ADEQ Inventory No.	100601	Permit No.	AZ0023558
LTF No.	73184	Place ID No.	978

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 2.1; the Federal Water Pollution Control Act, (33 USC§1251 et. seq., as amended), and Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Articles 9 and 10, and amendments thereto,

Salt River Project (SRP)
Santan Generating Station (Santan)
P. O. Box 52025
Mail Station: STS 300
Phoenix, Arizona 85072

is authorized to discharge cooling tower blowdown, heat recovery steam generator blowdown, other low volume wastes, stormwater, and non-process raw water from the Santan Generating Station (Santan) located at 1005 South Val Vista Drive in Gilbert, Maricopa County, Arizona to SRP Lateral 4-8.4, SRP Lateral 5-9.0 and SRP Lateral 5-9.5 to the Western Canal (a Phoenix Area Canal) or to SRP Lateral 4-11.4 and SRP Lateral 5-11.0 to an ADOT stormwater drainage system and eventual tributary to the Salt River in the Middle Gila River Basin in Maricopa County, Arizona. Discharge is permitted from the Santan at:

Outfall No.	Latitude	Longitude	Legal
001	33˚ 19’ 54” N	111˚ 44’ 59” W	Township 1 S, Range 6 E, Section 21
005	33˚ 20’ 01” N	111˚ 44’ 57” W	Township 1 S, Range 6 E, Section 21
021	33˚ 20’ 01” N	111˚ 44’ 57” W	Township 1 S, Range 6 E, Section 21

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 _____, 2019.

This permit and the authorization to discharge shall expire at midnight, _____, 2024.

Signed this _____ day of _____, 2019.

_____
Trevor Baggiore, Director
Water Quality Division
Arizona Department of Environmental Quality

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PART 1 – EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

A. Effluent Limitations and Monitoring Requirements

The Permittee shall limit and monitor discharges from Outfalls 001 and 005 as specified in Table 1.a and 1.b and Outfall 021 in Table 1.c, which follows. Discharges to Outfalls 001 and 005 are only permitted when the Roosevelt Water Conservation District (RWCD) Irrigation Canal and Tailwater Ditch are not available. Discharge to Outfall 021 may be used as necessary to support plant operations, but is typically reserved for occurrences when the RWCD Irrigation Canal and Tailwater Ditch are incapable of receiving the discharge volume from Santan.

Table 1.a – Chronic Discharge Limitations and Monitoring Requirements
(Applies to discharges of seven (7) or more consecutive days or with less than 30 days between discharges)

Parameter	Maximum Allowable Discharge Concentration Limits		Monitoring Requirement (1)			
	Monthly Average	Daily Maximum	Monitoring Frequency		Sample Type	
Discharge Flow (MGD)	REPORT (2)	REPORT	001	005	001	005
			1 x / Week (3)	Continuous	Discrete (4)	Metered
Chlorine, free available (FAC) (5) (6)	REPORT (7)	REPORT	1 x / month		Discrete	
Chlorine, total residual (TRC) (5) (6)	9.0 ug/L	18 ug/L	1 x/month		Discrete	
Chromium, total	200 ug/L	200 ug/L	1 x/month		Discrete	
Chromium VI	8.0 ug/L	16 ug/L	1 x/month		Discrete	
Copper (8) (9)	21 ug/L	50 ug/L	1 x/month		Discrete	
Hardness ($CaCO_3$) – effluent (8)	REPORT	REPORT	1 x/month		Discrete	
Iron	819 ug/L	1643 ug/L	1 x/month		Discrete	
Mercury	0.01 ug/L	0.02 ug/L	1 x/month		Discrete	
Oil and grease	15 mg/L	20 mg/L	1 x/month		Discrete	
Selenium (9)	2 ug/L	3 ug/L	1 x/month		Discrete	
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	1 x/month		Discrete	
Zinc (8)	189 ug/L	379 ug/L	1 x/month		Discrete	
pH (10)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x/week		Discrete	

Footnotes:

1 Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.B, Table 2 of the permit. See Part IV of the permit.
2 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.
3 Flow is to be measured as a discrete flow rate and integrated for the duration of the daily discharge.
4 For the purposes of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
5 FAC and TRC may not be discharged from any unit for more than two (2) hours in any one day and not more than one unit in any plant may discharge FAC or TRC at any one time.
6 pH, FAC, and TRC 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.
7 Monitoring and reporting required. No limit set at this time.
8 Limits listed for copper and zinc are based on a discharge hardness of 400 mg/L as $CaCo_3$. The discharge must be tested for hardness at the same time that metal samples are taken. Please see the hardness definition in Appendix A, Part B.
9 All metals discharge limits are for total recoverable metals, except for chromium VI, for which the discharge limits listed are dissolved.
10 pH, FAC, and TRC must be measured at the time of sampling and do not require used of 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.

Table 1.b: Acute Discharge Limitations and monitoring Requirements (Outfalls 001 and 005)
(Applies to discharges of less than seven (7) consecutive days with at least 30 days between discharges)

Parameter	Maximum Allowable Discharge Concentration Limits		Monitoring Requirement (1)			
	Monthly Average	Daily Maximum	Monitoring Frequency		Sample Type	
Discharge Flow (MGD)	-----	REPORT(2)	001	005	001	005
			1 x / Week (3)	Continuous	Discrete (4)	Metered
Chlorine, free available (FAC) (5) (6)	-----	REPORT (7)	1 x / month		Discrete	
Chlorine, total residual (TRC) (5) (6)	-----	18 ug/L	1 x/month		Discrete	
Chromium, total	-----	200 ug/L	1 x/month		Discrete	
Chromium VI	-----	16 ug/L	1 x/month		Discrete	
Copper (8) (10)	-----	50 ug/L	1 x/month		Discrete	
Hardness ($CaCO_3$) – effluent (8)	-----	REPORT	1 x/month		Discrete	
Iron	-----	1643 ug/L	1 x/month		Discrete	

Mercury	-----	0.02 ug/L	1 x/month	Discrete
Oil and grease	-----	20 mg/L	1 x/month	Discrete
Selenium (9)	-----	3 ug/L	1 x/month	Discrete
Total Suspended Solids (TSS)	-----	100 mg/L	1 x/month	Discrete
Zinc (8)	-----	379 ug/L	1 x/month	Discrete
pH (10)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x/week	Discrete

Footnotes:

1 Testing must coincide with the Whole Effluent Toxicity Test (WET) samples, if any, taken during that monitoring period as per Part I.B, Table 2 of the permit. See Part IV of the permit.
2 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.
3 Flow is to be measured as a discrete flow rate and integrated for the duration of the daily discharge.
4 For the purposes of this permit, a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
5 FAC and TRC may not be discharged from any unit for more than two (2) hours in any one day and not more than one unit in any plant may discharge FAC or TRC at any one time.
6 pH, FAC, and TRC 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.
7 Monitoring and reporting required. No limit set at this time.
8 Limits listed for copper and zinc are based on a discharge hardness of 400 mg/L as $CaCo_3$. The discharge must be tested for hardness at the same time that metal samples are taken. Please see the hardness definition in Appendix A, Part B.
9 All metals discharge limits are for total recoverable metals, except for chromium VI, for which the discharge limits listed are dissolved.
10 pH, FAC, and TRC must be measured at the time of sampling and do not require used of 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.

Table 1.c: Discharge Limitations and Monitoring Requirements
(The permittee shall limit and monitor discharges from Outfall 021 as specified in Table 1.c)

Parameter	**Maximum Allowable Discharge Concentration Limits**		**Monitoring Requirement (1)**	
	Monthly Average	**Daily Maximum**	**Monitoring Frequency**	**Sample Type**
Discharge Flow (MGD)	REPORT(2)	REPORT	1 x / Month	Metered
Chlorine, free available (FAC) (3) (4)	REPORT (5)	REPORT	1 x / month	Discrete

Chlorine, total residual (TRC) (3) (4)	REPORT	REPORT	1 x/month	Discrete
Chromium, total	200 ug/L	200 ug/L	1 x/month	Discrete
Oil and grease	15 mg/L	20 mg/L	1 x/month	Discrete
Total Suspended Solids (TSS)	30 mg/L	100 mg/L	1 x/month	Discrete
Zinc	1,000 ug/L	1,000 ug/L	1 x/month	Discrete
pH (4)	Not less than 6.5 standard units (S.U.) nor greater than 9.0 S.U.		1x/week	Discrete

Footnotes:

1 For the purposes of this permit a "discrete" sample means an individual sample of at least 100 ml collected from a single location, or over a period of time not exceeding 15 minutes.
2 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.
3 FAC and TRC may not be discharged from any unit for more than two (2) hours in any one day and not more than one unit in any plant may discharge FAC or TRC at any one time.
4 pH, FAC, and TRC 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.

B. Whole Effluent Toxicity Monitoring

The permittee shall monitor discharges from Outfall 001 and 005 for Whole Effluent Toxicity (WET) as specified in Table 2 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.

Table 2 – WET Testing

Effluent Characteristic (1)	Action Levels		Monitoring Requirements	
	Daily Maximum (2) (3)	Monthly Median (3)	Monitoring Frequency	Sample Type
Acute Toxicity (4) *Pimephales promelas* (Fathead minnow)	N/A	Fail	1 x / year	24-hr Composite
Acute Toxicity (4) *Ceriodaphnia dubia* (Water flea)	N/A	Fail	1 x / year	24-hr Composite
Chronic Toxicity *Pseudokirchneriella subcapitata* (Green algae) (6)	1.6 TUc	1.0 TUc	1 x / year	24-hr Composite
Chronic Toxicity *Pimephales promelas* (Fathead minnow)	1.6 TUc	1.0 TUc	1 x / year	24-hr Composite
Chronic Toxicity *Ceriodaphnia dubia* (Water flea)	1.6 TUc	1.0 TUc	1 x / year	24-hr Composite

Footnotes

1 See Part IV 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 IV for details.
4 The requirement for an acute test applies when duration of discharge doesn't allow for chronic tests to be conducted. See Part IV (B). If discharges is infrequent see Part I.C for minimum discharge characterization monitoring requirements.
5 Formerly known as *Selenastrum capricornutum or Raphidocelis subcapitata.*

C. Discharge Characterization Testing

The permittee shall monitor to characterize the facility's effluent for the parameters listed in Tables 3.a – b. When the facility discharges, monitoring is to be conducted at the frequency indicated in Tables 1 through 2. No limits or ALs are established, but the Limit of Quantification (LOQ) must be low enough to allow comparison of the results to the applicable water quality standards (WQS). If a LOQ below the WQS cannot be achieved, then the permittee shall use the method expected to achieve the lowest LOQ, as defined in Appendix A of this permit. Samples are to be representative of any seasonal variation in the discharge:

Table 3.a. – Discharge Characterization Testing – General Chemistry and Microbiology

Parameter	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (1)	Sample Type
Ammonia (as N)	mg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Biochemical Oxygen Demand (BOD-5)	mg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Total Organic Carbon (TOC)	mg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Chemical Oxygen Demand (COD)	mg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
E. coli	cfu/100 mL (2)	1 x / year in years 2020,2021,2022 of permit term	Discrete
Temperature (3)	°Celsius	1 x / year in years 2020,2021,2022 of permit term	Discrete

Footnotes

1 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 3.a. requirements.
2 cfu = colony forming units; "most probable number" (mpn) is considered equivalent for reporting purposes.
3 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.

Table 3.b. – Discharge Characterization Testing – Selected Metals

Parameter (1)	Reporting Units	Monitoring Requirements	
		Monitoring Frequency (2)	Sample Type
Arsenic	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Beryllium	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Cadmium	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Iron	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Lead	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete

Mercury	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Nickel	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Silver	µg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete
Hardness	mg/L	1 x / year in years 2020,2021,2022 of permit term	Discrete

Footnotes

1 All metals analyses shall be for total recoverable metals, except chromium VI, which is dissolved

2 If more frequent monitoring of any of these parameters is required by another part of this permit, those sampling results may be used to satisfy Table 3.b. requirements.

D. The discharge shall be free from pollutants in amounts or combinations that:

1. Settle to form bottom deposits that inhibit or prohibit the habitation, growth or propagation of aquatic life;
2. Cause objectionable odor in the area in which the surface water is located;
3. Cause off-flavor in aquatic organisms;
4. Are toxic to humans, animals, plants or other organisms;
5. 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;

E. 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.

F. The discharge shall not cause an increase in the ambient water temperature of more than 3.0 degrees Celsius.

G. The discharge shall not cause the dissolved oxygen concentration in the receiving water to fall below 3 mg/L from 3 hours after sunrise to sunset and 1 mg/l from sunset to 3 hours after sunrise, unless the percent saturation of oxygen remains equal to or greater than 90%.

H. The discharge shall be free from the 126 priority pollutants (except for chromium and zinc) which may be contained in chemicals added for cooling tower maintenance. The list of priority pollutants are provided in Appendix A to Part 423 of 40 CFR, which is incorporated by reference in A. A. C. R 18-9-A905(a)(9).

I. The discharge shall be free from polychlorinated biphenyl compounds (PCBs) such as those commonly used for transformer fluid.

J. Samples taken for the monitoring requirements specified in Part I shall be collected downstream from the last treatment process and prior to mixing with the receiving waters.

PART II – MONITORING AND REPORTING

A. Sample Collection and Analysis

1. The permittee is responsible for the quality and accuracy of all data required under this permit.

2. Quality Assurance (QA) Manual - The permittee shall keep a 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. Who will collect samples and their qualifications;
    v. Laboratory(s) that will perform analyses;
    vi. Any field tests to be conducted (detail methods and specify equipment, including a description of any needed calibrations); and
    vii. 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.

3. 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.

4. 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 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.R.S. 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.

f. If requested, the permittee shall participate in the annual NPDES DMR/QA study and submit the results of this study to ADEQ and ADHS for all laboratories used in monitoring compliance with this permit.

5. 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.

6. Chlorine Monitoring

Because of the short holding time for chlorine, samples may be analyzed on-site using Hach Method No. 10014. Other methods are also acceptable for chlorine if the Method has a LOQ lower than discharge limits specified in this permit.

7. 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) forms supplied by ADEQ, to the extent that the results may be entered on the forms. 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 31st, the permittee shall submit the DMR by February 28th. The permittee shall electronically submit all compliance monitoring data and reports using the myDEQ electronic portal provided by ADEQ. 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. Ammonia data logs (if applicable)

    e. AZPDES discharge flow records (if applicable)

    f. Method detection limit studies (if applicable)

    g. Bench sheets or similar documentation for field testing parameters (if applicable)

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 31st 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
Email: AZPDES@azdeq.gov

Arizona Department of Environmental Quality
Attn: Office of Laboratory Licensure and Certification
250 North 17th Avenue
Phoenix, AZ 85007

4. For the purposes of reporting, the permittee shall use the Limit of Quantitation (LOQ).

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:

Table 2 – DMR Reporting Requirements for Daily Maximum Limits and Assessment Levels

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 (1)	NODI (Q)
When the maximum value is less than the laboratory's LOD (2)	NODI (B)

Footnotes
1 Not Quantifiable
2 Below Detection

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.

Table 3 – DMR Reporting Requirements for Monthly Average Limits / Assessment Levels

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

   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/lab/license/resources.htm)

C. Twenty-four Hour Reporting of Noncompliance

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) 771-2330

by phone call or voice mail by 9 a.m. on the first business day following the noncompliance. The permittee shall also notify the Surface Water Permits Unit in writing within 5 days of the noncompliance event to AZPDES@azdeq.gov. 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.

D. Monitoring Records

The permittee shall retain records of the following monitoring information:

1. Date, exact location and time of sampling or measurements performed, preservatives used;
2. Individual(s) who performed the sampling or measurements;
3. Date(s) the analyses were performed;
4. Laboratory(s) which performed the analyses;
5. Analytical techniques or methods used;
6. Chain of custody forms;
7. 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.
8. Summary of data interpretation and any corrective action taken by the permittee.

PART III – BIOSOLIDS / SEWAGE SLUDGE REQUIREMENTS

Not Applicable

PART IV – WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. General Conditions

1. The permittee shall conduct chronic (acute or both) toxicity tests on 24-hr composite samples of the final effluent at the frequencies specified in Part 1. The requirement to conduct chronic toxicity testing is contingent upon the frequency or duration of discharges. See Part IV.C.1 below for details. If chronic testing is conducted a separate acute test is not required. However, the acute endpoint shall be reported from the chronic test.

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. Acute Toxicity

1. If chronic toxicity testing is not required per Part IV.C.1, the permittee shall conduct 96-hour acute toxicity tests with renewal at 48 hours on two species; *Ceriodaphnia dubia* and *Pimephales promelas* using 100% effluent and a control. The acute test may be completed as a non-renewal 48-hour acute test when a second sample for renewal at 48 hours cannot be taken due to a cessation of the discharge after an acute test has been initiated.

2. The permittee must follow the USEPA 5th edition manual, "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms" (EPA/821-R-02-012) for all acute toxicity testing. The presence of chronic toxicity shall be estimated as specified in the method for each species tested.

3. The acute toxicity action level is any failing test result. The test fails if survival in 100% effluent is less than 90%, and is significantly different from control survival (which must be 90% or greater), as determined by hypothesis testing. Section 11.3 of the acute manual referenced above must be followed to determine Pass or Fail. Any result of Fail requires follow-up testing per Part IV, Section E.

4. The permittee shall report results as Pass or Fail.

C. Chronic Toxicity

1. 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 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. 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.

D. 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.

2. 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 (i.e., 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. Lacks 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.

E. Toxicity Identification Evaluation (TIE)/Toxicity Reduction Evaluation (TRE) Process

1. If acute and/or 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 when discharging. 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 acute and/or chronic toxicity is detected above an action level or Limit specified in this permit and the source of toxicity is unknown, 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; 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: *Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures*, 2nd 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.

F. WET Reporting

1. The permittee shall report chronic toxicity results on DMRs in Chronic Toxicity Units (TUc). The TUc for DMR reporting shall be calculated as TUc= 100/NOEC.
2. 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 $100/IC_{25}$. 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 IV.A.3 of this permit, and 3) copies of completed "AZPDES Discharge Flow Records" for the months in the WET monitoring period.
3. WET lab reports and any required additional attachments shall be submitted to ADEQ by the 28th day of the month following the end of the WET monitoring period, or upon request.

PART V – SPECIAL CONDITIONS

A. Special Discharge Limitation

Discharge from Santan through SRP Lateral 4-8.4, SRP Lateral 5-9.0 and SRP Lateral 5-9.5 via outfall 021 will be used as deemed necessary for plant operations, but is expected when the Roosevelt Water Conservation District (RWCD) Irrigation Canal and Tailwater Ditch are incapable of receiving discharge volumes from Santan. Discharge from Santan through SRP Lateral 4-11.4 and SRP Lateral 5-11.0 via Outfalls 001 and 005 is only permitted when the Roosevelt Water Conservation District (RWCD) Irrigation Canal and Tailwater Ditch are incapable of receiving discharge volumes required by the plant operations.

B. Stormwater Pollution Prevention Plan Requirements

The permittee shall review the existing Stormwater Pollution Prevention Plan (SWPPP) for the Santan, and revise it as necessary to ensure that it fully and accurately addresses all the following provisions. Any updates or revisions needed shall be completed within 90 days of the effective date of this permit.

1. Pollution Prevention Team

The SWPPP shall identify individuals at SRP that are members of a Stormwater Pollution Prevention Team who are responsible for assisting the facility management in implementation, maintenance, and revision of the SWPPP. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's SWPPP.

2. Description of Potential Pollutant Sources

The plan shall describe and identify all sources at the facility which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of

pollutants during dry weather from the facility. These shall include all activities and exposed materials which may potentially be significant pollutant source.

1. **Drainage Considerations**
   a. The SWPPP must contain a drainage area site map which identifies the locations of any of the following activities or sources which may be exposed to precipitation/surface runoff: storage tanks, scrap yards, general refuse areas; short and long term storage of general materials (including but not limited to: supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning material, paint, water treatment chemicals, fertilizer and pesticides); landfills, construction sites; stock piles areas (e.g., coal or limestone piles).

   b. Each stormwater outfall shall be clearly identified by narrative in the SWPPP and depicted on a facility map included in the SWPPP. The SWPPP shall identify the types of pollutants which are likely to be present in the stormwater discharges at each designated outfall. Factors to consider include the toxicity of a chemical; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

2. **Inventory of Exposed Materials**
   The SWPPP shall include an inventory of the types of materials handled at the site that may be exposed to precipitation. This shall include a description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to stormwater since January 1, 2014; method and location of onsite storage and/or disposal; materials management practices employed to minimize contact of materials with stormwater runoff since January 1, 2014; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

3. **Spills and Leaks**
   The SWPPP shall contain a list of significant spills and/or leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a stormwater conveyance at the facility since January 1, 2014. This list shall be reviewed and updated, as appropriate, at least annually.

4. **Sampling Data**
   A summary of existing discharge sampling data describing pollutants in stormwater discharges from the facility, including a summary of sampling data collected during the term of this permit.

5. **Risk Identification and Summary of Potential Pollutant Sources**
   A description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage; manufacturing, or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., total suspended solids, copper, etc.) of concern shall be identified.

3. **Measures and Controls**
SRP shall develop and implement effective stormwater management controls for all identified potential sources of pollution. For each identified potential source, the SWPPP shall describe the nature of the

potential discharges, including the types of pollutants likely to be present in each. For each identified potential source, the SWPPP shall describe either structural and/or non-structural controls (BMPs) that shall be designed and implemented to minimize these releases. The controls shall include at least the following components:

1. **Good Housekeeping**
   Good housekeeping requires the maintenance of areas which may contribute pollutants to storm water discharges in a clean, orderly manner. The following areas must be specifically addressed:

   a. **Bulk Liquid and/or Chemical Delivery Vehicles**
      The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from delivery vehicles arriving on site. The SWPPP should detail the following:

      i. Procedures for the review of delivery vehicles to ensure overall integrity of the body or container; and
      ii. Procedures to deal with leakage or spillage from vehicles or containers. The SWPPP should also identify the nature and location of protective measures available for personnel and environment.

   b. **Fuel Oil Unloading Areas**
      The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from fuel oil unloading areas. SRP must implement the following measures, or an equivalent:

      i. Use of containment curbs in unloading areas
      ii. Personnel familiar with spill prevention and response procedures must be present during deliveries to ensure that leaks or spills are immediately contained and cleaned up; and
      iii. Use of spill and overflow protection (drip pans, drip diapers, and/or other containment devices shall be placed beneath fuel oil connectors to contain any spillage that may occur during deliveries or due to leaks at such connectors)

   c. **Chemical Loading / Unloading Areas**
      The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from chemical loading/unloading areas. SRP must implement the following measures, or an equivalent:

      i. Where practicable, chemical loading/unloading areas are to be covered, and chemicals are to be stored indoors.
      ii. Use of containment curbs at chemical loading/unloading areas to contain spills; and
      iii. Personnel familiar with spill prevention and response procedures must be present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up.

   d. **Miscellaneous Loading/Unloading Areas**
      The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from loading and unloading areas.

e. Liquid Storage Tanks

The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from above-ground liquid storage tanks. Liquid storage areas for Section 313 water priority chemicals must have secondary containment for at least the entire contents of the largest tank plus sufficient freeboard to allow for the 25-year, 24-hour precipitation event and a strong spill contingency and integrity testing plan. In addition, SRP must implement the following measures, or an equivalent, for any above-ground liquid storage tanks:

i. Use of protective guards around tanks;
ii. Use of containment curbs;
iii. Use of spill and overflow protection (drip pans, drip diapers, and/or other containment devices shall be placed beneath chemical connectors to contain any spillage that may occur during deliveries or due to leaks at such connectors); and
iv. Use of dry cleanup methods.

f. Large Bulk Fuel Storage Tanks

The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from bulk fuel storage tanks. SRP must implement the following measures:

i. Compliance with applicable State and Federal laws, including Spill Prevention Control and Countermeasures (SPCC); and
ii. Use of containment berms, or equivalent.

g. Oil or Chemical Spill

The SWPPP must describe, or reference the appropriate section of the facility's SPCC plan that describes, measures that prevent or minimize the potential for an oil or chemical spill. SRP must implement the measures described. The structural integrity of all above ground tanks, pipelines, pumps and other related equipment shall be visually inspected on at least a monthly basis. All repairs deemed necessary based on the findings of the review shall be completed immediately to reduce the incidence of spills and leaks occurring from such faulty equipment.

h. Oil Bearing Equipment in Switchyards

If applicable, the SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from oil bearing equipment in switchyard areas.

i. **Vehicle Maintenance Activities**

If vehicle maintenance activities are performed on the plant site, SRP shall use the applicable BMPs outlined in Part 6.P. of the Final Reissuance of National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities (Federal Register/ Vol. 65, No. 210/ Monday, October 30, 2000/ Notices -- Storm Water Discharges Associated With Industrial Activities From Railroad Transportation, Local and Highway Passenger Transportation, Motor Freight Transportation and Warehousing, United States Postal Service, and Petroleum Bulk Stations and Terminals).

ii. **Material Storage Areas**

The SWPPP must describe, and SRP must implement, measures that prevent or minimize the potential for contamination from material storage areas (including areas used for temporary storage of miscellaneous products, and construction materials stored in lay down areas).

2. Preventive Maintenance

The SWPPP must describe, and SRP must implement, a preventive maintenance program that includes timely inspection and maintenance of stormwater management devices (e.g., cleaning oil/water separators, catch basins). SRP shall also routinely inspect and test facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and shall ensure appropriate maintenance of such equipment and systems.

3. Spill Prevention and Response Procedures

The SWPPP must clearly identify describe areas where potential spills could contribute pollutants to stormwater discharge, and their accompanying drainage points. The SWPPP shall describe, and SRP shall implement, specific material handling procedures, storage requirements, and use of equipment such as diversion valves if applicable, to prevent spills. The SWPPP shall describe procedures for cleaning up spills, and SRP shall train appropriate SRP personnel to implement these procedures. SRP shall ensure that equipment necessary to implement a clean up is available to SRP personnel. (Note: these training and equipment requirements do not apply to third-party spill response contractors).

4. Stormwater Inspections

a. SRP shall identify qualified facility personnel and ensure that at they:
   i. assess the integrity of stormwater discharge diversions, conveyance systems, sediment control and collection systems, and containment structures at least monthly and after significant storm events; visually inspect sediment and erosion BMPs to determine if soil erosion has occurred at least monthly and after significant storm events;
   ii. visually inspect storage areas and other potential sources of pollution for evidence of actual or potential discharges of contaminated storm water at least monthly and after significant storm events;
   iii. inspect material handling, and unloading and loading areas daily whenever loading or unloading industrial activities occur in these areas; and
   iv. inspect processing and transport areas at least monthly to assess the effectiveness of practices to minimize drippage of treatment chemicals on unprotected soils and areas that will come in contact with stormwater discharges.

b. Records of inspections shall be maintained onsite. SRP shall implement and maintain an effective system for recordkeeping and tracking of follow-up corrective actions needed and taken in response to inspections. Inspection and related records are subject to review by ADEQ, EPA, and state and local agencies with jurisdiction, and must be retained onsite a minimum of 3 years after the date of the inspection.

5. Employee Training

SRP shall ensure that an effective training program is developed and implemented to inform personnel responsible for stormwater management or implementing activities addressed in the SWPPP. Training shall address topics such as goals of the SWPPP, spill prevention and control, proper handling procedures for hazardous wastes, and good housekeeping and material management practices. SRP must hold this training at least annually and the training agenda and records of employee attendance must be maintained as part of the SWPPP.

6. SWPPP Recordkeeping

The permittee shall include in the SWPPP:

a. a description of incidents (such as spills, or other discharges) that occur in areas exposed to precipitation;
b. other information describing the quality and quantity of storm water discharges;
c. documentation of inspections, maintenance activities, and training activities;
d. any analytical results available that relate to stormwater discharges on-site; and
e. other certifications or records required by Part II of this permit.

4. Non-storm Water Discharges (Other than those authorized in Part I)

1. SRP shall test or evaluate for the presence of non-stormwater discharges at the facility and shall include an annual certification in the SWPPP. The certification shall identify any potential significant sources of non-stormwater at the site; and describe the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test.

2. Except for flows from fire fighting activities, SRP must identify and describe in the SWPPP, any sources of non-storm water that are combined with on-site stormwater. The SWPPP must ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

3. If SRP is unable to provide the certification required (testing for non-storm water discharges), SRP must notify ADEQ within 90 days of the effective date of this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges; and, why adequate tests were not feasible. Non-storm water discharges to waters of the United States which are not authorized by an AZPDES permit are unlawful, and must be terminated.

5. Sediment and Erosion Control

The SWPPP shall identify specific areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion. SRP must include the following areas in the assessment: loading and unloading areas, access roads, material handling areas, storage areas, and any other

areas where heavy equipment and vehicle use is prevalent. SRP shall employ effective erosion and sediment controls to minimize the discharge of sediments from the site.

6. Management of Runoff

The SWPPP shall describe stormwater management practices used to divert, infiltrate, reuse, or otherwise manage stormwater runoff in a manner that reduces pollutants in stormwater discharges from the site. Measures SRP determines to be reasonable and appropriate shall be implemented and maintained. SRP shall consider the potential for various sources at the facility to contribute pollutants when determining reasonable and appropriate measures.

7. Comprehensive Site Compliance Evaluation

Qualified personnel shall conduct comprehensive stormwater compliance evaluations at least annually that shall address the following:

1. Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the SWPPP shall be observed to ensure that they are operating correctly. A visual evaluation of all equipment needed to implement the plan, including spill response equipment, shall be made.

2. Based on the results of the evaluation, SRP shall revise the description of potential pollutant sources (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the SWPPP (Measures and Controls) as appropriate within 2 weeks after the evaluation. SRP must implement any changes to the plan within 12 weeks after the evaluation.

C. STORMWATER MONITORING AND REPORTING REQUIREMENTS

1. **Monitoring**

The permittee is authorized to discharge from Outfall 001, Outfall 005 and Outfall 021 as required by section Part I.A of this permit. Stormwater is commingled with combined cooling tower blowdown and low volume wastes at Outfall 001, Outfall 005 and Outfall 021 and requires no separate stormwater discharge monitoring.

2. Quarterly Visual Examination of Stormwater Quality

SRP shall perform and document a visual examination of stormwater collected onsite prior to it commingling with industrial flows, at the storm water retention basins. Visual examination reports must be maintained on-site in the SWPPP. The report shall include the examination date and time, examination personnel, visual quality of the storm water discharge including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution, and probable sources of any observed storm water contamination. A 72-hour window (3 days) is required between measurable (discharging) storm events before another visual examination needs to be performed.

3. Annual Report

SRP shall make a report summarizing the scope of the annual site compliance evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWPPP, and actions taken per Part V, Section B.7.2 of the permit. The report shall be submitted to ADEQ on an annual basis and due on the anniversary of the effective date of this permit. The report shall also be retained as part of the SWPPP for at least 3 years from the date of evaluation. The report shall identify any incidents of noncompliance and recommendations for revisions of the SWPPP. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that SRP is in compliance with the SWPPP and Part V of this permit. The report shall be signed in accordance with Part 12 of the attached "Standard AZPDES Permit Conditions," dated February 3, 2004 (Signatory Requirements).

The annual report shall include a certification that the SWPPP has been reviewed, remains accurate or has been revised as necessary, and that SRP is implementing the SWPPP and the stormwater provisions required by this permit.

D. CHEMICAL ADDITIVES

1. Chemical Use

The permittee shall maintain a chemical use log at the facility of all chemical additives added to the water treatment systems and cooling tower that are eventually discharged from the facility. The chemical use log shall be made available to the Department upon request.

The log shall include a list of the chemicals used, the use of each chemical, the location of use of each chemical, and the approximate quantity of chemical used over a given time period.

The permittee shall notify ADEQ in writing of any additional new chemical additive within one business day of its use in the water treatment system or cooling tower. The notification shall include the name of the chemical additive, the reason for its use, and the approximate quantity to be used over a given time.

2. Discharge Prohibitions

1. Discharge of any product registered under the Federal Insecticide, Fungicide and Rodenticide Act to any waste stream which may ultimately be released to lakes, rivers, streams or other waters of the United States is prohibited unless specifically authorized elsewhere in this permit.

2. Discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

3. Microbiological Control

WET testing must be conducted after use of microbiological control agents if chemical is discharged. These tests may be used as annual WET tests required in Table 2. If no toxicity is detected after four WET

tests following a specific chemicals use, WET testing after that chemical use may be discontinued after notifying the Department.

4. Reporting

By January 31st of each year, the permittee shall submit to ADEQ, an annual summary of the quantities of all chemicals, listed by both chemical and trade names, which have been used for cooling, water treatment, descaling and/or microbiological control at the facility in the past calendar year.

E. 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.

F. Cooling Water Intake Structure Requirements

In order to maintain Best Technology Available (BTA) compliance for impingement & entrainment, the permittee must:

1. Conduct daily intake flow monitoring or daily calculation of the cycles of concentration pursuant to 40 CFR § 125.94 (c) (1).
2. Regularly maintain the close-cycle recirculating system to ensure efficient design performances as defined under 40 CFR § 125.92 (c) (1).
3. Submit the annual certification statement required by 40 CFR § 125.97 (C) that the CWIS at the facility has been properly operated and maintained and no changes to the facility that impact cooling water withdrawals or operation of the CWIS have been made unless documented.
4. Keep records consistent with 40 CFR § 125.97 (d).

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

Appendix A - Part A: Acronyms

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
EQ	Exceptional Quality (biosolids)
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).
Hardness	The sum of the calcium and magnesium concentrations, expressed as calcium carbonate ($CACO_3$) 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_0): The effluent is not toxic. Alternative hypothesis (H_a): 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
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 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., the highest concentration of toxicant at which the values for the observed responses are not statistically significant different from the controls).
Pathogen	A disease-causing organism.
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.
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.
Significant Difference	Defined as statistically significant difference (e.g., 95% confidence level) in the means of two distributions of sampling results.
Single Concentration Acute Test	A statistical analysis comparing only two sets of replicate observations. In the case of WET, comparing only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the 100% effluent concentration differs from the control (i.e., the test passes or fails).
Submit	Used in this permit, means post-marked, documented by other mailing receipt, or hand-delivered to ADEQ.
Test Acceptability Criteria (TAC)	Specific criteria for determining whether toxicity tests results are acceptable. The effluent and reference toxicant must meet specific criteria as defined in the test method.
Ton	A net weight of 2000 pounds and is known as a short ton.
Total Solids	The biosolids material that remains when sewage sludge is dried at 103° C to 105° C.
Toxic Unit (TU)	A measure of toxicity in an effluent as determined by the acute toxicity units or chronic toxicity units measured. Higher the TUs indicate greater toxicity.
Toxicity Identification Evaluation (TIE)	A set of procedures used to identify the specific chemical(s) causing effluent toxicity.
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.
Toxic Unit Acute (TUa)	Is the reciprocal of the effluent concentration that causes 50 percent of the organisms to die by the end of an acute toxicity test (i.e., TUa = 100/LC50).
Toxic Unit Chronic (TUc)	Is the reciprocal of the effluent concentration that causes no observable effect on the test organisms by the end of a chronic toxicity test (i.e., TUc = 100/NOEC).
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.
Whole Effluent Toxicity	The total toxic effect of an effluent measured directly with a toxicity test.

Appendix B - AZPDES Discharge Flow Record

SRP San Tan Generating Station – AZ0023558			
Discharge to SRP Irrigation Lateral No. 4 -11.4 and 5-11.0 at:			
Outfall No:	001		
Location:			
Month:		**Year**:	
Date:	**Flow Duration [(1)] (Total hours per day)**	**Flow Rate [(2)] (Total MGD per day)**	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
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19			
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22			
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27			
28			
29			
30			
31			
Comment:			

Footnotes

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

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

Appendix B - AZPDES Discharge Flow Record

SRP San Tan Generating Station – AZ0023558			
Discharge to SRP Irrigation Lateral No. 4 -11.4 and 5-11.0 at:			
Outfall No:	005		
Location:			
Month:		**Year**:	
Date:	**Flow Duration [1] (Total hours per day)**	**Flow Rate [2] (Total MGD per day)**	
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
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31			
Comment:			

Footnotes

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

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

Appendix B - AZPDES Discharge Flow Record

SRP San Tan Generating Station – AZ0023558			
Discharge to SRP Irrigation Lateral No. 4 -8.4 , 5-9.0 and 5-9.5at:			
Outfall No:	021		
Location:			
Month:		**Year**:	
Date:	**Flow Duration [(1)] (Total hours per day)**	**Flow Rate [(2)] (Total MGD per day)**	
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2			
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4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
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19			
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21			
22			
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30			
31			
Comment:			

Footnotes

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

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

Appendix C - Standard AZPDES Permit Conditions & Notifications
(Updated as of February 2, 2004)

1. 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(l)]

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(l) (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);

ii. 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 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.

Publicly owned treatment works 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 is desired.

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;

d. 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 A ct.