed in this permit, means post-marked, documented by other mailing receipt, or hand-delivered to ADEQ.SubmitUsed in this permit, means post-marked, documented by other mailing receipt, or hand-delivered to ADEQ.SubmitUsed in this p		
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	Toxic Unit (TU)	
effluent toxicity.	Toxicity Identification Evaluation (TIE)	A set of procedures used to identify the specific chemical(s) causing

Toxicity Reduction Evaluation (TRE)	A site-specific study conducted in a stepwise process designed to identify the causative agents of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.	
Toxicity Test	A procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect of a specific chemical or effluent on exposed test organisms.	
Vectors	Rodents, flies, mosquitoes, or other organisms capable of transporting pathogens.	
Whole Effluent Toxicity	The total toxic effect of an effluent measured directly with a toxicity test.	

#### **Appendix B - AZPDES Discharge Flow Record**

Discharge to H		
	assayampa River in the MG Basin at:	
Outfall No:		
Location:		
Month:		Year:
Date:	Flow Duration <sup>(1)</sup> (Total hours per day)	Flow Rate <sup>(2)</sup> (Total MGD per day)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
Comment:		

#### **Footnotes**

2 Report flow discharge in MGD. If no discharge occurs on any given day, report 'ND" for the flow for that day.

<sup>1</sup> Total time of discharge in hours per day. If actual time is not available, use an estimate of flow duration.

## **Appendix C - Standard AZPDES Permit Conditions & Notifications**

(Updated as of February 2, 2004)

- Duty to Reapply [R18-9-B904(C)] Unless the Permittee permanently ceases the discharging activity covered by this permit, the Permittee shall submit a new application 180 days before the existing permit expires
- 2. Applications [R18-9-A905(A)(1)(C) which incorporates 40CFR 122.22]
  - a. All applications shall be signed as follows:
    - i. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
      - A. A president, secretary, treasure, or vice-president of the corporation in charge of a principle 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;
    - ii. For partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
    - iii. 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: (i) The chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
  - b. All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this Section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
    - i. The authorization is made in writing by a person described in paragraph (a) of this section;
    - ii. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, operator of a well or a well field, superintendent, 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 any individual occupying a named position.) and,
    - iii. The written authorization is submitted to the Director.
  - c. Changes to Authorization. If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under paragraph (a) or (b) of 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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering 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.

- 3. Duty to Comply [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(a)(i) and A.R.S. §49- 262, 263.01, and 263.02.]
  - a. The Permittee shall comply with all conditions of this permit and any standard and prohibition required under A.R.S. Title 49, Chapter 2, Article 3.1 and A.A.C. Title 18, Chapter 9, Articles 9 and 10. Any permit noncompliance constitutes a violation of the Clean Water Act; A.R.S. Title 49, Chapter 2, Article 3.1; and A.A.C. Title 18, Chapter 9, Articles 9 and 10, and is grounds for enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application.
  - b. The issuance of this permit does not waive any federal, state, county, or local regulations or permit requirements with which a person discharging under this permit is required to comply.
  - c. The Permittee shall comply with the effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulation that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
  - d. Civil Penalties. A.R.S. § 49-262(C) provides that any person who violates any provision of A.R.S. Title 49, Chapter 2, Article 3.1 or a rule, permit, discharge limitation or order issued or adopted under A.R.S. Title 49, Chapter 2, Article 3.1 is subject to a civil penalty not to exceed \$25,000 per day per violation.
  - e. Criminal Penalties. Any a person who violates a condition of this permit, or violates a provision under A.R.S. Title 49, Chapter 2, Article 3.1, or A.A.C. Title 18, Chapter 9, Articles 9 and 10 is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which may include the possibility of fines and/or imprisonment.
- 4. Need to Halt or Reduce Activity Not a Defense [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(c)]

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.

5. Duty to Mitigate - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(d)]

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(e)]

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 the Permittee to 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 back-up 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 the permit.

7. Permit Actions - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(f)]

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8. Property Rights - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(g)]

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

9. Duty to Provide Information - [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(h)]

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.

10. Inspection and Entry [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(i)]

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and such other documents as may be required by 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 terms of the permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring equipment or control equipment), practices or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by A.R.S. Title 49, Chapter 2, Article 3.1, and A.A.C. Title 18, Chapter 9, Articles 9 and 10, any substances or parameters at any location
- 11. Monitoring and Records [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(j)]
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. 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, except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Director at any time.
  - c. Records of monitoring information shall include:
    - i. The date, exact place and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) the analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.

- d. Monitoring must be conducted according to test procedures specified in this permit. If a test procedure is not specified in the permit, then monitoring must be conducted according to test procedures approved under A.A.C. R18-9-A905(B) including those under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 (for sludge).
- e. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for first conviction. For a second conviction, such a person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment for not more than four years, or both.

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained in this permit is subject to the enforcement actions established under A.R.S. Title 49, Chapter 2, Article 4, which includes the possibility of fines and/or imprisonment.

- 12. Signatory Requirement [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(k)]
  - a. All applications, reports, or information submitted to the Director shall be signed and certified. (See 40 CFR 122.22 incorporated at R18-9-A905(A)(1)(c))
  - b. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both for a first conviction. For a second conviction, such a person is subject to a fine of not more than \$20,000 per day of violation, or imprisonment of not more than four years, or both.
- 13. Reporting Requirements [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(I)]
  - a. Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned physical alterations of additions to the permitted facility. Notice is required only when:
    - i. 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 122.29(b) (incorporated by reference at R18-9-A905(A)(1)(e)); or
    - ii. 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 under 40 CFR 122.42(a)(1) (incorporated by reference at R18-9-A905(A)(3)(b)).
    - iii. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
  - b. 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.
  - c. Transfers. (R18-9-B905) 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 Arizona Revised Statutes and the Clean Water Act.
  - d. Monitoring reports. Monitoring results shall be reported at the intervals specified elsewhere in this permit.

- i. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Director for reporting results of monitoring of sludge use or disposal practices.
- ii. If the Permittee monitors any pollutant more frequently than required by the permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR, or sludge reporting form specified by the Director.
- iii. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
- e. Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
- f. Twenty-four hour reporting.
  - i. The Permittee shall report any noncompliance which may endanger human 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 also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; 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 steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
  - ii. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - A. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR 122.41(g) which is incorporated by reference at R18-9-A905(A)(3)(a)).
    - B. Any upset which exceeds any effluent limitation in the permit.
    - C. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours. (See 40 CFR 122.44(g) which is incorporated by reference at R18-9-A905(A)(3)(d)).
- g. Other noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this section.
- h. 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.
- 14. Bypass [R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(m)]
  - a. Definitions
    - i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
    - ii. "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.

- b. 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 provision of paragraphs (c) and (d) of this section.
- c. Notice.
  - i. 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 bypass.
  - ii. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in paragraph (f)(2) of section 13 (24-hour notice).
- d. Prohibition of bypass.
  - i. 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 down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
    - C. The Permittee submitted notices as required under paragraph (c) of this section.
  - ii. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph (d)(1) of this section.
- 15. Upset [A.R.S.§§49-255(8) and 255.01(E), R18-9-A905(A)(3)(a) which incorporates 40 CFR 122.41(n)]
  - a. Definition. "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 preventative maintenance, or careless or improper operation.
  - b. 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 paragraph (c) of this section 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.
  - c. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defenses of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - i. An upset occurred and that the Permittee can identify the cause(s) of the upset;
    - ii. The permitted facility was at the time being properly operated; and
    - iii. The Permittee submitted notice of the upset as required in paragraph (f)(2) of Section 13 (24-hour notice).
    - iv. The Permittee has taken appropriate measure including all reasonable steps to minimize or prevent any discharge or sewage sludge use or disposal that is in violation of the permit and that has a reasonable likelihood of adversely affecting human health or the environment per A.R.S. § 49-255.01(E)(1)(d).

- d. Burden of proof. In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.
- 16. Existing Manufacturing, Commercial, Mining, and Silvicultural Dischargers [R18-9-A905(A)(3)(b) which incorporates 40 CFR 122.42(a)]

In addition to the reporting requirements under 40 CFR 122.41(I) (which is incorporated at R18-9-A905(A)(3)(a)), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have 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 which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - i. One hundred micrograms per liter (100 µg/l);
  - Two hundred micrograms per liter (200 μg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
  - iii. Five times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7) (which is incorporated at R18-9-A905(A)(1)(b)); or
  - iv. The level established by the Director in accordance with 40 CFR 122.44(f) (which is incorporated at R18-9-A905(A)(3)(d)).
- 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":
  - i. Five hundred micrograms per liter (500 µg/l);
  - ii. One milligram per liter (1 mg/l) for antimony;
  - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7)(which is incorporated at R18-9-A905(A)(1)(b));
  - iv. The level established by the Director in accordance with 40 CFR 122.44(f) (which is incorporated at R18-9-A905(A)(3)(d)).
- 17. Publicly Owned Treatment Works [R18-9-A905(A)(3)(b) which incorporates 40 CFR 122.42(b)]

This section applies only to publicly owned treatment works (POTW) as defined at ARS § 49-255(5).

- a. All POTW's must provide adequate notice to the Director of the following:
  - i. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
  - ii. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  - iii. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharge from the POTW.

POTWs may not receive hazardous waste by truck, rail, or dedicated pipe except as provided under 40 CFR 270. Hazardous wastes are defined at 40 CFR 261 and include any mixture containing any waste listed under 40 CFR 261.31 - 261.33. The Domestic Sewage Exclusion (40 CFR 261.4) applies only to

wastes mixed with domestic sewage in a sewer leading to a publicly owned treatment works and not to mixtures of hazardous wastes and sewage or septage delivered to the treatment plant by truck.

- 18. Reopener Clause [R18-9-A905(A)(3)(d) which incorporates 40 CFR 122.44(c)] This permit shall be modified or revoked and reissued to incorporate any applicable effluent standard or limitation or standard for sewage sludge use or disposal under sections 301(b)(2)(C), and (D), 304(b)(2), 307(a)(2) and 405(d) which is promulgated or approved after the permit is issued if that effluent or sludge standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant or sludge use or disposal practice not limited in the permit.
- 19. Privately Owned Treatment Works [R18-9-A905(A)(3)(d) which incorporates 40 CFR 122.44]

This section applies only to privately owned treatment works as defined at 40 CFR 122.2.

- a. Materials authorized to be disposed of into the privately owned treatment works and collection system are typical domestic sewage. Unauthorized material are hazardous waste (as defined at 40 CFR Part 261), motor oil, gasoline, paints, varnishes, solvents, pesticides, fertilizers, industrial wastes, or other materials not generally associated with toilet flushing or personal hygiene, laundry, or food preparation, unless specifically listed under "Authorized Non-domestic Sewer Dischargers" elsewhere in this permit.
- b. It is the Permittee's responsibility to inform users of the privately owned treatment works and collection system of the prohibition against unauthorized materials and to ensure compliance with the prohibition. The Permittee must have the authority and capability to sample all discharges to the collection system, including any from septic haulers or other unsewered dischargers, and shall take and analyze such samples for conventional, toxic, or hazardous pollutants when instructed by the permitting authority. The Permittee must provide adequate security to prevent unauthorized discharges to the collection system.
- c. Should a user of the privately owned treatment works desire authorization to discharge non-domestic wastes, the Permittee shall submit a request for permit modification and an application, pursuant to 40 CFR 122.44(m), describing the proposed discharge. The application shall, to the extent possible, be submitted using ADEQ Forms 1 and 2C, unless another format is requested by the permitting authority. If the privately owned treatment works or collection system user is different from the Permittee, and the Permittee agrees to allow the non-domestic discharge, the user shall submit the application and the Permittee shall submit the permit modification request. The application and request for modification shall be submitted at least 6 months before authorization to discharge non-domestic wastes to the privately owned treatment works or collection system.
- 20. Transfers by Modification [R18-9-B905]

Except as provided in section 21, a permit may be transferred by the Permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made under R18-9-B906, to identify the new Permittee and incorporate such other requirements as may be necessary.

21. Automatic Transfers [R18-9-B905]

An alternative to transfers under section 20, any AZPDES permit may be automatically transferred to a new Permittee if:

- a. The current Permittee notifies the Director at least 30 days in advance of the proposed transfer date;
- b. The notice includes a written agreement between the existing and new Permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- c. The Director does not notify the existing Permittee and the proposed new Permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under R18-9-B906(B).

22. Minor Modification of Permits [R18-9-B906(B)]

Upon the consent of the Permittee, the Director may modify a permit to make the corrections or allowances for changes in the permitted activity listed in this section, without following public notice procedures under R18-9-A907 or A908. Minor modifications may only:

- a. Correct typographical errors;
- b. Update a permit condition that changed as a result of updating an Arizona water quality standard;
- c. Require more frequent monitoring or reporting by the Permittee;
- Change an interim compliance date in a schedule of compliance, provided the new date is not more than 120 days after the date specified in the existing permit and does not interfere with attainment of the final compliance date requirement;
- e. Allow for a change in ownership or operational control of a facility where the Director determines that no other change in their permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, and liability between the current and new Permittee has been submitted to the Director.
- f. Change the construction schedule for a discharger which is a new source. No such change shall affect a discharger's obligation prior to discharge under 40 CFR 122.29 (which is incorporated by reference in R18-9-A905(A)(1)(e)).
- g. Delete a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with the permit limits.
- h. Incorporate conditions of a POTW pretreatment program that has been approved in accordance with the procedures in 40 CFR 403.11 and 403.18 as enforceable conditions of the POTW's permit.
- i. Annex an area by a municipality.
- 23. Termination of Permits [R-9-B906(C)]

The following are causes for terminating a permit during its term, or for denying a permit renewal application:

- a. Noncompliance by the Permittee with any condition of the permit;
- b. The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time;
- c. A determination that the permitted activity endangers human health or the environment and can only by regulated to acceptable levels by permit modification or termination; or
- d. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit (for example, a plant closure or termination of discharge by connection to a POTW).
- 24. Availability of Reports [Pursuant to A.R.S § 49-205]

Except for data determined to be confidential under A.R.S § 49-205(A), all reports prepared in accordance with the terms of this permit shall be available for public inspection at ADEQ offices. As required by A.R.S. § 49-205(B) and (C), permit applications, permits, and effluent data shall not be considered confidential.

25. Removed Substances - [Pursuant to Clean Water Act Section 301]

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

26. Severability - [Pursuant to A.R.S § 49-324(E)]

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 remainder of this permit, shall not be affected thereby.

27. Civil and Criminal Liability - [Pursuant to A.R.S § 49-262, 263.01, and 263.02]

Except as provided in permit conditions on "Bypass" (Section 14) and "Upset" (Section 15), nothing in this permit shall be construed to relieve the Permittee from civil or criminal penalties for noncompliance.

28. Oil and Hazardous Substance Liability - [Pursuant to Clean Water Act Section 311].

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

29. State or Tribal Law - [Pursuant to R 18-9-A904 (C)].

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