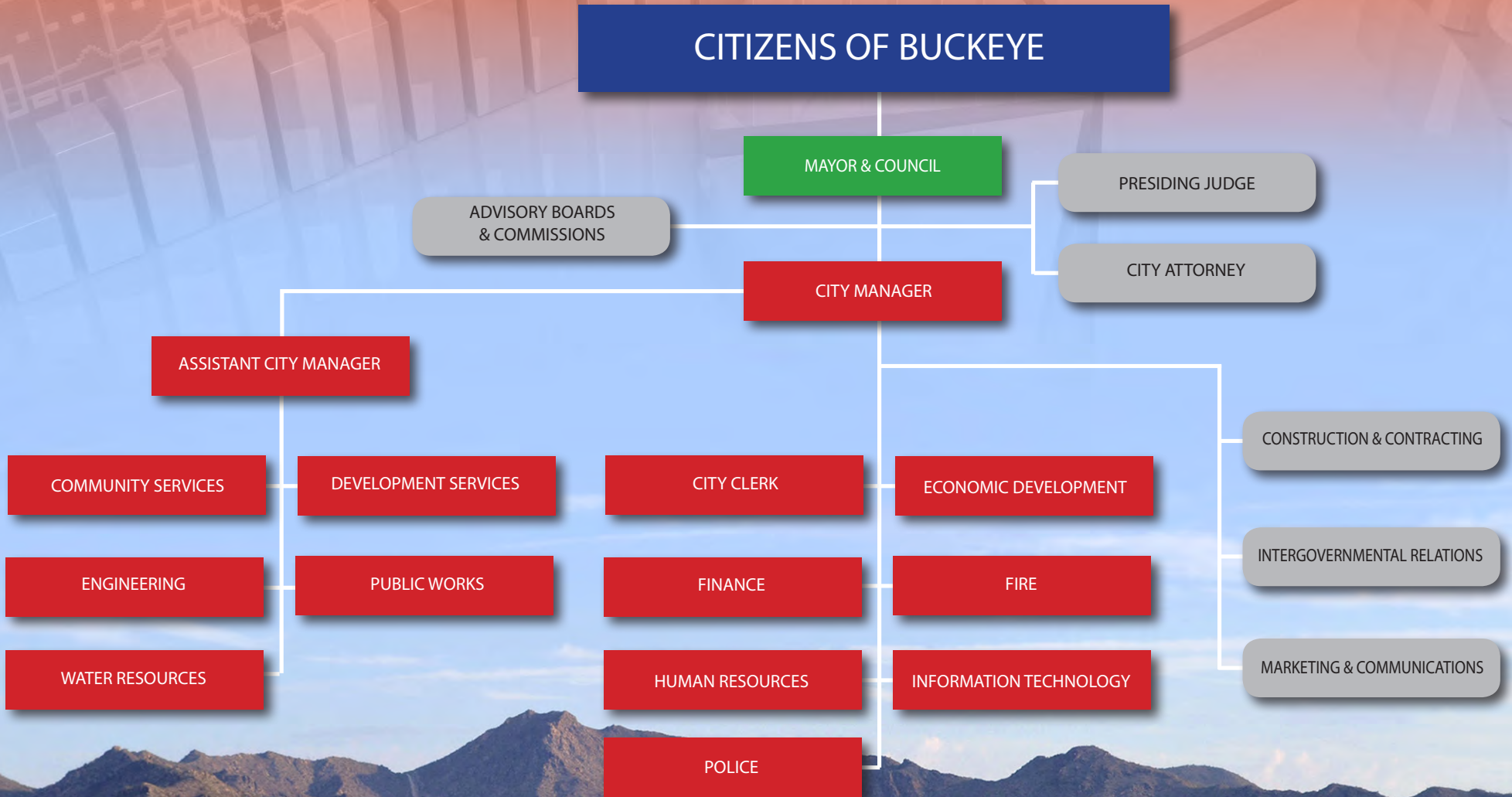




ORGANIZATION CHART



When Recorded Mail To:
City Clerk
City of Buckeye
530 East Monroe Avenue
Buckeye, Arizona 85326

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ORDINANCE NO. 07-21

AN ORDINANCE OF THE MAYOR AND CITY COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, DECLARING AS A PUBLIC RECORD THAT CERTAIN DOCUMENT ON FILE WITH THE CITY CLERK ENTITLED THE “CITY OF BUCKEYE 2020 SEWER UTILITIES AND USE OF PUBLIC SEWERS CODE UPDATES” BY REFERENCE; AND AMENDING THE BUCKEYE CITY CODE BY AMENDING CHAPTER 16, SEWER UTILITIES AND USE OF PUBLIC SEWERS IN ACCORDANCE WITH THE “CITY OF BUCKEYE 2020 SEWER UTILITIES AND USE OF PUBLIC SEWERS CODE UPDATES”; PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; AND PROVIDING PENALTIES FOR VIOLATIONS.

WHEREAS, that certain document entitled the “City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code,” of which at least three paper copies or one paper copy and one electronic copy are on file in the Office of the City Clerk and open for public inspection during normal business hours, is hereby declared to be a public record and said copies are ordered to remain on file with the City Clerk;

WHEREAS, the Mayor and Council of the City of Buckeye, Arizona (the “City Council”) deem it necessary, in order to protect the public health, and safety, to adopt certain rules and regulations controlling and preventing the introduction of pollutants into the City’s treatment works that will interfere with its operation and/or pass through inadequately treated materials; and

WHEREAS, the City Council finds that the proposed rules and regulations will further protect public health and safety by: protecting personnel of the City’s treatment works who may be affected by wastewater or sludge in the course of their employment and the general public; promoting reuse and recycling of industrial wastewater and sludge from the City’s treatment works; providing fees for the equitable distribution of the cost of operation, maintenance and improvements to the City’s treatment works; and enabling the City to comply with its National Pollutant Discharge Elimination System permit conditions, sludge use and disposal requirements, and any other Federal or state laws to which the City’s treatment works is subject.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, as follows:

Section 1. The recitals set forth above are hereby incorporated as if fully set forth herein.

Section 2. That certain document entitled the “City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code,” of which at least three paper copies or one paper copy and one electronic copy are on file in the Office of the City Clerk and open for public inspection during normal business hours, is hereby referred to, adopted and made a part hereof as if fully set out in this Ordinance.

Section 3. The City Code is hereby amended by deleting Chapter 16, Sewer Utilities and Use of Public Sewers, and amended by inserting the provisions in the “City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code,” as provided therein in Chapter 16, Sewer Utilities and Use of Public Sewers.

Section 4. All ordinances and parts of ordinances in conflict with the provisions of this Ordinance or any part of the Code adopted herein by reference are hereby repealed.

Section 5. Violation of any provision of the “City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code” adopted herein may result in civil and/or criminal penalties as follows:

Section 16-18-2 - Civil Penalties

- A. A user who has violated, or continues to violate, any provision of this ordinance, an individual wastewater discharge permit, or a general permit, or order issued hereunder, or any other pretreatment standard or requirement shall be liable to the city for a maximum civil penalty of \$25,000 per violation, per day. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the period of the violation.
- B. The director may recover reasonable attorneys’ fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the city.
- C. In determining the amount of civil liability, the court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the user’s violation, corrective actions by the user, the compliance history of the user, and any other factors as justice requires.

- D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, taking any other action against a user.

Section 16-18-3 - Criminal Prosecution

- A. A user who willfully or negligently violates any provision of this ordinance, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than \$2,500.00 per violation, per day, or imprisonment for not more than six (6) months, or both.
- B. A user who willfully or negligently introduces any substance into the POTW which causes personal injury or property damage shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than \$2,500.00 per violation, per day, or imprisonment for not more than six (6) months, or both. This penalty shall be in addition to any other cause of action for personal injury or property damage available under State law.
- C. A user who knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this ordinance, individual wastewater discharge permit, or a general permit or order issued hereunder, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this ordinance shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than \$2,500.00 per violation, per day, or imprisonment for not more than six (6) months, or both.

Section 16-18-4 - Remedies Nonexclusive

The remedies provided for in this ordinance are not exclusive. The director may take any, all, or any combination of these actions against a noncompliant user. Enforcement of pretreatment violations will generally be in accordance with the city's enforcement response plan or plans. However, the director may take other action against any user when the circumstances warrant. Further, the director is empowered to take more than one enforcement action against any noncompliant user.

Section 16-19-1 - Administrative Fine for Late Reports

An administrative fine of \$100.00 shall be assessed to any user for each day that a report required by this ordinance, a permit, or order issued hereunder is late, beginning five days after the date the report is due. Higher fines may also be assessed where reports

are more than 30 days late. Actions taken by the director to collect late reporting fines shall not limit the director's authority to initiate other enforcement actions that may include fines for late reporting violations.

Section 16-19-2 - Public Nuisances

A violation of any provision of this ordinance, an individual wastewater discharge permit, a general permit or order issued hereunder, or any other pretreatment standard or requirement is hereby declared a public nuisance and shall be corrected or abated as directed by the director. Any user(s) creating a public nuisance shall be subject to the provisions of the City Code Section 9-4-1 governing such nuisances, including reimbursing the city for any costs incurred in removing, abating, or remedying said nuisance.

Section 6. The provisions of this Ordinance and the public record adopted herein shall not go into effect unless approved by the Arizona Department of Environmental Quality ("ADEQ") in its regulatory review process for pretreatment standards. Subject to approval from ADEQ, this Ordinance shall be marked approved by the City Clerk, and become effective on September 1, 2021 to allow time for education and implementation of enforcement measures. Any permit applications and plans submitted for the first time to the City for review on or after September 1, 2021 shall comply with the "City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code".

Section 7. If any section, subsection, sentence, clause, phrase or portion of this Ordinance or any part of the "City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code" adopted herein by reference is for any reason to be held invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

Section 8. In the event of any inconsistency, conflict or ambiguity among any section, subsection, sentence, clause, phrase or portion of the "City of Buckeye 2020 Sewer Utilities and Use of Public Sewers Code" adopted herein by reference, the City Code, or this Ordinance, the documents shall govern in the order listed herein.

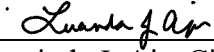
Section 9. The Mayor, the City Manager, the City Clerk and the City Attorney are hereby authorized and directed to take all steps necessary to carry out the purpose and intent of this Ordinance.

PASSED AND ADOPTED by the Mayor and City Council of the City of Buckeye, Arizona, this 6th day of April, 2021.



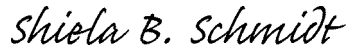
Eric W. Orsborn, Mayor

ATTEST:



Lucinda J. Aja, City Clerk

APPROVED AS TO FORM:



Shiela B. Schmidt, City Attorney

Chapter 16 SEWER UTILITIES AND USE OF PUBLIC SEWERS¹

Article:

PURPOSE AND POLICY

This chapter sets forth uniform requirements for users of the publicly owned treatment works for the City of Buckeye and enables the city to comply with all applicable state and federal laws, including Arizona Pretreatment Regulations established in accordance with A.R.S. § 49-255.02, Arizona Administrative Code Chapter 18, Article 9, the Clean Water Act (33 United States Code [U.S.C.] Section 1251 et seq.) and the general pretreatment regulations for existing and new sources of pollution (Title 40 of the Code of Federal Regulations [CFR] Part 403). The objectives are:

- A. To prevent the introduction of pollutants into the publicly owned treatment works that will interfere with its operation;
- B. To prevent the introduction of pollutants into the publicly owned treatment works that will pass through the publicly owned treatment works, inadequately treated, into receiving waters, or otherwise be incompatible with the publicly owned treatment works;
- C. To protect both publicly owned treatment works personnel who may be affected by wastewater and sludge in the course of their employment and the general public;
- D. To promote reuse and recycling of industrial wastewater and sludge from the publicly owned treatment works;
- E. To provide for fees for the equitable distribution of the cost of operation, maintenance, and improvement of the publicly owned treatment works; and
- F. To enable the city to comply with its national pollutant discharge elimination system permit conditions, sludge use and disposal requirements, and any other federal or state laws to which the publicly owned treatment works is subject.

This chapter shall apply to all users of the publicly owned treatment works. The chapter authorizes the issuance of individual wastewater discharge permits or general permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires user reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established herein.

¹Editor's note(s)—Ord. No. 07-21 Editor's note(s)—, § 3, adopted April 6, 2021, repealed ch. 16Editor's note(s)—, §§ 16-1-1Editor's note(s)—, 16-2-1Editor's note(s)—16-2-3, 16-3-1Editor's note(s)—, 16-3-2Editor's note(s)—, 16-4-1Editor's note(s)—, 16-5-1Editor's note(s)—16-5-10, 16-6-1—16-6-9, 16-7-1Editor's note(s)—16-7-9, 16-8-1—16-8-6, 16-9-1Editor's note(s)—16-9-3, 16-10-1Editor's note(s)—, 16-10-2Editor's note(s)—, and 16-11-1Editor's note(s)—, and enacted a new ch. 16Editor's note(s)—, §§ 16-1-1Editor's note(s)—, 16-1-2Editor's note(s)—, 16-2-1Editor's note(s)—16-2-3, 16-3-1Editor's note(s)—, 16-3-2Editor's note(s)—, 16-4-1Editor's note(s)—, 16-5-1Editor's note(s)—16-5-10, 16-7-1Editor's note(s)—16-7-9, 16-9-1Editor's note(s)—16-9-5, 16-10-1Editor's note(s)—16-10-3, 16-11-1Editor's note(s)—16-11-8, 16-12-1Editor's note(s)—16-12-7, 16-13-1Editor's note(s)—16-13-14, 16-14-1Editor's note(s)—, 16-14-2Editor's note(s)—, 16-15-1Editor's note(s)—, 16-16-1Editor's note(s)—, 16-17-1Editor's note(s)—16-17-7, 16-18-1Editor's note(s)—16-18-4, 16-19-1Editor's note(s)—, 16-19-2Editor's note(s)—, 16-20-1Editor's note(s)—16-20-3, and 16-21-1Editor's note(s)—16-21-3. The former chapter pertained to similar subject matter and derived from Ord. No. 37-11, § 2, adopted Dec. 6, 2011.

Article 16-1
ADMINISTRATION

Sections:

Section 16-1-1 Authority of Director of Water Resources

Except as otherwise provided herein, the director of the water resources department (the "director") shall administer, implement, and enforce the provisions of this chapter. Any powers granted to or duties imposed upon director may be delegated by the director to a duly authorized city employee.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-1-2 Sewer Service

All sewer service provided by the city is subject to the provisions of this chapter and each user accepting sewer service shall be considered as having expressly consented to be bound thereby.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-2
APPLICATION FOR SERVICE

Sections:

Section 16-2-1 Application for Service; Charges and Fees

In advance of receiving any utility service provided by the city, a formal application shall be made a minimum of three days in advance of the requested service date by the property owner, his agent, or the occupant of the property to a representative of the water resources department, utility billing division, on a form provided by the city. Proof of purchase date or a copy of the lease agreement may be required. As a term and condition of providing service, the city may require that outstanding amounts owed by the requesting customer for service to a previous location be paid. If a service is activated with an outstanding indebtedness owed by the requesting customer to the city, the account will be considered delinquent and subject to the disconnection of services in accordance with the provisions of this chapter. The city may reject any application for sewer service for any good and sufficient reason, including, but not limited to, the failure to meet any condition of rendering service specified in Section 16-2-3 (Conditions of Receipt of Sewer Service).

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-2-2 Deposit Required

The city may require deposits of any customer for any service provided by the city before such service is provided. The total amount of the deposit shall be determined by taking into consideration the anticipated amounts which will be billed for services provided, the past payment record, if any, of the customer, and any other information the city may deem necessary in order to provide an adequate deposit. The deposit will not be less than the amount established by resolution of the council. Deposits shall be noninterest bearing and shall be

refunded to the consumer upon discontinuance of service, provided that outstanding charges may be deducted from said deposit before the refund is made. In addition, customers may request that their deposits be refunded when their utility bill has been paid in full by the due date for 12 consecutive billing periods. Refunds will be applied to the account on the next billing.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-2-3 Conditions of Receipt of Sewer Service

- A. No utility service shall be initiated, continued or reestablished unless all of the following are met:
1. The city offers and determines it is capable of providing the utility service under an established rate.
 2. Providing the utility service would not involve excessive cost to the city.
 3. Providing the utility service would not adversely affect the service to existing customers.
 4. The customer has executed a service agreement for the utility service in a form provided by the city.
 5. All deposits, fees and other charges applicable to the utility service have been paid.
 6. All bills rendered for utility service provided to the customer and any required deposits have been paid.
 7. All extensions to the city's system necessary to provide service to the customer have been constructed and accepted by the city, without cost to the city.
 8. All improvements at the service location necessary to enable the city to provide the utility service have been completed, without cost to the city.
 9. Adequate easements and rights-of-way, satisfactory to the city, have been granted to the city to ensure the city can provide proper utility service to the service location.
 10. The dwelling or residence, if intended for human habitation, is equipped with a water closet in good working order, properly connected to a sanitary sewer or where such sanitary sewer is not available, connected to a sanitary cesspool that is in good working order and that is in compliance with state, local and city requirements.
 11. The customer and the service location are in compliance with all provisions of this Code and all rules, regulations and procedures adopted thereunder.
 12. If a customer with more than one account seeks to open a new account, the customer must be current on all its existing utility accounts before service can be initiated for the new account.
- B. The initiation, continuation or reestablishment of utility service shall not constitute a determination by the city that the conditions for service set forth in subsection A of this section have been met; nor does it preclude the city from pursuing any remedy available to the city arising from the consumer's failure to satisfy the condition including, but not limited to, termination of utility service with or without notice, pursuant to Article 16-3, Section 16-3-2B, and Article 16-7, Section 16-7-7B.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-3 ***DISCONTINUANCE OF SERVICE***

Sections:

Section 16-3-1 Notice Required by Customer to Discontinue Service

Any person who desires to discontinue utility services shall make a formal written request to the utility billing department at least three working days in advance of the requested termination of service. Until a request to discontinue service is received, such premises shall be deemed occupied by such consumer and the consumer's liability for services provided to the property will continue.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-3-2 Discontinuance of Service by City under Certain Conditions

- A. The city may discontinue utility service under any of the following conditions:
1. To prevent fraud or abuse.
 2. Noncompliance with the provisions of this chapter.
 3. Emergency repairs.
 4. Direction of public authorities.
 5. Local emergency requiring emergency measures.
 6. Non-payment of any monies due to the city for any services, fees, fines, or assessments billed to the customer.
 7. Failure to correct an unauthorized discharge as required by the water resources department.
- B. Before discontinuing utility service as provided herein the water resources department shall give written notice to the user of the discontinuance of utility service and an opportunity to appear before the director or designee on any disputed matter relative to the discontinuance of utility service. The director's decision shall be final. Upon notice of the director's final determination of a fee or charge owing or order to correct an unauthorized discharge, payment shall be due to the city within ten days of the date of the notice or discontinue the unauthorized discharge as ordered by the water resources department. If payment is not made within ten days of the date of the notice, the payment shall be considered delinquent and subject to collection, discontinuance of service, or other remedies as provided by law or this chapter. In the event the unauthorized discharge is not corrected as ordered, it is hereby declared to be, and is a public nuisance which may be abated by order of a court of competent jurisdiction and its continued operation is unlawful. The foregoing remedy shall be in addition to any other remedy authorized by this chapter. This section shall not prohibit the water resources department from discontinuing utility service if deemed immediately necessary to protect public health and safety.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-4 ***DEFINITIONS***

Sections:

Section 16-4-1 Definitions

In this chapter unless the context otherwise requires:

"Act" or "Clean Water Act" means the Federal Water Pollution Control Act as amended, 33 U.S.C. 1251, et.seq.

"Approved laboratory procedures" means the measurements, tests, and analyses in accordance with analytical procedures as established in Title 40, CFR, part 136 that are performed by an environmental laboratory licensed by the state pursuant to A.R.S. tit. 36, ch. 43 (A.R.S. § 36-495 et seq.). Alternative procedures may be approved by the water resources department in accordance with applicable federal regulations.

"Authorized or duly authorized representative of the user."

1. If the user is a corporation:
 - a. The president, secretary, treasurer, or a vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
 - b. The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for individual wastewater discharge permit or general permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. If the user is a partnership or sole proprietorship: a general partner or proprietor, respectively.
3. If the user is a federal, state, or local governmental facility: a director or highest official appointed or designated to oversee the operation and performance of the activities of the government facility, or their designee.

The individuals described in paragraphs 1 through 3, above, may designate a duly authorized representative if the authorization is in writing, the authorization specifies the individual or position responsible for the overall operation of the facility from which the discharge originates or having overall responsibility for environmental matters for the company, and the written authorization is submitted to the city.

"Best management practices" or "BMPs" means the schedules of activities, pollution treatment practices or devices, prohibition of practices, general good housekeeping practices, pollution prevention, waste minimization, educational practices, maintenance procedures, and other management practices or devices to prevent or reduce the amount of pollutants entering the sanitary sewer system, surface water, air, land or groundwater. BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

"BOD (biochemical oxygen demand)" means the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory conditions for five days at 20 degrees Celsius, expressed in milligrams per liter.

"Building connection" means the extension from a sewer tap to the property line, or to the easement line of the property to be served.

"Building sewer" means the extension from the building drain to the building connection or other place of disposal.

"Categorical standard (national federal categorical pretreatment)" means pretreatment standards specifying quantities or concentrations of pollutant or pollutant properties which may be discharged to a POTW by industrial users in specific industrial categories and which are published in 40 CFR (parts 405-471).

"CFR" means the Code of Federal Regulations.

"COD (chemical oxygen demand)" means the quantity of oxygen consumed by the chemical oxidation of inorganic and organic matter present in the water or wastewater, expressed in milligrams per liter.

"Combined sewer" means a sewer receiving both surface runoff (stormwater) and sewage.

"Control authority" means the city.

"Cooling water" means the clean wastewater discharged from any heat transfer system such as condensation, air conditioning, cooling or refrigeration.

"Composite sample" means:

1. A combination of individual samples obtained at regular intervals over a specified time period. The volume of each individual sample shall be either proportional to the flow rate during the sample period (flow-proportional composite) or constant and collected at equal time intervals during the composite period (time-proportional composite) as defined in the permit. Aliquots may be collected manually or automatically. Each sample aliquots must be at least 100 milliliters in volume unless collected using automatic self-purging sampling equipment.
2. For volatile pollutants required to be combined for analysis, aliquots must be combined in the laboratory immediately before analysis. The volatile composite samples must be collected by flow proportional means; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.
3. If one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

"Daily discharge" is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

"Daily maximum limit or limitation" means the maximum allowable concentration in the discharge as measured in a representative sample during a sampling day. In determining compliance with the daily average effluent limitation, city samples shall not be combined with non-city samples.

"Developer" means any person engaged in the organizing and financing of a wastewater collecting system within an area contributing to a branch, main, or trunk sewer of the city sewer system. Such may be either a subdivider or a legally constituted improvement district.

"Discharge" means the disposal of any sewage, pollutant(s), water or any liquid from any sewer user into the sewage system.

"Domestic waste" means a typical, residential-type waste which requires no pretreatment under the provisions of this chapter before discharging into the sanitary sewer system, excluding all commercial, manufacturing, and industrial waste.

"EPA" means the United States Environmental Protection Agency or, where appropriate, the regional water management division director, the regional administrator, or other duly authorized official of said agency.

"Existing source" means any source of discharge that is not a "new source."

"Grab sample" means an individual sample of at least 100 milliliters collected over a period not exceeding 15 minutes that is representative of conditions at the time the sample is collected.

"Indirect discharge" means the introduction or pollutants into the POTW from any nondomestic source.

"Industrial user" or "user" means a source of indirect discharge.

"Industrial user permit" (or "permit") means the permit granted by the city which each industrial user must first obtain prior to causing or allowing any industrial discharge to the POTW.

"Industrial waste" means any liquid, free-flowing waste, including cooling water, resulting from any industrial or manufacturing process or from the development, recovery or processing of natural sources, with or without suspended solids excluding uncontaminated water.

"Inflow" means water other than wastewater that enters a sewage system (including sewer service connections) from sources such as roof leaders, cellar drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, stormwaters, surface runoff, street wash waters or drainage.

"Instantaneous limit" means the maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.

"Interference" means a discharge which, alone or in conjunction with a discharge or discharges from other sources either:

1. Inhibits or disrupts the POTW, its treatment processes, or operations, or its sludge processes, use or disposal; or
2. Is a cause of a violation of any requirement of any environmentally related permit issued by a government entity (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA), and state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

"Local limit" means the specific discharge limits developed and enforced by the city upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR 403.5(a)(1) and (b).

"Maintenance" means keeping the sewage works in a state of repair, including expenditures necessary to maintain the capacity for which said works were designed and constructed.

"Medical wastes" means isolation wastes, infectious agents, human blood and blood products, pathological wastes, sharps, body parts, contaminated bedding, surgical wastes, potentially contaminated laboratory wastes, and dialysis wastes.

"National pretreatment standard" means any regulation containing pollutant discharge limits promulgated by EPA in accordance with Section 307(b) and (c) of the Clean Water Act (33 United States Code Section 1317, et seq.) which applies to industrial users. This term includes prohibitive discharge limits established pursuant to 40 Code of Federal Regulations Part 403.

"New source" means:

1. Any building, structure, facility, or installation from which there is (or may be) a discharge of pollutants, the construction of which commenced after the publication of proposed pretreatment standards under

Section 307(c) of the Clean Water Act that will be applicable to such source if such standards are thereafter promulgated in accordance with that section, provided that:

- a. The building, structure, facility, or installation is constructed at a site at which no other source is located; or
 - b. The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
 - c. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source, should be considered.
2. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of subsection (1)(b) or (c) above but otherwise alters, replaces, or adds to existing process or production equipment.
 3. Construction of a new source as defined under this paragraph has commenced if the owner or operator has:
 - a. Begun, or caused to begin, as part of a continuous onsite construction program;
 - b. Any placement, assembly, or installation of facilities or equipment;
 - c. Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or
 - d. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

"Noncontact cooling water" means water used for cooling that does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

"NPDES permit" means a national pollution discharge elimination system permit, issued to the city by the EPA, or an Arizona Pollutant Discharge Elimination System Permit (AZPDES), issued to the city by the State of Arizona, which imposes standards governing the quality of the treated effluent discharged from the POTW.

"Pass through" means a discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW NPDES permit (including an increase in the magnitude or duration of a violation) or which causes or contributes to a violation of an applicable numeric or narrative water quality standard.

"pH" means the inverse log of the hydronium ion concentration of a solution.

"Person" means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity, or any other legal entity; or their legal representatives, agents, or assigns. This definition includes all federal, state, and local governmental entities.

"Pollutant" means any dredged soil, solid waste, incinerator residue, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discharged equipment, rock, sand, cellar dirt,

and industrial, municipal and agricultural wastes. This includes any substance and effluent limitation identified in Chapter 16 of the city Code.

"Pretreatment" means the physical, chemical, biological, or other treatment of any industrial discharge prior to discharge to the POTW, for the purpose of:

1. Reducing the concentration of any pollutant; or
2. Eliminating the discharge of any pollutant; or
3. Altering the nature of any pollutant characteristic to a less harmful state.

"Pretreatment requirements" means all of the duties or responsibilities imposed upon POTW users by this chapter.

"Pretreatment standards" or "standards" means prohibited discharge standards, categorical pretreatment standards, and local limits.

"Prohibited discharge standards" or "prohibited discharges" means the absolute prohibitions against the discharge of certain substances; these prohibitions appear in Section 16-9-1 of this chapter.

"Public sewer" means a branch, main, or trunk sewer controlled and maintained by the city and to which storm, surface, and groundwaters are not intentionally admitted.

"POTW" means the publicly owned treatment works and connecting sewer collection system which are owned and/or operated, in whole or in part, by the city and which provide the city with wastewater collection and disposal services.

"Replacement" means those expenditures made for obtaining and installing equipment, accessories and/or appurtenances during the useful life of the treatment works which are necessary to maintain the capacity and performance of the treatment works for which they were designed and constructed.

"Septic tank waste" means any sewage from holding tanks such as vessels, chemical toilets, campers, trailers, and septic tanks.

"Sewage" means a combination of the water carried wastes from residences, business buildings, institutions and industrial establishments together with such ground, surface and stormwaters as may be present.

"Sewer connection" means the connection to the public sewer and the extension therefrom of the sewer to the property line at the alley or the curb line of the street, whichever is applicable, depending on the location of the public sewer.

"Sewer connection fee" means the initial sewer connection charge as set forth in Sections 16-5-7 and 16-5-10 of this chapter and shall apply to all sewer connections to the public sewer.

"Significant industrial user (SIU)," except as provided in paragraphs (3) and (4) of this definition, means:

1. An industrial user subject to categorical pretreatment standards; or
2. An industrial user that:
 - a. Discharges an average of 25,000 gallons per day ("gpd") or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater);
 - b. Contributes a process wastestream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or
 - c. Is designated as such by the director on the basis that it has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

-
3. The city may determine that an industrial user subject to categorical pretreatment standards is a non-significant categorical industrial user (NSCIU) rather than a significant industrial user on a finding that the industrial user never discharges more than 100 gallons per day (gpd) of total categorical wastewater (excluding sanitary, non-contact cooling and boiler blowdown wastewater, unless specifically included in the pretreatment standard) and the following conditions are met:
 - a. The industrial user, prior to city's finding, has consistently complied with all applicable categorical pretreatment standards and requirements;
 - b. The industrial user annually submits the certification statement required in Section 16-13-14B [see 40 CFR 403.12(q)], together with any additional information necessary to support the certification statement; and
 - c. The industrial user never discharges any untreated concentrated wastewater.
 4. Upon a finding that a user meeting the criteria in subsection (2) of this part has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the city may at any time, on its own initiative or in response to a petition received from an industrial user, and in accordance with procedures in 40 CFR 403.8(f)(6), determine that such user should not be considered a significant industrial user.

"Slug discharge" or "slug load" means any discharge of a non-routine, episodic nature, including, but not limited to, an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause interference or pass through, or in any other way violate the POTW's regulations, local limits or permit conditions.

"Standard industrial classification (S.I.C.)" means a coded classification of industries based upon economic activity developed by the U.S. Department of Commerce as published in the Standard Industrial Classification Manual, 1972.

"Storm water" or "stormwater" means rainwater, snow melt, and surface drainage.

"Suspended solids" or "total suspended solids" means solids measured in milligrams per liter that either float on the surface of, or are in suspension in water, wastewater or other liquids and which are removable by a laboratory filtering device.

"Total organic carbon (TOC)" means the total of all organic compounds expressed in milligrams per liter as determined by the combustion-infrared method prescribed by approved laboratory procedures.

"Wastewater" means the liquid and water-carried industrial wastes and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, which are contributed to the POTW.

"Water resources department" means those officers and agents of the city supervising sewer operations for the city.

"Zero process discharge user" means those users that have no discharge of process wastewaters, but may have the potential to discharge a process wastewater or has significant quantities of hazardous materials or high strength waste which, if discharged, would be regulated by this chapter. Such facilities may be regulated by requiring them to have zero discharge of process wastes, thus allowing only domestic wastes to be discharged.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-5

DEPARTMENT AND CONSUMER RESPONSIBILITIES

Sections:

Section 16-5-1 City Not Responsible for User's Building Sewer, Piping, or Defects

The city shall not be responsible for the installation, maintenance, repair or inspection of the user's building sewer, piping or apparatus, or for any defects therein, located on the user's side of the point of delivery.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-2 Consumer Responsibility for Sewer Service Connections

- A. Building sewer connections on the user's premises shall be so arranged as to provide service to one lot. If additional service is required, it will be considered as a separate and individual account.
- B. The user's building sewer line, sewer connection and apparatus shall be installed and maintained by the user, at the user's expense, in a safe and efficient manner and in accordance with city requirements and in full compliance with the applicable state law and county regulations.
- C. The user shall safeguard the public infrastructure placed on the user's premises and shall permit access to it by the authorized representatives of the water resources department.
- D. In the event that any loss or damage to public infrastructure on user's premises or any accident or injury to persons or property is caused by or results from the negligence or wrongful act of the user, his agents or employees, the cost of necessary repairs or replacements and damages shall be paid by the user to the city and any liability otherwise resulting shall be the responsibility of the user. The user agrees to indemnify the city, its mayor, council members, agents, and employees for, from, and against any claims, costs, and any loss or liability in connection with the requirements of this Section 16-5-2(D). The amount of such loss or damage or the cost of repairs may be added to the user's bill, and, if not paid, service may be discontinued as set forth in this chapter.
- E. Persons who lease, rent or otherwise permit the occupancy of their real property within the city or which are eligible to receive utility service from the city shall notify the city if the property is not to be provided utility service by the city. Property owners who fail to notify the city shall be jointly and severally liable for any utility service requested or received by the tenant, lessee or other occupant of their property and authorizes the city to enforce liens against their real property.
- F. When service to a user shall require installation of sewer lines or other public improvements on, under, across or over the user's property, the user will grant to the city, at no cost to the city, an easement, right-of-way or license for such installation.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-3 Unsanitary Disposal of Excrement Prohibited

It is unlawful for any person to deposit or permit to be deposited in an unsanitary manner upon public or private property within the city, or in any area under the jurisdiction of the city, any human or animal excrement or other objectionable waste.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-4 Private Sewage Systems

- A. Treatment of Polluted Wastes Required. It shall be unlawful in any area under the jurisdiction of the city, to release or maintain any sewage, industrial wastes, or other polluted waters, except where suitable treatment has been provided, in accordance with provisions of this chapter and applicable state and federal laws.
- B. Private Sewage System Overflow. The owner of any property within the city that has a private sewage system on such property and that accepts water service from the city, by acceptance of such service, authorizes the city to remediate any release or overflow of its private sewage system. The cost incurred by the city to remediate such overflow or release will be billed to the owner of the property and shall be paid by such owner in addition to all other penalties and costs provided in this chapter.
- C. Compliance with Article. Except as provided in this article, it is unlawful to construct or maintain within the city any privy, privy vault, septic tank, cesspool or other facility intended or used for the disposal of sewage, without the written permission of the water resources director.
- D. When Permitted; Sanitation. Where a public sanitary or combined sewer is not available within the city or in any area under the jurisdiction of the city, the building sewer shall be connected to a private sewage disposal system, which complies with the regulations of the Arizona Department of Health Services. Such private sewage disposal system shall be constructed, maintained and operated at all times in a sanitary manner and in compliance with all applicable laws and regulations.
- E. Discontinuance. Within 90 days after a public sewer becomes available within 300 feet of any property served by a private sewage disposal system, a direct connection shall be made to the public sewer in accordance with the provisions of this chapter, and any septic tanks, cesspools and similar private sewage facilities shall be abandoned and filled with suitable material in accordance with all applicable laws and regulations.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-5 Tampering with Equipment Prohibited

It is unlawful for any person to break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment that is a part of the POTW.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-6 Authorization Required

It is unlawful for any unauthorized personnel to uncover, make any connections with or opening into, use, alter or disturb any POTW without first obtaining written authorization from the water resources department.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-7 Application

Upon issuance of a required written authorization to any person, each and every written authorization issued shall be presented by the person to the water resources department and application made for the building connection. No sewer connection to the city POTW shall be made by any person or the city except upon written application furnished to the city by the owner of the premises to which sanitary sewer service is to be furnished or his authorized agent. An initial sewer connection fee shall be required in addition to a monthly charge for such sanitary sewer connection according to the rates fixed by the city until the service is discontinued by order of the

(Supp. No. 17, Update 2)

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water resources department or written order of the owner or his authorized agent. A charge shall be made for re-application of service to an existing connection. Any sewer connection fee is nonrefundable.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-8 Inspection and Approval by Water Resources Department or Building Inspector

No building sewer will be connected to the POTW until it has been inspected and approved by the water resources department or building inspector.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-9 Records to be kept by Water Resources Department

The water resources department will keep a record of all building and sewer connections made and the purpose for which they are to be used, together with the name of the owner of the property, his agent or representative.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-5-10 Fees

The fee for each building sewer connection for all users shall be set by resolution of the city council in accordance with the provisions of A.R.S. § 9-511.01. Classes may be established for different users, and different fees established for each class.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-7 ***SEWER SERVICE CHARGES***

Sections:

Section 16-7-1 User Charge Formula

A. The following formulas shall be used to develop the various elements of the user charge portion of the sewer service charge:

1. A treatment plant charge (T) will be made to all customers on the basis of flow and strength of sewage discharged. It shall be calculated as follows:

Flow Rate = Total Flow Costs/Total Gallons of Flow Treated

B.O.D. Rate = Total B.O.D. Costs/Total Pounds of B.O.D. Treated

Suspended Solids Rate = Total SS Costs/Total Pounds of SS Treated

Any other pollutant which causes an increase in the cost of treatment will be assessed in a similar fashion.

Other Pollutant Rate = Total Cost to Treat Other Pollutant/Total Pounds of Other Pollutant

$T = \text{user Gallons} \times \text{Flow Rate} + \text{user B.O.D.} \times \text{B.O.D. Rate} + \text{user SS} \times \text{SS Rate} + \text{user Other Pollutant} \times \text{Other Pollutant Rate}.$

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-2 Determination of Wastewater Quantity

- A. All users for which the water supply is from the city will be billed on the basis of the actual metered water use and/or a fixed rate as determined by the city.
- B. All users for which the water supply is from other suppliers of water may furnish to the water resources department either a certified meter reading of water delivered or a copy of the billings from the water supplier. The water resources department shall have the exclusive authority to determine the adequacy of this information and request additional documentation or tests if it finds the information supplied inadequate. If the water resources department finds the information adequate, the user's charges will be calculated and the same conditions will apply as if the city were the supplier of water to the user. If the information furnished is inadequate, or if such information is unavailable, the user charge will be calculated from the average monthly user charge for the last three months for that class and/or a fixed rate as determined by the city.
- C. The director shall have the authority to investigate and evaluate user complaints and appeals from billing decisions and may correct such billing to reflect what is, in the opinion of the director based on the records, the correct billing in the event a meter has been misread or some other billing error has occurred. The decision of the director shall be final.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-3 Determination of Wastewater Quality

- A. The water resources department shall have the authority to require whatever tests are necessary to carry out a planned sampling program and to require whatever analyses are needed for all commercial and industrial users including, but not limited to BOD, COD, and/or TOC tests. Wastewater characteristics shall be determined by the department on the basis of monitored wastewater discharged, a certified statement from the user, and/or on the best available data as to the characteristics of such discharges.
- B. Any change in the ongoing process(es) employed by a user contributing industrial wastewater which results in a variation of more than 25 percent in one or more of the effluent loading concentrations shall be reported to the department within 30 days of said change.
- C. If it is determined through testing that a significant variation exists between the user's certified data and the discharge characteristics monitored by the department, the city may adjust the sewer use charge based on the monitored data from the original date of certification, unless written notice has been provided to the water resources department advising of the changes in loading and giving specific dates of changes. Any changes require approval of the department in accordance with the provisions of this chapter.
- D. Designated Discharge. Where sampling and gauging of a specific user is not practical for physical, economic, safety or other reasons, the water resources department may designate values for concentrations of the wastes discharged into the sewage system for all users in the same standard industrial classification.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-4 Other User Charge Provisions

- A. Biennial Review. The water resources department will review, not less frequently than every two years, the wastewater contribution of users and user classes, the total costs of operation and maintenance of the POTW, and its approved user charge system. The water resources department shall at such time recommend a revision in the sewer service charge and user classes to accomplish the following:
 - 1. Maintain a reasonable proportionate distribution of operation and maintenance costs among users and user classes;
 - 2. Generate sufficient revenue to pay the total operation and maintenance costs necessary to the proper operation and maintenance (including replacement) of the treatment works; and
 - 3. Apply excess revenues collected from a class of users to the costs of operation and maintenance attributable to that class for the next year and adjust the rate accordingly.
- B. Notification of Users. Each user will be notified, at least annually, in conjunction with a regular bill, of the user charge rate and that portion of the total charges which are attributable to user charges.
- C. Inconsistent Agreements. The user charge system set forth in this chapter is applicable to all agreements or contracts between the city and users including industrial users, other municipalities or federal agencies or installations, and the terms of this chapter shall take precedence over any such agreements or contracts which are inconsistent with the requirements of this chapter.
- D. Records System. The water resources department shall maintain a financial management records system accurately accounting for operation and maintenance revenues and expenditures associated with the POTW. The accounting system shall segregate operation and maintenance revenue and expenditures from other wastewater revenue and expenditures to assure adequate revenue to properly operate, maintain, and replace the treatment works. All revenues collected for operation, maintenance, and replacement shall be deposited in a separate fund as outlined in Section 16-7-9 of this chapter.
- E. Wastewater Treatment By-Products. All revenue from the sale of treatment-related byproducts shall be used to offset the cost of operation and maintenance. User charges shall be proportionally reduced for all users. Total annual revenues received from the sale of a byproduct shall be credited to the treatment works operation and maintenance cost no later than the fiscal year immediately following their receipt.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-5 Other Sewer Service Charges

In addition to the user charges described herein, the rate schedules shall be sufficient to cover the following costs:

- A. A portion of the annual debt service costs for retirement of sewer bonds will be charged to all customers served directly by the city's POTW. The water resources department shall make recommendations to the city council at least once every two years as to how these costs shall be proportioned among the users. Charges to recover these costs will be called "other charges."
- B. Adequate reserve funds to allow for reasonably expected increases in the cost of providing services will be charged to all customers served directly by the city's POTW. The water resources department shall make recommendations to the city council as to the amount of reserve funds necessary and as to how these funds shall be proportioned among the users.
- C. The costs of billing and collection and performing industrial wastewater services shall be charged to customers on an equitable basis. The water resources department shall make recommendations to the

city council as to how these costs shall be proportioned among the users. Charges to recover these costs will be called billing and collection charges and industrial wastewater charges respectively.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-6 Sewer Service Charges

All utility service charges, fees, and rates imposed by the city pursuant to the provisions of this chapter shall be set by resolution of city council in accordance with the provisions of A.R.S. § 9-511.01.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-7 Payment of Bills and Charges

- A. All sewer user accounts shall be carried on the books of the water resources department by the street address. All notices sent out by the city regarding sewer user accounts, and all notices regarding any other matter pertaining to the use of the city POTW shall be sent to the street address of such property unless the owner of the property advises the city in writing of an alternative mailing address. To ensure proper delivery of notices, any change of address should be promptly reported, in writing, to the water resources department.
- B. All rates and service charges are due and payable when rendered. Payment must be made no later than the due date printed on the bill. If payment is not received by the due date, the next monthly billing will indicate the past due amount and the current amount due. The account is considered delinquent and subject to turnoff for nonpayment by the due date. No further notice by the city is required prior to discontinuation of service. A late fee on the previous amount due may be charged to the customer's account. Late fees will be established by resolution of city council from time to time. The turnoff fee and any reconnection fee shall be paid before restoring service, plus the total amount of the bill due. An account may also become delinquent and subject to disconnection for nonpayment of return check amounts and services charges. If a customer disputes the amount of the bill or protests a proposed termination of service as unjustified, the customer may present objections in writing to the director as provided in Section 16-3-2(B).
- C. A customer's water and/or sewer service may be disconnected for nonpayment of a bill for water and/or sewer service served by the city to the customer's previous location.
- D. Any expense incurred by the city for the repair or replacement of damaged, stolen, tampered with or misused sewer or water facilities shall be charged against and collected from the person or persons who caused the expense.
- E. All requests for discontinuing service must be made by the owner or authorized agent of the owner of the property or by the named applicant on a service account or his authorized agent. The customer requesting discontinuance of service must also furnish the city with a forwarding address.
- F. Until a written request to discontinue service is received, such premises shall be deemed occupied by such customer and customer's liability continued.
- G. In the event that such customer shall have paid a deposit to the city, and said deposit is still being retained by the city, the balance of the deposit amount paid will be refunded, after deducting from the deposit the amount owing on any water and sewer account.
- H. When a user or former user of the sewer and/or water system has been notified of the amount of charges remaining due on the account and payment for same has not been received, the city may assign the account for collection.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-8 Liens for Nonpayment

- A. Whenever a property owner has entered into an agreement with the city for sewer utility service to his property, the property owner consents to a lien against the property for the amount of unpaid utility bills, together with late payment, penalty, interest and collection costs until the bill is paid in full.
- B. Whenever a utility bill for sewer utility service remains unpaid for 90 days after the due date, the city may file a lien on the property for nonpayment of the sewer utility fees pursuant to and in accordance with the provisions of A.R.S. § 9-511.02, as amended.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-7-9 Distribution of Sewage System Revenues and Utilization of Funds

- A. Funds shall be established for the proper distribution of sewer revenues. They shall include, but not be limited to, the following:
 - 1. Sewage system operations and maintenance;
 - 2. Sewage system replacement;
 - 3. Sewage system betterments and improvements;
 - 4. Sewage system debt service;
 - 5. Sewage system construction and expansion.
- B. The distribution of sewer charges shall be as follows:
 - 1. Sewer use charge revenues shall be allocated as follows:
 - a. To the sewage system operations and maintenance fund or account.
 - b. To the sewage system replacement fund or account.
 - c. To the sewage system reserve fund or account.
 - 2. Sewage system capacity charge revenues shall be allocated as follows:
 - a. That portion of the charge levied to service the debt of sanitary sewer bonds or long-term construction contracts shall be allocated to the sewage system debt service fund or account.
 - b. The remainder of the charge shall be allocated to the sewage system construction and expansion fund or account.
- C. The utilization of the fund or accounts shall be as follows:
 - 1. Sewage system operation and maintenance fund or account shall be utilized for personal services, operational expenses associated with the provision of sewage system services.
 - 2. Sewage system replacement fund or account shall be utilized for equipment replacement expenses associated with the provision of sewage system services.
 - 3. Sewage system reserve fund or account shall be utilized for emergency expenditures, betterments, and improvements. Reserve funds can be transferred by council action to the construction and expansion fund or account.

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(Supp. No. 17, Update 2)

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4. Sewage system debt service fund or account shall be utilized in servicing the debt retirement of sanitary bonds or long-term construction contracts.
 5. Sewage system construction or expansion fund or account shall be utilized for the construction or expansion costs associated with the sewer system and the sewage treatment facilities.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-9

GENERAL SEWER USE REQUIREMENTS

Sections:

Section 16-9-1 Prohibited Discharge Standards

- A. General Prohibitions. No user shall introduce or cause to be introduced into the POTW any pollutant or wastewater which causes pass through or interference. These general prohibitions apply to all users of the POTW whether or not they are subject to categorical pretreatment standards or any other national, state, or local pretreatment standards or pretreatment requirements.
- B. Specific Prohibitions. No user shall introduce or cause to be introduced into the POTW the following pollutants, substances, or wastewater:
 1. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed-cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21, or pollutants which cause an exceedance of ten percent of the lower explosive limit (LEL) at any point within the POTW for any single reading or more than five percent for any two consecutive readings;
 2. Wastewater having a pH less than 5.0 or more than 10.5, or otherwise causing corrosive structural damage to the POTW or equipment;
 3. Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in interference but in no case solids greater than one-quarter inch in any dimension;
 4. Pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW;
 5. Wastewater having a temperature greater than 150 degrees F (66 degrees C), or which will inhibit biological activity in the treatment plant resulting in interference, but in no case wastewater which causes the temperature at the introduction into the treatment plant to exceed 104 degrees F (40 degrees C);
 6. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
 7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
 8. Trucked or hauled pollutants;
 9. Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;

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(Supp. No. 17, Update 2)

10. Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the city's NPDES permit;
11. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations;
12. Storm water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the director;
13. Sludges, screenings, or other residues from the pretreatment of industrial wastes;
14. Medical wastes, except as specifically authorized by the director in an individual wastewater discharge permit or a general permit;
15. Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;
16. Detergents, surface-active agents, or other substances which might cause excessive foaming in the POTW;
17. Fats, oils, or greases of animal or vegetable in amounts that will cause interference or pass through;
18. Any water or waste which contains any contaminant at a concentration in excess of the limits set below, as measured in a grab sample or composite sample, in units of milligrams per liter (mg/L):

Substance	Limitation mg/L
Benzene	0.035
Chloroform	0.420
Ethylbenzene	0.200
Toluene	0.200
Xylenes	0.200
Polyaromatic hydrocarbons	0.050
Phenols	1.000

19. Any of the following prohibited substances:
 - a. 4,4'—DDE
 - b. 4,4'—DDT
 - c. Aldrin
 - d. BHC-alpha
 - e. BHC-beta
 - f. BHC-gamma (Lindane)
 - g. Chlorinated phenols

Pollutants, substances, or wastewater prohibited by this section shall not be processed or stored in such a manner that they could be discharged to the POTW.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-9-2 National Categorical Pretreatment Standards

Users must comply with the categorical pretreatment standards found at 40 CFR Chapter I, Subchapter N, Parts 405-471.

- A. Where a categorical pretreatment standard is expressed only in terms of either the mass or the concentration of a pollutant in wastewater, the director may impose equivalent concentration or mass limits in accordance with Section 16-9-2E and 16-9-2F.
- B. When the limits in a categorical pretreatment standard are expressed only in terms of mass of pollutant per unit of production, the director may convert the limits to equivalent limitations expressed either as mass of pollutant discharged per day or effluent concentration for purposes of calculating effluent limitations applicable to individual industrial users.
- C. When wastewater subject to a categorical pretreatment standard is mixed with wastewater not regulated by the same standard, the director shall impose an alternate limit in accordance with 40 CFR 403.6(e).
- D. When a categorical pretreatment standard is expressed only in terms of pollutant concentrations, an industrial user may request that the city convert the limits to equivalent mass limits. The determination to convert concentration limits to mass limits is within the discretion of the director. The city may establish equivalent mass limits only if the industrial user meets all the conditions set forth in Sections 16-9-2D(1)(a) through 16-9-2D(1)(e) below.
 1. To be eligible for equivalent mass limits, the industrial user must:
 - a. Employ, or demonstrate that it will employ, water conservation methods and technologies that substantially reduce water use during the term of its individual wastewater discharge permit;
 - b. Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical pretreatment standard, and not have used dilution as a substitute for treatment;
 - c. Provide sufficient information to establish the facility's actual average daily flow rate for all wastestreams, based on data from a continuous effluent flow monitoring device, as well as the facility's long-term average production rate. Both the actual average daily flow rate and the long-term average production rate must be representative of current operating conditions;
 - d. Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the discharge; and
 - e. Have consistently complied with all applicable categorical pretreatment standards during the period prior to the industrial user's request for equivalent mass limits.
 2. An industrial user subject to equivalent mass limits must:
 - a. Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits;
 - b. Continue to record the facility's flow rates through the use of a continuous effluent flow monitoring device;
 - c. Continue to record the facility's production rates and notify the director whenever production rates are expected to vary by more than 20 percent from its baseline production rates determined in paragraph 16-9-2D(1)(c) of this section. Upon notification

of a revised production rate, the director will reassess the equivalent mass limit and revise the limit as necessary to reflect changed conditions at the facility; and

- d. Continue to employ the same or comparable water conservation methods and technologies as those implemented pursuant to paragraph 16-9-2D(1)(a) of this section so long as it discharges under an equivalent mass limit.
3. When developing equivalent mass limits, the director:
- a. Will calculate the equivalent mass limit by multiplying the actual average daily flow rate of the regulated process(es) of the industrial user by the concentration-based daily maximum and monthly average standard for the applicable categorical pretreatment standard and the appropriate unit conversion factor;
 - b. Upon notification of a revised production rate, will reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility; and
 - c. May retain the same equivalent mass limit in subsequent individual wastewater discharger permit terms if the industrial user's actual average daily flow rate was reduced solely as a result of the implementation of water conservation methods and technologies, and the actual average daily flow rates used in the original calculation of the equivalent mass limit were not based on the use of dilution as a substitute for treatment pursuant to Section 16-9-5. The industrial user must also be in compliance with Section 16-20-3 regarding the prohibition of bypass.
- E. The director may convert the mass limits of the categorical pretreatment standards of 40 CFR Parts 414, 419, and 455 to concentration limits for purposes of calculating limitations applicable to individual industrial users. The conversion is at the discretion of the director.
- F. Once included in its permit, the industrial user must comply with the equivalent limitations developed in this Section 16-9-2 in lieu of the promulgated categorical standards from which the equivalent limitations were derived.
- G. Many categorical pretreatment standards specify one limit for calculating maximum daily discharge limitations and a second limit for calculating maximum monthly average, or four-day average, limitations. Where such standards are being applied, the same production or flow figure shall be used in calculating both the average and the maximum equivalent limitation.

Any industrial user operating under a permit incorporating equivalent mass or concentration limits calculated from a production-based standard shall notify the director within two business days after the user has a reasonable basis to know that the production level will significantly change within the next calendar month. Any user not notifying the director of such anticipated change will be required to meet the mass or concentration limits in its permit that were based on the original estimate of the long term average production rate.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-9-3 Local Limits

- A. The director is authorized to establish local limits pursuant to 40 CFR 403.5(c).
- B. The following pollutant limits are established to protect against pass through and interference. In addition to the prohibited discharge standards at Section 16-9-1, users discharging under a Class I permit pursuant to Section 16-11-2C(1) shall not discharge wastewater containing in excess of the following daily maximum limits.

Pollutant (1) (2)	Daily Maximum Limit, mg/L
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BOD	User-Specific Limit (3)
TSS	User-Specific Limit (3)
TKN	User-Specific Limit (3)
Arsenic (As)	0.035
Boron (B)	1.1
Cadmium (Cd)	0.028
Chromium (Cr)	User-Specific Limit (3)
Copper (Cu)	5.0
Cyanide, Total (CN-T)	0.78
Fluoride (F)	11
Lead (Pb)	0.74
Mercury (Hg)	0.0080
Nickel (Ni)	User-Specific Limit (3)
Selenium (Se)	0.0074
Zinc (Zn)	166

1. All concentrations for metallic substances are for total metal unless indicated otherwise.
 2. The director may impose mass limitations in addition to the concentration-based limitations above.
 3. User-specific limits are derived by the director pursuant to Section 16-9-3D.
- C. In addition to the prohibited discharge standards at Section 16-9-1, users discharging under a Class II permit pursuant to Section 16-11-2C(2) shall not discharge wastewater containing in excess of the following daily maximum limits.

Pollutant (1) (2)	Daily Maximum Limit, mg/L
BOD	User-Specific Limit (1)
TSS	User-Specific Limit (1)
TKN	User-Specific Limit (1)

1. User-specific limits are derived by the director pursuant to Section 16-9-3D.
- D. The application of user specific limits.
1. The director is authorized to calculate user-specific limits based on available capacity of the treatment plant served by the industrial user.
 2. Available capacity is affected by several factors such as industrial user flows, pollutant discharge levels, POTW performance, and regulatory controls imposed upon the POTW.
- E. The director may develop best management practices (BMPs), by ordinance or in individual wastewater discharge permits or general permits, to implement local limits and the requirements of Article 16-9.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-9-4 City's Right of Revision

The city reserves the right to establish, by ordinance or in individual wastewater discharge permits or in general permits, more stringent standards, modify existing limitations, establish new effluent limitations, best

management practices, or pretreatment requirements on discharges to the POTW consistent with the purpose of this chapter.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-9-5 Dilution

No user shall ever increase the use of process water, or in any way attempt to dilute a discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable pretreatment standard or requirement. The director may impose mass limitations on users who are using dilution to meet applicable pretreatment standards or pretreatment requirements, or in other cases when the imposition of mass limitations is appropriate.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-10

PRETREATMENT OF WASTEWATER

Sections:

Section 16-10-1 Pretreatment Facilities

- A. Users shall provide wastewater treatment as necessary to comply with this chapter and shall achieve compliance with all categorical pretreatment standards, local limits, and the prohibitions set out in Section 16-9-1 of this chapter within the time limitations specified by EPA, the state, or the director, whichever is more stringent.
- B. Any facilities necessary for compliance shall be provided, operated, and maintained at the user's expense.
- C. Detailed plans describing such facilities and operating procedures shall be submitted to the director for review and shall be acceptable to the director before such facilities are constructed. The review of such plans and operating procedures shall in no way relieve the user from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to the city under the provisions of this chapter.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-10-2 Additional Pretreatment Measures

- A. Restriction and Control of Discharges.
 - 1. Whenever deemed necessary, the director may require users to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage wastestreams from industrial wastestreams, and such other conditions as may be necessary to protect the POTW and determine the user's compliance with the requirements of this chapter.
 - 2. The director may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow-control facility to ensure equalization of flow. An individual wastewater discharge permit or a general permit may be issued solely for flow equalization.
- B. Control of Grease, Oil and Solids Discharges.

(Supp. No. 17, Update 2)

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1. Grease, oil and sand interceptors or traps shall be provided when, in the opinion of the water resources department, they are necessary for the proper handling of liquid wastes containing grease and/or oil in excessive amounts or any flammable wastes, sand and other harmful ingredients except that such interceptors shall not be required for private living quarters or dwelling units.
 2. When installed grease, oil and sand interceptors or traps shall be sized and installed in accordance with the city's building and plumbing code requirements.
 3. Grease and oil and sand interceptors shall be constructed of impervious material capable of withstanding abrupt and extreme changes in temperature. They shall be of substantial construction, watertight and equipped with easily removable covers which, when bolted in place, shall be gastight and watertight.
 4. Where installed, all grease, oil and sand interceptors shall be maintained by the owner, at his expense, in continuously efficient operation at all times. The use of chemicals, bacteria, or other agents to dissolve grease and/or oil or otherwise clean grease and/or oil interceptors or traps is specifically prohibited.
 5. Unless approved by the director no interceptor installed pursuant to this section shall have a capacity less than 750 gallons nor greater than 2,500 gallons.
 6. The owner shall keep written records and documentation of all cleaning, repair, calibration and maintenance required to demonstrate compliance with this chapter. Records shall be kept at the facility for a minimum of three years and be made available to an authorized employee of the water resources department upon request.
- C. Control of Flammable Substance Discharges. Users with the potential to discharge flammable substances may be required by the director to install and maintain an approved combustible gas detection meter.
- D. Control of Chloride or TDS.
1. Users with the potential to discharge chloride or TDS at or above the following threshold levels may be required by the director to implement appropriate pretreatment or BMP:
 - a. The threshold level for chloride is 350 mg/L.
 - b. The threshold level for TDS is 1,800 mg/L.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-10-3 Accidental Discharge/Slug Discharge Control Plans

The director shall evaluate whether each SIU needs an accidental discharge/slug discharge control plan or other action to control slug discharges. The director may require any user to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control slug discharges. Alternatively, the director may develop such a plan for any user. An accidental discharge/slug discharge control plan shall address, at a minimum, the following:

- A. Description of discharge practices, including nonroutine batch discharges;
- B. Description of stored chemicals;
- C. Procedures for immediately notifying the director of any accidental or slug discharge, as required by Section 16-13-6 of this chapter; and
- D. Procedures to prevent adverse impact from any accidental or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment

structures or equipment, measures for containing toxic organic pollutants, including solvents, and/or measures and equipment for emergency response.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-11

INDIVIDUAL WASTEWATER DISCHARGE PERMITS AND GENERAL PERMITS

Sections:

Section 16-11-1 Wastewater Analysis

When requested by the director, a user must submit information on the nature and characteristics of its wastewater within 90 days of the request. The director is authorized to prepare a form for this purpose and may periodically require users to update this information. All tests and analyses of the characteristics of water and wastewater shall be determined in accordance with approved laboratory procedures as that term is defined in Article 16-4 of this chapter.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-2 Individual Wastewater Discharge Permit and General Permit Requirement

- A. No significant industrial user shall discharge wastewater into the POTW without first obtaining an individual wastewater discharge permit or a general permit from the director, except that a significant industrial user that has filed a timely application pursuant to Section 16-11-3 of this chapter may continue to discharge for the time period specified therein.
- B. The director may require other users to obtain individual wastewater discharge permits or general permits as necessary to carry out the purposes of this chapter.
- C. The director is authorized to issue the following types of industrial user permits:
 - 1. Class I permits shall be issued to significant industrial users (SIUs).
 - 2. Class II permits may be issued to high strength users who are not otherwise required to obtain a permit. A high strength user is one whose discharge equals or exceeds two and one-half percent of the loading capacity (by mass) of either BOD or TSS or TKN irrespective of the actual discharge volume.
 - 3. Class III permits may be issued to a zero process SIU or to a user meeting the definition of NSCIU at Section 16-4-1ZZ(3).
 - 4. Class IV permits (general permits) may be issued to users meeting the criteria in Section 16-11-6.
- D. Any violation of the terms and conditions of an individual wastewater discharge permit or a general permit shall be deemed a violation of this chapter and subjects the wastewater discharge permittee to the sanctions set out in this chapter. Obtaining an individual wastewater discharge permit or a general permit does not relieve a permittee of its obligation to comply with all federal and state pretreatment standards or pretreatment requirements or with any other requirements of federal, state, and local law.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-3 Individual Wastewater Discharge and General Permitting: Existing Connections

Any user required to obtain an individual wastewater discharge permit or a general permit who was discharging wastewater into the POTW prior to the effective date of the ordinance from which this chapter derived and who wishes to continue such discharges in the future, shall, within 60 days after said date, apply to the director for an individual wastewater discharge permit or a general permit in accordance with Section 16-11-5 of this chapter, and shall not cause or allow discharges to the POTW to continue after 120 days of the effective date of the ordinance from which this chapter derived except in accordance with an individual wastewater discharge permit or a general permit issued by the director.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-4 Individual Wastewater Discharge and General Permitting: New Connections

Any user required to obtain an individual wastewater discharge permit or a general permit who proposes to begin or recommence discharging into the POTW must obtain such permit prior to the beginning or recommencing of such discharge. An application for this individual wastewater discharge permit or a general permit, in accordance with Section 16-11-5 of this chapter, must be filed at least 90 days prior to the date upon which any discharge will begin or recommence.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-5 Individual Wastewater Discharge and General Permit Application Contents

- A. All users required to obtain an individual wastewater discharge permit or a general permit must submit a permit application. Users that are eligible may request a general permit under Section 16-11-6. The director may require users to submit all or some of the following information as part of a permit application:
1. Identifying Information.
 - a. The name and address of the facility, including the name of the operator and owner.
 - b. Contact information, description of activities, facilities, and plant production processes on the premises;
 2. Environmental Permits. A list of any environmental control permits held by or for the facility.
 3. Description of Operations.
 - a. A brief description of the nature, average rate of production (including each product produced by type, amount, processes, and rate of production), and standard industrial classifications of the operation(s) carried out by such user. This description should include a schematic process diagram, which indicates points of discharge to the POTW from the regulated processes.
 - b. Types of wastes generated, and a list of all raw materials and chemicals used or stored at the facility which are, or could accidentally or intentionally be, discharged to the POTW.
 - c. Number and type of employees, hours of operation, and proposed or actual hours of operation.
 - d. Type and amount of raw materials processed (average and maximum per day).
 - e. Site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, floor drains, and appurtenances by size, location, and elevation, and all points of discharge.

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4. Time and duration of discharges.
 5. The location for monitoring all wastes covered by the permit.
 6. Flow Measurement. Information showing the measured average daily and maximum daily flow, in gallons per day, to the POTW from regulated process streams and other streams, as necessary, to allow use of the combined wastestream formula set out in Section 16-9-2C (40 CFR 403.6(e)).
 7. Measurement of Pollutants.
 - a. The categorical pretreatment standards applicable to each regulated process and any new categorically regulated processes for existing sources.
 - b. The results of sampling and analysis identifying the nature and concentration, and/or mass, where required by the standard or by the director, of regulated pollutants in the discharge from each regulated process.
 - c. Instantaneous, daily maximum, and long-term average concentrations, or mass, where required, shall be reported.
 - d. The sample shall be representative of daily operations and shall be analyzed in accordance with procedures set out in Section 16-13-10 of this chapter. Where the standard requires compliance with a BMP or pollution prevention alternative, the user shall submit documentation as required by the director or the applicable standards to determine compliance with the standard.
 - e. Sampling must be performed in accordance with procedures set out in Section 16-13-11 of this chapter.
 8. Any requests for a monitoring waiver (or a renewal of an approved monitoring waiver) for a pollutant neither present nor expected to be present in the discharge based on Section 16-13-4B [40 CFR 403.12(e)(2)].
 9. Any request to be covered by a general permit based on Section 16-11-6.
 10. Any other information as may be deemed necessary by the director to evaluate the permit application.
- B. Incomplete or inaccurate applications will not be processed and will be returned to the user for revision.
- (Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-6 Wastewater Discharge Permitting: General Permits

- A. At the discretion of the director, the director may use general permits to control non-SIU or commercial user discharges to the POTW if the following conditions are met. All facilities to be covered by a general permit must:
 1. Involve the same or substantially similar types of operations;
 2. Discharge the same types of wastes;
 3. Require the same effluent limitations and pollutant controls;
 4. Require the same or similar monitoring; and
 5. In the opinion of the director, are more appropriately controlled under a general permit than under individual wastewater discharge permits.
- B. To be covered by the general permit, the user must file a written request for coverage that identifies its contact information, production processes, the types of wastes generated, the location for monitoring all wastes covered by the general permit, any requests in accordance with Section 16-13-4B for a monitoring

waiver for a pollutant neither present nor expected to be present in the discharge, and any other information the POTW deems appropriate. A monitoring waiver for a pollutant neither present nor expected to be present in the discharge is not effective in the general permit until after the director has provided written notice to the SIU that such a waiver request has been granted in accordance with Section 16-13-4B.

- C. The director will retain a copy of the general permit, documentation to support the POTW's determination that a specific user meets the criteria in Section 16-11-6A(1) to (5) and applicable state regulations, and a copy of the user's written request for coverage for three years after the expiration of the general permit.
- D. The director may not control a user through a general permit where the facility is subject to production-based categorical pretreatment standards or categorical pretreatment standards expressed as mass of pollutant discharged per day or for industrial users whose limits are based on the combined wastestream formula (Section 16-9-2C) or net/gross calculations (Section 16-9-2D).

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-7 Application Signatories and Certifications

- A. All wastewater discharge permit applications, user reports and certification statements must be signed by an authorized representative of the user and contain the certification statement in Section 16-13-14A.
- B. If the designation of an authorized representative is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for environmental matters for the company, a new written authorization satisfying the requirements of this section must be submitted to the director prior to or together with any reports to be signed by an authorized representative.
- C. A facility determined to be a non-significant categorical industrial user by director pursuant to 16-4-1ZZ(3) must annually submit the signed certification statement in Section 16-13-14B.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-11-8 Individual Wastewater Discharge and General Permit Decisions

The director will evaluate the data furnished by the user and may require additional information. Within 90 days of receipt of a complete permit application, the director will determine whether to issue an individual wastewater discharge permit or a general permit. The director may deny any application for an individual wastewater discharge permit or a general permit.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-12

INDIVIDUAL WASTEWATER DISCHARGE AND GENERAL PERMIT ISSUANCE

Sections:

Section 16-12-1 Individual Wastewater Discharge and General Permit Duration

An individual wastewater discharge permit or a general permit shall be issued for a specified time period, not to exceed five years from the effective date of the permit. An individual wastewater discharge permit or a general permit may be issued for a period less than five years, at the discretion of the director. Each individual wastewater discharge permit or a general permit will indicate a specific date upon which it will expire.

Section 16-12-2 Individual Wastewater Discharge Permit and General Permit Contents

An individual wastewater discharge permit or a general permit shall include such conditions as are deemed reasonably necessary by the director to prevent pass through or interference, protect the quality of the water body receiving the treatment plant's effluent, protect worker health and safety, facilitate sludge management and disposal, and protect against damage to the POTW.

- A. Individual wastewater discharge permits must contain:
1. A statement that indicates the wastewater discharge permit issuance date, expiration date and effective date;
 2. A statement that the wastewater discharge permit is nontransferable without prior notification to the city in accordance with Section 16-12-5 of this chapter, and provisions for furnishing the new owner or operator with a copy of the existing wastewater discharge permit;
 3. Effluent limits, including best management practices, based on applicable pretreatment standards;
 4. Self-monitoring, sampling, reporting, notification, and record-keeping requirements. These requirements shall include an identification of pollutants (or best management practice) to be monitored, sampling location, sampling frequency, and sample type based on federal, state, and local law.
 5. The process for seeking a waiver from monitoring for a pollutant neither present nor expected to be present in the discharge in accordance with Section 16-13-4B.
 6. A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedule may not extend the time for compliance beyond that required by applicable federal, state, or local law.
 7. Requirements to control slug discharge, if determined by the director to be necessary.
 8. Any grant of the monitoring waiver by the director (Section 16-13-4B) must be included as a condition in the user's permit.
- B. General wastewater discharge permits must contain:
1. A statement that indicates the wastewater discharge permit issuance date, expiration date and effective date;
 2. A statement that the wastewater discharge permit is nontransferable without prior notification to the city in accordance with Section 16-12-5 of this chapter, and provisions for furnishing the new owner or operator with a copy of the existing wastewater discharge permit;
 3. Effluent limits, including best management practices, based on applicable pretreatment standards;
 4. Self-monitoring, sampling, reporting, notification, and record-keeping requirements. These requirements shall include an identification of pollutants and/or best management practice to be monitored, sampling location, sampling frequency, and sample type based on federal, state, and local law.
 5. A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedule may not extend the time for compliance beyond that required by applicable federal, state, or local law.

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6. Requirements to control slug discharge, if determined by the director to be necessary.
- C. Individual wastewater discharge permits or general permits may contain, but need not be limited to, the following conditions:
1. Limits on the average and/or maximum rate of discharge, time of discharge, and/or requirements for flow regulation and equalization;
 2. Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the treatment works;
 - a. When installed such devices must at all times be properly operated and maintained.
 - b. Written operating and maintenance logs shall be maintained on-site.
 3. Requirements for the development and implementation of spill control plans or other special conditions including management practices necessary to adequately prevent accidental, unanticipated, or nonroutine discharges;
 4. Development and implementation of waste minimization plans to reduce the amount of pollutants discharged to the POTW;
 5. The unit charge or schedule of user charges and fees for the management of the wastewater discharged to the POTW;
 6. Requirements for installation and maintenance of inspection and sampling facilities and equipment, including flow measurement devices;
 7. A statement that compliance with the individual wastewater discharge permit or the general permit does not relieve the permittee of responsibility for compliance with all applicable federal and state pretreatment standards, including those which become effective during the term of the individual wastewater discharge permit or the general permit; and
 8. Other conditions as deemed appropriate by the director to ensure compliance with this chapter, and state and federal laws, rules, and regulations.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-12-3 Permit Issuance Process

- A. Permit Appeals. The user may petition the director to reconsider the terms of an individual wastewater discharge permit within 20 business days of notice of its issuance. Written appeals will be deemed to have been submitted on the date postmarked. For appeals, which are not mailed, postage prepaid, into a mail facility serviced by the United States Postal Service, the date of receipt of the appeal shall govern.
1. Failure to submit a timely petition for reconsideration shall be deemed to be a waiver of the administrative appeal.
 2. In its petition, the appealing party must indicate the individual wastewater discharge permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to place in the individual wastewater discharge permit.
 3. The effectiveness of the individual wastewater discharge permit not be stayed pending the appeal.
 4. If the director fails to act within 30 days of the appeal's submittal, a request for reconsideration shall be deemed to be denied. Decisions not to reconsider an individual wastewater discharge permit, not to

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issue an individual wastewater discharge permit, or not to modify an individual wastewater discharge permit shall be considered final administrative actions for purposes of judicial review.

- B. General Permit Appeals. The user may petition the director to reconsider the decision to require a general permit within 20 business days of notice of its issuance. Written appeals will be deemed to have been submitted on the date postmarked. For appeals, which are not mailed, postage prepaid, into a mail facility serviced by the United States Postal Service, the date of receipt of the appeal shall govern.
1. Failure to submit a timely petition for reconsideration shall be deemed to be a waiver of the administrative appeal.
 2. In its petition, the appealing party must indicate the general permit objected to, the reasons for this objection, and the alternative permit, if any, it finds applicable.
 3. The effectiveness of the general permit shall not be stayed pending the appeal.
 4. If the director fails to act within 30 days of the appeal's submittal, a request for reconsideration shall be deemed to be denied. Decisions not to reconsider a general permit, or not to issue a general permit shall be considered final administrative actions for purposes of judicial review.
- C. Aggrieved parties seeking judicial review of the final administrative individual wastewater discharge permit or general permit decision must do so by filing a complaint with the superior court for Maricopa County, Arizona.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-12-4 Permit Modification

- A. The director may modify an individual wastewater discharge permit for good cause, including, but not limited to, the following reasons:
1. To incorporate any new or revised federal, state, or local pretreatment standards or pretreatment requirements;
 2. To address significant alterations or additions to the user's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
 3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
 4. Information indicating that the permitted discharge poses a threat to the city's POTW, city personnel, or the receiving waters;
 5. Violation of any terms or conditions of the individual wastewater discharge permit;
 6. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;
 7. Revision of or a grant of variance from categorical pretreatment standards pursuant to 40 CFR 403.13;
 8. To correct typographical or other errors in the individual wastewater discharge permit; or
 9. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 16-12-5.
- B. The director may modify a general permit for good cause, including, but not limited to, the following reasons:

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1. To incorporate any new or revised federal, state, or local pretreatment standards or pretreatment requirements;
 2. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
 3. To correct typographical or other errors in the individual wastewater discharge permit; or
 4. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 16-12-5.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-12-5 Individual Wastewater Discharge Permit and General Permit Transfer

Individual wastewater discharge permits or coverage under general permits may be transferred to a new owner or operator only if the permittee gives at least 60 days' advance notice to the director and the director approves the individual wastewater discharge permit or the general permit coverage transfer. The notice to the director must include a written certification by the new owner or operator which:

- A. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;
- B. Identifies the specific date on which the transfer is to occur; and
- C. Acknowledges full responsibility for complying with the existing individual wastewater discharge permit or general permit.

Failure to provide advance notice of a transfer renders the individual wastewater discharge permit or coverage under the general permit void as of the date of facility transfer.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-12-6 Individual Wastewater Discharge Permit and General Permit Revocation

The director may revoke an individual wastewater discharge permit or coverage under a general permit for good cause, including, but not limited to, the following reasons:

- A. Failure to notify the director of significant changes to the wastewater prior to the changed discharge;
- B. Failure to provide prior notification to the director of changed conditions pursuant to Section 16-13-5 of this chapter;
- C. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
- D. Falsifying self-monitoring reports and certification statements;
- E. Tampering with monitoring equipment;
- F. Refusing to allow the director timely access to the facility premises and records;
- G. Failure to meet effluent limitations;
- H. Failure to pay fines;
- I. Failure to pay sewer charges;
- J. Failure to meet compliance schedules;

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- K. Failure to complete a wastewater survey or the wastewater discharge permit application;
 - L. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
 - M. Violation of any pretreatment standard or requirement, or any terms of the wastewater discharge permit or the general permit or this chapter.

Individual wastewater discharge permits or coverage under general permits shall be voidable upon cessation of operations or transfer of business ownership. All individual wastewater discharge permits or general permits issued to a user are void upon the issuance of a new individual wastewater discharge permit or a general permit to that user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-12-7 Individual Wastewater Discharge Permit and General Permit Reissuance

A user with an expiring individual wastewater discharge permit or general permit shall apply for individual wastewater discharge permit or general permit reissuance by submitting a complete permit application, in accordance with Section 16-11-5 of this chapter, a minimum of 90 days prior to the expiration of the user's existing individual wastewater discharge permit or general permit.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-13 ***REPORTING REQUIREMENTS***

Sections:

Section 16-13-1 Baseline Monitoring Reports

- A. Within either 180 days after the effective date of a categorical pretreatment standard, or the final administrative decision on a category determination under 40 CFR 403.6(a)(4), whichever is later, existing categorical industrial users currently discharging to or scheduled to discharge to the POTW shall submit to the director a report which contains the information listed in Section 16-13-1.B, below. At least 90 days prior to commencement of their discharge, new sources, and sources that become categorical industrial users subsequent to the promulgation of an applicable categorical standard, shall submit to the director a report which contains the information listed in paragraph B, below. A new source shall report the method of pretreatment it intends to use to meet applicable categorical standards. A new source also shall give estimates of its anticipated flow and quantity of pollutants to be discharged.
- B. Users described in paragraph A above shall submit the information set forth below.
 - 1. All information required in Section 16-11-5A(1)(a), Section 16-11-5A(2), Section 16-11-5A(3)(a), and Section 16-11-5A(6).
 - 2. Measurement of Pollutants.
 - a. The user shall provide the information required in Section 16-11-5A(7)(a) through (e).
 - b. The user shall take a minimum of one representative sample to compile that data necessary to comply with the requirements of this paragraph.
 - c. Samples should be taken immediately downstream from pretreatment facilities if such exist or immediately downstream from the regulated process if no pretreatment exists. If other

wastewaters are mixed with the regulated wastewater prior to pretreatment, the user should measure the flows and concentrations necessary to allow use of the combined wastestream formula in 40 CFR 403.6(e) to evaluate compliance with the pretreatment standards. Where an alternate concentration or mass limit has been calculated in accordance with 40 CFR 403.6(e) this adjusted limit along with supporting data shall be submitted to the control authority;

- d. Sampling and analysis shall be performed in accordance with Section 16-13-10;
 - e. The director may allow the submission of a baseline report which utilizes only historical data so long as the data provides information sufficient to determine the need for industrial pretreatment measures;
 - f. The baseline report shall indicate the time, date and place of sampling and methods of analysis, and shall certify that such sampling and analysis is representative of normal work cycles and expected pollutant discharges to the POTW.
- 3. Compliance Certification. A statement, reviewed by the user's authorized representative as defined in Section 16-4-1 and certified by a qualified professional, indicating whether pretreatment standards are being met on a consistent basis, and, if not, whether additional operation and maintenance (O&M) and/or additional pretreatment is required to meet the pretreatment standards and requirements.
 - 4. Compliance Schedule. If additional pretreatment and/or O&M will be required to meet the pretreatment standards, the shortest schedule by which the user will provide such additional pretreatment and/or O&M must be provided. The completion date in this schedule shall not be later than the compliance date established for the applicable pretreatment standard. A compliance schedule pursuant to this section must meet the requirements set out in Section 16-13-2 of this chapter.
 - 5. Signature and Report Certification. All baseline monitoring reports must be certified in accordance with Section 16-13-14A of this chapter and signed by an authorized representative as defined in Section 16-4-1.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-2 Compliance Schedule Progress Reports

The following conditions shall apply to the compliance schedule required by Section 16-13-1B(4) of this chapter:

- A. The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards. Such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation;
- B. No increment referred to above shall exceed nine months;
- C. The user shall submit a progress report to the director no later than 14 days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress, the reason for any delay, and, if appropriate, the steps being taken by the user to return to the established schedule; and
- D. In no event shall more than nine months elapse between such progress reports to the director. More frequent reporting may be required by the director.

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- E. The director is authorized to review and approve compliance schedules and may require shorter increments of progress between events.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-3 Reports on Compliance with Categorical Pretreatment Standard Deadline

Within 90 days following the date for final compliance with applicable categorical pretreatment standards, or in the case of a new source following commencement of the introduction of wastewater into the POTW, any user subject to such pretreatment standards and requirements shall submit to the director a report containing the information described in Section 16-11-5A(6) and (7) and 16-13-1B(2) of this chapter. For users subject to equivalent mass or concentration limits established in accordance with the procedures in Section 16-9-2, this report shall contain a reasonable measure of the user's long-term production rate. For all other users subject to categorical pretreatment standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the user's actual production during the appropriate sampling period. All compliance reports must be signed and certified in accordance with Section 16-13-14A of this chapter. All sampling will be done in conformance with Section 16-13-11.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-4 Periodic Compliance Reports

- A. Except as specified in Section 16-13-4C, all significant industrial users must, at a frequency determined by the director submit no less than twice per year (June and December or on dates specified in its permit) reports indicating the nature, concentration of pollutants in the discharge which are limited by pretreatment standards and the measured or estimated average and maximum daily flows for the reporting period. In cases where the pretreatment standard requires compliance with a best management practice (BMP) or pollution prevention alternative, the user must submit documentation required by the director or the pretreatment standard necessary to determine the compliance status of the user.
- B. The city may authorize an industrial user subject to a categorical pretreatment standard to forego sampling of a pollutant regulated by a categorical pretreatment standard if the industrial user has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the industrial user. [See 40 CFR 403.12(e)(2)] This authorization is subject to the following conditions:
 1. The waiver may be authorized where a pollutant is determined to be present solely due to sanitary wastewater discharged from the facility provided that the sanitary wastewater is not regulated by an applicable categorical standard and otherwise includes no process wastewater.
 2. The monitoring waiver is valid only for the duration of the effective period of the individual wastewater discharge permit, but in no case longer than five years. The user must submit a new request for the waiver before the waiver can be granted for each subsequent individual wastewater discharge permit. See Section 16-11-5A(8).
 3. In making a demonstration that a pollutant is not present, the industrial user must provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes.
 4. The request for a monitoring waiver must be signed in accordance with Section 16-4-1C, and include the certification statement in 16-13-14A (40 CFR 403.6(a)(2)(ii)).

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5. Non-detectable sample results may be used only as a demonstration that a pollutant is not present if the EPA approved method from 40 CFR Part 136 with the lowest minimum detection level for that pollutant was used in the analysis.
 6. Any grant of the monitoring waiver by the director must be included as a condition in the user's permit. The reasons supporting the waiver and any information submitted by the user in its request for the waiver must be maintained by the director for three years after expiration of the waiver.
 7. Upon approval of the monitoring waiver and revision of the user's permit by the director, the industrial user must certify on each report with the statement in Section 16-13-14C, that there has been no increase in the pollutant in its wastestream due to activities of the industrial user.
 8. In the event that a waived pollutant is found to be present or is expected to be present because of changes that occur in the user's operations, the user must immediately: comply with the monitoring requirements of Section 16-13-4A, or other more frequent monitoring requirements imposed by the director, and notify the director.
 9. This provision does not supersede certification processes and requirements established in categorical pretreatment standards, except as otherwise specified in the categorical pretreatment standard.
- C. The city may reduce the requirement for periodic compliance reports to a requirement to report no less frequently than once a year, unless required more frequently in the pretreatment standard, where the industrial user's total categorical wastewater flow does not exceed any of the following:
1. 0.01 percent of the POTW's design dry-weather hydraulic capacity of the POTW, or 5,000 gallons per day, whichever is smaller, as measured by a continuous effluent flow monitoring device unless the industrial user discharges in batches;
 2. 0.01 percent of the design dry-weather organic treatment capacity of the POTW; and
 3. 0.01 percent of the maximum allowable headworks loading for any pollutant regulated by the applicable categorical pretreatment standard for which approved local limits were developed in accordance with Section 16-9-3 of this chapter.

Reduced reporting is not available to industrial users that have in the last two years been in significant noncompliance, as defined in Section 16-16-1 of this chapter. In addition, reduced reporting is not available to an industrial user with daily flow rates, production levels, or pollutant levels that vary so significantly that, in the opinion of the director, decreasing the reporting requirement for this industrial user would result in data that are not representative of conditions occurring during the reporting period.

- D. All periodic compliance reports must be signed and certified in accordance with Section 16-13-14A of this chapter.
- E. All wastewater samples must be representative of the user's discharge. Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of a user to keep its monitoring facility in good working order shall not be grounds for the user to claim that sample results are unrepresentative of its discharge.
- F. If a user subject to the reporting requirement in this section monitors any regulated pollutant at the appropriate sampling location more frequently than required by the director, using the procedures prescribed in Section 16-13-11 of this chapter, the results of this monitoring shall be included in the report.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-5 Reports of Changed Conditions

Each user must notify the director of any significant changes to the user's operations or system which might alter the nature, quality, or volume of its wastewater at least 90 days before the change. For purposes of this section any increase or decrease in the volume of discharge or mass of any pollutant discharged that equals or exceeds 20 percent shall constitute a significant change.

- A. The director may require the user to submit such information as may be deemed necessary to evaluate the changed condition, including the submission of a wastewater discharge permit application under Section 16-11-5 of this chapter.
- B. The director may issue an individual wastewater discharge permit or a general permit under Section 16-12-2 of this chapter or modify an existing wastewater discharge permit or a general permit under Section 16-12-4 of this chapter in response to changed conditions or anticipated changed conditions.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-6 Reports of Potential Problems

- A. In the case of any discharge, including, but not limited to, accidental discharges, discharges of a non-routine, episodic nature, a non-customary batch discharge, a slug discharge or slug load, that might cause potential problems for the POTW, the user shall immediately telephone and notify the director of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the user.
- B. Within five days following such discharge, the user shall, unless waived by the director, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the user to prevent similar future occurrences. Such notification shall not relieve the user of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the user of any fines, penalties, or other liability which may be imposed pursuant to this chapter.
- C. A notice shall be permanently posted on the user's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph A, above. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.
- D. Significant industrial users are required to notify the director immediately of any changes at its facility affecting the potential for a slug discharge.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-7 Reports from Unpermitted Users

All users not required to obtain an individual wastewater discharge permit or general permit shall provide appropriate reports to the director as the director may require.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-8 Notice of Violation/Repeat Sampling and Reporting

If sampling performed by a user indicates a violation, the user must notify the director within 24 hours of becoming aware of the violation. The user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the director within 30 days after becoming aware of the violation. Resampling by the industrial user is not required if the city performs sampling at the user's facility at least once a month, or if the city performs sampling at the user's facility between the time when the initial sampling was conducted and the time when the user or the city receives the results of this sampling, or if the city has performed the sampling and analysis in lieu of the industrial user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-9 Notification of the Discharge of Hazardous Waste

- A. Any user who commences the discharge of hazardous waste shall notify the POTW, the EPA regional waste management division director, and state hazardous waste authorities, in writing, of any discharge into the POTW of a substance which, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the user discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification also shall contain the following information to the extent such information is known and readily available to the user: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months. All notifications must take place no later than 180 days after the discharge commences. Any notification under this paragraph need be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted under Section 16-13-5 of this chapter. The notification requirement in this section does not apply to pollutants already reported by users subject to categorical pretreatment standards under the self-monitoring requirements of Sections 16-13-1, 16-13-3, and 16-13-4 of this chapter.
- B. Dischargers are exempt from the requirements of paragraph A, above, during a calendar month in which they discharge no more than 15 kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than 15 kilograms of nonacute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the user discharges more than such quantities of any hazardous waste do not require additional notification.
- C. In the case of any new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the user must notify the director, the EPA regional waste management waste division director, and state hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.
- D. In the case of any notification made under this section, the user shall certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.
- E. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this chapter, a permit issued thereunder, or any applicable federal or state law.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-10 Analytical Requirements

All pollutant analyses, including sampling techniques, to be submitted as part of a wastewater discharge permit application or report shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, unless otherwise specified in an applicable categorical pretreatment standard. If 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the director or other parties approved by EPA.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-11 Sample Collection

Samples collected to satisfy reporting requirements must be based on data obtained through appropriate sampling and analysis performed during the period covered by the report, based on data that is representative of conditions occurring during the reporting period.

- A. Except as indicated in subsection B and C below, the user must collect wastewater samples using 24-hour flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the director. Where time-proportional composite sampling or grab sampling is authorized by the city, the samples must be representative of the discharge. Using protocols (including appropriate preservation) specified in 40 CFR Part 136 and appropriate EPA guidance, multiple grab samples collected during a 24-hour period may be composited prior to the analysis as follows: for cyanide, total phenols, and sulfides the samples may be composited in the laboratory or in the field; for volatile organics and oil and grease, the samples may be composited in the laboratory. Composite samples for other parameters unaffected by the compositing procedures as documented in approved EPA methodologies may be authorized by the city, as appropriate. In addition, grab samples may be required to show compliance with instantaneous limits.
- B. Samples for oil and grease, temperature, pH, cyanide, total phenols, sulfides, and volatile organic compounds must be obtained using grab collection techniques.
- C. For sampling required in support of baseline monitoring and 90-day compliance reports required in Section 16-13-1 and 16-13-3 [40 CFR 403.12(b) and (d)], a minimum of four grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide and volatile organic compounds for facilities for which historical sampling data do not exist; for facilities for which historical sampling data are available, the director may authorize a lower minimum. For the reports required by paragraphs Section 16-13-4 (40 CFR 403.12(e) and 403.12(h)), the industrial user is required to collect the number of grab samples necessary to assess and assure compliance by with applicable pretreatment standards and requirements.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-12 Date of Receipt of Reports

Written reports will be deemed to have been submitted on the date postmarked. For reports, which are not mailed, postage prepaid, into a mail facility serviced by the United States Postal Service, the date of receipt of the report shall govern.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-13 Recordkeeping

- A. Availability. Users subject to the reporting requirements of this chapter shall retain, and make available for inspection and copying, all records of information obtained pursuant to any monitoring activities required by this chapter, any additional records of information obtained pursuant to monitoring activities undertaken by the user independent of such requirements, and documentation associated with best management practices established under Section 16-9-3E.
- B. Contents. All monitoring required by this chapter or by discharge permits must be supported by chain-of-custody records. Records shall include the date, exact place, method, and time of sampling, and the name of the person(s) taking the samples; the dates analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.
- C. Retention. Records shall remain available for a period of at least three years. This period shall be automatically extended for the duration of any litigation concerning the user or the city, or where the user has been specifically notified of a longer retention period by the director.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-13-14 Certification Statements

- A. Certification of Permit Applications, User Reports and Initial Monitoring Waiver. The following certification statement is required to be signed and submitted by users submitting permit applications in accordance with Section 16-11-7; users submitting baseline monitoring reports under Section 16-13-1B(5); users submitting reports on compliance with the categorical pretreatment standard deadlines under Section 16-13-3; users submitting periodic compliance reports required by Section 16-13-4A-D, and users submitting an initial request to forego sampling of a pollutant on the basis of Section 16-13-4B(4). The following certification statement must be signed by an authorized representative as defined in Section 16-4-1:

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

- B. Annual Certification for Non-Significant Categorical Industrial Users. A facility determined to be a non-significant categorical industrial user by the director pursuant to 16-4-1ZZ(3) and 16-11-7C must annually submit the following certification statement signed in accordance with the signatory requirements in 16-4-C. This certification must accompany an alternative report required by the director:

Based on my inquiry of the person or persons directly responsible for managing compliance with the categorical pretreatment standards under 40 CFR ____, I certify that, to the best of my knowledge and belief, during the period from _____, _____ to _____, _____ [months, days, year]:

- (a) The facility described as _____ [facility name] met the definition of a non-significant categorical industrial user as described in 16-4-1ZZ(3);
- (b) The facility complied with all applicable pretreatment standards and requirements during this reporting period; and
- (c) The facility never discharged more than 100 gallons of total categorical wastewater on any given day during this reporting period.

This compliance certification is based on the following information.

- C. Certification of Pollutants Not Present. Users that have an approved monitoring waiver based on Section 16-13-4B must certify on each report with the following statement that there has been no increase in the pollutant in its wastestream due to activities of the user.

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for 40 CFR _____ [specify applicable national pretreatment standard part(s)], I certify that, to the best of my knowledge and belief, there has been no increase in the level of _____ [list pollutant(s)] in the wastewaters due to the activities at the facility since filing of the last periodic report under Section 16-13-4A.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-14

INSPECTION AND COMPLIANCE MONITORING

Sections:

Section 16-14-1 Right of Entry: Inspection and Sampling

- A. The director shall have the right to enter the premises of any user to determine whether the user is complying with all requirements of this chapter and any individual wastewater discharge permit or general permit or order issued hereunder. Users shall allow the director ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.
1. Where a user has security measures in force which require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, the director shall be permitted to enter without delay for the purposes of performing specific responsibilities.
 2. Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the director and shall not be replaced. The costs of clearing such access shall be borne by the user.
 3. Unreasonable delays in allowing the director access to the user's premises shall be a violation of this chapter.
- B. Monitoring Facilities.
1. The director shall have the right to set up on the user's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the user's operations.
 2. The director may require the user to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the user at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at least annually to ensure their accuracy. More frequent calibration may be required by the director.

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- C. Digital Images. Digital images may be used to document conditions observed during inspections and investigations and sampling. Digital image means any photograph or video taken using a digital camera or device, including the audio portion of the video. Inspections and sampling are conducted to evaluate a user for the purpose of gathering information to determine if the user is in compliance with applicable environmental requirements. Inspections and sampling may also assess a regulated entity's ability to maintain compliance. Standard operating procedures for the taking, use and storage of digital images shall be made available to the user.
- D. The user has the following rights during any inspection by an authorized employee of the water resources department:
1. To be presented with photo identification by the inspector;
 2. To be informed of the purpose of the inspection and the legal authority for the inspection;
 3. To know of any inspection fees;
 4. To accompany the inspector during the inspection, unless the inspection is for the purposes of a confidential interview;
 5. To obtain copies of any original documents taken from the premises during the inspection;
 6. To obtain a split or duplicate of any samples taken during the inspection if the split or duplicate of any samples, where appropriate, would not prohibit an analysis from being conducted or render an analysis inconclusive;
 7. To obtain copies of any analysis performed on samples taken during the inspection;
 8. To be informed if any conversation with the inspector is recorded; and
 9. To be informed that each person interviewed during the inspection shall be notified that statements made by the person may be included in the inspection report.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-14-2 Search Warrants

If the director has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this chapter, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of the city designed to verify compliance with this chapter or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, the director may seek issuance of a search warrant from the appropriate court or legal authority.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-15

CONFIDENTIAL INFORMATION

Sections:

Section 16-15-1 Confidential Information

Information and data on a user obtained from reports, surveys, wastewater discharge permit applications, individual wastewater discharge permits, general permits, and monitoring programs, and from the director's inspection and sampling activities, shall be available to the public without restriction, unless the user specifically requests, and is able to demonstrate to the satisfaction of the director, that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets under applicable state law. Any such request must be asserted at the time of submission of the information or data. When requested and demonstrated by the user furnishing a report that such information should be held confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302 shall not be recognized as confidential information and shall be available to the public without restriction.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-16

PUBLICATION OF USERS IN SIGNIFICANT NONCOMPLIANCE

Sections:

Section 16-16-1 Publication of Users in Significant Noncompliance

The director shall publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the POTW, a list of the users which, at any time during the previous 12 months, were in significant noncompliance with applicable pretreatment standards and requirements. The term significant noncompliance shall be applicable to all significant industrial users (or any other industrial user that violates paragraphs (C), (D) or (H) of this section) and shall mean:

- A. Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all the measurements taken for the same pollutant parameter taken during a six-month period exceed (by any magnitude) a numeric pretreatment standard or requirement, including instantaneous limits as defined in Section 16-4-1BB;
- B. Technical review criteria (TRC) violations, defined here as those in which 33 percent or more of wastewater measurements taken for each pollutant parameter during a six-month period equals or exceeds the product of the numeric pretreatment standard or requirement including instantaneous limits, as defined by Article 16-4-1BB multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH);
- C. Any other violation of a pretreatment standard or requirement as defined by Article 16-9 (daily maximum, long-term average, instantaneous limit, or narrative standard) that the director determines has caused, alone or in combination with other discharges, interference or pass through, including endangering the health of POTW personnel or the general public;
- D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in the director's exercise of its emergency authority to halt or prevent such a discharge;

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- E. Failure to meet, within 90 days of the scheduled date, a compliance schedule milestone contained in an individual wastewater discharge permit or a general permit or enforcement order for starting construction, completing construction, or attaining final compliance;
 - F. Failure to provide within 30 days after the due date any required reports, including baseline monitoring reports, reports on compliance with categorical pretreatment standard deadlines, periodic self-monitoring reports, and reports on compliance with compliance schedules;
 - G. Failure to accurately report noncompliance; or
 - H. Any other violation(s), which may include a violation of best management practices, which the director determines will adversely affect the operation or implementation of the local pretreatment program.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-17

ADMINISTRATIVE ENFORCEMENT REMEDIES

Sections:

Section 16-17-1 Notification of Violation

- A. Issuance of Notice of Violation.
 - 1. When the director finds that a user has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement, the director may serve upon that user a written notice of violation (NOV).
 - 2. The NOV shall be served personally or by registered or certified mail (return receipt requested) on the user and identify the nature of the alleged violation, the specific time frame for follow-up and/or other corrective actions and include a statement that additional enforcement actions may be pursued by the city if corrective actions are not achieved as required.
- B. Response to Notification of Violation. The user shall respond in writing to the director within the specified time frame, but not later than 15 calendar days from receipt of the NOV by the user. The response shall provide an explanation of the violation and the corrective action taken. Submission of this response in no way relieves the user of criminal and civil liability for any violations occurring before or after receipt of the NOV.
- C. If the response to a NOV requires an order to show cause, the user shall respond by demonstrating why the director should not ask the city attorney to file a court action requesting injunctive relief and criminal and/or civil penalties.
- D. The director will determine the validity or appropriateness of the response. If the director finds the response to be appropriate and satisfactory, the NOV will be closed and recorded in the facility file as part of compliance history. Closure to the NOV will be documented in writing and provided to the user. Closure of the NOV does not preclude further enforcement action.
- E. Deficient Response to Notification of Violation. Upon review of a response to a notification of violation the director finds the response to be deficient, the director may require additional information, suspend or revoke the user's permit, order the user to cease discharge, and/or seek appropriate injunctive relief and criminal and/or civil penalties.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-2 Consent Orders

The director may enter into consent orders, assurances of compliance, or other similar documents establishing an agreement with any user responsible for noncompliance. Such documents shall include specific action to be taken by the user to correct the noncompliance within a time period specified by the document. Such documents shall have the same force and effect as the administrative orders issued pursuant to Sections 16-17-4 and 16-17-5 of this chapter and shall be judicially enforceable.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-3 Show Cause Hearing

The director may order a user which has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement, to appear before the director and show cause why the proposed enforcement action should not be taken. Notice shall be served personally or by registered or certified mail (return receipt requested) on the user specifying the time and place for the meeting, the proposed enforcement action, the reasons for such action, and a request that the user show cause why the proposed enforcement action should not be taken. The notice of the meeting shall be served personally or by registered or certified mail (return receipt requested) at least 14 days prior to the hearing. Such notice may be served on any authorized representative of the user as defined in Section 16-4-1 and required by Section 16-11-7A. A show cause hearing shall not be a bar against, or prerequisite for, taking any other action against the user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-4 Compliance Orders

When the director finds that a user has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement, the director may issue an order to the user responsible for the discharge directing that the user come into compliance within a specified time. If the user does not come into compliance within the time provided, sewer service may be discontinued unless adequate treatment facilities, devices, or other related appurtenances are installed and properly operated. Compliance orders also may contain other requirements to address the noncompliance, including additional self-monitoring and management practices designed to minimize the amount of pollutants discharged to the sewer. A compliance order may not extend the deadline for compliance established for a pretreatment standard or requirement, nor does a compliance order relieve the user of liability for any violation, including any continuing violation. Issuance of a compliance order shall not be a bar against, or a prerequisite for, taking any other action against the user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-5 Cease and Desist Orders

When the director finds that a user has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement, or that the user's past violations are likely to recur, the director may issue an order to the user directing it to cease and desist all such violations and directing the user to:

(Supp. No. 17, Update 2)

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- A. Immediately comply with all requirements; and
 - B. Take such appropriate remedial or preventive action as may be needed to properly address a continuing or threatened violation, including halting operations and/or terminating the discharge. Issuance of a cease and desist order shall not be a bar against, or a prerequisite for, taking any other action against the user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-6 Emergency Suspensions

The director may immediately suspend a user's discharge, after informal notice to the user, whenever such suspension is necessary to stop an actual or threatened discharge, which reasonably appears to be present, or cause an imminent or substantial endangerment to the health or welfare of persons. The director may also immediately suspend a user's discharge, after notice and opportunity to respond, that threatens to interfere with the operation of the POTW, or which presents, or may present, an endangerment to the environment.

- A. Any user notified of a suspension of its discharge shall immediately stop or eliminate its contribution. In the event of a user's failure to immediately comply voluntarily with the suspension order, the director may take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW, its receiving stream, or endangerment to any individuals. The director may allow the user to recommence its discharge when the user has demonstrated to the satisfaction of the director that the period of endangerment has passed, unless the termination proceedings in Section 16-17-7 of this chapter are initiated against the user.
- B. A user that is responsible, in whole or in part, for any discharge presenting imminent endangerment shall submit a detailed written statement, describing the causes of the harmful contribution and the measures taken to prevent any future occurrence, to the director prior to the date of any show cause or termination hearing under Sections 16-17-3 or 16-17-7 of this chapter.

Nothing in this section shall be interpreted as requiring a hearing prior to any emergency suspension under this section.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-17-7 Termination of Discharge

In addition to the provisions in Section 16-12-6 of this chapter, any user who violates the following conditions is subject to discharge termination:

- A. Violation of individual wastewater discharge permit or general permit conditions;
- B. Failure to accurately report the wastewater constituents and characteristics of its discharge;
- C. Failure to report significant changes in operations or wastewater volume, constituents, and characteristics prior to discharge;
- D. Refusal of reasonable access to the user's premises for the purpose of inspection, monitoring, or sampling; or
- E. Violation of the pretreatment standards in Article 16-9 of this chapter.

Such user will be notified of the proposed termination of its discharge and be offered an opportunity to show cause under Section 16-17-3 of this chapter why the proposed action should not be taken. Exercise of this option by the director shall not be a bar to, or a prerequisite for, taking any other action against the user.

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(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-18
JUDICIAL ENFORCEMENT REMEDIES

Sections:

Section 16-18-1 Injunctive Relief

When the director finds that a user has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement, the director may petition the appropriate court through the city attorney for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the individual wastewater discharge permit, the general permit, order, or other requirement imposed by this chapter on activities of the user. The director may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the user to conduct environmental remediation. A petition for injunctive relief shall not be a bar against, or a prerequisite for, taking any other action against a user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-18-2 Civil Penalties

- A. A user who has violated, or continues to violate, any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement shall be liable to the city for a maximum civil penalty of \$25,000.00 per violation, per day. In the case of a monthly or other long-term average discharge limit, penalties shall accrue for each day during the averaging period of the violation.
- B. The director may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the city.
- C. In determining the amount of civil liability, the court shall take into account all relevant circumstances, including, but not limited to, the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the user's violation, corrective actions by the user, the compliance history of the user, and any other factor as justice requires.
- D. Filing a suit for civil penalties shall not be a bar against, or a prerequisite for, taking any other action against a user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-18-3 Criminal Prosecution

- A. A user who willfully or negligently violates any provision of this chapter, an individual wastewater discharge permit, or a general permit or order issued hereunder, or any other pretreatment standard or requirement shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than \$2,500.00 per violation, per day, or imprisonment for not more than six months, or both.
- B. A user who willfully or negligently introduces any substance into the POTW which causes personal injury or property damage shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not

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more than \$2,500.00 per violation, per day, or imprisonment for not more than six months, or both. This penalty shall be in addition to any other cause of action for personal injury or property damage available under state law.

- C. A user who knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to this chapter, individual wastewater discharge permit, or a general permit or order issued hereunder, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under this chapter shall, upon conviction, be guilty of a class one misdemeanor, punishable by a fine of not more than \$2,500.00 per violation, per day, or imprisonment for not more than six months, or both.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-18-4 Remedies Nonexclusive

The remedies provided for in this chapter are not exclusive. The director may take any, all, or any combination of these actions against a noncompliant user. Enforcement of pretreatment violations will generally be in accordance with the city's enforcement response plan. However, the director may take other action against any user when the circumstances warrant. Further, the director is empowered to take more than one enforcement action against any noncompliant user.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-19

SUPPLEMENTAL ENFORCEMENT ACTION

Sections:

Section 16-19-1 Administrative Fine for Late Reports

An administrative fine of \$100.00 shall be assessed to any user for each day that a report required by this chapter, a permit, or order issued hereunder is late, beginning five days after the date the report is due. Higher fines may also be assessed where reports are more than 30 days late. Actions taken by the director to collect late reporting fines shall not limit the director's authority to initiate other enforcement actions that may include fines for late reporting violations.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-19-2 Public Nuisances

A violation of any provision of this chapter, an individual wastewater discharge permit, a general permit or order issued hereunder, or any other pretreatment standard or requirement is hereby declared a public nuisance and shall be corrected or abated as directed by the director. Any person(s) creating a public nuisance shall be subject to the provisions of the city Code Section 9-4-1 governing such nuisances, including reimbursing the city for any costs incurred in removing, abating, or remedying said nuisance.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-20
AFFIRMATIVE DEFENSES TO DISCHARGE VIOLATIONS

Sections:

Section 16-20-1 Upset

- A. For the purposes of this section, "upset" means an exceptional incident in which there is unintentional and temporary noncompliance with categorical pretreatment standards because of factors beyond the reasonable control of the user. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- B. An upset shall constitute an affirmative defense to an action brought for noncompliance with categorical pretreatment standards if the requirements of paragraph (C), below, are met.
- C. A user who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - 1. An upset occurred and the user can identify the cause(s) of the upset;
 - 2. The facility was at the time being operated in a prudent and workman-like manner and in compliance with applicable operation and maintenance procedures; and
 - 3. The user has submitted the following information to the director within 24 hours of becoming aware of the upset [if this information is provided orally, a written submission must be provided within five days]:
 - a. A description of the indirect discharge and cause of noncompliance;
 - b. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and
 - c. Steps being taken and/or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- D. In any enforcement proceeding, the user seeking to establish the occurrence of an upset shall have the burden of proof.
- E. Users shall have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with categorical pretreatment standards.
- F. Users shall control production of all discharges to the extent necessary to maintain compliance with categorical pretreatment standards upon reduction, loss, or failure of its treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-20-2 Prohibited Discharge Standards

A user shall have an affirmative defense to an enforcement action brought against it for noncompliance with the general prohibitions in Section 16-9-1A of this chapter or the specific prohibitions in Sections 16-9-1B(3)

through 19 of this chapter if it can prove that it did not know, or have reason to know, that its discharge, alone or in conjunction with discharges from other sources, would cause pass through or interference and that either:

- A. A local limit exists for each pollutant discharged and the user was in compliance with each limit directly prior to, and during, the pass through or interference; or
- B. No local limit exists, but the discharge did not change substantially in nature or constituents from the user's prior discharge when the city was regularly in compliance with its NPDES permit, and in the case of interference, was in compliance with applicable sludge use or disposal requirements.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-20-3 Bypass

- A. For the purposes of this section:
 - 1. "Bypass" means the intentional diversion of wastestreams from any portion of a user's treatment facility.
 - 2. "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. A user may allow any bypass to occur which does not cause pretreatment standards or pretreatment requirements to be violated, 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. Bypass Notifications.
 - 1. If a user knows in advance of the need for a bypass, it shall submit prior notice to the director, at least ten days before the date of the bypass, if possible.
 - 2. A user shall submit oral notice to the director of an unanticipated bypass that exceeds applicable pretreatment standards within 24 hours from the time it becomes aware of the bypass. A written submission shall also be provided within five days of the time the user becomes aware of the bypass. The written submission shall contain a description of the bypass and its cause; the duration of the bypass, including exact dates and times, and, if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass. The director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- D. Bypass.
 - 1. Bypass is prohibited, and the director may take an enforcement action against a user for a bypass, unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c. The user submitted notices as required under paragraph (C) of this section.

-
2. The director may approve an anticipated bypass, after considering its adverse effects, if the director determines that it will meet the three conditions listed in paragraph (D)(1) of this section.

(Ord. No. 07-21 , § 3, 4-6-2021)

Article 16-21

MISCELLANEOUS PROVISIONS

Sections:

Section 16-21-1 Pretreatment Charges and Fees

The city may adopt reasonable fees for reimbursement of costs of setting up and operating the city's pretreatment program, which may include:

- A. Fees for wastewater discharge permit applications including the cost of processing such applications;
- B. Fees for monitoring, inspection, and surveillance procedures including the cost of collection and analyzing a user's discharge, and reviewing monitoring reports and certification statements submitted by users;
- C. Fees for reviewing and responding to accidental discharge procedures and construction;
- D. Fees for filing appeals;
- E. Fees to recover administrative and legal costs (not included in Section 16-21-1B associated with the enforcement activity taken by the director to address industrial user noncompliance; and
- F. Other fees as the city may deem necessary to carry out the requirements contained herein. These fees relate solely to the matters covered by this chapter and are separate from all other fees, fines, and penalties chargeable by the city.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-21-2 Recovery of Costs and Damages

In addition to the charges and fees included in Section 16-21-1, all users shall be financially responsible for all injury, damage, and/or loss suffered by any person as a result of any industrial discharge, by such user, which violates any categorical standard, pretreatment requirement, or permit condition enforced pursuant to this chapter. In particular, such user shall be liable for the:

- A. Personal injury suffered by any person, including the city, as a result of such discharge;
- B. Costs reasonably incurred by any person, including the city, in correcting, or otherwise mitigating, any adverse environmental impact which resulted from such discharge; and
- C. Economic loss and property damage suffered by any person, including the city, as a result of such discharge.

(Ord. No. 07-21 , § 3, 4-6-2021)

Section 16-21-3 Recovery of Extraordinary Expenses

The director is authorized to determine and bill any user for all extraordinary expenses reasonably incurred by the city in insuring user's compliance with the applicable requirements of this chapter. An extraordinary expense is any cost not otherwise reimbursed from the normal collection of sewer fees. Such extraordinary expenses include, but are not limited to, the costs in:

- A. Issuing permits;
- B. Conducting inspection, surveillance, and monitoring activities;
- C. Obtaining laboratory analyses of waste samples;
- D. Taking and pursuing enforcement actions against users not in compliance with the requirements of this chapter; and

Carrying out any measure needed for the protection of human health or safety, the environment, the POTW or any other property in order to correct or mitigate any harm caused by the violation of any categorical standard or pretreatment requirement.

(Ord. No. 07-21 , § 3, 4-6-2021)

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July 1, 2021

Mr. Trevor Baggione
Water Quality Division Director
Arizona Department of Environmental Quality
Water Quality Compliance Section
1110 West Washington Street, 5415B-1
Phoenix, Arizona 85007

Re: City of Buckeye Industrial Pretreatment Program Submission

Dear Mr. Baggione:

Subject to your office's approval, to facilitate the establishment of the City of Buckeye's Industrial Pretreatment Program ("IPP"), the City of Buckeye (the "City") amended its Code of Ordinances ("City Code"). This amendment included, among other things, new local limits of pollutants discharged to the City's sewer system.

As part of the City's program submission to your office, Code of Federal Regulations ("CFR"), Title 40, Chapter I, Subchapter N, Part 403.9(b) (40 CFR 403.9(b)), as adopted by the State of Arizona, requires a statement from the City Attorney that, as a publicly owned treatment works ("POTW"), the City is adequately authorized to carry out the IPP as required by state and federal regulations. In this regard, I have reviewed applicable sections of state and federal laws and regulations, including the applicable sections of the Arizona Revised Statutes ("A.R.S.") §§ 49-255 *et seq.*, the Arizona Administrative Code ("A.A.C.") Title 18, Chapter 9, Article 9, the Federal Water Pollution Control Act (Clean Water Act), as amended (the "Act") (33 U.S.C. 1251 *et seq.*), and 40 CFR Parts 401 and 403. I have also examined the ordinance identified as "City of Buckeye Code of Ordinances, Chapter 16-Sewer Utilities and Use of Public Sewers" (the "Sewer Code"), amending Buckeye City Code §§ 16-8 *et seq.*

The City's Sewer Code adequately carries out the programs described in A.R.S. §§ 49-255 *et seq.* and 40 CFR 403.8. Arizona Revised Statutes § 49-391 and the City's Sewer Code empower the City to apply and enforce the Act's applicable requirements and regulations. The Sewer Code authorizes the issuance of individual wastewater discharge permits or general permits; provides

for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires User reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established therein. The adoption thereof will, subject to your approval, adequately authorize the City to carry out and enforce the IPP.

Further, as required by 40 CFR 403.9(b), three additional areas of specific criteria must be addressed in this statement of opinion and legal authority. This statement does not provide an exhaustive listing of all City Code provisions that might apply; instead, it cites only such provisions necessary to demonstrate meeting each required criteria. Finally, this statement will not restate the City's IPP requirements but will merely abbreviate the relevant content. Please refer to the City Code sections referenced below for further particulars.

First, under 40 CFR 403.9(b)(1)(i), this statement must identify the provision of the legal authority under 40 CFR 403.8(f)(1) which provides the basis for each procedure under 40 CFR 403.8(f)(2). Those provisions under 40 CFR 403.8(f)(2) are:

40 CFR 403.8(f)(2)(i). City Code § 16-4-1 defines "Industrial User," or "User," as a source of Indirect Discharge, which means the introduction or pollutants into the POTW from any nondomestic source. Section 16-11-5 enables identification and location of all possible Industrial Users who might be subject to the City's IPP by requiring Users to register with the City's POTW Director and provide pertinent information regarding the User's operations and pollutants. Section 16-5-8 further provides that no building sewer will be connected to the POTW until it has been inspected and approved by the City. Section 16-5-9 then requires the City to keep a record of all such connections, along with Users' identifying information.

40 CFR 403.8(f)(2)(ii). City Code §§ 16-11-1, 16-13-1, 16-13-3, and 16-13-4 enable identifying the character and volume of pollutants contributed to the City's POTW by requiring baseline and periodic monitoring and reporting requirements for Industrial Users. Sections 16-13-5 and 16-13-6 enable such identification by requiring those Users to provide reports of changed conditions or potential problems.

40 CFR 403.8(f)(2)(iii). City Code § 16-12-2 sets out the content to be included in wastewater discharge permits, including applicable Pretreatment Standards and any applicable requirements under Sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. The type of permit issued and the contents therein provide each Significant Industrial User notice of its status and all requirements applicable to it due to such status.

40 CFR 403.8(f)(2)(iv). City Code §§ 16-13-1 and 16-13-4 require Users' baseline monitoring and 90-day compliance reports to include sampling and analysis of their wastewater discharge, the standards for which are established in 16-13-11 and 16-13-10.

40 CFR 403.8(f)(2)(v). City Code § 16-14-1 provides the Director the right to enter Users' premises to determine compliance with City Code requirements and any individual wastewater discharge permit or general permit or order issued. Users must provide the City access to all parts of their premises for inspection, sampling, records examination and copying, and the performance of any additional duties. Section 16-13-11 sets out sample collection and reporting requirements.

40 CFR 403.8(f)(2)(v)(A). Section 16-13-4 sets out the conditions for Industrial Users subject to a Categorical Pretreatment Standard to forego sampling of a pollutant regulated by a Categorical Pretreatment Standard.

40 CFR 403.8(f)(2)(v)(B). Sections 16-11-7 and 16-13-14 set out the conditions for annual certification of Users classified as Non-Significant Categorical Industrial Users.

40 CFR 403.8(f)(2)(v)(C). Section 16-13-4 sets out the conditions for Industrial Users subject to reduced reporting requirements.

40 CFR 403.8(f)(2)(vi). City Code § 16-10-3 empowers the Director to require Significant Industrial Users to develop and maintain an accidental discharge/slug discharge control plan or other action to control Slug Discharges, evaluate whether such a User needs a slug plan, and develop such a plan for any User.

40 CFR 403.8(f)(2)(vii). Various provisions of the City Code, including Sections 16-3-2, 16-9-1, 16-17-2, and 16-17-4, and Article 16-16, collectively empower the Director to investigate and enforce against instances of noncompliance with Pretreatment Standards.

40 CFR 403.8(f)(2)(viii). Article 16-16 of the City Code empowers the Director to publish annually, in a newspaper of general circulation that provides meaningful public notice within the jurisdictions served by the POTW, a list of the Users which, at any time during the previous 12 months, were in Significant Noncompliance with applicable Pretreatment Standards and Requirements.

Second, under 40 CFR 403.9(b)(1)(ii), this statement must identify how the POTW will implement the program requirements outlined in 40 CFR 403.8, including how the POTW will apply Pretreatment Standards to individual Industrial Users.

The City of Buckeye will implement its Industrial Pretreatment Program requirements and apply Pretreatment Standards to all Users through individual wastewater discharge permits or general permits and direct enforcement of its Sewer Utilities and Use of Public Sewers Code.

Third, under 40 CFR 403.9(b)(1)(iii), this statement must identify how the POTW will ensure compliance with Pretreatment Standards and requirements and enforce them in the event of noncompliance by Industrial Users.

The City of Buckeye ensures compliance with pretreatment standards and requirements through an inspection and sampling program authorized under City Code § 16-5-8, which provides that no building sewer will be connected to the POTW until it has been inspected and approved by the City. Sections 16-13-1 and 16-13-4 require Users' baseline monitoring and 90-day compliance reports to include sampling and analysis of their wastewater discharge. The POTW may enforce against those violating the approved program through various administrative and legal proceedings, including City Code §§ 16-17-1 through 4, 16-17-7, 16-18-1 through 3, and 16-19-1. The POTW will order those violating the approved program to "Cease and Desist" under City Code § 16-17-5. Violators are also subject to sanitary sewer service termination (Section 16-17-5), revocation (Section 16-12-6), and emergency suspension (Section 16-17-6).

A copy of the City's Code of Ordinances for the IPP and the City's Enforcement Response Plan is provided to ADEQ on this date, July 1, 2021. On behalf of the City, we believe the information contained herein, coupled with the documents previously provided to the Arizona Department of Environmental Quality ("ADEQ"), satisfies the requirements governing the approval necessary from ADEQ for the City to implement its IPP.

Very truly yours,



Shiela B. Schmidt
For the Firm

SBS:cal

cc: Chris Montague-Breakwell

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Appendix A – Local Limits Sampling Results

Central Buckeye WWTP

Table CB A-1 Central Buckeye WWTP and Collection System Sampling Results

Table CB A-2 Central Buckeye WWTP and Collection System Biosolids Sampling Results

Sundance WRF

Table SD A-1 Sundance WRF and Collection System Sampling Results

Table SD A-2 Sundance Ranch WRF and Collection System Biosolids Sampling Results

Appendix B – Identification of Pollutants of Concern

Central Buckeye WWTP

Table CB B-1 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > Most Stringent Effluent Criterion

Table CB B-2 Central Buckeye WWTP Pollutants of Concern: Effluent Concentration > ½ Most Stringent Effluent Criterion

Table CB B-3 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > ½ Most Stringent Inhibition Criterion

Table CB B-4 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > Most Stringent Health & Safety Criterion

Table CB B-5 Central Buckeye WWTP Pollutants of Concern: TCLP Concentration > ½ TCLP Limitation

Sundance WRF

Table SD B-1 Sundance WRF Pollutants of Concern: Influent Concentration > Most Stringent Effluent Criterion

Table SD B-2 Sundance WRF Pollutants of Concern: Effluent Concentration > ½ Most Stringent Effluent Criterion

Table SD B-3 Sundance WRF Pollutants of Concern: Influent Concentration > ½ Most Stringent Inhibition Criterion

Table SD B-4 Sundance WRF Pollutants of Concern: Influent Concentration > Most Stringent Health & Safety Criterion

Table SD B-5 Sundance WRF Pollutants of Concern: TCLP Concentration > ½ TCLP Limitation

Festival Ranch WRF

Table FR B-1 Festival Ranch WRF Pollutants of Concern: Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Tartesso WRF

Table T B-1 Tartesso WRF Pollutants of Concern: Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Appendix C - Flow and Load Analyses

C-1 Flow and Load Calculations and Mass Balances

Central Buckeye WWTP

Table CB C-1 Central Buckeye WWTP Influent and Collection System Pollutant Concentrations

Table CB C-2 Central Buckeye WWTP Influent and Collection System Pollutant Loads

Table CB C-3 Central Buckeye WWTP Collection System—to—Influent Mass Balance

Table CB C-4 Central Buckeye WWTP Internal Dry Stream—to—Wet Stream Mass Balance

Sundance WRF

Table SD C-1 Sundance WRF Influent and Collection System Pollutant Concentrations

Table SD C-2 Sundance WRF Influent and Collection System Pollutant Loads

Table SD C-3 Sundance WRF Collection System—to—Influent Mass Balance

Table SD C-4 Sundance WRF Internal Dry Stream—to—Wet Stream Mass Balance

Appendix D—Removal Efficiencies

Central Buckeye WWTP

Table CB D-1 Central Buckeye WWTP Removal Efficiency Calculations

Table CB D-2 Central Buckeye WWTP Removal Efficiency Summary

Sundance WRF

Table SD D-1 Sundance WRF Removal Efficiency Calculations

Table SD D-2 Sundance WRF Removal Efficiency Summary

Appendix E—MAHL Analyses

E-1 Definitions

E-2 Literature Review of Nitrification Inhibition Threshold Levels for Copper, Nickel, and Zinc

E-3 Example of MAHL Analysis – Arsenic

E-4 Detailed MAHL Calculations

Table E-4.1 MAHL Analyses: Equations and Abbreviations

Central Buckeye WWTP

Table CB E-4.2.1 Central Buckeye WWTP MAHL Analyses: Concentration Data and Removal Efficiencies

Table CB E-4.2.2 Central Buckeye WWTP MAHL Analyses: Flows

Table CB E-4.2.3 Central Buckeye WWTP MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Permits

Table CB E-4.2.4 Central Buckeye WWTP MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Standards

Table CB E-4.2.5 Central Buckeye WWTP MAHL Analyses: Sludge/Biosolids-Quality Based Allowable Headworks Loadings (AHLs)
Table CB E-4.2.6 Central Buckeye WWTP MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)
Table CB E-4.2.8 Central Buckeye WWTP MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loading (MAHLs)
Table CB E-4.2.6 Central Buckeye WWTP MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Sundance WRF

Table SD E-4.2.1 Sundance WRF MAHL Analyses: Concentration Data and Removal Efficiencies
Table SD E-4.2.2 Sundance WRF MAHL Analyses: Flows
Table SD E-4.2.3 Sundance WRF MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Permits
Table SD E-4.2.4 Sundance WRF MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Standards
Table SD E-4.2.5 Sundance WRF MAHL Analyses: Sludge/Biosolids-Quality Based Allowable Headworks Loadings (AHLs)
Table SD E-4.2.6 Sundance WRF MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)
Table SD E-4.2.8 Sundance WRF MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loading (MAHLs)
Table SD E-4.2.6 Sundance WRF MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Appendix F—Local Limit Analyses

F-1 Planned Land Use and Projected Water Usage

CB Central Buckeye WWTP

Table CB F-1 Central Buckeye WWTP Planned Land Use and Projected Water Usage

SD Sundance WRF

Table SD F-1 Sundance WRF Planned Land Use and Projected Water Usage

F-2 Example of MAIL Analysis and UCL Calculation – Arsenic

F-3 MAIL and UCL Calculations – Toxic Pollutants

CB Central Buckeye WWTP

Table CB F-3 Central Buckeye WWTP MAIL and UCL Calculations – Toxic Pollutants

SD Sundance WRF

Table SD F-3.1 Sundance WRF MAIL and UCL Calculations at 3% SIU Flow – Toxic Pollutants

Table SD F-3.2 Sundance WRF MAIL and UCL Calculations at 12% SIU Flow – Toxic Pollutants

F-4 Examples of User-Specific Allocations for Nickel and BOD

F-4.1 Nickel

Table 4.1.1 Central Buckeye WWTP Nickel Allocation Example: Uniform Concentration Allocation

Table 4.1.2 Central Buckeye WWTP Nickel Allocation Example: User-Specific Allocation

F-4.2 BOD

Table 4.2.1 Sundance WRF BOD Allocation Example: Application of Prohibition Level of 300 mg/L

Table 4.2.2 Sundance WRF BOD Allocation Example: User-Specific Allocation

F-5 Westside City Local Limit Comparison

Table F-5 Westside City Local Limit Comparison

F-6 Example Best Management Practices for Oil and Grease

Appendix A – Local Limits Sampling Results

Central Buckeye WWTP

Table CB A-1 Central Buckeye WWTP and Collection System Sampling Results

Table CB A-2 Central Buckeye WWTP and Collection System Biosolids Sampling Results

Sundance WRF

Table SD A-1 Sundance WRF and Collection System Sampling Results

Table SD A-2 Sundance Ranch WRF and Collection System Biosolids Sampling Results

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
ARSENIC (METHOD 200.8) (b)					
Day 1	0.0045	< 0.0043	< 0.0043	0.0056	0.0047
Day 2	< 0.0043	< 0.0043	0.0046	0.0064	< 0.0043
Day 3	< 0.0043	< 0.0043	< 0.0043	0.0096	0.0046
Day 4	< 0.0043	< 0.0043	0.0087	0.007	< 0.0043
Day 5	< 0.0043	< 0.0043	0.0047	0.0071	< 0.0043
Day 6	0.0052	< 0.0043	< 0.0043	0.0075	< 0.0043
Day 7	< 0.0043	< 0.0043	< 0.0043	0.0082	< 0.0043
Day 8	0.0046	< 0.0043	< 0.0043	0.009	
Day 9				0.0067	
Maximum	0.0052	ND	0.0087	0.0096	0.0047
Average	0.0045	ND	0.0049	0.0075	0.0044
BORON (METHOD 200.7)					
Day 1	0.78	0.96	0.88	0.15	0.88
Day 2	0.81	0.87	0.98	0.14	0.86
Day 3	0.82	0.87	0.89	0.23	0.86
Day 4	0.86	0.82	2	0.22	1
Day 5	0.87	0.9	1	0.13	0.98
Day 6	1	1	0.34	0.15	0.89
Day 7	1	0.93	0.92	0.28	0.89
Day 8	0.84	0.84	1.1	0.16	
Day 9				0.053	
Maximum	1.00	1.00	2.00	0.28	1.00
Average	0.87	0.90	1.01	0.17	0.91
CADMIUM (METHOD 200.8) (b)					
Day 1	0.0001	< 0.0001	0.0002	0.0001	0.0002
Day 2	0.0001	0.0001	0.0002	0.0002	< 0.0001
Day 3	0.0001	< 0.0001	0.0002	0.0002	0.0001
Day 4	0.0002	< 0.0001	0.0001	0.0002	< 0.0001
Day 5	0.0003	< 0.0001	0.0002	0.0002	0.0001
Day 6	0.0001	< 0.0001	0.0002	0.0002	0.0001
Day 7	< 0.0001	< 0.0001	0.0001	0.0003	< 0.0001
Day 8	0.0001	< 0.0001	0.0001	0.0001	
Day 9				0.0002	
Maximum	0.0003	0.0001	0.0002	0.0003	0.0002
Average	0.0001	0.0001	0.0002	0.0002	0.0001

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)					
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>	
CHLORIDE (METHOD 300.0)						
Day 1	771	613	665	60.3	570	
Day 2	584	578	684	66.4	559	
Day 3	690	560	646	116	540	
Day 4	559	578	1050	122	589	
Day 5	551	584	756	68.9	582	
Day 6	633	626	681	64	562	
Day 7	628	587	638	58.1	559	
Day 8	554	571	686	59.6		
Day 9				59.2		
Maximum	771	626	1050	122	589	
Average	621	587	726	75	566	
TOTAL CHROMIUM (METHOD 200.7)						
Day 1	0.015	0.0048	0.027	0.008	0.024	
Day 2	0.014	0.0038	0.027	0.008	0.0066	
Day 3	0.017	0.0046	0.022	0.011	0.01	
Day 4	0.015	0.0032	0.031	0.0064	0.0062	
Day 5	0.018	0.0034	0.022	0.0076	0.013	
Day 6	0.017	0.004	0.0086	0.0094	0.01	
Day 7	0.013	0.0034	0.018	0.0082	0.0072	
Day 8	0.018	< 0.0032	0.022	0.01		
Day 9				0.004		
Maximum	0.018	0.0048	0.031	0.011	0.024	
Average	0.016	0.0038	0.022	0.0081	0.011	
COPPER (METHOD 200.7) (b)						
Day 1	0.031	< 0.013	0.024	0.048	0.041	
Day 2	0.019	< 0.013	0.024	0.035	< 0.0032	
Day 3	0.029	< 0.013	0.018	0.05	0.016	
Day 4	<	0.013	< 0.013	0.02	0.051	< 0.0032
Day 5	0.027	< 0.013	0.023	0.04	0.016	
Day 6	0.024	< 0.013	< 0.013	0.056	0.019	
Day 7	0.019	< 0.013	0.015	0.038	< 0.0032	
Day 8	0.038	< 0.013	0.022	0.056		
Day 9				0.023		
Maximum	0.038	ND	0.024	0.056	0.041	
Average	0.025	ND	0.020	0.044	0.015	

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
CYANIDE (METHOD 4500CN-E) (b)					
Day 1	< 0.003	0.005	< 0.003	< 0.003	0.013
Day 2	< 0.003	0.007	< 0.003	< 0.003	0.004
Day 3	0.003	0.009	0.003	0.004	0.003
Day 4	0.004	0.007	0.004	< 0.003	0.003
Day 5	0.003	0.005	0.004	0.004	0.003
Day 6	0.005	0.004	< 0.003	0.007	0.003
Day 7	0.004	0.004	< 0.003	0.005	< 0.003
Day 8	< 0.003	0.005	< 0.003	< 0.003	
Day 9				< 0.003	
Maximum	0.005	0.009	0.004	0.007	0.013
Average	0.004	0.006	0.003	0.004	0.005
FLUORIDE (METHOD 300.0)					
Day 1	4.45	1.74	1.74	4.16	1.68
Day 2	5.73	1.68	1.9	4.47	1.67
Day 3	3.97	1.68	1.77	3.2	1.68
Day 4	6.29	1.67	2.74	4.89	1.75
Day 5	5.9	1.71	4.14	7.74	1.73
Day 6	5.78	1.75	1.49	7.59	1.64
Day 7	6.64	1.63	3.58	5.21	1.59
Day 8	1.48	1.54	1.75	5.99	
Day 9				3.52	
Maximum	6.64	1.75	4.14	7.74	1.75
Average	5.03	1.68	2.39	5.20	1.68

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
LEAD (METHOD 200.8) (2)					
Day 1	0.001	< 0.0003	0.0009	0.0021	0.0021
Day 2	0.001	< 0.0003	0.0007	0.002	0.0007
Day 3	0.0013	< 0.0003	0.0008	0.012	0.0011
Day 4	0.0012	0.0004	0.0007	0.0032	0.0005
Day 5	0.0013	< 0.0003	0.0012	0.0028	0.0009
Day 6	0.0011	< 0.0003	0.001	0.0039	0.0011
Day 7	0.0008	< 0.0003	0.0005	0.0039	0.0007
Day 8	0.0016	0.0003	0.0007	0.0039	
Day 9				0.007	
Maximum	0.0016	0.0004	0.0012	0.012	0.0021
Average	0.0012	0.0003	0.0008	0.0045	0.0010
MERCURY (METHOD 245.1) (b)					
Day 1	< 0.00009	< 0.00009	< 0.00009	0.0031	< 0.00009
Day 2	< 0.00009	< 0.00009	< 0.00009	0.0014	< 0.00009
Day 3	< 0.00009	< 0.00009	< 0.00009	0.0009	< 0.00009
Day 4	< 0.00009	< 0.00009	< 0.00009	0.0012	< 0.00009
Day 5	< 0.00009	< 0.00009	< 0.00009	0.0004	< 0.00009
Day 6	< 0.00009	< 0.00009	0.00009	< 0.00009	< 0.00009
Day 7	< 0.00009	< 0.00009	< 0.00009	< 0.00009	< 0.00009
Day 8	< 0.00009	< 0.00009	< 0.00009	0.0009	
Day 9				0.0016	
Maximum	ND	ND	0.00009	0.0031	ND
Average	ND	ND	0.00009	0.00108	ND
NICKEL (METHOD 200.7)					
Day 1	0.0066	0.0044	< 0.0036	0.0052	0.007
Day 2	< 0.0036	0.0036	0.0072	0.0042	< 0.0036
Day 3	< 0.0036	< 0.0036	< 0.0036	0.011	< 0.0036
Day 4	0.0038	< 0.0036	< 0.0036	0.0042	< 0.0036
Day 5	< 0.0036	< 0.0036	< 0.0036	< 0.0036	< 0.0036
Day 6	< 0.0036	< 0.0036	< 0.0036	< 0.0036	< 0.0036
Day 7	< 0.0036	< 0.0036	< 0.0036	< 0.0036	< 0.0036
Day 8	< 0.0036	< 0.0036	< 0.0036	< 0.0036	
Day 9				< 0.0036	
Maximum	0.0066	0.0044	0.0072	0.0110	0.0070
Average	0.0040	0.0037	0.0041	0.0047	0.0041

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
SELENIUM (METHOD 200.8) (b)					
Day 1	0.0025	< 0.0011	0.0028	0.0008	0.0027
Day 2	0.0024	0.0022	0.0067	0.0014	0.0019
Day 3	0.0019	0.0015	0.0035	0.0011	0.0028
Day 4	0.0035	0.0018	0.01	0.0011	0.0034
Day 5	0.0034	0.0026	0.0049	0.0012	0.0031
Day 6	0.0038	0.0031	0.0051	0.0016	0.0026
Day 7	0.0031	0.0024	0.0042	0.0018	0.0029
Day 8	0.0036	0.0024	0.0061	0.0019	
Day 9				0.002	
Maximum	0.0038	0.0031	0.010	0.0020	0.0034
Average	0.0030	0.0021	0.005	0.0014	0.0028
TOTAL DISSOLVED SOLIDS (METHOD 2540.C) (c)					
Day 1	1580	1370	2610	600	2990
Day 2	1520	1890	1520	526	1230
Day 3	1960	1220	1500	872	1540
Day 4	1430	1180	2510	668	1090
Day 5	1290	1170	2090	512	1460
Day 6	1510	1440	1980	564	3020
Day 7	1650	1670	1730	588	1360
Day 8	1650	1470		544	
Day 9				656	
Maximum	1960	1890	2610	872	3020
Average	1574	1426	1991	614	1813
ZINC (METHOD 200.7)					
Day 1	0.16	0.046	0.19	0.14	0.25
Day 2	0.13	0.046	0.19	0.2	0.1
Day 3	0.19	0.055	0.15	-	0.13
Day 4	0.2	0.05	0.12	0.17	0.078
Day 5	0.16	0.051	0.15	0.12	0.12
Day 6	0.16	0.05	0.094	0.19	0.12
Day 7	0.11	0.046	0.13	0.15	0.087
Day 8	0.17	0.045	0.15	0.15	
Day 9				0.071	
Maximum	0.20	0.055	0.19	0.20	0.25
Average	0.16	0.049	0.15	0.15	0.13

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
BOD5 (METHOD SM5210B)					
Day 1	280	2	394	326	88
Day 2	194	2	317	447	74
Day 3	305	4	375	306	12
Day 4	396	2	289	462	36
Day 5	306	3	301	424	65
Day 6	240	3	396	586	88
Day 7	210	3	380	349	35
Day 8	289	2	256	418	
Day 9				464	
Maximum	396	4	396	586	88
Average	278	3	339	420	57
COD (METHOD EPA410.4)					
Day 1	370	31	730	587	224
Day 2	460	29	691	1070	164
Day 3	487	26	608	629	731
Day 4	612	28	578	1090	184
Day 5	2050	31	616	760	183
Day 6	587	32	750	1160	404
Day 7	481	30	538	700	122
Day 8	613	29	586	985	
Day 9				931	
Maximum	2050	32	750	1160	731
Average	708	30	637	879	287
TSS (METHOD SM2540D) (b)					
Day 1	260	2	214	218	354
Day 2	158	< 1	218	374	74
Day 3	316	< 1	196	366	104
Day 4	258	< 1	144	302	60
Day 5	196	< 1	250	274	152
Day 6	184	1	296	274	174
Day 7	76	6	234	194	88
Day 8	242	1	188	386	
Day 9				414	
Maximum	316	6	296	414	354
Average	211	2	218	311	144

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
AMMONIA AS NITROGEN (METHOD EPA350.1) (b)					
Day 1	49.8	< 0.126	26.3	15.1	0.486
Day 2	55.2	< 0.126	39.4	32.9	0.546
Day 3	49.8	< 0.126	39.3	28.5	0.275
Day 4	46.3	0.228	37.2	51.4	0.582
Day 5	53.6	0.361	61.4	36.4	1.36
Day 6	47.1	2.3	56	71.8	0.726
Day 7	47.1	< 0.126	63.9	17.4	0.501
Day 8	0.751	< 0.126	32.4	41.4	
Day 9				55.2	
Maximum	55.2	2.3	63.9	71.8	1.36
Average	43.7	0.44	44.5	38.9	0.64
NITRATE AS NITROGEN (METHOD 300.0) (b)					
Day 1	0.1	3.28	0.46	1.55	0.81
Day 2	0.1	3.58	0.1	1.66	0.8
Day 3	0.15	3.25	< 0.04	1.86	1.08
Day 4	0.11	3.84	4.74	1.6	0.84
Day 5	0.12	3.31	< 0.04	0.57	0.88
Day 6	0.12	1.9	0.13	1.61	1.15
Day 7	0.48	2.23	< 0.04	0.71	0.64
Day 8	< 0.04	3.75	1.16	0.97	
Day 9				< 0.04	
Maximum	0.48	3.84	4.74	1.86	1.15
Average	0.15	3.14	0.84	1.17	0.89
NITRITE AS NITROGEN (METHOD 300.0) (b)					
Day 1	< 0.01	0.02	0.34	< 0.01	0.08
Day 2	0.02	< 0.01	0.1	0.47	0.05
Day 3	0.03	0.03	< 0.01	0.23	0.08
Day 4	0.02	< 0.01	0.23	< 0.01	0.06
Day 5	0.02	0.13	0.65	0.01	0.07
Day 6	< 0.01	0.18	< 0.01	0.09	0.07
Day 7	0.02	< 0.01	0.34	< 0.01	0.06
Day 8	< 0.01	0.04	< 0.01	0.01	
Day 9			0.23	0.01	
Maximum	0.03	0.18	0.65	0.47	0.08
Average	0.02	0.054	0.21	0.094	0.067

Table CB A-1. Central Buckeye WWTP and Collection System Sampling Results

Date (a)	Concentration (mg/L)				
	<i>Influent with Belt Press</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Belt Press Return Stream</i>
TOTAL KJELDAHL NITROGEN (METHOD 351.2) (b)					
Day 1	66.7	1.5	52.8	46.9	22.2
Day 2	71.2	1.55	67	77.8	17
Day 3	69.7	1.6	57.4	42	30.2
Day 4	70.1	1.52	78.2	66.9	11.6
Day 5	68.1	2.62	65.9	71.7	16.2
Day 6	77.7	3.99	63.5	74.6	71.3
Day 7	59.7	1.58	62.2	66.8	11.1
Day 8	67.7	1.47	57.1	80	
Day 9				79.6	
Day 10					
Maximum	77.7	3.99	78.2	80.0	71.3
Average	68.9	1.98	63.0	67.4	25.7
TOTAL NITROGEN (METHOD 351.2)					
Day 1	66.8	4.8	57.4	48.4	23.1
Day 2	71.3	5.13		79.9	17.8
Day 3	69.9	4.88		44.1	31.4
Day 4	70.2	5.36	83.6	68.5	12.5
Day 5	68.2	6.07	65.9	72.3	17.1
Day 6	77.8	6.07	64	76.3	72.5
Day 7	60.2	3.81	62.2	67.5	11.8
Day 8	67.7	5.26	58.5	81	
Day 9				79.6	
Maximum	77.8	6.07	83.6	81.0	72.5
Average	69.0	5.17	65.3	68.6	26.6

Notes

a. Influent samples were collected from 3/19/2019 through 3/26/2019; effluent samples were collected from 3/20/2019 through 3/27/2019: 12 hours after influent to reflect detention time of WWTP; residential samples were collected from 3/19/2019 through 3/21/2019 and from 3/25/2019 through 3/31/2019; mixed commercial samples were collected from 3/19/2019 through 3/27/19.

b. If all sample results at a given location were reported as non-detected, value is represented as ND. If one or more sample results were reported as detected, the value of the method detection level was substituted for non-detected results.

c. Total Dissolved Solids: Relative percent difference of sample collected at residential location on 3/31/2019 exceeded laboratory acceptance test.

Table CB A-2. Central Buckeye WWTP
Biosolids Sampling Results

Date	Concentration (mg/kg)
ARSENIC	
3/6/2019	1.2
3/21/2019	1.5
3/23/2019	1.4
Maximum	1.5
Average	1.4
BORON	
3/21/2019	12
3/23/2019	11
Maximum	12
Average	12
CADMIUM	
3/6/2019	<
3/21/2019	0.14
3/23/2019	0.13
Maximum	0.14
Average	0.135
CHROMIUM (TOTAL)	
3/6/2019	13
3/21/2019	14
3/23/2019	13
Maximum	14
Average	13
LEAD	
3/6/2019	<
3/21/2019	1.2
3/23/2019	1.1
Maximum	1.2
Average	1.2
MERCURY	
3/6/2019	<
3/21/2019	0.043
3/23/2019	0.061
Maximum	0.061
Average	0.052
NICKEL	
3/21/2019	1.8
3/23/2019	1.5
Maximum	1.8
Average	1.7

Table CB A-2. Central Buckeye WWTP
Biosolids Sampling Results

Date	Concentration (mg/kg)
SELENIUM	
3/6/2019	1.8
3/21/2019	1.6
3/23/2019	1.5
Maximum	1.8
Average	1.6
ZINC	
3/21/2019	100
3/23/2019	98
Maximum	100
Average	99
NITROGEN - NITRATE (NO ₃ -N) + NITRITE (NO ₂ -N)	
3/21/2019	ND
3/23/2019	1.59
Maximum	1.59
Average	1.59
NITROGEN - NITRITE (NO ₂ -N)	
3/21/2019	0.3
3/23/2019	0.6
Maximum	0.6
Average	0.45
NITROGEN - TOTAL KJELDAHL (TKN)	
3/21/2019	13100
3/23/2019	12300
Maximum	13100
Average	12700
TOTAL SOLIDS	
3/6/2019	15
4/4/2019	16
Maximum	16
Average	15.5

Note:

Averages do not include non-detects

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
ARSENIC (METHOD 200.8) (b)				
Day 1	< 0.0043			
Day 2	0.0053	< 0.0043	0.0092	0.0063
Day 3	0.0043	0.0052	0.0061	0.0061
Day 4		0.0051	0.0053	0.0061
Day 5	0.0047	0.0045	0.0064	0.0058
Day 6	0.0052	0.0046		0.0065
Day 7	0.0061	0.0061		0.0051
Day 8	< 0.0043	< 0.0043	0.005	0.005
Day 9	0.0062	0.0048		0.0073
Day 10			0.0066	
Day 11			0.0061	
Day 12			0.0068	
Day 13			0.006	
Day 14			0.0076	
Maximum	0.0062	0.0061	0.0092	0.0073
Average	0.0051	0.0049	0.0065	0.0060
BORON (METHOD 200.7)				
Day 1	0.7			
Day 2	0.83	0.78	1.3	0.62
Day 3	0.71	0.76	0.57	0.86
Day 4		0.76	0.7	0.6
Day 5	0.75	0.78	0.75	0.6
Day 6	0.7	0.78		0.64
Day 7	0.67	0.73		0.58
Day 8	0.7	0.69	0.54	0.6
Day 9	0.79	0.69		0.59
Day 10			0.63	
Day 11			0.97	
Day 12			0.75	
Day 13			0.91	
Day 14			0.62	
Maximum	0.83	0.78	1.30	0.86
Average	0.73	0.75	0.77	0.64

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
CADMIUM (METHOD 200.8) (b)				
Day 1	< 0.0001			
Day 2	0.0001	< 0.0001	0.0002	0.0001
Day 3	0.0001	< 0.0001	0.0002	< 0.0001
Day 4		< 0.0001	0.0002	0.0001
Day 5	0.0001	< 0.0001	0.0001	< 0.0001
Day 6	0.0001	< 0.0001		< 0.0001
Day 7	0.0001	< 0.0001		< 0.0001
Day 8	0.0001	< 0.0001	0.0002	< 0.0001
Day 9	0.0001	< 0.0001		< 0.0001
Day 10			0.0002	
Day 11			0.0001	
Day 12			0.0001	
Day 13			< 0.0001	
Day 14				
Maximum	0.0001	ND	0.0002	0.0001
Average	0.00010	ND	0.0002	0.0001
CHLORIDE (METHOD 300.0)				
Day 1	232			
Day 2	380	387	356	386
Day 3	330	401	295	554
Day 4		0.3	33	< 0.07
Day 5	320	373	122	271
Day 6	291	330		404
Day 7	283	322		484
Day 8	242	321	117	426
Day 9	389	428		456
Day 10			141	
Day 11			113	
Day 12			345	
Day 13			340	
Day 14			331	
Maximum	389	428	356	554
Average	308	320	219	373

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
TOTAL CHROMIUM (METHOD 200.7)				
Day 1	0.022			
Day 2	0.024	0.0048	0.049	0.027
Day 3	0.024	0.0046	0.023	0.027
Day 4		0.0046	0.026	0.027
Day 5	0.024	0.0048	0.03	0.027
Day 6	0.022	0.0052		0.029
Day 7	0.022	0.0080		0.028
Day 8	0.024	0.0076	0.029	0.027
Day 9	0.029	0.0068		0.029
Day 10			0.027	
Day 11			0.033	
Day 12			0.027	
Day 13			0.027	
Day 14			0.026	
Maximum	0.029	0.0080	0.049	0.029
Average	0.024	0.0058	0.030	0.028
COPPER (METHOD 200.7) (b)				
Day 1	0.038			
Day 2	0.042	< 0.013	0.046	0.081
Day 3	0.055	< 0.013	0.055	0.09
Day 4		< 0.013	0.057	0.084
Day 5	0.051	0.048	0.065	0.083
Day 6	0.045	< 0.013		0.088
Day 7	0.038	< 0.013		0.082
Day 8	0.038	< 0.013	0.053	0.09
Day 9	0.046	< 0.013		0.089
Day 10			0.056	
Day 11			0.064	
Day 12			0.061	
Day 13			0.064	
Day 14			0.07	
Maximum	0.055	0.048	0.070	0.090
Average	0.044	0.017	0.059	0.086

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
CYANIDE (METHOD 4500CN-E) (b)				
Day 1	< 0.003			
Day 2	< 0.003	< 0.003	0.009	< 0.003
Day 3	0.003	< 0.003	< 0.003	< 0.003
Day 4		0.003	< 0.003	< 0.003
Day 5	< 0.003	0.003	0.003	< 0.003
Day 6	0.003	0.003		< 0.003
Day 7	< 0.003	< 0.003		0 0.003
Day 8	< 0.003	< 0.003	0.003	< 0.003
Day 9	< 0.003	< 0.003		< 0.003
Day 10			< 0.003	
Day 11			0.003	
Day 12			< 0.003	
Day 13			0.003	
Day 14			0.003	
Maximum	0.003	0.003	0.009	0.003
Average	0.003	0.003	0.004	0.003
FLUORIDE (METHOD 300.0)				
Day 1	2.04			
Day 2	1.82	1.88	2.98	1.81
Day 3	1.7	1.93	1.77	1.68
Day 4		< 0.02	0.18	< 0.02
Day 5	1.73	1.86	1.96	1.32
Day 6	1.73	1.9		1.86
Day 7	1.77	1.91		1.82
Day 8	1.74	1.89	1.93	1.24
Day 9	1.93	1.83		1.77
Day 10			2.06	
Day 11			1.77	
Day 12			1.8	
Day 13			1.78	
Day 14			1.78	
Maximum	2.04	1.93	2.98	1.86
Average	1.81	1.65	1.80	1.44

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
LEAD (METHOD 200.8) (b)				
Day 1	0.0007			
Day 2	0.0011	< 0.0003	0.0007	0.0009
Day 3	0.001	< 0.0003	0.0008	0.0012
Day 4		< 0.0003	0.0009	0.001
Day 5	0.001	0.003	0.0014	0.001
Day 6	0.001	< 0.0003		0.0018
Day 7	0.0007	< 0.0003		< 0.0003
Day 8	0.0007	< 0.0003	0.0007	0.0008
Day 9	0.0009	< 0.0003		0.001
Day 10			0.0009	
Day 11			0.0011	
Day 12			0.0006	
Day 13			0.001	
Day 14			0.0009	
Maximum	0.0011	0.003	0.0014	0.0018
Average	0.0009	0.0006	0.0009	0.0010
MERCURY (METHOD 245.1) (b)				
Day 1	< 0.00009			
Day 2	0.0001	< 0.00009	< 0.00009	< 0.00009
Day 3	0.0001	< 0.00009	0.0002	0.0001
Day 4		0.0002	< 0.00009	0.0001
Day 5	< 0.00009	< 0.00009	0.0002	< 0.00009
Day 6	0.0001	< 0.00009		< 0.00009
Day 7	0.0002	< 0.00009		< 0.00009
Day 8	0.0002	< 0.00009	< 0.00009	< 0.00009
Day 9	0.0001	< 0.00009		< 0.00009
Day 10			< 0.00009	
Day 11			< 0.00009	
Day 12			< 0.00009	
Day 13			< 0.00009	
Day 14			< 0.00009	
Maximum	0.0002	0.0002	0.0002	0.0001
Average	0.0001	0.0001	0.00011	0.00009

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
NICKEL (METHOD 200.7)				
Day 1	< 0.0036			
Day 2	0.0048	< 0.0036	< 0.0036	0.0056
Day 3	0.004	< 0.0036	< 0.0036	0.006
Day 4		< 0.0036	< 0.0036	0.006
Day 5	< 0.0036	< 0.0036	0.005	0.0072
Day 6	< 0.0036	< 0.0036		0.0062
Day 7	0.0039	< 0.0036		< 0.0036
Day 8	< 0.0036	< 0.0036	< 0.0036	0.0052
Day 9	0.0042	< 0.0036		0.0068
Day 10			< 0.0036	
Day 11			< 0.0036	
Day 12			< 0.0036	
Day 13			< 0.0036	
Day 14			< 0.0036	
Maximum	0.0048	ND	0.005	0.0072
Average	0.0039	ND	0.0037	0.0058
SELENIUM (METHOD 200.8) (b)				
Day 1	0.0023			
Day 2	0.0029	< 0.0011	0.0039	0.0021
Day 3	0.0024	0.0014	0.0033	0.0024
Day 4		0.0012	0.0019	0.0023
Day 5	0.0031	< 0.0011	0.002	0.0018
Day 6	0.0025	< 0.0011		0.0014
Day 7	0.0027	0.0013		< 0.0011
Day 8	0.0018	< 0.0011	0.0019	0.0019
Day 9	0.002	< 0.0011		0.0027
Day 10			0.0036	
Day 11			0.0024	
Day 12			0.0082	
Day 13			0.0014	
Day 14			0.0026	
Maximum	0.0031	0.0014	0.0082	0.0027
Average	0.0025	0.0012	0.0031	0.0020

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
TOTAL DISSOLVED SOLIDS (METHOD 2540.C)				
Day 1	774			
Day 2	1040	963	1320	1080
Day 3	851	1050	926	1420
Day 4		948	808	923
Day 5	900	1010	618	1000
Day 6	980	1000		1260
Day 7	793	804		1500
Day 8	760	866	636	1250
Day 9	1180	1020		1260
Day 10			866	
Day 11			782	
Day 12			1020	
Day 13			920	
Day 14			936	
Maximum	1180	1050	1320	1500
Average	910	958	883	1212
ZINC (METHOD 200.7)				
Day 1	0.14			
Day 2	0.13	0.046	0.13	0.1
Day 3	0.14	0.048	0.16	0.11
Day 4		0.053	0.17	0.1
Day 5	0.14	0.079	0.27	0.097
Day 6	0.14	0.059		0.11
Day 7	0.12	0.051		0.086
Day 8	0.14	0.051	0.19	0.1
Day 9	0.14	0.043		0.093
Day 10			0.18	
Day 11			0.3	
Day 12			0.16	
Day 13			0.18	
Day 14			0.21	
Maximum	0.14	0.079	0.30	0.11
Average	0.14	0.054	0.20	0.10

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
BOD5 (METHOD SM5210B)				
Day 1	336			
Day 2	345	5	334	732
Day 3	321	2	315	686
Day 4		2	374	764
Day 5	395	2	323	672
Day 6	299	2		594
Day 7	257	3		724
Day 8	326	2	478	672
Day 9	297	2		647
Day 10			321	
Day 11			424	
Day 12			350	
Day 13			516	
Day 14			427	
Maximum	395	5	516	764
Average	322	3	386	686
COD (METHOD EPA410.4)				
Day 1	716			
Day 2	585	28	605	1130
Day 3	475	28	721	1140
Day 4		27	237	288
Day 5	618	25	716	1130
Day 6	581	30		1070
Day 7	500	30		1090
Day 8	646	23	759	1020
Day 9	579	23		983
Day 10			673	
Day 11			819	
Day 12			656	
Day 13			760	
Day 14			675	
Maximum	716	30	819	1140
Average	588	27	662	981

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
TSS (METHOD SM2540D) (b)				
Day 1	250			
Day 2	202	< 1	184	156
Day 3	194	< 1	240	250
Day 4		1	244	190
Day 5	240	< 1	286	198
Day 6	218	< 1		366
Day 7	183	3		220
Day 8	154	2	404	196
Day 9	208	< 1		232
Day 10			274	
Day 11			312	
Day 12			264	
Day 13			274	
Day 14			290	
Maximum	250	3	404	366
Average	206	1	277	226
AMMONIA AS NITROGEN (METHOD EPA350.1) (b)				
Day 1	49.6			
Day 2	70	0.374	86.3	3.74
Day 3	39.8	0.485	79.8	1.8
Day 4		0.349	43.9	26.7
Day 5	69.1	0.358	80	2.53
Day 6	71.4	0.252		2.42
Day 7	69.4	0.318		4.47
Day 8		0.423	81.2	9
Day 9		< 0.126		11
Day 10			62.6	
Day 11			90.3	
Day 12			82.2	
Day 13			73.7	
Day 14			68	
Maximum	71.4	0.485	90.3	26.7
Average	61.6	0.336	74.8	7.71

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
NITRATE AS NITROGEN (METHOD 300.0) (b)				
Day 1	0.08			
Day 2	< 0.04	1.1	1.79	0.1
Day 3	< 0.015	2.2	< 0.015	< 0.015
Day 4		< 0.04	0.1	< 0.04
Day 5	0.11	1.22	0.16	0.16
Day 6	0.12	1.56		< 0.04
Day 7	0.09	0.68		< 0.04
Day 8	< 0.04	1.23	0.28	< 0.04
Day 9	< 0.04	1.4		0.19
Day 10			0.24	
Day 11			< 0.015	
Day 12			0.301	
Day 13			< 0.04	
Day 14			0.62	<
Maximum	0.12	2.20	1.79	0.19
Average	0.07	1.18	0.36	0.08
NITRITE AS NITROGEN (METHOD 300.0) (b)				
Day 1	< 0.037			
Day 2	< 0.037	0.11	0.83	< 0.01
Day 3	< 0.02	0.45	< 0.002	< 0.002
Day 4		< 0.01	0.02	< 0.01
Day 5	0.114	0.19	0.05	< 0.01
Day 6	0.116	0.44		< 0.01
Day 7	0.088	0.09		< 0.01
Day 8	< 0.037	0.32	0.12	< 0.01
Day 9	< 0.037	0.1		0.07
Day 10			< 0.002	
Day 11			0.14	
Day 12			< 0.002	
Day 13			< 0.002	
Day 14			0.22	
Maximum	0.116	0.45	0.83	0.07
Average	0.061	0.21	0.13	0.017

Table SD A-1. Sundance Ranch WRF and Collection System Sampling Results

Date (a)	Concentration (mg/L)			
	<i>Influent</i>	<i>Effluent</i>	<i>Residential</i>	<i>Mixed Commercial</i>
TOTAL KJELDAHL NITROGEN (METHOD 351.2) (b)				
Day 1	60.2			
Day 2	62.9	1.7	81.1	49.8
Day 3	109	1.86	65.4	60.2
Day 4		1.98	105	8.55
Day 5	69.7	1.71	62.1	8.55
Day 6	61	1.99		53.2
Day 7	60.4	1.97		55.1
Day 8	62.1	2.08	71.8	49.6
Day 9	67.1	1.66		54
Day 10			62.4	50.1
Day 11			71.4	
Day 12			66.8	
Day 13			65	
Day 14			72.5	
Maximum	109	2.08	105	60.2
Average	69.1	1.87	72.4	43.2
TOTAL NITROGEN (METHOD 351.2) (b)				
Day 1	60.3			
Day 2	62.9	2.91	83.7	49.9
Day 3	109	4.51	65.4	60.2
Day 4		1.98	105	< 4.23
Day 5	69.8	3.12	62.3	53.4
Day 6	61.1	4		55.1
Day 7	60.4	2.73		49.6
Day 8	62.1	3.64	72.2	54
Day 9	67.1	3.16		50.4
Day 10			62.6	
Day 11			71.7	
Day 12			67.1	
Day 13			65	
Day 14			73.3	
Maximum	109	4.51	105	60.2
Average	69.1	3.26	72.8	47.1

Notes

a. Influent samples were collected from April 11 through 13 and from April 15 through 19, 2019. Effluent samples were collected six hours after influent samples to reflect detention time of WRF, from April 12 through 19, 2019. Residential samples were collected from April 12 through 15, on April 18, and from April 20 through 24, 2019. Mixed commercial samples were collected from April 12 through 19, 2019.

b. If all sample results at a given location were reported as non-detected, value is represented as ND. If one or more sample results were reported as detected, the value of the method detection level was substituted for non-detected results.

Table SD A-2. Sundance WRF Biosolids
Sampling Results

Date	Concentration (mg/kg)
ARSENIC	
4/24/19	1.3
CADMIUM	
4/24/19	0.16
LEAD	
4/24/19	ND
MERCURY	
4/24/19	0.12
SELENIUM	
4/24/19	2.1
NITROGEN - NITRATE (NO ₃ -N) + NITRITE (NO ₂ -N)	
4/24/19	13
NITROGEN - TOTAL KJELDAHL (TKN)	
4/24/19	10200
NITROGEN - TOTAL	
4/24/19	10200
TOTAL SOLIDS	
4/24/19	13

Appendix B – Identification of Pollutants of Concern

Central Buckeye WWTP

Table CB B-1 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > Most Stringent Effluent Criterion

Table CB B-2 Central Buckeye WWTP Pollutants of Concern: Effluent Concentration > ½ Most Stringent Effluent Criterion

Table CB B-3 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > ½ Most Stringent Inhibition Criterion

Table CB B-4 Central Buckeye WWTP Pollutants of Concern: Influent Concentration > Most Stringent Health & Safety Criterion

Table CB B-5 Central Buckeye WWTP Pollutants of Concern: TCLP Concentration > ½ TCLP Limitation

Sundance WRF

Table SD B-1 Sundance WRF Pollutants of Concern: Influent Concentration > Most Stringent Effluent Criterion

Table SD B-2 Sundance WRF Pollutants of Concern: Effluent Concentration > ½ Most Stringent Effluent Criterion

Table SD B-3 Sundance WRF Pollutants of Concern: Influent Concentration > ½ Most Stringent Inhibition Criterion

Table SD B-4 Sundance WRF Pollutants of Concern: Influent Concentration > Most Stringent Health & Safety Criterion

Table SD B-5 Sundance WRF Pollutants of Concern: TCLP Concentration > ½ TCLP Limitation

Festival Ranch WRF

Table FR B-1 Festival Ranch WRF Pollutants of Concern: Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Tartesso WRF

Table T B-1 Tartesso WRF Pollutants of Concern: Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Table CB B-1. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane	< 5.00	1000			200		160	200	160	
1,1,2-trichloroethane	< 5.00				5		4	5	4	dl
1,1-dichloroethylene	< 5.00				7		5.6	7	5.6	
1,2,4-trichlorobenzene	< 5.00				70		56	70	56	
1,2-dichloroethane	< 5.00				5		4	5	4	dl
1,2-dichloropropane	< 5.00				5		4	5	4	dl
Aldrin (d)	< 0.200	0.003	0.003						0.003	dl
Antimony	< 2.00				6		4.8	6	4.8	
Arsenic (e)	7.4	2000	200		50	10	40	50	10	
Barium	161				2000		1600	2000	1600	
Benzene	< 5.00				5		4	5	4	dl
Benzidine	< 10.0	0.01	0.01						0.01	dl
Beryllium	< 2.00				4		3.2	4	3.2	
BOD ₅	501000				30000				30000	YES
Boron	1040	1000			1231				1000	YES
Bromoform	< 5.00				80				80	
Cadmium	< 2.00	50	50		5		4	5	4	
Carbon tetrachloride	< 5.00				5		4	5	4	dl
Chloroform	< 5.00				80				80	
Chromium (total)	27.1	1000	1000		100		80	100	80	
cis-1,2-dichloroethylene					70		56	70	56	
Copper (e)	944	5000	500						500	YES
Cyanide (e,f)			200		200		160	200	160	
DDT	< 0.200	0.001	0.001						0.001	dl
Dichloromethane (g)					5		4	5	4	

Table CB B-1. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Dieldrin (d)	< 0.200	0.003	0.003						0.003	dl
Endrin	< 0.200	0.004	0.004						0.004	dl
Ethylbenzene	< 5.00				700		560	700	560	
Fluoride					4000		3200	4000	3200	
Hexachlorobenzene	< 5.00				1		0.8	1	0.8	dl
Hexachlorocyclopentadiene	< 5.00				50		40	50	40	
Lead (d)	26.3	10000	100		50		40	50	40	
Manganese		10000							10000	
Mercury (d)					2		1.6	2	1.6	
Monochlorobenzene (f)	< 5.00				100		80	100	80	
Nickel	14.2				100		80	100	80	
Nitrogen - Nitrate (g)					10000				10000	
Nitrogen - Nitrite (g)					1000				1000	
Nitrogen - Total (h)								10000	10000	
o-dichlorobenzene (g)	< 5.00				600		480	600	480	
Oil & Grease (h)				10000					10000	
para-dichlorobenzene (g)	< 5.00				75		60	75	60	
Pentachlorophenol	< 10.00				1				1	dl
PCBs	< 0.50	0.001	0.001						0.001	dl
Selenium (e)	5.18	20	20	2	50		40	50	2	YES
Styrene	< 5.00				100		80	100	80	
Tetrachloroethylene	< 5.00				5		4	5	4	dl
Thallium	< 2.00				2		1.6	2	1.6	dl
Toluene	< 5.00				1000		800	1000	800	
Toxaphene	< 5.00	0.005	0.005						0.005	dl
trans-1,2-dichloroethylene					100		80	100	80	

Table CB B-1. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Trichloroethylene					5		4	5	4	
Trihalomethanes (total)					100	80	80	100	80	
TSS	667000			30000					30000	YES
Vinyl Chloride					2		1.6	2	1.6	
Xylenes (total)	< 10.0				10000		8000	10000	8000	
Zinc (e)	1370	10000	25000						10000	

Table CB B-1. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		

Abbreviations

AgI = Agricultural Irrigation

AgL = Agricultural Livestock Watering

APP = Aquifer Protection Permit No. P-100574, May 26, 2016

AWQS = Arizona Aquifer Water Quality Standards, 1994

AZPDES = Arizona Pollutant Discharge Elimination System Permit No. AZ0025313, August 4, 2016

BOD₅ = 5-day Biochemical Oxygen Demand

DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE

dl = detection level; detection level is greater than most stringent criterion

ug/l = microgram/liter

NA = not analyzed

PCB = Polychlorinated Biphenyls

SWQS = Arizona Surface Water Quality Standards, September 2, 2016

TSS = Total Suspended Solids

Notes

a. Influent concentration data for metals from routine monitoring conducted July 2016; for organic toxics, from one sampling event in April 2018

b. Monthly average values

c. Federal Drinking Water Standards to be incorporated into AWQS

d. The Aldrin/Dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 mg/L.

e. Total for AgI and AgL

f. As free cyanide for AgL

g. Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

h. Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

i. Oil & Grease = hexane extractable material per EPA Method 1664

Table CB B-2. Central Buckeye WWTP Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane	< 5.00	1000			200		160	200	160	
1,1,2-trichloroethane	< 5.00				5		4	5	4	dl
1,1-dichloroethylene	< 5.00				7		5.6	7	5.6	dl
1,2,4-trichlorobenzene	< 5.00				70		56	70	56	
1,2-dichloroethane	< 5.00				5		4	5	4	dl
1,2-dichloropropane	< 5.00				5		4	5	4	dl
Aldrin (d)	< 0.0200	0.003	0.003						0.003	dl
Antimony	< 2.00				6		4.8	6	4.8	
Arsenic (e)	48.5	2000	200		50	10	40	50	10	YES
Barium	156				2000		1600	2000	1600	
Benzene	< 5.00				5		4	5	4	dl
Benzidine	-	0.01	0.01						0.01	-
Beryllium	< 2.00				4		3.2	4	3.2	dl
BOD ₅	8200			30000					30000	
Boron	1190	1000		1231					1000	YES
Bromoform	< 5.00				80				80	
Cadmium	< 2.00	50	50		5		4	5	4	dl
Carbon tetrachloride	< 5.00				5		4	5	4	dl
Chloroform	2270				80				80	YES
Chromium (total)	6.56	1000	1000		100		80	100	80	
cis-1,2-dichloroethylene	< 0.500				70		56	70	56	
Copper (e)	4.11	5000	500						500	
Cyanide (e,f)	7.6		200		200		160	200	160	
DDT	< 0.0200	0.001	0.001						0.001	dl
Dichloromethane (g)	< 2.00				5		4	5	4	dl

Table CB B-2. Central Buckeye WWTP Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Dieldrin (d)	< 0.0200	0.003	0.003						0.003	dl
Endrin	< 0.0200	0.004	0.004						0.004	dl
Ethylbenzene	< 5.00				700		560	700	560	
Fluoride	1380				4000		3200	4000	3200	
Hexachlorobenzene	< 0.100				1		0.8	1	0.8	
Hexachlorocyclopentadiene	< 0.100				50		40	50	40	
Lead (d)	< 2.00	10000	100		50		40	50	40	
Manganese	-	10000							10000	-
Mercury (d)	0.471				2		1.6	2	1.6	
Monochlorobenzene (f)	< 5.00				100		80	100	80	
Nickel	3.31				100		80	100	80	
Nitrogen - Nitrate (g)	9640				10000				10000	YES
Nitrogen - Nitrite (g)	9640				1000				1000	YES
Nitrogen - Total (h)	48900							10000	10000	YES
o-dichlorobenzene (g)	< 5.00				600		480	600	480	
Oil & Grease (h)	6300			10000					10000	YES
para-dichlorobenzene (g)	< 5.00				75		60	75	60	
Pentachlorophenol	< 10				1				1	dl
PCBs	< 5.00	0.001	0.001						0.001	dl
Selenium (e)	2.31	20	20	2	50		40	50	2	YES
Styrene	< 5.00				100		80	100	80	
Tetrachloroethylene	< 5.00				5		4	5	4	dl
Thallium	< 2.00				2		1.6	2	1.6	dl
Toluene	< 5.00				1000		800	1000	800	
Toxaphene	< 5.00	0.005	0.005						0.005	dl

Table CB B-2. Central Buckeye WWTP Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
trans-1,2-dichloroethylene	-				100		80	100	80	-
Trichloroethylene	-				5		4	5	4	-
Trihalomethanes (total)	7670				100	80	80	100	80	YES
TSS	< 10000			30000					30000	
Vinyl Chloride	< 2.00				2		1.6	2	1.6	dl
Xylenes (total)	< 5.00				10000		8000	10000	8000	
Zinc (e)	54.2	10000	25000						10000	

Table CB B-2. Central Buckeye WWTP Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		

Abbreviations

AgI = Agricultural Irrigation

AgL = Agricultural Livestock Watering

APP = Aquifer Protection Permit No. P-100574, May 26, 2016

AWQS = Arizona Aquifer Water Quality Standards, 1994

AZPDES = Arizona Pollutant Discharge Elimination System Permit No. AZ0025313, August 4, 2016

BOD5 = 5-day Biochemical Oxygen Demand

DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE

dl = detection level; detection level is greater than most stringent criterion

ug/l = microgram/liter

NA = not analyzed

PCB = Polybichlorinated Biphenyls

SWQS = Arizona Surface Water Quality Standards, September 2, 2016

TSS = Total Suspended Solids

Notes

a. Effluent concentration data from routine monitoring January 2016 to February 2018

b. Monthly average values

c. Federal Drinking Water Standards to be incorporated into AWQS

d. The Aldrin/Dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 mg/L.

e. Total for AgI and AgL

f. As free cyanide for AgL

g. Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

h. Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

i. Oil & Grease = hexane extractable material per EPA Method 1664

Table CB B-3. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > 1/2 Most Stringent Inhibition Criterion

Constituent	Concentration (ug/l)				Pollutant of Concern?	
	Maximum Influent (a)	Activated Sludge (b)	Nitrification (b)	Most Stringent		
1,2-dichlorobenzene	<	5.00	5000	5000		
1,3-dichlorobenzene	<	5.00	5000	5000		
1,4-dichlorobenzene	<	5.00	5000	5000		
2-chlorophenol	<	5.00	5000	5000		
2,4-dichlorophenol	<	5.00	64000	64000	64000	
2,4-dimethylphenol	<	5.00	40000	40000		
2,4-dinitrotoluene	<	5.00	5000	5000		
2,4-dinitrophenol	<	5.00		150000	150000	
1,2-diphenylhydrazine	<	5.00	5000	5000		
2,4,6-trichlorophenol	<	5.00	50000	50000		
Anthracene	<	5.00	500000	500000		
Arsenic		7.4	100	1500	100	
Benzene	<	5.00	100000		100000	
Cadmium	<	2.00	1000	5200	1000	
Chloride				180000	180000	
Chloroform	<	5.00		10000	10000	
Chromium (VI)			1000	1000	1000	
Chromium (III)			10000		10000	
Chromium (total)		27.1	1000	250	250	
Copper		944	1000	50	50	YES
Cyanide			100	340	100	
Ethylbenzene	<	5.00	200000		200000	
Hexachlorobenzene	<	5.00	5000		5000	
Iodine			10000		10000	
Lead		2.63	1000	500	500	
Mercury			100		100	
Napthalene	<	5.00	500000		500000	
Nickel		14.2	1000		1000	
Nitrobenzene	<	5.00	30000		30000	
Nitrogen - Ammonia			480000		480000	
Pentachlorophenol	<	10.00	950		950	
Phenanthrene	<	5.00	500000		500000	
Phenol	<	10.00	50000	4000	4000	
Sulfide			25000		25000	
Surfactants			100000		100000	
Toluene	<	5.00	200000		200000	
Zinc		1370	300	800	300	YES

Abbreviations

ug/l = microgram/liter

Notes

a. Influent concentration data for metals from routine monitoring conducted July 2016; for organic toxics, from one sampling event in April 2018

b. Lower range limit, Inhibition Threshold Levels, 2004 EPA Local Limits Development Guidance , App. G

Table CB B-4. Central Buckeye WWTP Pollutants of Concern:
Influent Concentration > Most Stringent Health & Safety Criterion

Constituent	Concentration (ug/l)					Pollutant of Concern?
	Maximum Influent (a)	Explosivity (b)	Fume Toxicity (b)	Exposure (c)	Most Stringent	
Acrolein	<	50.0	13163000	47	100	47
Acrylonitrile	<	50.0	14586000	4822	1000	1000
Benzene	<	5.00	169000		100	100
Bromoform	<	5.00		227	500	227
Carbon Tetrachloride	<	5.00		11	5000	11
Chlorobenzene	<	5.00	395000	2290	10000	2290
Chloroethane	<	10.00	222000	5880	100000	5880
Chloroform	<	5.00		60	10000	60
1,1-dichloroethane	<	5.00	909000	1685	100000	1685
1,2-dichloroethane	<	5.00	5221000	168	1000	168
1,1-dichloroethylene	<	5.00	215000	16	5000	16
Trans-1,2-dichloroethylene			571000	2040	200000	2040
1,2-dichloropropane	<	5.00	1326000	4289	75000	4289
Ethyl benzene	<	5.00	106000	1659	100000	1659
Hydrogen cyanide			13529000	1149	10000	1149
Hydrogen sulfide			96000	34	10000	34
Methyl bromide			1521000	305	1000	305
Methyl chloride			450000		50000	50000
Methylene chloride	<	5.00	4307000	557	25000	557
1,1,2,2-tetrachloroethane	<	5.00		1847	1000	1000
Tetrachloroethylene	<	5.00		945	25000	945
Toluene	<	5.00	152000	2075	50000	2075
1,1,2-trichloroethane	<	5.00	9611000	1601	10000	1601
1,1,1-trichloroethane	<	5.00	591000	2759	350000	2759
Trichloroethylene	<	5.00	1029000	26	25000	26
Vinyl chloride	<	2.00	88000	12	1000	12

Abbreviations

ug/l = microgram/liter

NA = not analyzed

Notes

a. Influent concentration data for metals from routine monitoring conducted July 2016; for toxics organics, from one sampling event in April 2018

b. Discharge Screening Levels, *2004 EPA Local Limits Development Guidance*, App. I

c. Exposure Limits from Various Agencies for Volatile Organic Priority Pollutants, *2004 EPA Local Limits Development Guidance*, App. J

Table CB B-5 Central Buckeye WWTP Pollutants of Concern:
TCLP Concentration > 1/2 TCLP Limitation

Constituent	Concentration (ug/l)		Pollutant of Concern?
	Maximum Influent (a)	TCLP (b)	
Arsenic	< 100	5000	
Barium	205	100000	
Benzene	< 25.0	500	
Cadmium	< 50.0	1000	
Carbon tetrachloride	< 25.0	500	
Chlordane		30	
Chlorobenzene	< 25.0	100000	
Chloroform	< 25.0	6000	
Chromium	< 50.0	5000	
o-cresol		200000	
m-cresol		200000	
p-cresol		200000	
cresols		200000	
2,4-D		10000	
1,4-dichlorobenzene	< 25.0	7500	
1,2-dichloroethane	< 25.0	500	
1,1-dichloroethylene	< 25.0	700	
2,4-dinitrotoluene	< 25.0	130	
Endrin		20	
Heptachlor		8	
Hexachlorobenzene	< 25.0	130	
Hexachlorobutadiene	< 25.0	500	
Hexachloroethane	< 75.0	3000	
Lead	< 25.0	5000	
Lindane		400	
Mercury	< 0.200	200	
Methoxychlor		10000	
Methyl ethyl ketone	< 250.0	200000	
Nitrobenzene	< 25.0	2000	
Pentachlorophenol	< 50.0	100000	
Pyridine	< 50.0	5000	
Selenium	< 150	1000	
Silver	< 150	5000	
Tetrachloroethylene	< 25.0	700	
Toxaphene		500	
Trichloroethylene	< 25.0	500	
2,4,5-trichlorophenol	< 25.0	400000	
2,4,6-trichlorophenol	< 25.0	2000	
2,4,5-TP (Silvex)		1000	
Vinyl Chloride	< 10.0	200	

Table CB B-5 Central Buckeye WWTP Pollutants of Concern:
TCLP Concentration > 1/2 TCLP Limitation

Abbreviations

ug/l - microgram/liter

TCLP = Toxicity Characteristic Leachate Procedure

Notes

- a. TCLP data from January 2016 Waste Profile
- b. TCLP Limitations, Regulatory Level, *2004 EPA Local Limits Development Guidance, App. F*

Conversion (mg/L to ug/L) = 0.001

Table SD B-1. Sundance WRF Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Pollutant of Concern?	
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP			Most Stringent
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane	< 0.500	1000			200		160	200	160	
1,1,2-trichloroethane	< 0.500				5		4	5	4	
1,1-dichloroethylene	< 0.500				7		5.6	7	5.6	
1,2,4-trichlorobenzene	< 5.00				70		56	70	56	
1,2-dichloroethane	< 0.500				5		4	5	4	
1,2-dichloropropane	< 0.500				5		4	5	4	
Aldrin (d)	< 0.108	0.003	0.003						0.003	dl
Antimony					6		4.8	6	4.8	
Arsenic (e)	12.9	2000	200		50	10	40	50	10	YES
Barium					2000		1600	2000	1600	
Benzene	< 0.500				5		4	5	4	
Benzidine		0.01	0.01						0.01	
Beryllium					4		3.2	4	3.2	
BOD ₅	531,000								30000	YES
Boron	822	1000							1000	YES
Bromoform	< 1.00				80				80	
Cadmium	< 2.00	50	50		5		4	5	4	dl
Carbon tetrachloride	< 0.500				5		4	5	4	
Chloroform	< 0.500				80				80	
Chromium (total)	159	1000	1000		100		80	100	80	YES
cis-1,2-dichloroethylene					70		56	70	56	
Copper (e)	226	5000	500						500	
Cyanide (e,f)			200		200		160	200	160	
DDT		0.001	0.001						0.001	
Dichloromethane (g)					5		4	5	4	
Dieldrin (d)	< 0.108	0.003	0.003						0.003	dl

Table SD B-1. Sundance WRF Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Pollutant of Concern?	
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP			Most Stringent
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Endrin	< 0.108	0.004	0.004						0.004	dl
Ethylbenzene	< 2.00				700		560	700	560	
Fluoride					4000		3200	4000	3200	
Hexachlorobenzene	< 5.26				1		0.8	1	0.8	dl
Hexachlorocyclopentadiene	< 5.26				50		40	50	40	
Lead (e)	4.41	10000	100		50		40	50	40	
Manganese		10000							10000	
Mercury (e)					2		1.6	2	1.6	
Monochlorobenzene (g)	< 0.500				100		80	100	80	
Nickel	18.6				100		80	100	80	
Nitrogen - Nitrate					10000				10000	
Nitrogen - Nitrite					1000				1000	
Nitrogen - Total (h)								10000	10000	
o-dichlorobenzene (g)					600		480	600	480	
Oil & Grease (i)				10000					10000	
para-dichlorobenzene (g)	< 5.26				75		60	75	60	
Pentachlorophenol	< 10.5				1				1	dl
PCBs	< 0.538	0.001	0.001						0.001	dl
Selenium (e)	7.91	20	20		50		40	50	20	
Styrene	< 1.00				100		80	100	80	
Tetrachloroethylene	< 0.500				5		4	5	4	
Thallium					2		1.6	2	1.6	
Toluene	< 2.00				1000		800	1000	800	
Toxaphene	< 2.69	0.005	0.005						0.005	dl
trans-1,2-dichloroethylene	< 0.500				100		80	100	80	
Trichloroethylene	< 0.500				5		4	5	4	

Table SD B-1. Sundance WRF Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Most Stringent	Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP			
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Trihalomethanes (total)	< 0.500				100	80	80	100	80	
TSS	661000			30000					30000	YES
Vinyl Chloride					2		1.6	2	1.6	
Xylenes (total)	< 1.00				10000		8000	10000	8000	
Zinc (e)	830	10000	25000						10000	

Table SD B-1. Sundance WRF Pollutants of Concern:
Influent Concentration > Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Most Stringent	Pollutant of Concern?
	Maximum Influent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP			
		Agl	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		

Abbreviations

Agl = Agricultural Irrigation

AgL = Agricultural Livestock Watering

APP = Aquifer Protection Permit No. P-105022, May 16, 2016

AWQS = Arizona Aquifer Water Quality Standards, 1994

AZPDES = Arizona Pollutant Discharge Elimination System Permit No. AZ0024881, November 17, 2015

BOD₅ = 5-day Biochemical Oxygen Demand

DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE

dl = detection level; detection level is greater than most stringent criterion

ug/l = microgram/liter

NA = not analyzed

PCB = Polychlorinated Biphenyls

SWQS = Arizona Surface Water Quality Standards, September 2, 2016

TSS = Total Suspended Solids

Notes

a. Influent concentration data for toxic organics from routine monitoring conducted August 2017; for metals, from 2 sampling events conducted April 2018

b. Monthly average values

c. Federal Drinking Water Standards to be incorporated into AWQS

d. The Aldrin/Dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 mg/L

e. Total for Agl and AgL

f. As free cyanide for AgL

g. Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

h. Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

i. Oil & Grease = hexane extractable material per EPA Method 1664

Table SD B-2. Sundance WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES Discharge Limitation (b)	AWQS		2016 APP		Most Stringent	
		AgI	AgL		1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane	< 0.500	1000			200		160	200	160	
1,1,2-trichloroethane	< 0.500				5		4	5	4	
1,1-dichloroethylene	< 0.500				7		5.6	7	5.6	
1,2,4-trichlorobenzene	< 5.00				70		56	70	56	
1,2-dichloroethane	< 0.500				5		4	5	4	
1,2-dichloropropane	< 0.500				5		4	5	4	
Aldrin (d)	< 0.0200	0.003	0.003						0.003	dl
Antimony	< 2.00				6		4.8	6	4.8	
Arsenic (e)	8.13	2000	200		50	10	40	50	10	YES
Barium	111				2000		1600	2000	1600	
Benzene	< 0.500				5		4	5	4	
Benzidine	< 10.0	0.01	0.01						0.01	dl
Beryllium	< 2.00				4		3.2	4	3.2	dl
BOD ₅	16300				30000				30000	YES
Boron	947	1000			1000				1000	YES
Bromoform	< 1.00				80				80	
Cadmium	< 2.00	50	50		5		4	5	4	dl
Carbon tetrachloride	< 0.500				5		4	5	4	
Chloroform	46.4				80				80	YES
Chromium (total)	10.5	1000	1000		100		80	100	80	
cis-1,2-dichloroethylene	< 0.500				70		56	70	56	
Copper (e)	5.89	5000	500						500	
Cyanide (e,f)	24.3		200		200		160	200	160	
DDT	< 0.0200	0.001	0.001						0.001	dl
Dichloromethane (g)	< 3.00				5		4	5	4	dl
Dieldrin (d)	< 0.0200	0.003	0.003						0.003	dl

Table SD B-2. Sundance WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Endrin	< 0.0200	0.004	0.004						0.004	dl
Ethylbenzene	< 2.00				700		560	700	560	
Fluoride	2080				4000		3200	4000	3200	YES
Hexachlorobenzene	< 0.100				1		0.8	1	0.8	
Hexachlorocyclopentadiene	0.528				50		40	50	40	
Lead (e)	< 2.00	10000	100		50		40	50	40	
Manganese	20.3	10000							10000	
Mercury (e)	< 0.200				2		1.6	2	1.6	
Monochlorobenzene (g)					100		80	100	80	
Nickel	5.13				100		80	100	80	
Nitrogen - Nitrate	4730				10000				10000	
Nitrogen - Nitrite	4730				1000				1000	YES
Nitrogen - Total (h)	40100							10000	10000	YES
o-dichlorobenzene (g)					600		480	600	480	
Oil & Grease (i)	< 5000			10000					10000	dl
para-dichlorobenzene (g)					75		60	75	60	
Pentachlorophenol					1				1	
PCBs	< 0.500	0.001	0.001						0.001	dl
Selenium (e)	2.71	20	20		50		40	50	20	
Styrene	< 1.00				100		80	100	80	
Tetrachloroethylene	< 0.500				5		4	5	4	
Thallium	< 2.00				2		1.6	2	1.6	dl
Toluene	< 2.00				1000		800	1000	800	
Toxaphene	< 0.500	0.005	0.005						0.005	dl
trans-1,2-dichloroethylene	< 0.500				100		80	100	80	
Trichloroethylene	< 0.500				5		4	5	4	

Table SD B-2. Sundance WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Pollutant of Concern?	
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP			Most Stringent
		AgI	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Trihalomethanes (total)	52.7				100	80	80	100	80	dl
TSS	26600			30000					30000	YES
Vinyl Chloride	< 0.500				2		1.6	2	1.6	
Xylenes (total)	< 1.00				10000		8000	10000	8000	
Zinc (e)	< 67.2	10000	25000						10000	

Table SD B-2. Sundance WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)									Pollutant of Concern?
	Maximum Effluent (a)	2016 SWQS		2016 AZPDES	AWQS		2016 APP		Most Stringent	
		Agl	AgL	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		

Abbreviations

Agl = Agricultural Irrigation

AgL = Agricultural Livestock Watering

APP = Aquifer Protection Permit No. P-105022, May 16, 2016

AWQS = Arizona Aquifer Water Quality Standards, 1994

AZPDES = Arizona Pollutant Discharge Elimination System Permit No. AZ0024881, November 17, 2015

BOD5 = 5-day Biochemical Oxygen Demand

DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE

dl = detection level; detection level is greater than most stringent criterion

ug/l = microgram/liter

NA = not analyzed

PCB = Polybichlorinated Biphenyls

SWQS = Arizona Surface Water Quality Standards, September 2, 2016

TSS = Total Suspended Solids

Notes

a. Effluent concentration data from routine monitoring conducted January 2016 to February 2018

b. Monthly average values

c. Federal Drinking Water Standards to be incorporated into AWQS

d. The Aldrin/Dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 mg/L

e. Total for Agl and AgL

f. As free cyanide for AgL

g. Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

h. Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

i. Oil & Grease = hexane extractable material per EPA Method 1664

Table SD B-3. Sundance WRF Pollutants of Concern:
Influent Concentration > 1/2 Most Stringent Inhibition Criterion

Constituent	Concentration (ug/l)				Pollutant of Concern?	
	Maximum Influent (a)	Activated Sludge (b)	Nitrification (c)	Most Stringent		
1,2-dichlorobenzene	<	1.50	5000	5000		
1,3-dichlorobenzene	<	5.26	5000	5000		
1,4-dichlorobenzene	<	5.26	5000	5000		
2-chlorophenol	<	5.26	5000	5000		
2,4-dichlorophenol	<	5.26	64000	64000	64000	
2,4-dimethylphenol	<	5.26	40000	40000		
2,4-dinitrotoluene	<	5.26	5000	5000		
2,4-dinitrophenol	<	10.5		150000	150000	
1,2-diphenylhydrazine			5000	5000		
2,4,6-trichlorophenol	<	5.26	50000	50000		
Anthracene	<	5.26	500000	500000		
Arsenic		12.9	100	1500	100	
Benzene	<	0.500	100000	100000		
Cadmium			1000	5200	1000	
Chloride		365000		180000	180000	YES
Chloroform	<	0.500		10000	10000	
Chromium (VI)			1000	1000	1000	
Chromium (III)			10000		10000	
Chromium (total)		159	1000	250	250	YES
Copper		226	1000	50	50	YES
Cyanide			100	340	100	
Ethylbenzene	<	2.00	200000		200000	
Hexachlorobenzene	<	5.26	5000		5000	
Iodine			10000		10000	
Lead			1000	500	500	
Mercury			100		100	
Napthalene	<	5.00	500000		500000	
Nickel		186	1000		1000	
Nitrobenzene	<	5.26	30000		30000	
Nitrogen - Ammonia	<		480000		480000	
Pentachlorophenol	<	10.5	950		950	
Phenanthrene	<	5.26	500000		500000	
Phenol	<	10.5	50000	4000	4000	
Sulfide	<		25000		25000	
Surfactants	<		100000		100000	
Toluene	<	2.00	200000		200000	
Zinc		830	300	800	300	YES

Table SD B-3. Sundance WRF Pollutants of Concern:
Influent Concentration > 1/2 Most Stringent Inhibition Criterion

Abbreviations

ug/l = microgram/liter

NA = not analyzed

Notes

a. Influent concentration data for toxic organics from routine monitoring conducted August 2017; for metals, from 2 sampling events conducted April 2018

b. Lower range limit, Inhibition Threshold Levels, *2004 EPA Local Limits Development Guidance*, App. G

Table SD B-4. Sundance WRF Pollutants of Concern:
Influent Concentration > Most Stringent Health & Safety Criterion

Constituent	Concentration (ug/l)					Pollutant of Concern?
	Maximum Influent (a)	Explosivity (b)	Fume Toxicity (b)	Exposure (c)	Most Stringent	
Acrolein		13163000	47	100	47	
Acrylonitrile		14586000	4822	1000	1000	
Benzene	< 0.500	169000		100	100	
Bromoform	< 1.00		227	500	227	
Carbon Tetrachloride	< 0.500		11	5000	11	
Chlorobenzene	< 0.500	395000	2290	10000	2290	
Chloroethane	< 4.00	222000	5880	100000	5880	
Chloroform	< 0.500		60	10000	60	
1,1-dichloroethane	< 0.500	909000	1685	100000	1685	
1,2-dichloroethane	< 0.500	5221000	168	1000	168	
1,1-dichloroethylene	< 0.500	215000	16	5000	16	
Trans-1,2-dichloroethylene	< 0.500	571000	2040	200000	2040	
1,2-dichloropropane	< 0.500	1326000	4289	75000	4289	
Ethyl benzene	< 2.00	106000	1659	100000	1659	
Hydrogen cyanide		13529000	1149	10000	1149	
Hydrogen sulfide		96000	34	10000	34	
Methyl bromide		1521000	305	1000	305	
Methyl chloride		450000		50000	50000	
Methylene chloride	< 3.00	4307000	557	25000	557	
1,1,2,2-tetrachloroethane	< 0.500		1847	1000	1000	
Tetrachloroethylene	< 0.500		945	25000	945	
Toluene	< 2.00	152000	2075	50000	2075	
1,1,2-trichloroethane	< 0.500	9611000	1601	10000	1601	
1,1,1-trichloroethane	< 0.500	591000	2759	350000	2759	
Trichloroethylene	< 2.00	1029000	26	25000	26	
Vinyl chloride	< 0.500	88000	12	1000	12	

Abbreviations

ug/l = microgram/liter

NA = not analyzed

Notes

a. Influent concentration data for toxic organics from routine monitoring conducted August 2017

b. Discharge Screening Levels, 2004 EPA Local Limits Development Guidance , App. I

c. Exposure Limits from Various Agencies for Volatile Organic Priority Pollutants, 2004 EPA Local Limits Development Guidance , App. J

Table SD B-5. Sundance WRF Pollutants of Concern:
TCLP Concentration > 1/2 TCLP Limitation

Constituent	Concentration (ug/l)		Pollutant of Concern?
	Maximum Influent (a)	TCLP (b)	
Arsenic		5000	
Barium	298	100000	
Benzene		500	
Cadmium	< 25.0	1000	
Carbon tetrachloride	< 25.0	500	
Chlordane		30	
Chlorobenzene	< 25.0	100000	
Chloroform	< 25.0	6000	
Chromium	< 50.0	5000	
o-cresol		200000	
m-cresol		200000	
p-cresol		200000	
cresols		200000	
2,4-D		10000	
1,4-dichlorobenzene	< 25.0	7500	
1,2-dichloroethane	< 25.0	500	
1,1-dichloroethylene	< 25.0	700	
2,4-dinitrotoluene	< 25.0	130	
Endrin		20	
Heptachlor		8	
Hexachlorobenzene	< 25.0	130	
Hexachlorobutadiene	< 25.0	500	
Hexachloroethane	< 25.0	3000	
Lead		5000	
Lindane		400	
Mercury		200	
Methoxychlor		10000	
Methyl ethyl ketone	< 250.0	200000	
Nitrobenzene	< 25.0	2000	
Pentachlorophenol	< 50.0	100000	
Pyridine	< 50.0	5000	
Selenium	< 150	1000	
Silver		5000	
Tetrachloroethylene	< 25.0	700	
Toxaphene		500	
Trichloroethylene	< 25.0	500	
2,4,5-trichlorophenol		400000	
2,4,6-trichlorophenol		2000	
2,4,5-TP (Silvex)		1000	
Vinyl Chloride	< 10.0	200	

Table SD B-5. Sundance WRF Pollutants of Concern:
TCLP Concentration > 1/2 TCLP Limitation

Abbreviations

ug/l = microgram/liter; NA = not analyzed;

TCLP = Toxicity Characteristic Leachate Procedure

Notes

a. TCLP data from January 2016

b. TCLP Limitations, Regulatory Level, 2004 EPA Local Limits Development Guidance, App. F

Conversion (mg/L to ug/L) = 0.001

Table FR B-1. Festival Ranch WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration, ug/L										Pollutant of Concern?
	Maximum Effluent (a)	2019 AZPDES (2)		2019 SWQS		AWQS		2016 APP		Most Stringent	
		Assessment Level	Discharge Limitation (b)	PBC	A&Wedw	1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane				1866667	1600	200		160	200	160	
1,1,2-trichloroethane				3733	12000	5		4	5	4	
1,1-dichloroethylene				46667	950	7		5.6	7	5.6	
1,2,4-trichlorobenzene				9333	300	70		56	70	56	
1,2-dichloroethane				186667	41000	5		4	5	4	
1,2-dichloropropane				84000	9200	5		4	5	4	
Aldrin (d)				28						28	
Antimony				747	600	6		4.8	6	4.8	
Arsenic	6.92			280	150	50	10	40	50	10	YES
Barium	62.5			98000		2000		1600	2000	1600	
Benzene				3733	560	5		4	5	4	
Benzidine				2800	89					89	
Beryllium				1867	53	4		3.2	4	3.2	
BOD ₅	16900		30000							30000	YES
Boron	627			186,667						186667	
Bromoform	2.27			18,667	10000	80				80	
Cadmium (e)				700	3	5		4	5	3	
Carbon tetrachloride				980	1,100	5		4	5	4	
Chloroform	0.57			9333	900	80				80	
Chromium (hex)		9.0		2800	11					9	
Chromium (total)	6.04	R				100		80	100	80	
cis-1,2-dichloroethylene				70	70	70		50	70	50	
Copper (e)	49.4		12	1300	12.3					12	YES
Cyanide	5.58		7.9	18667		200		160	200	7.9	YES
Dichloromethane (f)				186667	5500	5		4	5	4	
Dieldrin (d)				47	0.06					0.06	

Table FR B-1. Festival Ranch WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration, ug/L									Pollutant of Concern?	
	Maximum Effluent (a)	2019 AZPDES (2)		2019 SWQS		AWQS		2016 APP			Most Stringent
		Assessment Level	Discharge Limitation (b)	PBC	A&Wedw	1994	Future (c)	Alert Level	Discharge Limit		
Endrin				280	0.04					0.04	
Ethylbenzene				93333	1400	700		560	700	560	
Fluoride	2690			140000		4000		3200	4000	3200	YES
Hexachlorobenzene				747	3.7	1		0.8	1	0.8	
Hexachlorocyclopentadiene				9800	130	50		40	50	40	
Hydrogen sulfide		2								2	
Iron		820			1000					820	
Lead (e)				15	3.8	50		40	50	3.8	
Manganese	15.90			130667						130667	
Mercury		0.01		280	0.01	2		1.6	2	0.01	
Monochlorobenzene (f)				18667	260	100		80	100	80	
Nickel (e)	2.42			28000	71.4	100		80	100	71.4	
Nitrogen - Ammonia	(g)		(g)		(g)						YES
Nitrogen - Nitrate (h)	2170			3,730,000		10000				10000	
Nitrogen - Nitrite (h)	2170			23300		1000				1000	YES
Nitrogen - Total (h)	35100				850			8000	10000	850	YES
o-dichlorobenzene (f)	4.78			84000	470	600		480	600	470	
Oil & Grease (i)	5780	10000								10000	YES
para-dichlorobenzene (f)				373333	780	75		60	75	60	
Pentachlorophenol				28000		1				1	
PCBs				19	0.02					0.02	
Selenium	2.43		2	4667	2	50		40	50	2	YES
Styrene				186667	370	100		80	100	80	
Sulfides		R								NS	
Tetrachloroethylene				9333	680	5		4	5	4	
Thallium				75	150	2		1.6	2	1.6	

Table FR B-1. Festival Ranch WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration, ug/L										Pollutant of Concern?
	Maximum Effluent (a)	2019 AZPDES (2)		2019 SWQS		AWQS		2016 APP		Most Stringent	
		Assessment Level	Discharge Limitation (b)	PBC	A&Wedw	1994	Future (c)	Alert Level	Discharge Limit		
Toluene				280000	180	1000		800	1000	180	
Toxaphene				933	0.0002					0.0002	
trans-1,2-dichloroethylene				18667	3900	100		80	100	80	
Trichloroethylene				280	1,300	5		4	5	4	
Trihalomethanes (total)	2.27			280		100	80	80	100	80	
TSS	33000		30000							30000	YES
Vinyl Chloride				2800		2		1.6	2	1.6	
Xylenes (total)				186667		10000		8000	10000	8000	
Zinc (e)	652		122	280000	161					122	YES

Abbreviations:

- A&Wedw = Aquatic and Wildlife, effluent-dominated water
- Agl = Agricultural Irrigation
- AgL = Agricultural Livestock Watering
- APP = Aquifer Protection Permit No. P-1005441, June 8, 2004
- AWQS = Arizona Aquifer Water Quality Standards, 2019
- AZPDES = Arizona Pollutant Discharge Elimination System Permit No. AZ0025216, August 26, 2015
- BOD5 = 5-day Biochemical Oxygen Demand
- DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE
- dl = detection level; detection level is greater than most stringent criterion
- ug/l = microgram/liter
- NA = not analyzed
- PBC = Partial Body Contact
- PCB = Polybichlorinated Biphenyls
- SWQS = Arizona Surface Water Quality Standards, September 2, 2016
- TSS = Total Suspended Solids

Table FR B-1. Festival Ranch WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration, ug/L										Pollutant of Concern?
	Maximum Effluent (a)	2019 AZPDES (2)		2019 SWQS		AWQS		2016 APP		Most Stringent	
		Assessment Level	Discharge Limitation (b)	PBC	A&Wedw	1994	Future (c)	Alert Level	Discharge Limit		

Notes:

(a) Effluent concentration data from routine monitoring April 2016 through March 2018

(b) Monthly average values

(c) Federal Drinking Water Standards to be incorporated into AWQS

(d) Aldrin/Dieldrin standard is exceeded when the sum of the two compounds exceeds 0.003 mg/L

(e) 2019 SWQS for A&W edw based on hardness of 146 mg/L

(f) Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

(g) Criteria for total ammonia are pH- and temperature-dependent; exceedances have occurred

(h) Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

(i) Oil & Grease = hexane extractable material per EPA Method 1664

Table T B-1. Tartesso WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)							Pollutant of Concern?	
	Maximum Effluent (a)	2015 AZPDES (2)		AWQS		2016 APP			Most Stringent
		Assessment Level	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
1,1,1-trichloroethane				200		160	200	160	
1,1,2-trichloroethane				5		4	5	4	
1,1-dichloroethylene				7		5.6	7	5.6	
1,2,4-trichlorobenzene				70		56	70	56	
1,2-dichloroethane				5		4	5	4	
1,2-dichloropropane				5		4	5	4	
Aldrin (d)								NS	
Antimony				6		4.8	6	4.8	
Arsenic	6			50	10	40	50	10	YES
Barium	692			2000		1600	2000	1600	
Benzene				5		4	5	4	
Benzidine								NS	
Beryllium				4		3.2	4	3.2	
BOD ₅	150000		30000					30000	YES
Boron								NS	
Bromoform				80				80	
Cadmium				5		4	5	4	
Carbon tetrachloride				5		4	5	4	
Chloroform				80				80	
Chromium (hex)	12.7							NS	
Chromium (total)	4.74			100		80	100	80	
cis-1,2-dichloroethylene				70		56	70	56	
Copper	20							NS	
Cyanide				200		160	200	160	
DDT								NS	

Table T B-1. Tartesso WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)							Pollutant of Concern?	
	Maximum Effluent (a)	2015 AZPDES (2)		AWQS		2016 APP			Most Stringent
		Assessment Level	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Dichloromethane (e)				5		4	5	4	
Dieldrin (d)								NS	
Endrin								NS	
Ethylbenzene				700		560	700	560	
Fluoride	3590			4000		3200	4000	3200	YES
Hexachlorobenzene				1		0.8	1	0.8	
Hexachlorocyclopentadiene				50		40	50	40	
Hydrogen sulfide								NS	
Iron								NS	
Lead				50		40	50	40	
Manganese								NS	
Mercury				2		1.6	2	1.6	
Monochlorobenzene (e)				100		80	100	80	
Nickel	6.89			100		80	100	80	
Nitrogen - Nitrate (f)				10000				10000	
Nitrogen - Nitrite (f)				1000				1000	
Nitrogen - Total (f)	43920					8000	10000	8000	YES
o-dichlorobenzene (e)				600		480	600	480	
Oil & Grease (g)	6210							NS	
para-dichlorobenzene (e)				75		60	75	60	
Pentachlorophenol				1				1	
PCBs								NS	
Selenium	3.31			50		40	50	40	
Styrene				100		80	100	80	
Sulfides								NS	
Tetrachloroethylene				5		4	5	4	

Table T B-1. Tartesso WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)								Pollutant of Concern?
	Maximum Effluent (a)	2015 AZPDES (2)		AWQS		2016 APP		Most Stringent	
		Assessment Level	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		
Thallium				2		1.6	2	1.6	
Toluene				1000		800	1000	800	
Toxaphene								NS	
trans-1,2-dichloroethylene				100		80	100	80	
Trichloroethylene				5		4	5	4	
Trihalomethanes (total)				100	80	80	100	80	
TSS	125000		30000					30000	YES
Vinyl Chloride				2		1.6	2	1.6	
Xylenes (total)				10000		8000	10000	8000	
Zinc	1400							NS	

Abbreviations:

AgI = Agricultural Irrigation

AgL = Agricultural Livestock Watering

APP = Aquifer Protection Permit No. P-105340, December 24, 2013

AWQS = Arizona Aquifer Water Quality Standards, 1994

AZPDES = Arizona Pollutant Discharge Elimination System General Permit for Infrequent Discharges to Waters of the United States, Authorization No. AZIF25127, July 20, 2012

BOD5 = 5-day Biochemical Oxygen Demand

DDT = p,p'-Dichlorophenyltrichlorethane and metabolites DDD and DDE

dl = detection level; detection level is greater than most stringent criterion

ug/l = microgram/liter

NA = not analyzed

PCB = Polychlorinated Biphenyls

SWQS = Arizona Surface Water Quality Standards, September 2, 2016

TSS = Total Suspended Solids

Notes:

Table T B-1. Tartesso WRF Pollutants of Concern:
Effluent Concentration > 1/2 Most Stringent Effluent Criterion

Constituent	Concentration (ug/l)							Pollutant of Concern?	
	Maximum Effluent (a)	2015 AZPDES (2)		AWQS		2016 APP			Most Stringent
		Assessment Level	Discharge Limitation (b)	1994	Future (c)	Alert Level	Discharge Limit		

(a) Effluent concentration data from routine monitoring April 2016-March 2018

(b) Monthly average values

(c) Federal Drinking Water Standards to be incorporated into AWQS

(d) Aldrin/Dieldrin standards is exceeded when the sum of the two compounds exceeds 0.003 mg/L

(e) Dichloromethane = methylene chloride; monochlorobenzene = chlorobenzene; o-dichlorobenzene = 1,2-dichlorobenzene; para-dichlorobenzene = 1,4-dichlorobenzene

(f) Nitrogen-Total = Total Kjeldahl Nitrogen + Nitrate + Nitrite-N

(g) Oil & Grease = hexane extractable material per EPA Method 1664

Appendix C - Flow and Load Analyses

C-1 Flow and Load Calculations and Mass Balances

Central Buckeye WWTP

Table CB C-1 Central Buckeye WWTP Influent and Collection System Pollutant Concentrations

Table CB C-2 Central Buckeye WWTP Influent and Collection System Pollutant Loads

Table CB C-3 Central Buckeye WWTP Collection System—to—Influent Mass Balance

Table CB C-4 Central Buckeye WWTP Internal Dry Stream—to—Wet Stream Mass Balance

Sundance WRF

Table SD C-1 Sundance WRF Influent and Collection System Pollutant Concentrations

Table SD C-2 Sundance WRF Influent and Collection System Pollutant Loads

Table SD C-3 Sundance WRF Collection System—to—Influent Mass Balance

Table SD C-4 Sundance WRF Internal Dry Stream—to—Wet Stream Mass Balance

C-1 Flow and Load Calculations and Mass Balances

Tables CB 1 and SD 1 compile average pollutant concentrations for each pollutant for residential, mixed commercial, influent, side stream, and effluent streams based on data collected during the March and April 2019 sampling events at Central Buckeye WWTP and Sundance Ranch WRF.

Tables CB 2 and SD 2 summarize results of load calculations, based on the following givens and assumptions:

- Average pollutant concentrations: as compiled in Tables CB 1 and SD 1.
- Residential and mixed commercial flow rates: estimated as fractions of 93 percent and 7 percent of influent from analysis of Buckeye water usage records that were not service-area specific.
- Influent, effluent, and internal side stream flow rates: average flow rate during March and April 2019 sampling events.

Mass Balances

Mass balances can help evaluate the validity of assumptions as well as the accuracy of data. USEPA guidance suggests that the causes of mass balances that fall below 80 percent or exceed 120 percent be considered. System and internal mass balances were calculated and are discussed below.

System Mass Balances

System mass balances were calculated to compare estimates of service area loads and influent loads. Tables CB C-3 and SD C-3 show

- the relative load contribution of residential and mixed commercial sources to each of the facilities, and
- the calculated ratios of service area loads to total influent loads.

Generally, the calculated load ratios from residential and mixed commercial sources were similar to estimated flow ratios (93 percent residential, 7 percent mixed commercial). The exceptions (based on residential loads five percent less or greater than 93 percent of total service area loads) at Central Buckeye WWTP were

- boron and chloride, with higher residential concentrations, and
- copper, fluoride, lead and mercury at Central Buckeye WWTP, with higher mixed commercial concentrations.

The ratios of service area loads to total influent loads that fell outside the range of 80 to 120 percent at Central Buckeye WWTP included:

- Pollutants with a disparity between residential and mixed commercial concentrations--fluoride (2.4 vs 5.2 mg/L) and TDS (1991 vs 194 mg/L).
- Pollutants with small influent loads--cadmium, chromium, cyanide, mercury and selenium. Estimated influent loads of cadmium, cyanide, mercury and selenium were less than 0.1 lb/day; estimated loads of chromium were less than 1 lb/day.

The ratios of service area loads to total influent loads that fell outside the range of 80 to 120 percent at Sundance WRF included:

- Pollutants with a disparity between residential and commercial concentrations--chloride (219 vs 373 mg/L), zinc (0.20 vs 0.01 mg/L), BOD (386 vs 686 mg/L), and TSS (883 vs 1212 mg/L).

- Pollutants with small influent loads—arsenic, cadmium, chromium, copper, cyanide, and selenium. Estimated influent loads of arsenic, cadmium, copper, and selenium were less than 0.1 lb/d and estimated loads of chromium and cyanide less than 1 lb/d.
- Pollutants with higher variability in measured service area concentrations: TSS

Internal Mass Balances

Internal mass balances were calculated for conservative pollutants detected in dewatered sludge to compare estimates of the mass of each pollutant present in the waste sludge to the mass removed from the wet stream. Analyses used data from local limits sampling, which included eight to ten influent samples and one dewatered sludge sample for each facility. Sludge data for boron, nickel, and zinc were not available for Sundance WRF. Tables CB C-4 and SD C-4 summarize the results for Central Buckeye WWTP and Sundance WRF, respectively.

The internal mass balances for Central Buckeye WWTP that fell outside the range of 80 to 120 percent were for pollutants with small influent loads—arsenic, chromium, lead, nickel, and selenium. The estimated load of chromium was less than 1 lb/d; estimated influent loads of the other pollutants were less than 0.1 lb/d. The internal mass balances for boron and cadmium were not calculated: these pollutants were not removed through treatment.

The internal mass balances for Sundance WRF that fell outside the range of 80 to 120 percent were for pollutants with small influent loads—arsenic, chromium, lead, and selenium. Estimated influent loads of arsenic, cadmium, lead and selenium were less than 0.1 lb/d; estimated loads of chromium were less than 1 lb/d.

Table CB C-1 Central Buckeye WWTP Influent and Collection System Pollutant Concentrations (a,b)

Pollutant	Average Pollutant Concentration (mg/L)						
	Residential	Mixed Commercial	Service Area	Influent with Belt Press Return	Belt Press Return	Influent without Belt Press Return	Effluent
Arsenic (c)	0.0049	0.0075	0.0051	0.0045	0.0044	0.0045	0
Boron	1.01	0.17	0.95	0.87	0.91	0.87	0.90
Cadmium (c)	0.0002	0.0002	0.0002	0.00010	0.00010	0.00010	0.0001
Chloride	726	75	680	621	566	625	587
Chromium (Total)	0.022	0.0081	0.021	0.016	0.011	0.016	0.0038
Copper (c)	0.02	0.044	0.022	0.025	0.015	0.026	0
Cyanide (c)	0.003	0.004	0.0031	0.004	0.005	0.0039	0.006
Fluoride	2.4	5.2	2.6	5.0	1.7	5.3	1.7
Lead (c)	0.0008	0.0045	0.00106	0.0012	0.001	0.0012	0.0003
Mercury (c)	0.00009	0.00108	0.00016	0	0	0	0
Nickel (c)	0.0041	0.0047	0.0041	0.004	0.0041	0.0040	0.0037
Selenium	0.005	0.0014	0.0047	0.003	0.0028	0.0030	0.0021
TDS	1991	614	1895	1574	1813	1556	1426
Zinc	0.15	0.15	0.15	0.16	0.13	0.16	0.049
BOD	339	420	345	278	57	295	3
COD	637	879	654	708	287	740	30
TSS (c)	218	311	225	211	144	216	2
Ammonia-N (c)	44.5	38.9	44	43.7	0.64	47	0.44
TKN	63.0	67.4	63	68.9	25.7	72	2.0
Total Nitrogen	65.3	68.6	66	69.0	26.6	72	5.2

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = nitrogen; TDS=total dissolved solids; TKN = total Kjeldahl nitrogen; TSS = total suspended solids

Notes

- (a) Wet stream samples collected during March 2019 sampling event
 (b) If all sample results were reported as non-detected, value is represented as zero.
 (c) Three or more sample results from one or more streams were reported as non-detected

Table CB C-2 Central Buckeye WWTP Influent and Collection System Pollutant Loads(a,b)

Pollutant	Average Pollutant Load (lb/d)					
	Residential	Mixed Commercial	Total Service Area	Influent with Belt Press Return	Belt Press Return	Influent w/out Belt Press Return
Arsenic (c)	0.055	0.0063	0.061	0.059	0.004	0.055
Boron	11	0.144	12	11	0.83	10
Cadmium (c)	0.002	0.00017	0.0024	0.0013	0.0001	0.0012
Chloride	8165	63	8228	8079	519	7560
Chromium (Total)	0.25	0.0069	0.25	0.21	0.01	0.20
Copper (c)	0.22	0.037	0.26	0.33	0.0	0.31
Cyanide (c)	0.03	0.0034	0.037	0.05	0	0.047
Fluoride	27	4.4	31	65	1.5	64
Lead (c)	0.009	0.0038	0.013	0.016	0.001	0.015
Mercury (c)	0.0010	0.00091	0.0019	0	0	0
Nickel (c)	0.046	0.0040	0.050	0.052	0.0038	0.048
Selenium	0.056	0.00119	0.057	0.039	0.0026	0.036
TDS	22392	520	22912	20478	1663	18815
Zinc	1.7	0.127	1.8	2.1	0.12	2.0
BOD	3813	356	4168	3617	52	3565
COD	7164	744	7908	9211	263	8948
TSS (c)	2452	263	2715	2745	132	2613
Ammonia-N (c)	500	33	533	569	1	568
TKN	709	57	766	896	24	873
Total Nitrogen	734	58	792	898	24	873
Flow (MGD)	1.35	0.10	1.45	1.56	0.11	1.45

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = Nitrogen; TKN = total Kjeldahl nitrogen; TDS = total dissolved solids, TSS = total suspended solids

Notes

- a. Wet stream samples collected during March 2019 sampling event
b. If all sample results were reported as non-detected, value is represented as zero.
c. Three or more sample results from one or more streams were reported as non-detected

d. Flow proportions:

Residential	93%
Commercial	7%

Table CB C-3 Central Buckeye WWTP Collection System--to--Influent Mass Balance(a,b)

Pollutant	Average Pollutant Load			Percent of Influent Load		
	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Influent (w/o Belt Press Return)</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Total Service Area</i>
Arsenic (c)	0.055	0.0063	0.055	90%	10%	113%
Boron	11	0.144	10	99%	1%	110%
Cadmium (c)	0.002	0.0002	0.0012	93%	7%	200%
Chloride	8165	63	7560	99%	1%	109%
Chromium (Total)	0.25	0.0069	0.20	97%	3%	128%
Copper (c)	0.22	0.037	0.31	86%	14%	84%
Cyanide (c)	0.03	0.0034	0.05	91%	9%	78%
Fluoride	27	4.4	64	86%	14%	49%
Lead (c)	0.009	0.0038	0.015	70%	30%	87%
Mercury (c)	0.0010	0.0009	0	53%	47%	-
Nickel (c)	0.046	0.0040	0.048	92%	8%	104%
Selenium	0.056	0.00119	0.036	98%	2%	157%
TDS	22392	520	18815	98%	2%	122%
Zinc	1.7	0.127	2.0	93%	7%	92%
BOD	3813	356	3565	91%	9%	117%
COD	7164	744	8948	91%	9%	88%
TSS (c)	2452	263	2613	90%	10%	104%
Ammonia-N (c)	500	33	568	94%	6%	94%
TKN	709	57	873	93%	7%	88%
Total Nitrogen	734	58	873	93%	7%	91%

Notes

- a. Wet stream samples collected during March 2019 sampling event
- b. If all sample results were reported as non-detected, value is represented as zero.
- c. Three or more sample results from one or more streams were reported as non-detected

Table CB C-4 Central Buckeye WWTP Internal Dry Stream--to--Wet Stream Mass Balance(a,b)

Pollutant	Sludge		Wet Stream					Sludge/Wet Stream, %
	Sludge Concentration (mg/dry kg)(d)	Sludge Mass (lb/d)	Influent with Belt Press Return Concentration (mg/L)	Influent with Belt Press Return Mass (lb/d)	Effluent Concentration (mg/L)	Effluent Mass (lb/d)	Mass Removed (lb/d)	
Arsenic (c)	8.5	0.022	0.0045	0.059	0	0	0.06	37%
Boron	72	0.18	0.87	11	0.90	12	<0	-
Cadmium (c)	0.84	0.0022	0.0001	0.0013	0.0001	0.0013	0	-
Chromium (Total)	83	0.21	0.016	0.21	0.0038	0.049	0.16	134%
Lead (c)	7.2	0.018	0.0012	0.016	0.0003	0.004	0.012	158%
Nickel (c)	10	0.026	0.004	0.052	0.0037	0.048	0.004	658%
Selenium	10	0.026	0.003	0.039	0.0021	0.027	0.012	219%
Zinc	620	1.6	0.16	2.082	0.049	0.638	1.444	110%
TKN	79400	204	68.9	896	1.98	26	871	23%
Total Nitrogen	79400	204	69	898	5.17	67	830	25%

<i>Variables</i>	
Sludge, wet tons/month	249
Total solids, percent	16
Sludge, dry kg/d	1167
Influent WWTP flow (with belt press return), mgd	1.56
<i>Conversion factors:</i>	
lb/ton	2000
days/month	31
lb/gal	8.34
L/gal	3.785
percent to mg/L	10,000
mg/kg	1,000,000
mg/lb	454,000

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = Nitrogen; TKN = total Kjeldahl nitrogen; TDS = total dissolved solids, TSS = total suspended solids

Notes

- a. Samples collected during March 2019 sampling event; dewatered sludge production from March 2019 invoice
- b. If all sample results were reported as non-detected, value is represented as zero.
- c. Three or more sample results from one or more streams were reported as non-detected
- d. Dry sludge values were estimated using reported wet results and estimated 16 percent solids concentration

Table SD C-1 Sundance WRF Influent and Collection System
Pollutant Concentrations (a,b)

Pollutant	Average Pollutant Concentration (mg/L)				
	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Service Area</i>	<i>Influent</i>	<i>Effluent</i>
Arsenic (c)	0.0065	0.0060	0.0065	0.0051	0.0049
Boron	0.77	0.64	0.76	0.73	0.75
Cadmium (c)	0.0002	0.0001	0.00019	0.00010	0
Chloride	219	373	230	308	320
Chromium (Total)	0.030	0.028	0.030	0.024	0.0058
Copper (c)	0.059	0.086	0.061	0.044	0.017
Cyanide (c)	0.004	0.003	0.0039	0.003	0.003
Fluoride	1.80	1.44	1.77	1.81	1.65
Lead (c)	0.0009	0.001	0.0009	0.0009	0.0006
Mercury (c)	0.00011	0.00009	0.00011	0.0001	0.0001
Nickel (c)	0.0037	0.0058	0.0038	0.0039	0
Selenium (c)	0.0031	0.0020	0.0030	0.0025	0.0012
TDS	883	1212	906	910	958
Zinc	0.20	0.10	0.19	0.14	0.054
BOD	386	686	407.0	322	3
COD	819	1140	841.5	716	30
TSS (c)	277	226	273.4	206	1
Ammonia-N	74.8	7.71	70.1	61.6	0.336
TKN	72.4	43.2	70.4	69.1	1.87
Total Nitrogen	72.8	47.1	71.0	69.1	3.26

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = nitrogen; TDS=total dissolved solids; TKN = total Kjeldahl nitrogen; TSS = total suspended solids

Notes

- Wet stream samples collected during April 2019 sampling event
- If all sample results were reported as non-detected, value is represented as zero.
- Three or more sample results from one or more streams were reported as non-detected

Table SD C-2 Sundance WRF Influent and Collection System Pollutant Loads(a,b)

Pollutant	Average Pollutant Load (lb/d)			
	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Total Service Area</i>	<i>Influent</i>
Arsenic (c)	0.082	0.0057	0.088	0.069
Boron	10	0.609	10	9.9
Cadmium (c)	0.003	0.00010	0.0026	0.001
Chloride	2769	355	3124	4187
Chromium (Total)	0.38	0.0266	0.41	0.33
Copper (c)	0.75	0.082	0.83	0.60
Cyanide (c)	0.05	0.0029	0.053	0.041
Fluoride	23	1.4	24	25
Lead (c)	0.011	0.0010	0.012	0.012
Mercury (c)	0.0014	0.00009	0.0015	0.0014
Nickel (c)	0.047	0.0055	0.052	0.053
Selenium (c)	0.039	0.00190	0.041	0.034
TDS	11163	1153	12317	12371
Zinc	2.5	0.095	2.6	1.9
BOD	4880	653	5533	4377
COD	10354	1085	11439	9733
TSS	3502	215	3717	2800
Ammonia-N	946	7	953	837
TKN	915	41	956	939
Total Nitrogen	920	45	965	939
Flow (MGD)	1.52	0.11	1.63	1.63

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = Nitrogen; TKN = total Kjeldahl nitrogen; TDS = total dissolved solids, TSS = total suspended solids

Notes:

- a. Wet stream samples collected during April 2019 sampling event
b. If all sample results were reported as non-detected, value is represented as zero.
c. Three or more sample results from one or more streams were reported as non-detected

d. Flow proportions:

Residential	93%
Commercial	7%

Table SD C-3 Sundance WRF Collection System--to--Influent Mass Balance (a,b)

Pollutant	Average Pollutant Load			Percent of Influent Load		
	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Influent</i>	<i>Residential</i>	<i>Mixed Commercial</i>	<i>Total Service Area</i>
Arsenic (c)	0.082	0.006	0.069	94%	6%	127%
Boron	10	0.6	9.9	94%	6%	104%
Cadmium (c)	0.003	0.0001	0.0014	96%	4%	193%
Chloride	2769	355	4187	89%	11%	75%
Chromium (Total)	0.38	0.027	0.33	93%	7%	124%
Copper (c)	0.75	0.08	0.60	90%	10%	138%
Cyanide (c)	0.05	0.0029	0.041	95%	5%	131%
Fluoride	23	1.4	24.61	94%	6%	98%
Lead (c)	0.011	0.0010	0.012	92%	8%	101%
Mercury (c)	0.0014	0.0001	0.0014	94%	6%	109%
Nickel (c)	0.047	0.0055	0.05	89%	11%	99%
Selenium (c)	0.039	0.0019	0.03	95%	5%	121%
TDS	11163	1153	12371	91%	9%	100%
Zinc	2.5	0.095	1.90	96%	4%	138%
BOD	4880	653	4377	88%	12%	126%
COD	10354	1085	9733	91%	9%	118%
TSS (3)	3502	215	2800	94%	6%	133%
Ammonia-N	946	7	837	99%	1%	114%
TKN	915	41	939	96%	4%	102%
Total Nitrogen	920	45	939	95%	5%	103%

Notes

- a. Wet stream samples collected during March 2019 sampling event
- b. If all sample results were reported as non-detected, value is represented as zero.
- c. Three or more sample results from one or more streams were reported as non-detected

Table SD C-4 Sundance WRF Internal Dry Stream--to--Wet Stream Mass Balance(a,b)

Pollutant	Sludge		Wet Stream				Sludge/Wet Stream, %	
	Sludge Concentration (mg/dry kg)	Sludge Mass (lb/d)	Influent Concentration (mg/L)	Influent Mass (mg/L)	Effluent Concentration (mg/L)	Effluent Mass (lb/d)		Mass Removed (lb/d)
Arsenic (b)	3.6	0.004	0.0051	0.069	0.0049	0.067	0.003	135%
Cadmium (c)	1.2	0.0012	0.0001	0.0014	0	0	0.0014	90%
Chromium (Total)	190	0.19	0.024	0.33	0.0058	0.079	0.25	79%
Lead (c)	1	0.0010	0.0009	0.012	0.0006	0.008	0.004	25%
Selenium (c)	3.2	0.003	0.0025	0.034	0.0012	0.016	0.018	19%
TKN (d)	78462	80	69.1	939	1.87	25	914	9%
Total Nitrogen (d)	78462	80	69.1	939	3.26	44	895	9%

Variables:

Sludge, wet tons/month	122
Total solids, percent	13
Sludge, dry kg/d	464
Influent WWTP flow, mgd	1.63

Conversion factors:

lb/ton	2000
days/month	31
lb/gal	8.34
L/gal	3.785
percent to mg/L	10,000
mg/kg	1,000,000
mg/lb	454,000

Abbreviations: BOD = five-day biochemical oxygen demand; COD = chemical oxygen demand; mg/L = milligrams per liter; N = Nitrogen; TKN = total Kjeldahl nitrogen; TDS = total dissolved solids, TSS = total suspended solids

Notes

- Samples collected during April 2019 sampling event; dewatered sludge production from April 2019 invoice
- If all sample results for effluent were reported as non-detected value was represented as zero
- If all sample results for dewatered sludge were reported as non-detected, value of detection level was used
- Dry sludge values estimated using reported wet result and estimated 13 percent solids

Appendix D—Removal Efficiencies

Central Buckeye WWTP

Table CB D-1 Central Buckeye WWTP Removal Efficiency Calculations

Table CB D-2 Central Buckeye WWTP Removal Efficiency Summary

Sundance WRF

Table SD D-1 Sundance WRF Removal Efficiency Calculations

Table SD D-2 Sundance WRF Removal Efficiency Summary

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
ARSENIC (b,c)			
3/19/19	0.0045	< 0.0043	4%
3/20/19	< 0.0043	< 0.0043	-
3/21/19	< 0.0043	< 0.0043	-
3/22/19	< 0.0043	< 0.0043	-
3/23/19	< 0.0043	< 0.0043	-
3/24/19	0.0052	< 0.0043	17%
3/25/19	< 0.0043	< 0.0043	-
3/26/19	0.0046	< 0.0043	7%
ADRE			9%
MRE	0.0048	0.0043	10%
NRMRL			50%
Appendix R			45%
Selected			10%
BORON			
3/19/19	0.78	0.96	-23%
3/20/19	0.81	0.87	-7%
3/21/19	0.82	0.87	-6%
3/22/19	0.86	0.82	5%
3/23/19	0.87	0.9	-3%
3/24/19	1.0	1.0	0%
3/25/19	1.0	0.93	7%
3/26/19	0.84	0.84	0%
ADRE			-4%
MRE	0.87	0.90	-3%
NRMRL			-
Appendix R			-
Selected			0%
CADMIUM (b,c)			
3/19/19	0.0001	< 0.0001	-
3/20/19	0.0001	0.0001	-
3/21/19	0.0001	< 0.0001	-
3/22/19	0.0002	< 0.0001	50%
3/23/19	0.0003	< 0.0001	67%
3/24/19	0.0001	< 0.0001	-
3/25/19	< 0.0001	< 0.0001	-
3/26/19	0.0001	< 0.0001	-
ADRE			58%
MRE	0.00014	0.00010	30%
NRMRL			62%
Appendix R			67%
Selected			30%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
CHLORIDE			
3/19/19	771	613	20%
3/20/19	584	578	1%
3/21/19	690	560	19%
3/22/19	559	578	-3%
3/23/19	551	584	-6%
3/24/19	633	626	1%
3/25/19	628	587	7%
3/26/19	554	571	-3%
ADRE			4%
MRE	621	587	5%
NRMRL			-
Appendix R			-
Selected			0%
CHROMIUM (TOTAL)			
3/19/19	0.015	0.0048	68%
3/20/19	0.014	0.0038	73%
3/21/19	0.017	0.0046	73%
3/22/19	0.015	0.0032	79%
3/23/19	0.018	0.0034	81%
3/24/19	0.017	0.004	76%
3/25/19	0.013	0.0034	74%
3/26/19	0.018	< 0.0032	82%
ADRE			76%
MRE	0.016	0.0038	76%
NRMRL			72%
Appendix R			82%
Selected			76%
COPPER (b,c)			
3/19/19	0.031	< 0.013	58%
3/20/19	0.019	< 0.013	32%
3/21/19	0.029	< 0.013	55%
3/22/19	< 0.013	< 0.013	-
3/23/19	0.027	< 0.013	52%
3/24/19	0.024	< 0.013	46%
3/25/19	0.019	< 0.013	32%
3/26/19	0.038	< 0.013	66%
ADRE			49%
MRE	0.027	0.0130	51%
NRMRL			72%
Appendix R			86%
Selected			51%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
CYANIDE (b)			
3/19/19	< 0.003	0.005	
3/20/19	< 0.003	0.007	
3/21/19	0.003	0.009	-200%
3/22/19	0.004	0.007	-75%
3/23/19	0.003	0.005	-67%
3/24/19	0.005	0.004	20%
3/25/19	0.004	0.004	0%
3/26/19	< 0.003	0.005	-
ADRE			-64%
MRE	0.004	0.006	-51%
NRMRL			55%
Appendix R			69%
Selected			0%
FLUORIDE			
3/19/19	4.45	1.74	61%
3/20/19	5.73	1.68	71%
3/21/19	3.97	1.68	58%
3/22/19	6.29	1.67	73%
3/23/19	5.9	1.71	71%
3/24/19	5.78	1.75	70%
3/25/19	6.64	1.63	75%
3/26/19	1.48	1.54	-4%
ADRE			59%
MRE	5.03	1.68	67%
NRMRL			-
Appendix R			-
Selected			67%
LEAD (c)			
3/19/19	0.001	< 0.0003	70%
3/20/19	0.001	< 0.0003	70%
3/21/19	0.0013	< 0.0003	77%
3/22/19	0.0012	0.0004	67%
3/23/19	0.0013	< 0.0003	77%
3/24/19	0.0011	< 0.0003	73%
3/25/19	0.0008	< 0.0003	63%
3/26/19	0.0016	0.0003	81%
ADRE			72%
MRE	0.0012	0.0003	73%
NRMRL			70%
Appendix R			61%
Selected			73%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
MERCURY (b,c)			
3/19/19	< 0.00009	< 0.00009	-
3/20/19	< 0.00009	< 0.00009	-
3/21/19	< 0.00009	< 0.00009	-
3/22/19	< 0.00009	< 0.00009	-
3/23/19	< 0.00009	< 0.00009	-
3/24/19	< 0.00009	< 0.00009	-
3/25/19	< 0.00009	< 0.00009	-
3/26/19	< 0.00009	< 0.00009	-
ADRE			-
MRE		0.00009	-
NRMRL			68%
Appendix R			60%
Selected			0%
NICKEL (b,c)			
3/19/19	0.0066	0.0044	33%
3/20/19	< 0.0036	0.0036	-
3/21/19	< 0.0036	< 0.0036	-
3/22/19	0.0038	< 0.0036	5%
3/23/19	< 0.0036	< 0.0036	-
3/24/19	< 0.0036	< 0.0036	-
3/25/19	< 0.0036	< 0.0036	-
3/26/19	< 0.0036	< 0.0036	-
ADRE			19%
MRE	0.0052	0.0037	29%
NRMRL			36%
Appendix R			42%
Selected			29%
SELENIUM (c)			
3/19/19	0.0025	< 0.0011	56%
3/20/19	0.0024	0.0022	8%
3/21/19	0.0019	0.0015	21%
3/22/19	0.0035	0.0018	49%
3/23/19	0.0034	0.0026	24%
3/24/19	0.0038	0.0031	18%
3/25/19	0.0031	0.0024	23%
3/26/19	0.0036	0.0024	33%
ADRE			29%
MRE	0.0030	0.0021	29%
NRMRL			38%
Appendix R			50%
Selected			29%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
TOTAL DISSOLVED SOLIDS			
3/19/19	1580	1370	13%
3/20/19	1520	1890	-24%
3/21/19	1960	1220	38%
3/22/19	1430	1180	17%
3/23/19	1290	1170	9%
3/24/19	1510	1440	5%
3/25/19	1650	1670	-1%
3/26/19	1650	1470	11%
ADRE			8%
MRE	1574	1426	9%
NRMRL			-
Appendix R			-
Selected			0%
ZINC			
3/19/19	0.16	0.046	71%
3/20/19	0.13	0.046	65%
3/21/19	0.19	0.055	71%
3/22/19	0.2	0.05	75%
3/23/19	0.16	0.051	68%
3/24/19	0.16	0.05	69%
3/25/19	0.11	0.046	58%
3/26/19	0.17	0.045	74%
ADRE			69%
MRE	0.16	0.049	70%
NRMRL			73%
Appendix R			79%
Selected			70%
BOD ₅			
3/19/19	280	2	99%
3/20/19	194	2	99%
3/21/19	305	4	99%
3/22/19	396	2	99%
3/23/19	306	3	99%
3/24/19	240	3	99%
3/25/19	210	3	99%
3/26/19	289	2	99%
ADRE			99%
MRE	278	3	99%
NRMRL			-
Appendix R			-
Selected			99%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
COD			
3/19/19	370	31	92%
3/20/19	460	29	94%
3/21/19	487	26	95%
3/22/19	612	28	95%
3/23/19	2050	31	98%
3/24/19	587	32	95%
3/25/19	481	30	94%
3/26/19	613	29	95%
ADRE			95%
MRE	708	30	96%
NRMRL			-
Appendix R			-
Selected			96%
TOTAL NITROGEN			
3/19/19	66.8	4.8	93%
3/20/19	71.3	5.13	93%
3/21/19	69.9	4.88	93%
3/22/19	70.2	5.36	92%
3/23/19	68.2	6.07	91%
3/24/19	77.8	6.07	92%
3/25/19	60.2	3.81	94%
3/26/19	67.7	5.26	92%
ADRE			93%
MRE	69.0	5.17	93%
NRMRL			-
Appendix R			-
Selected			93%
TOTAL SUSPENDED SOLIDS (c)			
3/19/19	260	2	99%
3/20/19	158	< 1	99%
3/21/19	316	< 1	100%
3/22/19	258	< 1	100%
3/23/19	196	< 1	99%
3/24/19	184	1	99%
3/25/19	76	6	92%
3/26/19	242	1	100%
ADRE			99%
MRE	211	2	99%
NRMRL			-
Appendix R			-
Selected			99%

Table CB D-1. Central Buckeye WWTP Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	

Abbreviations

- ADRE = Average Daily Removal Efficiency
- Appendix R = 2004 USEPA Local Limits Development Guidance
- BOD₅ = 5-day Biochemical Oxygen Demand
- COD = Chemical Oxygen Demand
- mg/L = milligrams per liter
- MRE = Mean Removal Efficiency
- NRMRL = National Risk Management Research Laboratory

Notes

- a. Influent samples were collected from 3/19/2019 through 3/26/2019; effluent samples were collected from 3/20/2019 through 3/27/2018, 12 hours after influent to reflect detention time of WWTP.
- b. Influent values reported as non-detected were excluded from calculation of average influent, and daily removal efficiencies were not calculated.
- c. Detection level values were substituted in calculations for effluent values reported as non-detected.

Table CB D-2. Central Buckeye WWTP Removal Efficiency Summary

Pollutant	Removal Efficiency (Percent)		Literature Values (Percent)		Selected
	ADRE	MRE	NRMRL	App R	
Arsenic	9	10	50	45	10%
Boron (a)	-4	-3	-	-	0%
Cadmium	58	30	62	67	30%
Chloride (a)	4	5	-	-	0%
Chromium (Total)	76	76	72	82	76%
Copper	49	51	72	86	51%
Cyanide (a)	-64	-51	55	69	0%
Fluoride	59	67	-	-	67%
Lead	72	73	70	61	73%
Mercury (b)		-	68	60	0%
Nickel	19	29	36	42	29%
Selenium	29	29	38	50	29%
Total Dissolved Solids (a)	8	9	-	-	0%
Zinc	69	70	73	79	70%
BOD ₅	99	99	-	-	99%
COD	95	96	-	-	96%
Total Nitrogen	93	93	-	-	93%
Total Suspended Solids	99	99	-	-	99%

Abbreviations

ADRE = Average Daily Removal Efficiency

Appendix R = 2004 USEPA Local Limits Development Guidance

BOD₅ = 5-day Biochemical Oxygen Demand

COD = Chemical Oxygen Demand

NRMRL = National Risk Management Research Laboratory

Notes

a. Some or all daily removal efficiencies were less than zero

b. No influent or effluent results were reported as detected

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
ARSENIC (b,c)			
4/11/19	< 0.0043		-
4/12/19	0.0053	< 0.0043	19%
4/13/19	0.0043	0.0052	-21%
4/14/19		0.0051	-
4/15/19	0.0047	0.0045	4%
4/16/19	0.0052	0.0046	12%
4/17/19	0.0061	0.0061	0%
4/18/19	< 0.0043	< 0.0043	0%
4/19/19	0.0062	0.0048	23%
ADRE			5%
MRE	0.0051	0.0049	4%
NRMRL			50%
Appendix R			45%
Selected			0%
BORON			
4/11/19	0.7		-
4/12/19	0.83	0.78	6%
4/13/19	0.71	0.76	-7%
4/14/19		0.76	-
4/15/19	0.75	0.78	-4%
4/16/19	0.7	0.78	-11%
4/17/19	0.67	0.73	-9%
4/18/19	0.7	0.69	1%
4/19/19	0.79	0.69	13%
ADRE			-2%
MRE	0.73	0.75	-2%
NRMRL			-
Appendix R			-
Selected			0%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
CADMIUM (2,3)			
4/11/19	< 0.0001		-
4/12/19	0.0001	< 0.0001	0%
4/13/19	0.0001	< 0.0001	0%
4/14/19		< 0.0001	-
4/15/19	0.0001	< 0.0001	0%
4/16/19	0.0001	< 0.0001	0%
4/17/19	0.0001	< 0.0001	0%
4/18/19	0.0001	< 0.0001	0%
4/19/19	0.0001	< 0.0001	0%
ADRE			0%
MRE	0.0001	0.00010	0%
NRMRL			62%
Appendix R			67%
Selected			0%
CHLORIDE			
4/11/19	232		-
4/12/19	380	387	-2%
4/13/19	330	401	-22%
4/14/19		0.3	-
4/15/19	320	373	-17%
4/16/19	291	330	-
4/17/19	283	322	-14%
4/18/19	242	321	-33%
4/19/19	389	428	-10%
ADRE			-16%
MRE	308	320	-4%
NRMRL			-
Appendix R			-
Selected			0%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
CHROMIUM (TOTAL)			
4/11/19	0.022		-
4/12/19	0.024	0.0048	80%
4/13/19	0.024	0.0046	81%
4/14/19		0.0046	-
4/15/19	0.024	0.0048	80%
4/16/19	0.022	0.0052	76%
4/17/19	0.022	0.0080	64%
4/18/19	0.024	0.0076	68%
4/19/19	0.029	0.0068	77%
ADRE			75%
MRE	0.024	0.0058	76%
NRMRL			72%
Appendix R			82%
Selected			76%
COPPER (b,c)			
4/11/19	0.038		-
4/12/19	0.042	< 0.013	69%
4/13/19	0.055	< 0.013	76%
4/14/19		< 0.013	-
4/15/19	0.051	0.048	6%
4/16/19	0.045	< 0.013	71%
4/17/19	0.038	< 0.013	66%
4/18/19	0.038	< 0.013	66%
4/19/19	0.046	< 0.013	72%
ADRE			61%
MRE	0.044	0.017	61%
NRMRL			72%
Appendix R			86%
Selected			61%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
CYANIDE (b)			
4/11/19	< 0.003		-
4/12/19	< 0.003	< 0.003	0%
4/13/19	0.003	< 0.003	0%
4/14/19		0.003	-
4/15/19	< 0.003	0.003	0%
4/16/19	0.003	0.003	0%
4/17/19	< 0.003	< 0.003	0%
4/18/19	< 0.003	< 0.003	0%
4/19/19	< 0.003	< 0.003	0%
ADRE			0%
MRE	0.003	0.003	0%
NRMRL			55%
Appendix R			69%
Selected			0%
FLUORIDE			
4/11/19	2.04		-
4/12/19	1.82	1.88	-3%
4/13/19	1.7	1.93	-14%
4/14/19		0.02	-
4/15/19	1.73	1.86	-8%
4/16/19	1.73	1.9	-10%
4/17/19	1.77	1.91	-8%
4/18/19	1.74	1.89	-9%
4/19/19	1.93	1.83	-8%
ADRE			-8%
MRE	1.81	1.65	9%
NRMRL			-
Appendix R			-
Selected			0%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
LEAD (c)			
4/11/19	0.0007		-
4/12/19	0.0011	< 0.0003	73%
4/13/19	0.001	< 0.0003	70%
4/14/19		< 0.0003	-
4/15/19	0.001	-	(d)
4/16/19	0.001	< 0.0003	70%
4/17/19	0.0007	< 0.0003	57%
4/18/19	0.0007	< 0.0003	57%
4/19/19	0.0009	< 0.0003	67%
ADRE			66%
MRE	0.0009	0.0003	66%
NRMRL			70%
Appendix R			61%
Selected			66%
MERCURY (b,c)			
4/11/19	< 0.00009		-
4/12/19	0.0001	< 0.00009	10%
4/13/19	0.0001	< 0.00009	10%
4/14/19		0.0002	-
4/15/19	< 0.00009	< 0.00009	0%
4/16/19	0.0001	< 0.00009	10%
4/17/19	0.0002	< 0.00009	63%
4/18/19	0.0002	< 0.00009	55%
4/19/19	0.0001	< 0.00009	10%
ADRE			23%
MRE	0.0001	0.0001	19%
NRMRL			68%
Appendix R			60%
Selected			19%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
NICKEL (b,c)			
4/11/19	< 0.0036		-
4/12/19	0.0048	< 0.0036	25%
4/13/19	0.004	< 0.0036	10%
4/14/19		< 0.0036	
4/15/19	< 0.0036	< 0.0036	0%
4/16/19	< 0.0036	< 0.0036	0%
4/17/19	0.0039	< 0.0036	8%
4/18/19	< 0.0036	< 0.0036	0%
4/19/19	0.0042	< 0.0036	14%
ADRE			8%
MRE	0.0039	0.0036	8%
NRMRL			36%
Appendix R			42%
Selected			8%
SELENIUM (c)			
4/11/19	0.0023		-
4/12/19	0.0029	< 0.0011	62%
4/13/19	0.0024	0.0014	42%
4/14/19		0.0012	-
4/15/19	0.0031	< 0.0011	65%
4/16/19	0.0025	< 0.0011	56%
4/17/19	0.0027	0.0013	52%
4/18/19	0.0018	< 0.0011	39%
4/19/19	0.002	< 0.0011	45%
ADRE			51%
MRE	0.0025	0.0012	52%
NRMRL			38%
Appendix R			50%
Selected			52%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
TOTAL DISSOLVED SOLIDS			
4/11/19	774		-
4/12/19	1040	963	7%
4/13/19	851	1050	-23%
4/14/19		948	-
4/15/19	900	1010	-12%
4/16/19	980	1000	-2%
4/17/19	793	804	-1%
4/18/19	760	866	-14%
4/19/19	1180	1020	14%
ADRE			-5%
MRE	910	958	-5%
NRMRL			-
Appendix R			-
Selected			0%
ZINC			
4/11/19	0.14		-
4/12/19	0.13	0.046	65%
4/13/19	0.14	0.048	66%
4/14/19		0.053	
4/15/19	0.14	0.079	44%
4/16/19	0.14	0.059	58%
4/17/19	0.12	0.051	58%
4/18/19	0.14	0.051	64%
4/19/19	0.14	0.043	69%
ADRE			60%
MRE	0.14	0.054	61%
NRMRL			73%
Appendix R			79%
Selected			61%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
BOD ₅			
4/11/19	336		-
4/12/19	345	5	99%
4/13/19	321	2	99%
4/14/19		2	-
4/15/19	395	2	99%
4/16/19	299	2	99%
4/17/19	257	3	-
4/18/19	326	2	99%
4/19/19	297	2	99%
ADRE			99%
MRE	322	3	99%
NRMRL			-
Appendix R			-
Selected			99%
COD			
4/11/19	716		-
4/12/19	585	28	95%
4/13/19	475	28	94%
4/14/19		27	-
4/15/19	618	25	96%
4/16/19	581	30	95%
4/17/19	500	30	94%
4/18/19	646	23	96%
4/19/19	579	23	96%
ADRE			95%
MRE	588	27	95%
NRMRL			-
Appendix R			-
Selected			95%

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (a) (mg/L)		Removal Efficiency
	Influent	Effluent	
TOTAL NITROGEN			
4/11/19	60.3		-
4/12/19	62.9	2.91	95%
4/13/19	109	4.51	96%
4/14/19		1.98	-
4/15/19	69.8	3.12	96%
4/16/19	61.1	4	93%
4/17/19	60.4	2.73	95%
4/18/19	62.1	3.64	94%
4/19/19	67.1	3.16	95%
ADRE			95%
MRE	69.1	3.26	95%
NRMRL			
Appendix R			
Selected			95%
TOTAL SUSPENDED SOLIDS (c)			
4/11/19	250		-
4/12/19	202	< 1	100%
4/13/19	194	< 1	99%
4/14/19		1	0%
4/15/19	240	< 1	100%
4/16/19	218	< 1	100%
4/17/19	183	3	98%
4/18/19	154	2	99%
4/19/19	208	< 1	100%
ADRE			87%
MRE	206	1	99%
NRMRL			-
Appendix R			-
Selected			99%

Abbreviations

ADRE = Average Daily Removal Efficiency

Appendix R = 2004 USEPA Local Limits Development Guidance

BOD₅ = 5-day Biochemical Oxygen Demand

COD = Chemical Oxygen Demand

mg/L = milligrams per liter

NRMRL = National Risk Management Research Laboratory

Table SD D-1. Sundance WRF Removal Efficiency Calculations

Date	Concentration (<i>a</i>) (mg/L)		Removal Efficiency
	<i>Influent</i>	<i>Effluent</i>	

Notes

- a. Influent samples were collected from 3/19/2019 through 3/26/2019; effluent samples were collected from 3/20/2019 through 3/27/2018, 12 hours after influent to reflect detention time of WWTP.
- b. Influent values reported as non-detected were excluded from calculation of average influent, and daily removal efficiencies were not calculated.
- c. Detection level values were substituted in calculations for effluent values reported as non-detected.

Table SD D-2. Sundance WRF Removal Efficiency Summary

Pollutant	Removal Efficiency (Percent)		Literature Values (Percent)		Selected
	ADRE	MRE	NRMRL	App R	
Arsenic (<i>a</i>)	5	4	50	45	0%
Boron (<i>a</i>)	-2	-2	-	-	0%
Cadmium	0	0	62	67	0%
Chloride (<i>a</i>)	-16	-4	-	-	0%
Chromium (Total)	75	76	72	82	76%
Copper	61	66	72	86	61%
Cyanide (<i>a</i>)	0	0	55	69	0%
Fluoride (<i>a</i>)	-8	9	-	-	0%
Lead	66	66	70	61	66%
Mercury	23	19	68	60	19%
Nickel	8	8	36	42	8%
Selenium	51	52	38	50	52%
Total Dissolved Solids (<i>a</i>)	-5	-5	-	-	0%
Zinc	60	61	73	79	61%
BOD ₅	99	99	-	-	99%
COD	95	95	-	-	95%
Total Nitrogen	95	95	-	-	95%
Total Suspended Solids	99	99	-	-	99%

Abbreviations

ADRE = Average Daily Removal Efficiency

Appendix R = 2004 USEPA Local Limits Development Guidance

BOD₅ = 5-day Biochemical Oxygen Demand

COD = Chemical Oxygen Demand

NRMRL = National Risk Management Research Laboratory

Note

a. Some or all daily removal efficiencies were less than zero.

Appendix E - MAHL Analyses

E-1 Definitions

E-2 Literature Review of Nitrification Inhibition Threshold Levels for Copper, Nickel, and Zinc

E-3 Example of MAHL Analysis – Arsenic

E-4 Detailed MAHL Calculations

Table E-4.1 MAHL Analyses: Equations and Abbreviations

Central Buckeye WWTP

Table CB E-4.2.1 Central Buckeye WWTP MAHL Analyses: Concentration Data and Removal Efficiencies

Table CB E-4.2.2 Central Buckeye WWTP MAHL Analyses: Flows

Table CB E-4.2.3 Central Buckeye WWTP MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Permits

Table CB E-4.2.4 Central Buckeye WWTP MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Standards

Table CB E-4.2.5 Central Buckeye WWTP MAHL Analyses: Sludge/Biosolids-Quality Based Allowable Headworks Loadings (AHLs)

Table CB E-4.2.6 Central Buckeye WWTP MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Table CB E-4.2.8 Central Buckeye WWTP MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loading (MAHLs)

Table CB E-4.2.6 Central Buckeye WWTP MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Sundance WRF

Table SD E-4.2.1 Sundance WRF MAHL Analyses: Concentration Data and Removal Efficiencies

Table SD E-4.2.2 Sundance WRF MAHL Analyses: Flows

Table SD E-4.2.3 Sundance WRF MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Permits

Table SD E-4.2.4 Sundance WRF MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) – Standards

Table SD E-4.2.5 Sundance WRF MAHL Analyses: Sludge/Biosolids-Quality Based Allowable Headworks Loadings (AHLs)

Table SD E-4.2.6 Sundance WRF MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Table SD E-4.2.8 Sundance WRF MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loading (MAHLs)

Table SD E-4.2.6 Sundance WRF MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

E-1 Definitions

The following definitions (USEPA 2004) are useful in understanding technical analyses and alternative control strategies (1).

Allowable Headworks Loading (AHL) - The estimated maximum loading of a pollutant the POTW headworks can receive without jeopardizing a particular criterion (e.g., an effluent permit limit) or otherwise causing pass through or interference.

Allowable Headworks Loading (AHL) - The estimated maximum loading of a pollutant the POTW headworks can receive without jeopardizing a particular criterion (e.g., an effluent permit limit) or otherwise causing pass through or interference.

Interference - A discharge that, alone or with discharges from other sources, inhibits or disrupts a POTW, its treatment processes and operations, or its sludge processes, use or disposal, causing a violation of the POTW's National Pollutant Discharge Elimination System (NPDES) permit, increases the magnitude or duration of such a violation, or prevents the proper use or disposal of sewage sludge.

Industrial User - A nondomestic source of pollutants into the POTW.



Industrial User (IU) Contributory Flow Method - An allocation method that divides the maximum allowable industrial loading (MAIL) among only the controlled sources that discharge a particular pollutant. The portion of the MAIL above background (the amount contributed by uncontrolled sources and controlled sources that do not discharge the pollutant) is divided by the flow rate from the controlled sources that discharge the pollutant, yielding the concentration-based contributory flow limit (CFL).

Mass Proportion Method - An allocation method that divides the MAIL among controlled sources in proportion to each source's loading of a particular pollutant. The portion of the MAIL above background (the amount contributed by uncontrolled sources and controlled sources that do not discharge the pollutant) is multiplied by the ratio of the current loading from each user to the current total loading of a pollutant from controlled sources, yielding the mass-based mass proportion limit (MPL).

Maximum Allowable Headworks Loading (MAHL) - The estimated maximum loading of a pollutant the POTW can receive without jeopardizing any criterion or otherwise causing pass through or interference.

Maximum Allowable Industrial Loading (MAIL) - The estimated maximum loading of a pollutant that can be received at a POTW's headworks from all permitted IUs and other controlled sources without causing pass through or interference.

Pass Through - A discharge that enters the waters of the United States from a POTW in quantities or concentrations that, alone or with discharges from other sources, either causes a violation of any requirement of the POTW's NPDES permit, or increases the magnitude or duration of a violation of the POTW's NPDES permit.

Pollutant of Concern (POC) - Any pollutant that might be discharged in sufficient amounts to cause pass through or interference.

Significant Industrial User or SIU – An Industrial User that is subject to federal categorical standards or that discharges an average of 25,000 gallons per day (gpd) or more of process wastewater to the POTW; contributes a process waste stream that makes up five percent or more of the capacity of the POTW treatment plant; or is designated as such by the City on the basis that it has a reasonable potential for adversely affecting the POTW’s operation or for violating any pretreatment standard or requirement.

Uniform Concentration Method – An allocation method that divides the maximum allowable industrial loading (MAIL) among all controlled sources. The MAIL is divided by the flow rate from the controlled sources, yielding the uniform concentration limit (UCL).

User-Specific Allocation Method – An allocation method that allots portions of the MAIL to prospective controlled sources according to a user-specific evaluation of each proposed discharge.

(1) Discharges to Arizona surface waters are regulated by the Arizona Department of Environmental Quality (ADEQ) through two permitting programs administered by the state Water Quality Division: the Arizona Pollutant Discharge Elimination System (AZPDES) permit program and the Aquifer Protection Permit (APP) program. Where definitions refer to “NPDES permit”, the reader may, for the purposes of this TM, substitute “AZPDES permit and/or APP.”

E-2 Literature Review of Nitrification Inhibition Threshold Levels for Copper, Nickel and Zinc

E-2.1 Copper

2004 USEPA Guidance Appendix G (Literature Inhibition Values) (USEPA, 2004) shows a nitrification inhibition threshold level for copper ranging from 0.05 to 0.48 mg/L. The lower limit of this range, 0.05 mg/L, was used in identifying copper as a POC. From batch tests on nitrifying activated sludge, Braam and Klapwijk (Braam, 1981) observed nitrification inhibition by approximately 13 mg/L total copper in a biomass concentration of 2700 mg/L at a pH of 8. A literature review prepared in 1990 (Russell, 1982) identified a nitrification inhibition level for copper of 0.5 mg/L, noting that “copper is found to stimulatory to nitrification in pure Nitrosomonas culture up to 0.06 mg/L. No concentrations between 0.06 and 0.48 mg/L were tested, and the latter concentration resulted in decreased nitrification.” On the basis of the review, a nitrification inhibition value of 0.50 mg/L was selected for use in the final MAHL analysis for copper.

E-2.2 Nickel

2004 USEPA Guidance Appendix G (Literature Inhibition Values) (USEPA, 2004), shows a nitrification inhibition threshold level for nickel ranging from 0.25 to 5 mg/L. The lower limit of this range, 0.25 mg/L, was used in screening for pollutants of concern. Trahern (Trahern, 1982) found that 0.5 mg/L had no adverse effect on the degree of nitrification achieved by bench-scale activated sludge systems. On the basis of the review, a nitrification inhibition value of 0.5 mg/L was selected for use in the final MAHL analysis for nickel.

E-2.3 Zinc

2004 USEPA Guidance Appendix G (Literature Inhibition Values) (USEPA, 2004) shows a nitrification inhibition threshold level for nickel ranging from 0.08 to 0.5 mg/L. The lower limit of this range, 0.08 mg/L, was used in identifying zinc as a POC. United States Public Health Service studies (Barth E. F., 1965A) (Barth E. F., 1965B) showed an activated sludge inhibition level of 4 mg/L. Russell et al (Russell 1982) listed the activated sludge inhibition threshold level as 3.0 mg/L, and the nitrification inhibition threshold level as 1.5 mg/L [sic; assumed to be 1.5]. On the basis of the review, a nitrification inhibition value of 1.5 mg/L was selected for use in the final MAHL analysis for zinc.

References

Barth, E. F. (1965B). Field Survey of Four Municipal Wastewater Treatment Plants Receiving Metallic Wastes. *Journal Water Pollution Control Federation*, Vol. 37, No. 8 , 1101-1117.

Barth, E. F. (1965A). Summary Report on the Effects of Heavy Metals on the Biological Treatment Processes. *Journal Water Pollution Control Federation*, Vol. 37, No. 1 , 86-96.

Braam, F. a. (1981). Effect of Copper on Nitrification in Activated Sludge. 1093-1098.

Russell, L. L. (1982). Impact of Priority Pollutants on Publicly Owned Treatment Works Processes: A Literature Review. *Purdue Industrial Waste Conference* , pp. 871-883.

Sandy, T. a. (June 2010). *Review of Available Technologies for the Removal of Selenium from Water*. North American Metals Council/CH2MHILL.

Trahern, P. G. (1982). *Effects of Nickel on Activated Sludge Performance at Varying COD:TKN Ratios*. Virginia Polytechnic Institute and State University.

USEPA. (2004). *Local Limits Development Guidance*. EPA 833-R-04-002A.

USEPA. (2004). *Local Limits Development Guidance EPA 833R04002A*. EPA 833-R-04-002A.

E-3 Example of MAHL Analysis – Arsenic

Arsenic was identified as a POC at Central Buckeye WWTP because the maximum influent POTW concentration exceeded one-half of the most stringent water quality screening criterion. Relevant environmental criteria included the following:

The APP alert level of 40 ug/L

The future AWQS criterion of 10 ug/L

SWQS criteria:

- 2000 ug/L for AgI
- 200 for AgL

Inhibition threshold values of 0.1 mg/L for activated sludge and 1.5 mg/L for nitrification

The federal biosolids maximum pollutant concentration for surface disposal of biosolids of 30 mg/kg

The estimated POTW influent flow was 1.55 MGD. The estimated sludge flow was 2,566 dry lb/d.

The POTW removal efficiency was 10 percent, based on the data collected during the March 2019 sampling event.

Effluent Quality Criteria

The AHL for arsenic based on effluent permit limitations was calculated using Equation 5-1:

$$AHL_{eqc} = \frac{(8.34)(C_{eqc})(Q_{potw})}{1 - R_{potw}}$$

AHL _{eqc}	=	AHL based on effluent quality criterion, lb/d
C _{eqc}	=	Most stringent permit limitation = APP alert level of 40 ug/L (0.040 mg/L)
Q _{potw}	=	POTW average flow rate = 1.55 MGD
R _{potw}	=	Plant removal efficiency from headworks to plant effluent, as decimal = 0.10
8.34	=	Conversion factor (mg/L to lb/d)

$$AHL_{eqc} = \frac{(8.34) \left(0.040 \frac{mg}{L}\right) (1.55 MGD)}{1 - 0.10} = 0.57 \text{ lb/d}$$

The AHL for arsenic based on water quality standards (WQS) was calculated using Equation 5-1:

$$AHL_{eqc} = \frac{(8.34)(C_{eqc})(Q_{potw})}{1 - R_{potw}}$$

AHL _{eqc}	=	AHL based on effluent quality criterion, lb/d
C _{eqc}	=	Most stringent WQS criterion = future AWQS criterion of 10 ug/L (0.010 mg/L)
Q _{potw}	=	POTW average flow rate = 1.55 MGD
R _{potw}	=	Plant removal efficiency from headworks to plant effluent, as decimal = 0.10
8.34	=	Conversion factor (mg/L to lb/d)

$$AHL_{eqc} = \frac{(8.34) \left(0.010 \frac{mg}{L}\right) (1.55 MGD)}{1 - 0.10} = 0.14 \frac{lb}{d}$$

Sludge/Biosolids Quality Criteria

The AHL for arsenic based on federal biosolids surface disposal criteria was calculated using a version of Equation 5-2, modified to account for the expression of sludge flow as mass:

$$AHL_{slgd} = \frac{(C_{slgdstd})(Q_{slgd})(G_{slgd})}{(R_{potw})(1,000,000)}$$

AHL_{slgd} = AHL based on sludge, lb/d

C_{slgd} = Sludge standard = monthly average pollutant concentration of 30 mg/kg dry sludge

Q_{slgd} = Total sludge flow rate to disposal = 2566 lb/d (dry)

R_{potw} = Plant removal efficiency from headworks to plant effluent, as decimal = 0.10

1,000,000 = Conversion factor (mg to kg)

$$AHL_{slgd} = \frac{\left(30 \frac{mg}{kg}\right)(2566 lb/d)(1.0)}{(0.10)(1,000,000)} = 0.77 lb/d$$

Inhibition Threshold Levels

The AHL for arsenic based on inhibition threshold levels was calculated using Equation 5-4:

$$AHL_{sec} = (8.34)(C_{inhib2})(Q_{potw})$$

AHL_{sec} = AHL based on secondary treatment inhibition, lb/d

C_{inhib2} = Inhibition criterion for activated sludge = 0.1 mg/L

Q_{potw} = POTW average flow rate = 1.55 MGD

R_{prim} = Removal efficiency from headworks to primary treatment effluent, as decimal = 0

8.34 = Conversion factor (mg/L to lb/d)

$$AHL_{sec} = (8.34) \left(0.1 \frac{mg}{L}\right) (1.55 MGD) = 1.3 lb/d$$

Note: Values may vary slightly from those presented in text because of rounding

Table E-4.1 MAHL Analyses: Equations and Abbreviations

Equations (a)			
Abbreviation	Parameter	Equation	Reference
AHLwqp	Permit effluent limitation-based AHL	$AHLwqp = (8.34/1000)(Cwqp)(Qpotw)/(1-Rpotw)$	5.5
AHLwqs	Water quality standard criterion-based AHL	$AHLwqs = (8.34/1000)(Cwqs)(Qpotw)/(1-Rpotw)$	
AHLinh	Inhibition-based AHL	$AHLinh = (8.34)(Cinhib)(Qpotw)$	5.10
AHLsldg	Sludge-quality-based AHL	$AHLsldg = (Cslgstd)(Qsldg)/(Rpotw)(10^6)$	5.9
MAIL	Maximum allowable industrial loading	$MAIL = MAHL(1-SF) - (Lunc)$	6.2
Lunc	Uncontrolled loading	$Lunc = (8.34/1000)(Cunc)(Qunc)$	6.3
Clim	Uniform concentration limit	$Clim = MAIL/(Qcont)(8.34/1000)$	6.8

Note

a. From 2004 EPA Guidance. Some equations have been modified to suit site-specific conditions and expression of criteria in different units.

Table E-4.1 MAHL Analyses: Equations and Abbreviations

Abbreviations	
<i>Abbreviation</i>	<i>Definition</i>
8.34	unit conversion factor for mg/L to lb/MG
1000	unit conversion factor for milligrams to micrograms
AgI	Agricultural irrigation
AgL	Agricultural livestock
AHL	allowable headworks loading, lb/d
AHLinh	AHL based on biological treatment inhibition, lb/d
AHLsldg	AHL based on sludge, lb/d
AHLwqp	AHL based on permit effluent limitation, lb/d
AHLwqs	AHL based on water quality standard criterion, lb/d
APP	Aquifer Protection Permit No. P-100574, effective 5/27/2016
AWQS	Arizona Aquifer Water Quality Standard
AZPDES	Arizona Pollutant Discharge Elimination System No. AZ002513, effective 3/27/2015
Cinhib	inhibition criterion for biological treatment, mg/L
Clim	uniform concentration limit, ug/L
Csldgstd	sludge standard, mg/kg dry sludge
Cunc	uncontrolled pollutant concentration, ug/L
Cwqp	permit effluent limitation, ug/L
Cwqs	water quality criteria, ug/L
Gsldg	specific gravity of sludge, kg/L
lb/d	pounds per day
Lunc	loading from uncontrolled sources = domestic + some commercial + inflow and infiltration
MAHL	maximum allowable headworks loading, lb/d
MAIL	maximum allowable industrial loading, lb/d
ug/l	micrograms per liter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MGD	million gallons per day
MRE	mean removal efficiency
PS	percent solids to disposal
Qcont	total flow rate from industrial and other controlled sources, mgd
Qpotw	POTW average flow rate, mgd
Qsiu	total SIU flow, gpd
Qsldg	total sludge flow rate to disposal, lb/d
Qunc	uncontrolled flow rate, mgd
R	selected removal efficiency
SF	safety factor
SWQS	Arizona Water Quality Standards for Surface Waters
TDS	total dissolved solids

Table CB E-4.2.1 Central Buckeye WWTP MAHL Analyses: Concentration Data and Removal Efficiencies

Pollutant	Influent Concentration (mg/L) (a)		Removal Efficiency	
	Average	Maximum	Value	Reference
Arsenic	0.0045	0.0052	10%	MRE
Boron (b)	0.87	1.00	0%	(b)
Cadmium	0.0001	0.0003	30%	MRE
Chloride (b)	625	771	0%	(b)
Chromium	0.016	0.018	76%	MRE
Copper	0.026	0.038	51%	MRE
Cyanide (b)	0.0039	0.005	0%	(b)
Fluoride	5.3	6.64	67%	MRE
Lead	0.0012	0.0016	73%	MRE
Mercury (c)	0	0	0%	(c)
Nickel	0.0040	0.0066	29%	MRE
Selenium	0.0030	0.0038	29%	MRE
TDS (b)	1556	1960	0%	(b)
Zinc	0.16	0.20	70%	MRE

Abbreviation

MRE = Mean Removal Efficiency

Notes

- a. Influent flow excludes belt filter press return.
- b. One or more daily removal efficiencies were less than zero.
- c. No influent or effluent results were reported as detected.

Table CB E-4.2.2 Central Buckeye WWTP MAHL Analyses: Flows

Abbreviation	Variable	Given	Calculated	Basis or Assumption
Qcont	Controlled flow	0.00 MGD	- -	(a)
Qunc	Uncontrolled flow	1.55 MGD	- -	(b)
Qpotw	POTW flow	- -	1.55 MGD	Qunc + Qcont
Qsldg	Sludge to disposal	249 wet tons per month	2570 lb/d	(c)
	Qcont as fraction of Qt	0%		

Notes

- a. No SIUs identified; Controlled flow based on evaluation of land use and water usage projections
- b. Uncontrolled flow set equal to POTW influent flow, based on annual average, May 2018 through April 2019.
- c. Qsldg based on **sludge production rate for March 2019** and following variables and conversion factors:

Variables	
Sludge, wet tons/month	249
Sludge, wet tons/MG	5.2
Total solids, percent	16%
Sludge, dry lb/day	2570
Influent WWTP flow (with belt press return), mgd	1.55

Conversion factors	
lb/ton	2000
days/month	31
lb/gal	8.34
L/gal	3.785
percent to mg/L	10,000
mg/kg	1,000,000
mg/lb	454,000

Table CB E-4.2.3 Central Buckeye WWTP MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) - Permits

Pollutant	Removal Efficiency	AZPDES Permit Limit	APP Limit	Most Stringent Criterion (Cwqp)	Allowable Headworks Loading (AHLwqp)
		<i>Discharge Limitation</i>	<i>Alert Level (a)</i>		
		(ug/l)	(ug/l)	(ug/l)	(lb/d)
Arsenic	10%	-	40	40	0.57
Boron (b)	0%	1000	-	1000	13
Cadmium	30%	-	4	4	0.074
Chloride	0%	-	-	-	-
Chromium	76%	-	80	80	4.3
Copper	51%	-	-	-	-
Cyanide	0%	-	160	160	2.1
Fluoride	67%	-	3200	3200	125
Lead	73%	-	40	40	1.9
Mercury	0%	-	1.6	1.6	0.021
Nickel	29%	-	80	80	1.5
Selenium (b)	29%	3	40	3	0.055
TDS	0%	-	-	-	-
Zinc	70%	-	-	-	-

Notes

- a. Alert levels are typically 80 percent of discharge limits.
- b. Values represent Sundance Ranch WRF AZPDES permit limits to allow blending of effluents for irrigation. The AZPDES permit limit is 1231 mg/L for boron and has no permit limit for selenium.

Table CB E-4.2.4 Central Buckeye WWTP MAHL Analyses: Effluent Quality-Based Allowable Headworks Loadings (AHLs) - Standards

Pollutant	Removal Efficiency	SWQS Criterion (a)		AWQS Criterion (ug/L)	Most Stringent Criterion (Cwqs) (ug/L)	Allowable Headworks Loading (AHLwqs) (lb/d)
		<i>AgI</i>	<i>AgL</i>			
		(ug/L)	(ug/L)			
Arsenic (b)	10%	2000	200	10	10	0.14
Boron	0%	1000	-	-	1000	13
Cadmium	30%	50	50	5	5	0.092
Chloride (c)	0%	-	-	-	350000	4524
Chromium	76%	1000	1000	100	100	5.4
Copper	51%	5000	500		500	13
Cyanide	0%	-	200	200	200	2.6
Fluoride	67%	-	-	4000	4000	157
Lead	73%	10000	100	50	50	2.4
Mercury	0%	-	-	2	2	0.026
Nickel	29%	-		100	100	1.82
Selenium	29%	20	50	50	20	0.36
TDS (c)	0%	-	-	-	1800000	23269
Zinc	70%	10000	25000	-	10000	431

Notes

a. 2019.

b. Future AWQS; Current value is 50 ug/L.

c. Informal goal.

Table CB E-4.2.5 Central Buckeye WWTP MAHL Analyses: Sludge/Biosolids
Quality-Based Allowable Headworks Loadings (AHLs)

Pollutant	Removal Efficiency	Federal Surface Disposal Standards (a)	Most Stringent Criterion (Cclsldg)	Headworks Loading (AHLclsldg)
		(mg/kg)	(mg/kg)	(lb/d)
Arsenic	10%	30	30	0.77
Boron	0%	-	-	-
Cadmium	30%	-	-	-
Chloride	0%	-	-	-
Chromium	76%	200	200	0.68
Copper	51%	-	-	-
Cyanide	0%	-	-	-
Fluoride	67%	-	-	-
Lead	73%	-	-	-
Mercury	0%	-	-	-
Nickel	29%	210	210	1.9
Selenium	29%	-	-	-
TDS	0%	-	-	-
Zinc	70%	-	-	-

Note

a. Maximum Pollutant Concentration for Surface Disposal of Biosolids, Distance from boundary of active biosolids unit without liner or leachate collection to property line 0 to less than 25 meters.

Table CB E-4.2.6 Central Buckeye WWTP MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Pollutant	Inhibition Threshold Values (a)		Most Stringent Criterion (Cinh)	Allowable Headworks Loading (AHLinh)
	<i>Activated Sludge (Cinhas)</i>	<i>Nitrification (Cinhn)</i>		
	(mg/l)	(mg/l)		
Arsenic	0.1	1.5	0.1	1.3
Boron	-	-	-	-
Cadmium	1	5.2	1	13
Chloride	-	180	180	2327
Chromium	-	1.9	1.9	24.6
Copper (a)	1	0.5	0.5	6.5
Cyanide	0.1	0.34	0.1	1.3
Fluoride	-	-	-	-
Lead	1	0.5	0.5	6.5
Mercury	0.1	-	0.1	1.3
Nickel (a)	1.0	0.5	0.5	6.5
Selenium	-	-	-	-
TDS	-	-	-	-
Zinc (a)	4	1.5	1.5	21

Note

a. Inhibition values from EPA Guidance, App. G with the exception of copper nitrification value (0.5 mg/l), nickel nitrification value (0.5 mg/l), and zinc activated sludge and nitrification values (4 mg/l and 1.5 mg/l), for which additional independent literature searches were conducted (Barth 1965A&B)(Braam 1981)(Russell et al. 1982)(Trahern 1982).

Allowable headworks loading depends upon Cell E9 in Table E-3 (POTW_flow)

Table CB E-4.2.7 Central Buckeye WWTP MAHL Analyses: Maximum Allowable Headworks Loadings (MAHLs)

Pollutant	Allowable Headworks Loadings (AHL)				Maximum Allowable Headworks Loading (MAHL) (lb/d)
	<i>Effluent Quality</i>		<i>Sludge</i>	<i>Inhibition</i>	
	Permits (AHLwqp)	Standards (AHLwqs)	Federal Surface Disposal (AHLsldg) (a)	(AHLinh) (a)	
	(lb/d)	(lb/d)	(lb/d)	(lb/d)	
Arsenic	0.57	0.14	0.77	1.3	0.14
Boron	13	13	-	-	13
Cadmium	0.074	0.092	-	13	0.074
Chloride	-	4524	-	2327	4524
Chromium	4.3	5.4	0.68	25	4.3
Copper	-	13	-	6.5	13
Cyanide	2.1	2.6	-	1.3	2.1
Fluoride	125	-	-	-	125
Lead	1.9	2.4	-	6.5	1.9
Mercury	0.021	0.026	-	1.3	0.021
Nickel	1.5	1.8	1.9	6.5	1.5
Selenium	0.05	0.36	-	-	0.05
TDS	-	23269	-	-	23269
Zinc	-	431	-	21	431

Note

a. Federal surface disposal limits and inhibition thresholds may trigger additional evaluation. MAHLs are based on more stringent of Permit and Standard criteria.

Table CB E-4.2.8 Central Buckeye WWTP MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loadings (MAHLs)

Pollutant	POTW Influent Concentration		Current POTW Influent Load (a)		MAHL	POTW Influent Load/MAHL		Meets EPA Criteria For Setting Limit?
	Average	Maximum	Average	Maximum		Average	Maximum	
	(mg/L)	(mg/L)	(lb/d)	(lb/d)	(lb/d)			
Arsenic	0.0045	0.0052	0.058	0.067	0.14	41%	47%	
Boron	0.87	1.00	11	13	13	87%	100%	YES
Cadmium	0.00010	0.0003	0.0013	0.0039	0.074	2%	5%	
Chloride	625	771	8082	9967	4524	179%	220%	YES
Chromium	0.016	0.018	0.21	0.23	4.3	5%	5%	
Copper	0.026	0.038	0.33	0.49	13	3%	4%	
Cyanide	0.0039	0.005	0.051	0.065	2.1	2%	3%	
Fluoride	5.28	6.64	68	86	125	54%	68%	
Lead	0.0012	0.0016	0.016	0.021	1.9	1%	1%	
Mercury	0	0	0	0	0.021	0%	0%	
Nickel	0.0040	0.0066	0.052	0.085	1.5	4%	6%	
Selenium	0.0030	0.0038	0.039	0.049	0.055	71%	90%	YES
TDS	1556	1960	20113	25337	23269	86%	109%	YES
Zinc	0.16	0.20	2.1	2.6	431	0%	1%	

Note

a. Current POTW influent load = uncontrolled load, as there are no SIUs.

Table SD E-4.2.1 Sundance WRF MAHL Analyses: Concentration Data and Removal Efficiencies

Pollutant	Influent Concentration (mg/L)		Removal Efficiency	
	<i>Average</i>	<i>Maximum</i>	<i>Value</i>	<i>Reference</i>
Arsenic (<i>a</i>)	0.0051	0.0062	0%	(<i>a</i>)
Boron (<i>a</i>)	0.73	0.83	0%	(<i>a</i>)
Cadmium	0.0001	0.0001	0%	MRE
Chloride (<i>a</i>)	308	389	0%	(<i>a</i>)
Chromium	0.024	0.029	76%	MRE
Copper	0.044	0.055	61%	MRE
Cyanide (<i>a</i>)	0.003	0.003	0%	(<i>a</i>)
Fluoride (<i>a</i>)	1.81	2.04	0%	(<i>a</i>)
Lead	0.0009	0.0011	66%	MRE
Mercury	0.0001	0.0002	19%	MRE
Nickel	0.0039	0.0048	8%	MRE
Selenium	0.0025	0.0039	52%	MRE
TDS (<i>a</i>)	910	1180	0%	(<i>a</i>)
Zinc	0.14	0.14	61%	MRE

Abbreviation

MRE = Mean Removal Efficiency

Note

a. One or more daily removal efficiencies were less than zero.

Table SD E-4.2.2 Sundance WRF MAHL Analyses: Scenarios

Abbreviation	Variable	Given	Calculated	Basis or Assumption
Qcont	Controlled flow		0 MGD	(a)
Qunc	Uncontrolled flow	1.34 MGD		(b)
Qpotw	POTW flow		1.34 MGD	Qunc + Qcont
Qsldg	Sludge to disposal	122 wet tons per month	1023 lb/d	(c)
	Qcont as fraction of Qt	0%		

Notes

- a. No SIUs identified. Controlled flow based on evaluation of land use and water usage projections
- b. Uncontrolled flow set equal to POTW influent flow, based on annual average, May 2018 through April 2019.
- b. Given Qsldg based on sludge production rate for April 2019 and following variables, calculations, and conversion factors:

<i>Variables</i>	
Sludge, wet tons/month	122
Sludge, wet tons/MG	2.9
Total solids, percent	13%
Sludge, dry lb/d	1023
Influent WWTP flow, mgd	1.34

<i>Conversion factors</i>	
lb/ton	2000
days/month	31
lb/gal	8.34
L/gal	3.785
percent to mg/L	10,000
mg/kg	1,000,000
mg/lb	454,000

Table SD E-4.2.3 Sundance WRF MAHL Analyses: Effluent-Quality Based Allowable Headworks Loadings (AHLs) - Permits

Pollutant	Removal Efficiency	AZPDES Permit Limit	APP Limit	Most Stringent Criterion (Cwqp)	Allowable Headworks Loading (AHLwqp)
		<i>Discharge Limitation</i>	<i>Alert Level (a)</i>		
		(ug/l)	(ug/l)	(ug/l)	(lb/d)
Arsenic	0%	-	40	40	0.45
Boron	0%	1000	-	1000	11
Cadmium	0%	-	4	4	0.045
Chloride	0%	-	-	-	-
Chromium	76%	-	80	80	3.7
Copper	61%	-	-	-	-
Cyanide	0%	-	160	160	1.8
Fluoride	0%	-	3200	3200	36
Lead	66%	-	40	40	1.3
Mercury	19%	-	1.6	1.6	0.022
Nickel	8%	-	80	80	1.0
Selenium	52%	3	40	3	0.070
TDS	0%	-	-	-	-
Zinc	61%	-	-	-	-

Note

a. Alert levels are typically 80 percent of discharge limits.

Table SD E-4.2.4 Sundance WRF MAHL Analyses: Effluent Quality-Based Allowable Headworks Loadings (AHLs) - Standards

Pollutant	Removal Efficiency	SWQS Criterion (a)		AWQS Criterion	Most Stringent Criterion (Cwqs)	Allowable Headworks Loading (AHLwqs)
		AgI (ug/L)	AgL (ug/L)			
Arsenic (b)	0%	2000	200	10	10	0.11
Boron	0%	1000	-	-	1000	11
Cadmium	0%	50	50	5	5	0.056
Chloride (c)	0%	-	-	-	350000	3911
Chromium	76%	1000	1000	100	100	4.7
Copper	61%	5000	500		500	14
Cyanide	0%	-	200	200	200	2.2
Fluoride	0%	-	-	4000	4000	45
Lead	66%	10000	100	50	50	1.6
Mercury	19%	-	-	2	2	0.028
Nickel	8%	-		100	100	1.21
Selenium	52%	20	50	50	20	0.47
TDS (c)	0%	-	-	-	1800000	20116
Zinc	61%	10000	25000	-	10000	287

Notes

a. 2019.

b. Future AWQS; Current value is 50 ug/L.

c. City's informal goal.

Table SD E-4.2.5 Sundance WRF MAHL Analyses: Sludge/Biosolids Quality-Based Allowable Headworks Loadings (AHLs)

Pollutant	Removal Efficiency	Federal Surface Disposal Standards (a)	Most Stringent Criterion (Cclsldg)	Allowable Headworks Loading (AHLclsldg)
		(mg/kg)	(mg/kg)	(lb/d)
Arsenic (b)	0%	30	30	3.1
Boron	0%	-	-	-
Cadmium	0%	-	-	-
Chloride	0%	-	-	-
Chromium	76%	200	200	0.27
Copper	61%	-	-	-
Cyanide	0%	-	-	-
Fluoride	0%	-	-	-
Lead	66%	-	-	-
Mercury	19%	-	-	-
Nickel	8%	210	210	2.7
Selenium	52%	-	-	-
TDS	0%	-	-	-
Zinc	61%	-	-	-

Notes

- a. Maximum Pollutant Concentration for Surface Disposal of Biosolids, Distance from boundary of active biosolids unit without liner or leachate collection to property line 0 to less than 25 meters
- b. Removal efficiency of 1% substituted for zero to enable calculation of AHL

Table SD E-4.2.6 Sundance WRF MAHL Analyses: Inhibition-Based Allowable Headworks Loadings (AHLs)

Pollutant	Inhibition Threshold Values (<i>a</i>)		Most Stringent Criterion (Cinh)	Allowable Headworks Loading (AHLinh)
	Activated Sludge (Cinhas)	Nitrification (Cinhn)		
	(mg/l)	(mg/l)	(mg/l)	(lb/d)
Arsenic	0.1	1.5	0.1	1.1
Boron	-	-	-	-
Cadmium	1	5.2	1	11
Chloride	-	180	180	2012
Chromium	-	1.9	1.9	21
Copper (<i>a</i>)	1	0.5	0.5	5.6
Cyanide	0.1	0.34	0.1	1.1
Fluoride	-	-	-	-
Lead	1	0.5	0.5	5.6
Mercury	0.1	-	0.1	1.1
Nickel (<i>a</i>)	1.0	0.5	0.5	5.6
Selenium	-	-	-	-
TDS	-	-	-	-
Zinc (<i>a</i>)	4	1.5	1.5	17

Note

a. Inhibition values from EPA Guidance, App. G with the exception of copper nitrification value (0.5 mg/l), nickel nitrification value (0.5 mg/l), and zinc activated sludge and nitrification values (4 mg/l and 1.5 mg/l), for which additional independent literature searches were conducted (Barth 1965A&B)(Braam 1981)(Russell et al. 1982)(Trahern 1982).

Table SD E-4.2.7 Sundance WRF MAHL Analyses: Maximum Allowable Headworks Loadings (MAHLs)

Pollutant	Allowable Headworks Loadings (AHL)				Maximum Allowable Headworks Loading (MAHL)
	Effluent Quality		Sludge (a)	Inhibition (a)	
	<i>Permits (AHLwqp)</i>	<i>Standards (AHLwqs)</i>	<i>Federal Surface Disposal (AHLsldg)</i>	<i>(AHLinh)</i>	
	(lb/d)	(lb/d)	(lb/d)	(lb/d)	
Arsenic	0.45	0.11	3.1	1.1	0.11
Boron	11	11	-	-	11
Cadmium	0.045	0.056	-	11.2	0.045
Chloride	-	3911	-	2012	3911
Chromium	3.7	4.7	0.27	21	3.7
Copper	-	14	-	5.6	14
Cyanide	1.8	2.2	-	1.1	1.8
Fluoride	36	-	-	-	36
Lead	1.3	1.6	-	5.6	1.3
Mercury	0.022	0.028	-	1.1	0.022
Nickel	1.0	1.2	2.7	5.6	1.0
Selenium	0.07	0.47	-	-	0.070
TDS	-	20116	-	-	20116
Zinc	-	287	-	17	287

Note

a. Federal surface disposal limits and inhibition thresholds may trigger additional evaluation. MAHLs are based on more stringent of Permit and Standard criteria.

Table SD E-4.2.8 Sundance WRF MAHL Analyses: Comparison of Influent Loads and Maximum Allowable Headworks Loadings (MAHLs)

Pollutant	POTW Influent Concentration		Current POTW Influent Load (a)		MAHL (lb/d)	POTW Influent Load/MAHL (a)		Meets EPA Criteria for Setting Limit?
	Average	Maximum	Average	Maximum		Average	Maximum	
	(mg/L)	(mg/L)	(lb/d)	(lb/d)				
Arsenic	0.0051	0.0062	0.057	0.069	0.11	51%	62%	
Boron	0.73	0.83	8.2	9.3	11.2	73%	83%	YES
Cadmium	0.0001	0.0001	0.0011	0.0011	0.0	3%	3%	
Chloride	308	389	3442	4347	3911	88%	111%	YES
Chromium	0.024	0.029	0.27	0.32	3.7	7%	9%	
Copper	0.044	0.055	0.49	0.61	14	3%	4%	
Cyanide (a)	0.0030	0.0030	0.034	0.034	1.8	2%	2%	
Fluoride	1.81	2.0	20	23	36	57%	64%	
Lead	0.0009	0.0011	0.010	0.012	1.3	1%	1%	
Mercury (a)	0	0	0.0011	0.0022	0.0	5%	10%	
Nickel (a)	0.0039	0.0048	0.044	0.054	1.0	4%	6%	
Selenium (a)	0.0025	0.0039	0.028	0.044	0.1	40%	62%	
TDS	910	1180	10170	13187	20116	51%	66%	
Zinc	0.14	0.14	1.6	1.6	287	1%	1%	

Note

a. Current POTW influent load = uncontrolled load, as there are no SIUs.

Appendix F- Local Limit Analyses

F-1 Planned Land Use and Projected Water Usage

CB Central Buckeye WWTP

Table CB F-1 Central Buckeye WWTP Planned Land Use and Projected Water Usage

SD Sundance WRF

Table SD F-1 Sundance WRF Planned Land Use and Projected Water Usage

F-2 Example of MAIL Analysis and UCL Calculation – Arsenic

F-3 MAIL and UCL Calculations – Toxic Pollutants

CB Central Buckeye WWTP

Table CB F-3 Central Buckeye WWTP MAIL and UCL Calculations – Toxic Pollutants

SD Sundance WRF

Table SD F-3 Sundance WRF MAIL and UCL Calculations – Toxic Pollutants

F-4 Examples of User-Specific Allocations for Nickel and BOD

F-4.1 Nickel

Table 4.1.1 Central Buckeye WWTP Nickel Allocation Example: Uniform Concentration Allocation

Table 4.1.2 Central Buckeye WWTP Nickel Allocation Example: User-Specific Allocation

F-4.2 BOD

Table 4.2.1 Sundance WRF BOD Allocation Example: Application of Prohibition Level of 300 mg/L

Table 4.2.2 Sundance WRF BOD Allocation Example: User-Specific Allocation

F-5 Westside City Local Limit Comparison

Table F-5 Westside City Local Limit Comparison

F-6 Example Best Management Practices for Oil and Grease

Table CB F-1 Central Buckeye WWTP Planned Land Use and Projected Water Usage

Land Use	Area (acres)	2017 Integrated Water Master Plan		Projected Flow	
		MP Land Use	Use (gpapd)	(MGD)	(Percent)
Activity Center	2422	Developed Open Space Parks	1,786	4.3	
	2422	Developed Open Space Parks		4.3	8%
Business Commerce	159	Commercial/Mixed Use	2,009	0.3	
Business Commerce	126	Commercial/Mixed Use	2,009	0.3	
Business Commerce	282	Commercial/Mixed Use	2,009	0.6	
	567	Commercial/Mixed Use Total		1.1	2%
Employment	1941	Industrial	2,009	3.9	
Employment	3024	Industrial	2,009	6.1	
	4965	Industrial Total		10.0	18%
Master Planned Community	1513	Residential	3,000	4.5	
Master Planned Community	267	Residential	3,000	0.8	
Master Planned Community	1634	Residential	3,000	4.9	
Neighborhood	546	Residential	3,000	1.6	
Neighborhood	1127	Residential	3,000	3.4	
Neighborhood	7986	Residential	3,000	24.0	
Neighborhood	315	Residential	3,000	0.9	
	13388	Residential Total		40.2	72%
Open Space	2910	Open Space	0	0.0	
	2910	Open Space Total		0.0	0%
	24252	Grand Total		55.6	100%

Variables		Abbreviations
Capita/DU	8	DU = dwelling unit
Use per capita, gpcpd	150	gpapd = gallons per acre per day
Total Use, gpd per DU	375	gpcpd = gallons per capital per day
Number of Units/acre	8	gpd = gallons per day
Total Use per acre, gpapd	3000	MGD = million gallons per day

Table SD F-1 Sundance WRF Planned Land Use and Projected Water Usage

Land Use	Area (acres)	2017 Integrated Water Master Plan		Projected Flow	
		MP Land Use	Use (gpapd)	(MGD)	(Percent)
Activity Center	1409	Developed Open Space Parks	1,786	2.5	
	1409	Developed Open Space Parks		2.5	5%
Luke Compatibility Area	758	Industrial	2,009	1.5	
	758	Industrial Total		1.5	3%
Master Planned Community	1513	Residential	3,000	4.5	
Master Planned Community	409	Residential	3,000	1.2	
Master Planned Community	465	Residential	3,000	1.4	
Master Planned Community	72	Residential	3,000	0.2	
Neighborhood	80	Residential	3,000	0.2	
Neighborhood	164	Residential	3,000	0.5	
Neighborhood	2346	Residential	3,000	7.0	
Neighborhood	2074	Residential	3,000	6.2	
Neighborhood	1127	Residential	3,000	3.4	
Neighborhood	7986	Residential	3,000	24.0	
Neighborhood	81	Residential	3,000	0.2	
Neighborhood	204	Residential	3,000	0.6	
	16521	Residential Total		49.6	92%
Open Space	2910	Open Space	0	0	
	2910	Open Space Total		0	0%
	21598	Grand Total		53.6015899	100%

Variables		Abbreviations
Capita/DU	8	DU = dwelling unit
Use per capita, gpcpd	150	gpapd = gallons per acre per day
Total Use, gpd per DU	375	gpcpd = gallons per capital per day
Number of Units/acre	8	gpd = gallons per day
Total Use per acre, gpapd	3000	MGD = million gallons per day

F-2 Example of MAIL Analysis and UCL Calculation – Arsenic

The MAIL analysis and UCL calculation for arsenic at Central Buckeye WWTP are shown as an example.

MAIL Analysis

The estimated uncontrolled arsenic concentration was 0.0045 mg/L. A safety factor of 10% was assumed. No hauled waste is accepted at the WWTP. The growth allowance was accounted for in the assumed volume of uncontrolled flow.

The total MAIL for arsenic was calculated using Equation 6-1:

$$MAIL = MAHL(1 - SF) - (L_{unc} + HW + GA)$$

MAIL	=	Maximum allowable industrial loading, lb/d
MAHL	=	Maximum allowable headworks loading = 0.18 lb/d
SF	=	Safety factor = 0.10
L _{unc}	=	Loadings from uncontrolled sources = 0.058 lb/d
HW	=	Loadings from hauled waste = 0 lb/d
GA	=	Growth allowance = 0

$$MAIL = 0.18 \frac{lb}{d} (1 - 0.10) - \left(0.058 \frac{lb}{d} + 0 + 0 \right) = 0.099 \text{ lb/d}$$

UCL Calculation

The estimated uncontrolled flow based on land use and water usage projections was 18 percent of total influent flow. The UCL for arsenic was calculated using Equation 6-3:

$$UCL = \frac{MAIL \times 1000}{Q_{cont} \times 8.34}$$

UCL	=	Uniform concentration limit, ug/L
MAIL	=	Maximum allowable industrial loading = 0.099 lb/d
Q _{cont}	=	Controlled flow rate = 0.34 MGD
8.34	=	Conversion factor from lb/d to mg/L

$$UCL = \frac{0.099 \frac{lb}{d}}{0.34 \text{ MGD} \times 8.34} = 0.035 \frac{mg}{L}$$

Note: Values may vary slightly from those presented in text because of rounding.

Table CB F-3 Central Buckeye MAHL Analyses: Maximum Allowable Industrial Loadings (MAHLs) and Uniform Concentration Limits (UCLs)

SIU Flow (gpd) = 340,244 18% of POTW Influent Flow

Pollutant	Maximum Allowable Headworks Loading (MAHL) <i>(lb/d)</i>	Safety Factor	Uncontrolled Conc. (Cunc) <i>(a)</i> <i>(mg/l)</i>	Uncontrolled Loading (Lunc) <i>(lb/d)</i>	Maximum Allowable Industrial Loading (MAIL) <i>(lb/d)</i>	Uniform Conc. Limit (UCL) <i>(mg/l)</i>
Arsenic	0.18	10%	0.0045	0.058	0.099	0.035
Boron	16	10%	0.87	11	3.0	1.1
Cadmium	0.090	10%	0.00010	0.0013	0.080	0.028
Chloride <i>(b,c)</i>	5518	10%	625	8082	-3116	-1098
Chromium	5.3	10%	0.016	0.21	4.5	1.6
Copper	16	10%	0.026	0.33	14	5.0
Cyanide	2.5	10%	0.0039	0.051	2.2	0.78
Fluoride	153	10%	5.3	68	69	24
Lead	2.3	10%	0.0012	0.016	2.1	0.74
Mercury	0.025	10%	0	0	0.023	0.0080
Nickel	1.8	10%	0.0040	0.052	1.5	0.55
Selenium	0.067	10%	0.0030	0.039	0.021	0.0074
TDS <i>(c)</i>	28376	10%	1556	20113	5426	1912
Zinc	525	10%	0.16	2.1	471	166

Notes

- a. Uncontrolled concentration set equal to influent (without belt press return) concentration as there are no identified SIUs.
- b. No permit or standard criteria: MAHL based on inhibition threshold value.
- c. UCL could not be calculated, as uncontrolled loading exceeds MAHL.

Table SD F-3 Sundance WRF MAHL Analyses: Maximum Allowable Industrial Loadings (MAILs) and Uniform Concentration Limits (UCLs)

SIU Flow (gpd) = 41,443 3% of POTW Influent Flow

Pollutant	Maximum Allowable Headworks Loading (MAHL) (lb/d)	Safety Factor	Uncontrolled Conc. (Cunc) (a) (mg/l)	Uncontrolled Loading (Lunc) (lb/d)	Maximum Allowable Industrial Loading (MAIL) (lb/d)	Uniform Conc. Limit (UCL) (mg/l)
Arsenic	0.12	10%	0.0051	0.057	0.047	0.14
Boron	12	10%	0.73	8.2	2.2	6.4
Cadmium	0.046	10%	0.0001	0.0011	0.040	0.12
Chloride (b,c)	4032	10%	308	3442	187	541
Chromium	3.8	10%	0.024	0.27	3.2	9.2
Copper	15	10%	0.044	0.49	13	37
Cyanide	1.8	10%	0.0030	0.034	1.6	4.7
Fluoride	37	10%	1.81	20	13	37
Lead	1.4	10%	0.0009	0.010	1.2	3.5
Mercury	0.023	10%	0.0001	0.0011	0.019	0.056
Nickel	1.0	10%	0.0039	0.044	0.86	2.5
Selenium	0.07	10%	0.0025	0.028	0.037	0.11
TDS	20738	10%	910	10170	8495	24577
Zinc	295	10%	0.14	1.6	264	765

Notes

- a. Uncontrolled concentration set equal to influent concentration as there are no identified SIUs.
- b. No permit or standard criteria: MAHL based on inhibition threshold value.
- c. UCL could not be calculated, as uncontrolled loading exceeds MAHL/.

Table SD F-3 Sundance WRF MAHL Analyses: Maximum Allowable Industrial Loadings (MAILs) and Uniform Concentration Limits (UCLs)

SIU Flow (gpd) = 182,727 12% of POTW Influent Flow

Pollutant	Maximum Allowable Headworks Loading (MAHL) (lb/d)	Safety Factor	Uncontrolled Conc. (Cunc) (a) (mg/l)	Uncontrolled Loading (Lunc) (lb/d)	Maximum Allowable Industrial Loading (MAIL) (lb/d)	Sundance Uniform Conc. Limit (UCL) (mg/l)
Arsenic	0.13	10%	0.0051	0.057	0.057	0.038
Boron	13	10%	0.73	8.2	3.3	2.1
Cadmium	0.051	10%	0.0001	0.0011	0.045	0.029
Chloride (b,c)	4445	10%	308	3442	558	366
Chromium	4.2	10%	0.024	0.27	3.5	2.3
Copper	16	10%	0.044	0.49	14	9.3
Cyanide	2.0	10%	0.0030	0.034	1.8	1.2
Fluoride	41	10%	1.81	20	16	11
Lead	1.5	10%	0.0009	0.010	1.3	0.88
Mercury	0.025	10%	0.0001	0.0011	0.021	0.014
Nickel	1.1	10%	0.0039	0.044	0.95	0.62
Selenium	0.08	10%	0.0025	0.028	0.043	0.029
TDS	22859	10%	910	10170	10403	6827
Zinc	326	10%	0.14	1.6	292	191

Notes

- a. Uncontrolled concentration set equal to influent concentration as there are no identified SIUs.
- b. No permit or standard criteria: MAHL based on inhibition threshold value.
- c. UCL could not be calculated, as uncontrolled loading exceeds MAHL/.

F-4 Examples of User-Specific Allocations for Nickel and BOD

F-4.1 Nickel

A comparison of typical discharge concentrations from common SIUs found that implementing calculated UCLs for chromium and nickel could limit the City's ability to accept certain categorical industrial users (CIUs). This appendix presents a simplified example of user-specific allocations for nickel at Central Buckeye WWTP. SIU flows and concentrations were chosen to illustrate the relative achievability of UCLs and user-specific limits.

The MAHLs for total nickel at Central Buckeye WWTP and Sundance WRF were based upon the APP alert level of 80 µg/L ((0.08 mg/L). Calculated UCLs for these facilities were 0.55 and 2.5 mg/L, respectively. The current average influent nickel concentration is 0.0040 mg/L at Central Buckeye WWTP and 0.0039 mg/L at Sundance WRF. The Federal categorical pretreatment standards for new sources (PSNS) for metal finishers include a monthly average limit of 2.38 mg/L for nickel. Metal finishers using electroless nickel baths would have difficulty meeting the more stringent UCL of 0.55 mg/L.

The user-specific allocation method, described in Section 6.2.2, allots portions of the MAIL to prospective controlled sources according to user-specific evaluations of proposed discharges. As modeled, the method can easily accommodate increases in uncontrolled flow and concentration; however, for simplicity, the example assumes that there is no increase in uncontrolled flow or change in uncontrolled concentration.

Example

The first two proposed industrial users, IUs CB-1 and CB-2, are high-flow dischargers with discharge concentrations of nickel equal to the average uncontrolled source concentration of 0.004 mg/L. The third and fourth proposed industrial users, IUs CB-3 and CB-4, are low-flow metal finishers with discharge concentrations of nickel at the PSNS of 2.38 mg/L.

Table 4.1.1 illustrates application of the calculated UCL of 0.55 mg/L. IUs CB-1 and CB-2, which represent 6 and 10 percent of the WWTP influent flow (Column E1), consume 34 and 55 percent of the MAIL (Column D2). The limit of 0.55 mg/L is not technologically achievable for IU CB-3 (or IU CB-4), and therefore these IUs would be rejected.

Table 4.1.2 illustrates application of the user-specific allocation method. Discharges from IUs CB-1 and CB-2 are limited to the average uncontrolled source concentration of 0.004 mg/L and consume a negligible fraction of the MAIL. Enough capacity remains for IUs CB-3 and CB-4 at the PSNS of 2.38 mg/L, and these IUs could be accepted.

Table F-4.1.1 Central Buckeye WWTP Nickel Example: Uniform Concentration Allocation

A1	B1	C1	D1	E1	F1	G1	H1	I1
IU	Concentration (mg/L) Ciu	Flow (mgd)			Load (lb/d)			
		Qiu	Qpotw = Qunc + Σ Qiu	Qiu/Qpotw	Lunc	Liu Allocation	Σ Liu Allocation	Lpotw =Lunc + Σ Liu
No IUs	0	0	1.55	0%	0.05	0	0	0
CB-1	0.55	0.100	1.65	6%	0.05	0.46	0.46	0.51
CB-2	0.55	0.180	1.83	10%	0.05	0.83	1.28	1.34
CB-3	2.38	0.045	1.88	2%	-	-	-	-
CB-4	2.38	0.025	1.90	1%	-	-	-	-

A2	B2	C2	D2	E2	F2
IU	MAHL	MAIL	Liu/MAIL	IU Flow- Based Design Capacity	Service Area Reserve
No IUs	1.46	1.26	0%	0	1.21
CB-1	1.55	1.34	34%	0.46	0.83
CB-2	1.72	1.50	55%	0.83	0.16
CB-3	-	-	-	-	-
CB-4	-	-	-	-	-

Calculations based on

Capp	0.080 mg/L
Cunc	0.0040 mg/L
Qunc	1.55 mg/L
PSNS for MF	2.38 mg/L
RE	29%
SF	10%
UCL	0.6 mg/L

Abbreviations

C	pollutant concentration
L	pollutant load
MAHL	design load adjusted to influent flow (Qunc + sum of Qsiu)
MF	metal finisher
Q	flow
PSNS	Pretreatment Standards for New Sources (40CFR433.17)
RE	removal efficiency across POTW

app	Aquifer Protection Permit alert level
des	design
iu	industrial user
potw	publicly owned treatment works
unc	uncontrolled (by local limit for this pollutant)

Table F-4.1.2 Central Buckeye WWTP Nickel Example: User-Specific Allocation

A1	B1	C1	D1	E1	F1	G1	H1	I1
IU	Concentration (mg/L) Ciu	Flow (mgd)			Load (lb/d)			
		Qiu	Qpotw = Qunc + Σ Qiu	Qiu/Qpotw	Lunc	Liu Allocation	Σ Liu Allocation	Lpotw =Lunc + Σ Liu
No IUs	0	0	1.55	0%	0.05	0	0	0
CB-1	0.004	0.100	1.65	6%	0.05	0.00	0.00	0.06
CB-2	0.004	0.180	1.83	10%	0.05	0.01	0.01	0.06
CB-3	2.38	0.045	1.88	2%	0.05	0.89	0.90	0.95
CB-4	2.38	0.025	1.90	1%	0.05	0.50	1.40	1.45

A2	B2	C2	D2	E2	F2
IU	MAHL	MAIL	Liu/MAIL	IU Flow-Based Design Capacity	Service Area Reserve
No IUs	1.46	1.26	0%	0	1.21
CB-1	1.55	1.34	0.2%	0.00	1.29
CB-2	1.72	1.50	0.4%	0.01	1.43
CB-3	1.76	1.53	58%	0.89	0.58
CB-4	1.79	1.56	32%	0.50	0.10

Calculations based on

Capp	0.080 mg/L
Cunc	0.0040 mg/L
Qunc	1.55 mg/L
PSNS for MF	2.38 mg/L
RE	29%
SF	10%
UCL	0.55 mg/L

Abbreviations

- C pollutant concentration
- L pollutant load
- MAHL design load adjusted to influent flow (Qunc + sum of Qsiu)
- MF metal finisher
- Q flow
- PSNS Pretreatment Standards for New Sources (40CFR433.17)
- RE removal efficiency across POTW

- app Aquifer Protection Permit alert level
- des design
- iu industrial user
- potw publicly owned treatment works
- unc uncontrolled (by local limit for this pollutant)

F-4.2 BOD

Current influent loads—comprising discharges from uncontrolled sources—approach the MAHL for BOD at Central Buckeye WWTP, exceed the MAHL for TKN at Central Buckeye WWTP, and exceed the MAHLs for BOD and TKN at Sundance WRF. Applying UCLs would limit SIUs to design concentrations and leave design overloading unaddressed. This appendix presents a simplified example of the user-specific allocation methods for BOD at Sundance WRF. SIU flows and concentrations were chosen to illustrate (1) the potential impact of the City’s prohibition of discharges containing BOD in excess of 300 mg/L (2012 Code of Ordinances, Section 16-6-1) and (2) the potential of pretreatment to alleviate overloading.

The MAHLs for BOD at Central Buckeye WWTP and Sundance WRF were based upon the average design concentration of 300 mg/L. The current average influent BOD concentration is 295 mg/L at Central Buckeye WWTP and 322 mg/L at Sundance WRF.

The user-specific allocation method, described in Section 6.2.2, allots portions of the MAIL to prospective controlled sources according to user-specific evaluations of proposed discharges.

Example

The first two proposed industrial users, IUs SD-1 and SD-2, discharge BOD concentrations of 200 and 322 mg/L, respectively, less than and equal to the average uncontrolled source concentration of 322 mg/L. The third proposed industrial user, IU SD-3, is projected to discharge 2000 mg/L.

Table 4.2.1 illustrates application of the prohibition level of 300 mg/L. The BOD concentration discharged by IU SD-1 (200 mg/L) is less than the prohibition level, and it could be accepted. The BOD concentration discharged by IU SD-2 exceeds the prohibition level, pretreatment is not economically feasible, and thus the IU would be rejected, despite its minimal impact on influent concentration.

Table 4.2.2 illustrates application of the user-specific allocation method. Both IU SD-1 and SD-2, having little impact on influent loads, would be accepted. Pretreatment of the discharge from IU SD-3 is economically achievable and would reduce its BOD concentration from 2000 mg/L to 100 mg/L. The pretreated discharge from IU SD-3 would reduce the WRF influent BOD concentration from 314 to 303 mg/L, and it too can be accepted.

Table F-4.2.1 Sundance WRF BOD Example: Application of Prohibition Level of 300 mg/L

A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1
IU	Concentration (mg/L)		Flow (mgd)				Load (lb/d)			
	Cunc	Ciu	Qunc	Qiu	Qpotw = Qunc + Σ Qiu	Qiu/Qpotw	Lunc	Individual Liu	Σ Liu	Lpotw =Lunc + Σ Liu
No IUs	322	0	1.34	0	1.34	0%	3599	0	0	3599
SD-1	322	200	1.34	0.080	1.42	6%	3599	133	133	3732
SD-2	322	322	1.34	0.080	1.50	5%	3599	215	348	3947

A2	B2	C2	D2	E2
IU	Load (lb/d)		Concentration (mg/L)	
	MAHL (1)	MAIL (2)	Cpotw	
No IUs	3353	-246	322	
SD-1	3553	-46	315	
SD-2	3753	154	315	

Note

1. MAHL is based on design concentration:
300 mg/L
2. MAIL is based on SF of 0%

Abbreviations

- C pollutant concentration
- L pollutant load
- MAHL design load adjusted to influent flow (Qunc + sum of Qsiu)
- Q flow
- des design
- iu industrial user
- potw publicly owned treatment works
- unc uncontrolled (i.e., nonindustrial sources to which local limits do not apply)

Table F-4.2.2 Sundance WRF BOD Example: User-Specific Allocation

A1	B1	C1	D1	E1	F1	G1	H1	I1	J1	K1
IU	Concentration (mg/L)		Flow (mgd)				Load (lb/d)			
	Cunc	Ciu	Qunc	Qiu	Qpotw = Qunc + Σ Qiu	Qiu/Qpotw	Lunc	Individual Liu	Σ Liu	Lpotw =Lunc + Σ Liu
No IUs	322	0	1.34	0	1.34	0%	3599	0	0	3599
SD-1	322	200	1.34	0.080	1.42	6%	3599	133	133	3732
SD-2	322	322	1.34	0.080	1.50	5%	3599	215	348	3947
SD-3	322	100	1.34	0.080	1.58	5%	3599	67	415	4014

A2	B2	C2	D2	E2
IU	Load (lb/d)		Concentration (mg/L)	
	MAHL (1)	MAIL (2)	Cpotw	
No IUs	3353	-246	322	
SD-1	3553	-46	315	
SD-2	3753	154	315	
SD-3	3953	355	305	

Note

1. MAHL is based on design concentration:
300 mg/L
2. MAIL is based on SF of 0%

Abbreviations

- C pollutant concentration
- L pollutant load
- MAHL design load adjusted to influent flow (Qunc + sum of Qsiu)
- Q flow
- des design
- iu industrial user
- potw publicly owned treatment works
- unc uncontrolled (i.e., nonindustrial sources to which local limits do not apply)

Table F-5 Westside City Local Limits Comparison (mg/L)

Pollutant	Buckeye (1)	Range of Other Cities	Avondale (2)	Glendale	Goodyear (3)	Peoria	Surprise (3,4)
Toxic Pollutants							
Arsenic	0.035	0.02 - 0.41	0.41	0.13	0.020	0.13	0.10
Boron	1.1	0.016 - 0.047	-	-	-	-	5.6
Cadmium	0.028	0.016 - 0.09	0.09	0.047	0.016	0.047	0.047
Chloride	Other Controls	-	-	-	-	-	-
Chromium	User-Specific	1.2 - 7.0	1.2	-	User-Specific	7.0	1.4
Copper	5.0	1.5 - 3	3	1.5	User-Specific	1.5	1.7
Cyanide	0.78	0.081 - 2	1.75	2	0.081	0.5	2.00
Fluoride	11	-	-	-	-	-	-
Lead	0.74	-	1.6	0.41	0.051	0.35	4.0
Mercury	0.0080	0.0002 - 0.12	0.12	0.0023	0.0020	0.0002	0.0023
Molybdenum	-	-	-	-	Reserved	M	0.50
Nickel	User-Specific	0.63 - 5.0	0.63	-	Reserved	3.3	5.0
Zinc	166	2.0 - 4.75	4.75	3.5	2.4	2.0	3.5
Conventional Pollutants							
TSS	User-Specific	400 - 680	450	-	680	400	Reserved
Nitrogen							
Ammonia (NH ₃ -N)	-	40 - 75	75	-	-	40	Reserved
Total Kjeldahl (TKN)	User-Specific	-	-	-	User-Specific	-	-
Oil & Grease	Other Controls	50 - 100	100	50	-	100	100

Notes

1. Based on controlled flow of 18% at Central Buckeye WWTP and 12% at Sundance Ranch WRF (Buckeye)
2. Lead units are labeled "MH/L" in ordinance (Avondale)
3. "Reserved": parameters to be submitted to the City for review and approval. City reserves the right to apply limits or prohibit discharge (Goodyear, Surprise)
4. Cyanide limit is for cyanide amenable to chlorination (Surprise)

F-6 Example Best Management Practices for Oil and Grease

F-6.1 Vehicle Service Facilities (VSFs)

VSFs, including auto repair shops, radiator shops, and service stations, can have a high potential for discharging petroleum-based oils and grease. These discharges are more effectively controlled through requirements for installation, operation, and maintenance of control devices and for implementation of source control BMPs than through enforcement of a numeric limit. Table 6-1 lists BMPs for vehicle service facilities. Many of the BMPs for management of oil and grease discharges from VSFs are also beneficial in controlling the discharge of toxic pollutants.

Table F-6.1 Common Vehicle Service Facility Activities and Example Best Management Practices

Activities	Example BMPs
Changing Oil and Other Fluids	<ul style="list-style-type: none">• When draining fluids into a drain pan, place a larger drip pan under the primary drain pan to catch any spilled fuels• Transfer fluids drained from vehicles to a designated waste storage area as soon as possible• Never pour vehicle fluids into sinks, toilets, or floor drains• Drain fluids from leaking or wrecked vehicles as soon as possible, to avoid leaks and spills
Housekeeping	<ul style="list-style-type: none">• Eliminate discharges to the collection system by using a licensed service to haul and recycle or dispose of wastes• Use drip pans under leaking vehicles to capture fluids• For spills: spot clean using absorbents or rags; sweep the floor and collect sweepings for proper disposal (not to collection system); damp mop, instead of hosing, if necessary• Send rags to an industrial laundry
Storage	<ul style="list-style-type: none">• Store wastes in a way that prevents spills from reaching the collection system; double-contain all bulk fluids• Keep wastes separate to increase waste recycling/disposal options and reduce costs

Table F-6.1 Common Vehicle Service Facility Activities and Example Best Management Practices

Activities	Example BMPs
Spill Control	<ul style="list-style-type: none"> • Maintain and keep current a spill response plan and ensure that employees are trained on the elements of the plan • Minimize the distance between waste collection points and storage areas • Contain and cover all liquid wastes, especially during transfer • Purchase and maintain the proper absorbent materials for containment and cleanup of different spills and make sure they are easily accessible; dispose of saturated absorbents properly • Seal or remove floor drains to prevent accidental discharge to the collection system
Recycling	<ul style="list-style-type: none"> • Recycle, oil filters and motor oil • Set up a system that makes it easy for employees to separate and recycle wastes • Retain only a licensed service to haul away and dispose of wastes
Education and Training	<ul style="list-style-type: none"> • Train all employees on personal safety and proper methods for handling and disposing of waste • Post instructional/informational signs for customers and employees • Label drains

Water coming into contact with oily residues in the shop and fueling areas, engine and parts flush water, and vehicle/floor wash water, as well as flows from wash bays and from any other areas that collect oil, grease, and grit, including rinse down and mop water, that flow into the wastewater collection system may also require pretreatment. Pretreatment devices such as oil/water separators, sand/oil separators, grease interceptors, or solids interceptors can be used to collect and treat this wastewater prior to discharge to the collection system.

F.6.2 Food Service Facilities (FSFs)

FSFs, such as restaurants, coffee shops, bakeries, grocery store delis, and school cafeterias, can have a high potential for discharging FOG. These discharges are more effectively controlled through requirements for installation, operation, and maintenance of control devices and for implementation of source control BMPs than through enforcement of a numeric limit. Table F-6.2 lists common activities/areas and example BMPs:

Table F-6.2 Common Food Service Facility Activities and Example Best Management Practices

Activities	Example BMPs
Housekeeping	<p>Scrape excess food waste and grease from dishes into collection containers using rubber scrapers</p> <p>Use food-grade paper to soak up grease from fryers</p> <p>Use paper towels to wipe down kitchen and dining areas</p> <p>Dry sweep kitchen areas with brooms instead of mopping, when possible</p> <p>Avoid using food grinders or garbage disposal units</p> <p>Keep grease out of the wash water</p> <p>Take precautions to prevent spills when emptying fryers and other oil and grease containers (There are devices available that can be used to safely and effectively collect and transport oil and grease to recycling containers)</p> <p>Take precautions to prevent spills when emptying and cleaning grease traps located inside the kitchen and nearby floor drains</p> <p>Clean up liquid spills with absorbent material, such as powdered aluminum silicate, instead of mopping, and do not wash down floor drains</p> <p>Block off all floor drains and floor sinks near a spill</p> <p>Prevent pouring oil and grease down the drain, food grinders, and garbage disposal units</p> <p>Stop running hot water over dishes, pans, fryers, and griddles to wash grease down the drain until after manual removal of oil and grease</p>

Table F-6.2 Common Food Service Facility Activities
and Example Best Management Practices

Activities	Example BMPs
Waste Segregation and Recycling	<p>Set up a system that makes it easy for employees to separate and recycle wastes</p> <p>Segregate used oil or grease from frying, broiling, and hood cleaning operations</p> <p>Collect used oil and grease in a covered container and reuse/recycle</p> <p>Inspect used oil and grease containers for leaks</p> <p>Maintain the used oil and grease containers with lids to prevent rain from contaminating the contents and reducing the capacity</p> <p>Retain only a licensed service to haul away and dispose of wastes</p>

Conducting an Industrial Waste Survey

Purpose:

To identify sources of discharges of pollutants of concern and processes that are either categorical in nature, a significant source (greater than 25,000 gpd process flow), have potential to cause an upset in the publicly owned treatment works (POTW) and/or cause worker health and safety concerns. The requirements set forth in the Code of Federal Regulations (CFR) at 403.8(f)(2) requires the POTW to identify and locate all possible IUs that might be subject to the pretreatment program, to identify the character and volume of pollutants discharged by those IUs, and to make this information available to the “Regional Administrator or Director” (Control Authority) upon request. The records obtained will comprise the basis of the industrial waste survey (IWS) process.

Overview:

The IWS process is the backbone of an effective pretreatment program. The term “industrial waste” is not restricted to industrial sources. Commercial users with chilling systems, restaurants, service stations, and drycleaners, for example, can often have a more detrimental impact on the treatment process than a large industrial user. The bottom line is that a well-designed survey process is a primary tool that allows the inspector(s) to learn the system, its users, and the impact the users can have at a specific plant. The term “survey” is to mean an onsite inspection will occur.

A tiered approach, described below, will forgo mailings of surveys. Direct contact with the users is the most effective means to learn the system. Mailers to give notice to the users is a useful tool to notice users of proposed local limits and to communicate with classes of users for specific purposes. Utility bill message inserts or an occasional article about the pretreatment program in the utility newsletter is a great communication tool. It is important that the users become knowledgeable of the pretreatment program through out-reach and community involvement.

The tiered approach utilizes several questionnaires designed to allow the inspector to properly document the activities occurring at the facility on the first visit. By physically completing a baseline questionnaire during the initial site visit, administrative time is decreased.

Procedures are included which will result in the data being inputted into Linko Pretreatment and FOG Management software, the IWS data structure, in a timely and complete manner. By establishing an electronic record of the initial survey process, the status of the user can be maintained while the user remains active in the POTW.

Users who do not meet criteria to be permitted but do raise concerns, should be re-visited approximately every 12 to 15 months; users who did not raise concerns should be re-visited every 36 months. Triggers will be developed to aide in scheduling future inspections, or as some agencies refer to, completing walk through inspections.

Tools:

The inspector should have access to the City's utility billing program and Geographical Information System (GIS). As a minimum, the inspector must have the ability to obtain monthly consumption data including the sewer volume billed by individual accounts. GIS data will be used by the inspector to conduct flow studies, flow proportional sampling, and investigations of illicit discharges where obtaining the slopes from each manhole is necessary. Additionally, both the billing and GIS data is an integral part of the survey and discharge permitting process. A digital camera with date and time stamp is extremely valuable. The camera should only be used for inspection purposes and all photos taken must be logged. Personal use should be avoided. Remember, you may have to explain to legal and judicial personnel why the order of photos are not sequential which in turn can impact your credibility.

Forms:

There are three forms for the IWS process. The primary survey form is for facilities not engaged in food preparation. It is double-sided form. The front side contains four sections; Business Information, Confirmation of Sewer Service, Chemicals and Hazardous Waste, and Other Information to account for floor drains, process discharges and whether follow-up is required.

The reverse side of the form contains the Notice of Inspection Rights as required the by Arizona Revised Statutes Article 4 Municipal Regulations Section 9-833, Inspections; applicability. The Consultant recommends this form be standard for non-permitted as well as permitted although the statue is specific to "licensed" (taken as permitted) facilities.

The second form is for commercial food establishments. The front side contains two main sections, business information and equipment cleaning operations. The second section walks the inspector through a fixture count as well as requiring documenting of photographs of the facility. As stated previously the reverse side contains the Notice of Inspection Rights.

The third form is an application/questionnaire which has eight sections; Company Profile, Plant Operational Characteristics, Water Flow, Wastewater Discharge Point Sources, Pretreatment Facilities, Priority Pollutants listing, Sample Schedule, and Company Certification. A Solvent Management Plan form and a Total Toxic Organic Response form has also been included.

Planning:

Survey's should be conducted in a systematic manner. Using the GIS quarter section information, the inspector can document in writing and geographically their inspection efforts. Prior to beginning a survey, the inspector shall:

- Identify quarter section that will be worked in.
- Record the town/range/quarter section and the upstream and downstream manhole of each business you plan on inspecting each day.
- Review water purchase records for those to be inspected.
- Review building safety plans for larger buildings.
- Review Fire Department Hazardous Materials Inventory Statement (HMIS) as required by Chapter 15 – Building Regulations (§5001.5.2).
- Review water utility records to determine if the facility has backflow installed.
- When a facility has a reduced pressure principal assembly (RP) or a double check assembly (DC) the facility must have a higher degree of hazard which warranted the installation. Be aware of why an assembly was required by Chapter 17 – Water Utilities (§17-4-3).
- Verify that adequate paper work such as copies of ordinance(s), survey forms, and business cards are available.
- Be prepared to present a professional appearance. ID must be visible.

Introducing Yourself for the Survey

Prior to entering the building, drive around the exterior portion of the business where access is possible. For example, if access to a refuse container is available you should make note of the contents of the container. The contents of refuse containers can often reveal what type of businesses are operating in the building as well as their waste management practices.

- Take notes of your observations including the completion of a photo log for every photo taken.
- Enter through the main entrance of the building. Although you have right of entry you are a guest of the occupant.
- Present a business card.
- Explain that it is the intention of the City to conduct an initial survey of the facility for the purpose of determining the type of processes employed and if there are process discharges to the sanitary sewer.
- Ask to speak a facility manager. If the facility manager is busy, ask for a business card for that individual, and inquire if another employee might be available to walk through the facility.
- If the employee remains hesitant, thank them for their time and inform them that you will schedule a visit when the appropriate staff is available.
- Prior to leaving the grounds of the facility, take detailed notes of potential issues. Observation should be made from several points.

Conducting the Survey

- If a facility manager or representative is available, introduce yourself and offer a business card.
- Explain the purpose of your visit and that the initial inspection will only take a short time.
- Request to initially inspect wet processes if any are employed.
- Request to see all chemical storage if chemicals are used and/or stored onsite.
- Each room should be inspected, and the determination made if access to the sewer is possible. Keep in mind that categorical processes such as metal finishing can be conducted in beakers.

Completing the Survey

- Upon completion of the inspection complete the walk-through inspection form prior to departing the facility so that all required information is complete.
- If the facility manager requests a copy of the form, allow them to make a copy of your completed sheet. Prior to allowing a copy to be made, place a note on bottom of sheet indicating that a copy was obtained by the business.
- If further visits or follow-up will be required, inform the facility manager of the reason. Explain that a letter will be issued to explain why further follow-up is required.
- If facility is unsure of any requests for follow-up, provide your supervisor's name and number (general office number).
- Inquire if any other officials should be contacted and, if so, obtain their names and titles.
- Ask the representative if they have questions.
- Thank the facility manager for his/her time.
- Complete the data entry into Linko (Initially you will input the data into an upload file provided by Linko).
- File the hard copy form.

Follow-Up if further information is required

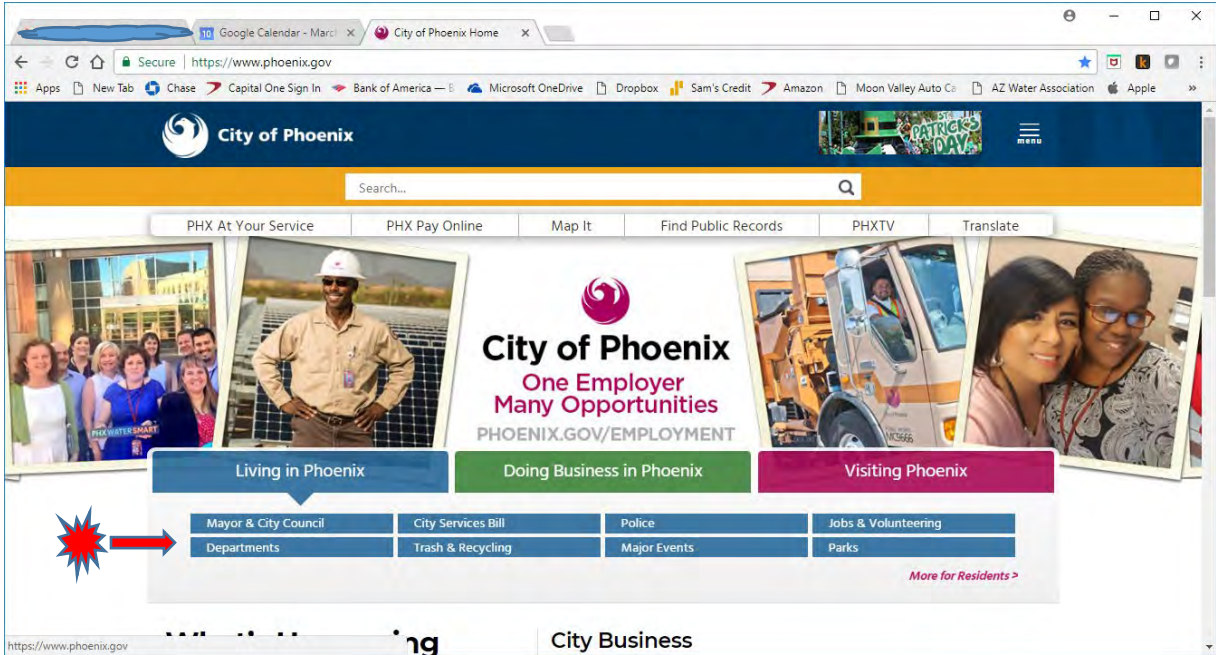
- Draft a letter within one working day after completion of inspection thanking them for their time.
- The letter should list any concerns or reasons further follow-up is required.
- If you reference regulations, provide a copy of the regulations as an attachment to letter.
- If further documentation is required, allow ample time for documents/information to be provided. Do not demand but request this information.
- Be specific with each requirement.
- Offer to assist in providing and/or completing information if at all possible (within reason).

Locating Non-residential users of the POTW

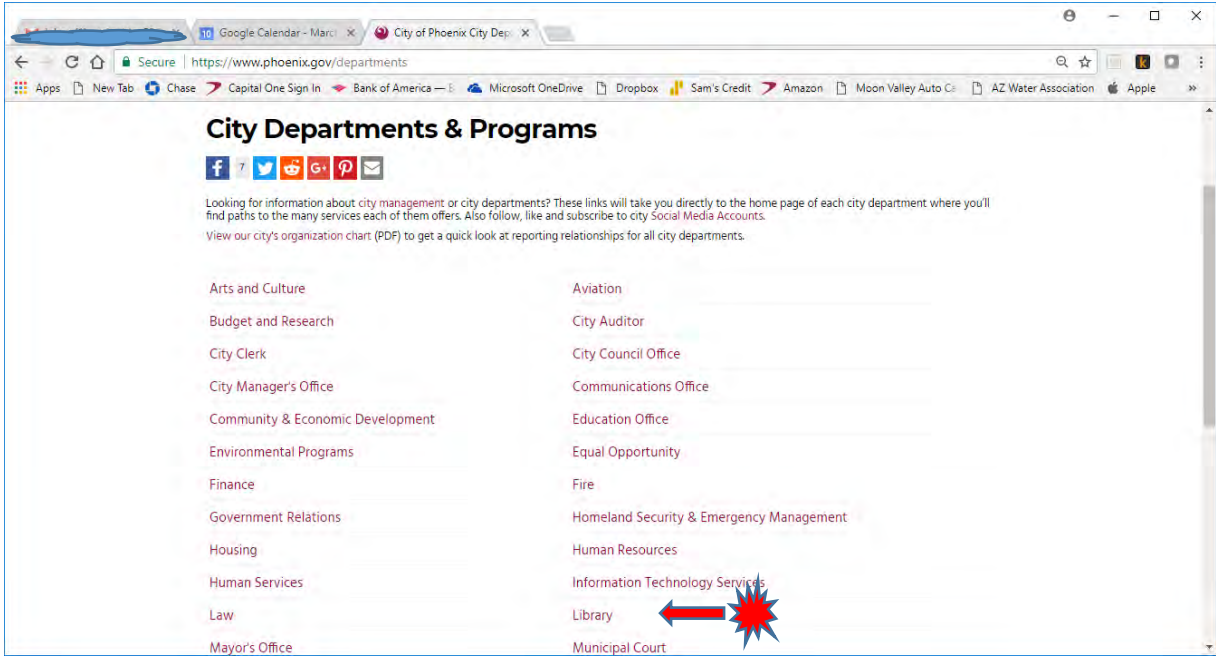
Visit your library and obtain your library card. Typically the application must be made in person. E-cards access is possible but access is then limited.

<http://www.phoenixpubliclibrary.org/ServicesForYou/Borrowing-Items/Pages/Library-Cards.aspx>

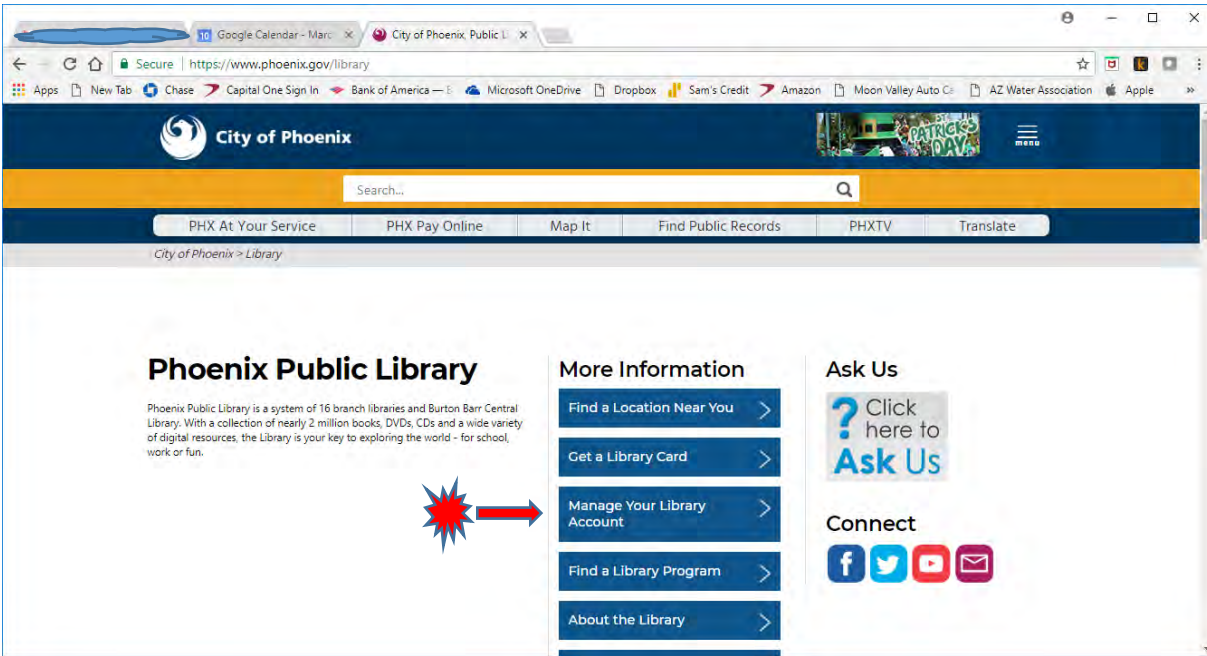
With new card in hand visit your library's web site and create an online account. The examples provided are from the City of Phoenix website (<http://www.phoenix.gov>)



Select "Departments"



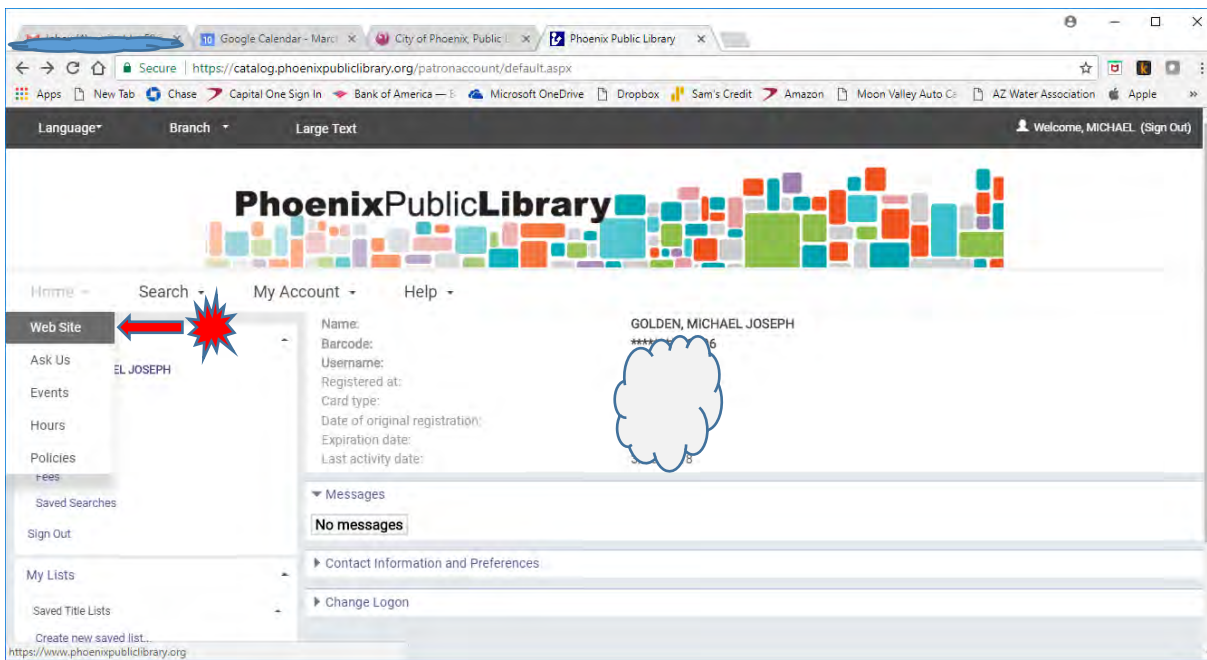
Select "Library"



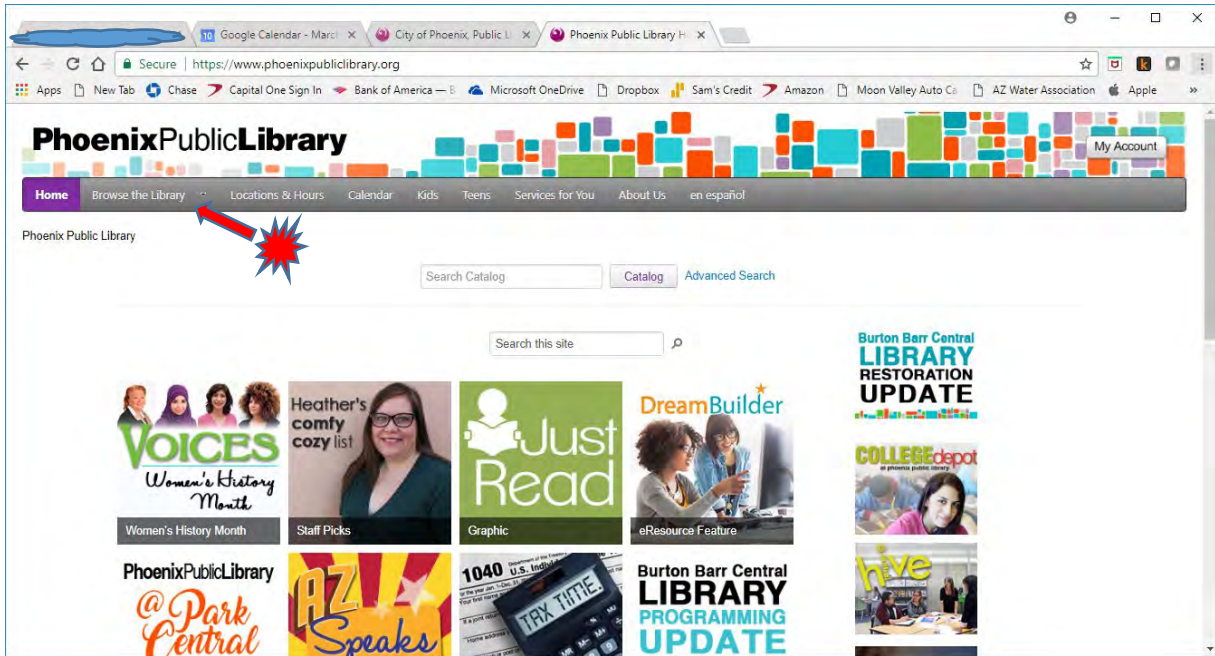
Select "Manage Your Library Account"

Enter your library card barcode number or user name if already setup.

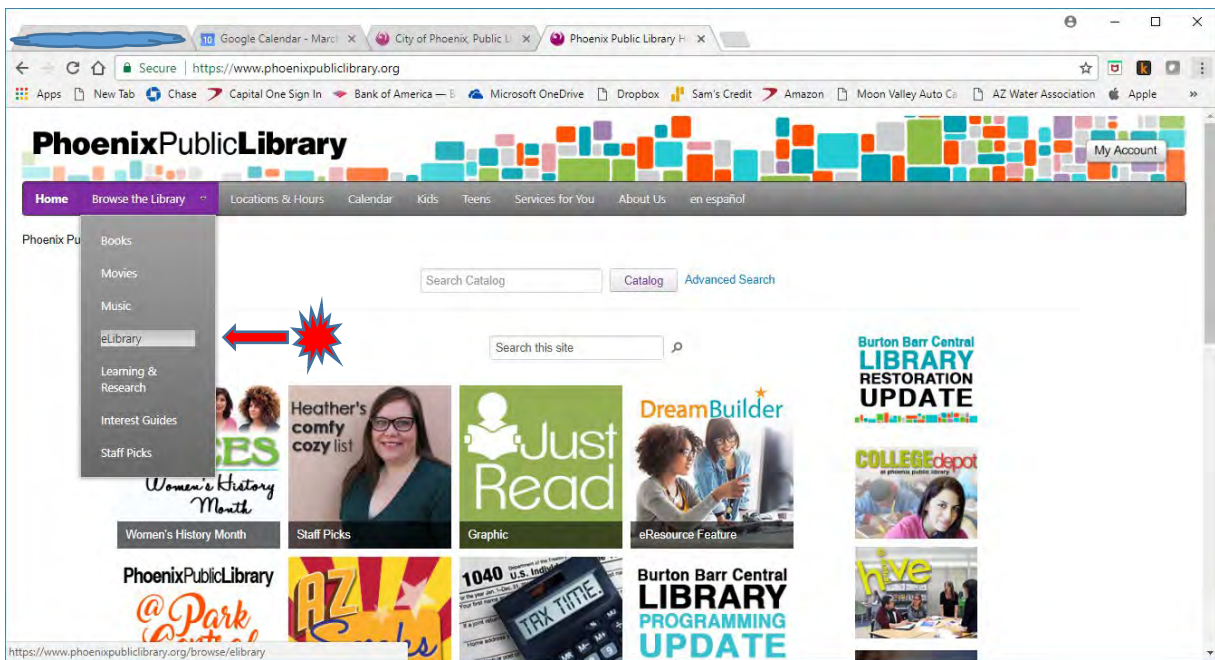
Select "Home" and then select "Web Site"



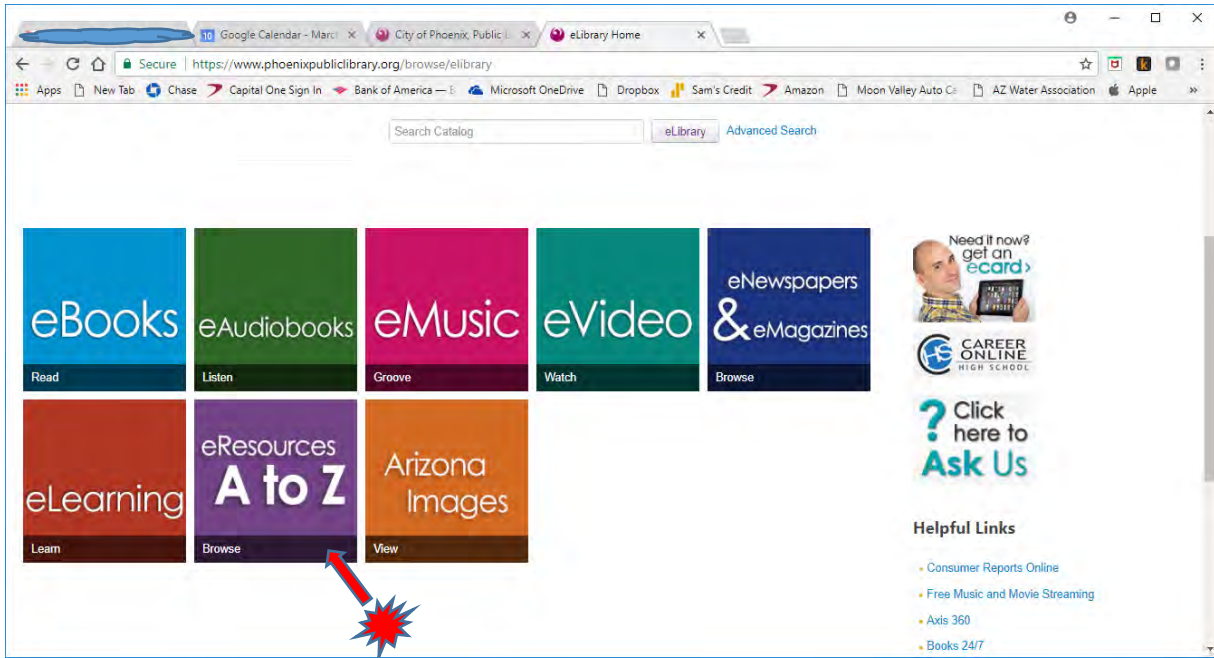
Select "Browse the Library"



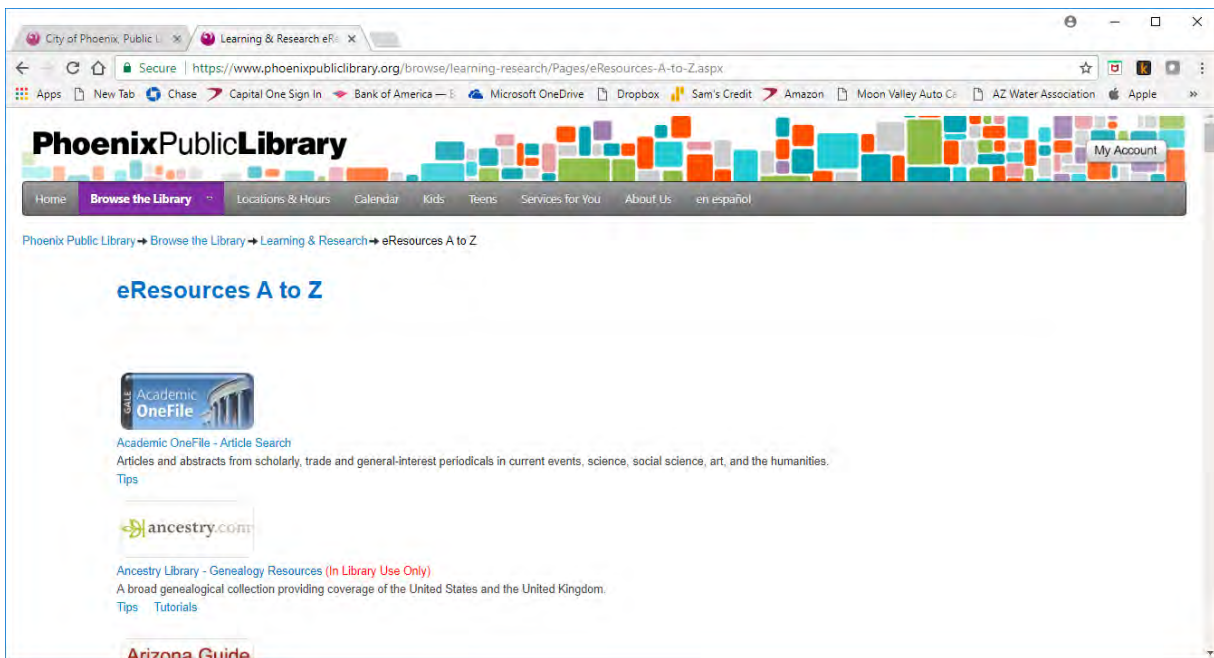
Select "eLibrary"



Select “eResources A to Z”



Scroll to down to “Reference USA Business”



Select "Reference USA Business"

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ReferenceUSA Business

Reference USA - Business Directory
Directory information of more than 14 million publicly and privately owned companies in the United States.

ReferenceUSA Residential

Reference USA - Residential Phone Directory
National telephone directory of over 120 million residential (consumer) listings. Searchable by name, location or phone number.

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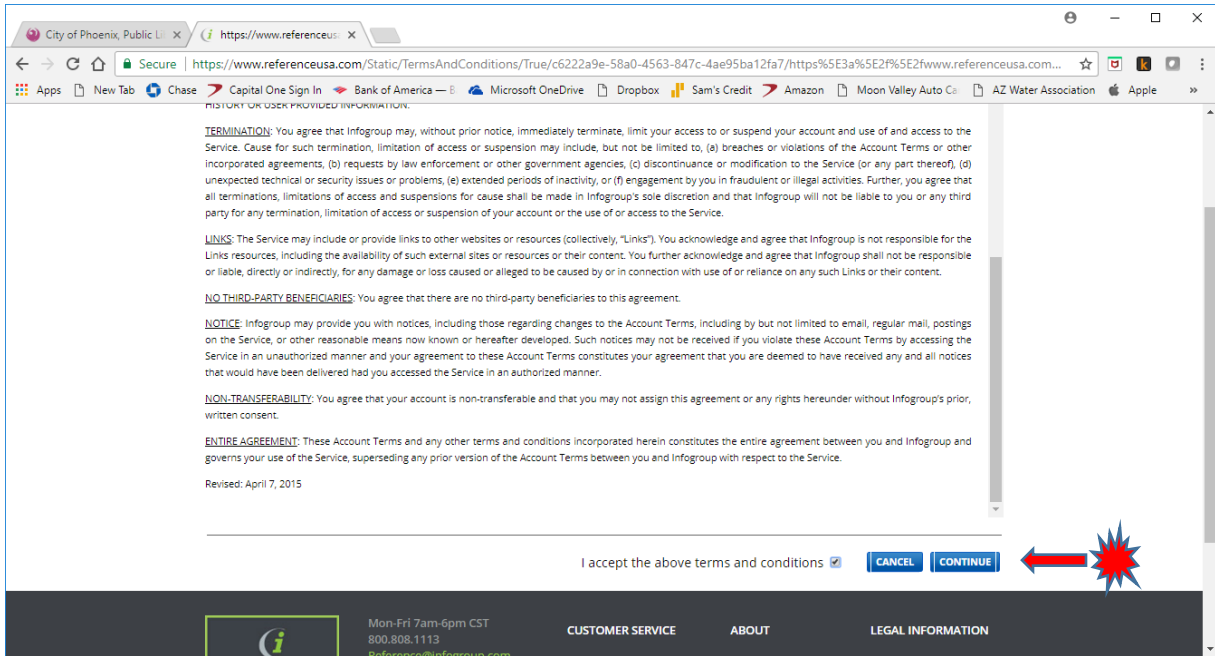
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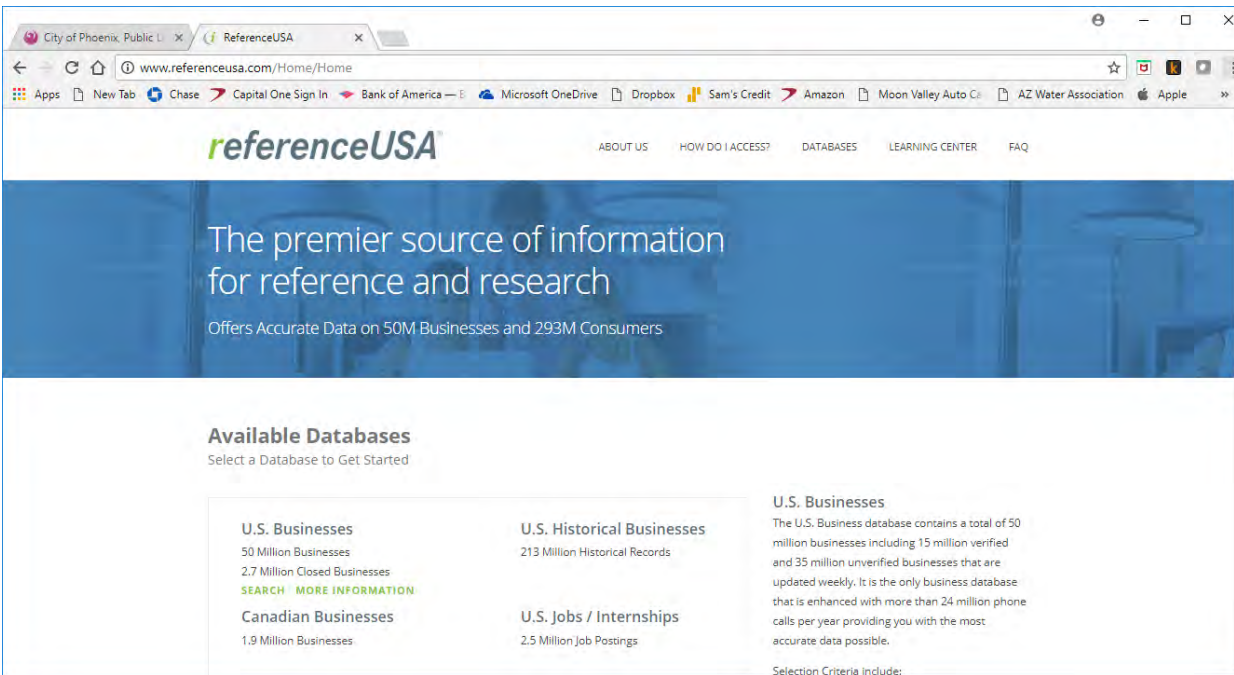
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Welcome to Reference USA



Select the data source to search – “US Businesses - Search”

The screenshot shows the ReferenceUSA website's 'Available Databases' page. A red starburst with an arrow points to the 'U.S. Businesses' database. The page lists several databases with their respective record counts:

- U.S. Businesses:** 50 Million Businesses, 2.7 Million Closed Businesses. Includes a 'SEARCH MORE INFORMATION' link.
- Canadian Businesses:** 1.9 Million Businesses.
- U.S. New Businesses:** 4.3 Million New Businesses.
- U.S. Standard White Pages:** 157 Million Residents.
- Canadian White Pages:** 11 Million Individuals.
- U.S. Historical Businesses:** 213 Million Historical Records.
- U.S. Jobs / Internships:** 2.5 Million Job Postings.
- U.S. Healthcare:** 1.2 Million Physicians & Dentists.
- U.S. Consumers / Lifestyles:** 293 Million Individuals.
- U.S. New Movers / Homeowners:** 16 Million Records.

The 'U.S. Businesses' section includes a description: 'The U.S. Business database contains a total of 50 million businesses including 15 million verified and 35 million unverified businesses that are updated weekly. It is the only business database that is enhanced with more than 24 million phone calls per year providing you with the most accurate data possible.' It also lists selection criteria: 'Company name, Executive title, Business type, Sales volume, Employee size, Year established, And more...'. A 'SEARCH' button is visible at the bottom of this section.

Select “Quick Search”

The screenshot shows the ReferenceUSA website's search interface for the 'U.S. Businesses Database'. The 'Quick Search' tab is selected, and the 'Advanced Search' tab is also visible. The search form includes the following fields:

- Company Name
- Executive First Name
- Executive Last Name
- City
- State (dropdown menu, currently set to 'All')
- Phone

Below the search form, there are links for 'Additional Filters', 'Clear Search', and a 'VIEW RESULTS' button.

Enter "Buckeye" in City and select "Arizona"

The screenshot shows the referenceUSA search interface. The search criteria are as follows:

Company Name	Executive First Name	Executive Last Name
City	State	Phone
Buckeye	Arizona	

Buttons: [Additional Filters](#), [Clear Search](#), [VIEW RESULTS](#)

Select "View Results"

The screenshot shows the search results page for "Buckeye, Arizona". The results are displayed in a table with the following columns:

Company Name	Executive Name	Street Address	City, State	ZIP	Phone	Corp. Tree
1 Buckeye Plumbing	Frank Bio	23400 W Galpin Rd	Buckeye, AZ	85326	(623) 386-0710	
2b Wireless-Buckeye		940 S Watson Rd	Buckeye, AZ	85326	(623) 223-1000	
360 Development LLC	Todd Scholes	20472 W Springfield St	Buckeye, AZ	85396	(602) 684-7477	
A & C Hvac & CONSTRUCTION	Abel Burciaga	2005 N 193rd Ave	Buckeye, AZ	85396	(480) 612-3244	
A V Homes Inc		20640 W Park Meadows Dr	Buckeye, AZ	85396	(623) 505-3191	
A V Homes Inc		2311 N Park St	Buckeye, AZ	85396	(623) 251-7266	
A2m Consulting	Albenago B Arseo	2924 N Lainey Ln	Buckeye, AZ	85396	(702) 351-4204	
AAA Insulation	David Hart	26103 W US Highway 85	Buckeye, AZ	85326	(623) 691-6222	
Aaron's		1260 S Watson Rd	Buckeye, AZ	85326	(623) 386-0572	
Abraza Buckeye Emergency Ctr		525 S Watson Rd	Buckeye, AZ	85326	(623) 925-3980	
Abraza Buckeye Emergency Ctr	Nana N Dwomoh	525 S Watson Rd	Buckeye, AZ	85326	(623) 925-3980	
Abraza Medical Group		525 S Watson Rd	Buckeye, AZ	85326	(623) 474-0074	
Abraza Medical Group	Sasi K Gbanta	525 S Watson Rd # 200	Buckeye, AZ	85326	(602) 726-8750	

With use of the library card access you may download up to 250 entries at a time. For accuracy it is recommended that you select the data by pages staying at or under the 250 record limit.

Check the "Company Name" box to select one page of data (25 records per page)

referenceUSA

U.S. Businesses
1,026 Results
90 with e-mail addresses [more info]

Page 1 of 42

Details Heat Map Summary Charts Download Print Save Search

Company Name	Executive Name	Street Address	City, State	ZIP	Phone	Corp. Tree
1 Buckeye Plumbing	Frank Blo	23400 W Galpin Rd	Buckeye, AZ	85326	(623) 386-0710	
2b Wireless-Buckeye		940 S Watson Rd	Buckeye, AZ	85326	(623) 223-1000	
360 Development LLC	Todd Scholes	20472 W Springfield St	Buckeye, AZ	85396	(602) 684-7477	
A & C Hvac & CONSTRUCTION	Abel Burciaga	2005 N 193rd Ave	Buckeye, AZ	85396	(480) 612-3244	
A V Homes Inc		20640 W Park Meadows Dr	Buckeye, AZ	85396	(623) 505-3191	
A V Homes Inc		2311 N Park St	Buckeye, AZ	85396	(623) 251-7266	
A2m Consulting	Albenago B Arseo	2924 N Lainey Ln	Buckeye, AZ	85396	(702) 351-4204	
AAA Insulation	David Hart	26103 W US Highway 85	Buckeye, AZ	85326	(623) 691-6222	
Aaron's		1260 S Watson Rd	Buckeye, AZ	85326	(623) 386-0572	
Abrazo Buckeye Emergency Ctr		525 S Watson Rd	Buckeye, AZ	85326	(623) 925-3980	
Abrazo Buckeye Emergency Ctr	Nana N Dwomoh	525 S Watson Rd	Buckeye, AZ	85326	(623) 925-3980	
Abrazo Medical Group		525 S Watson Rd	Buckeye, AZ	85326	(623) 474-0074	
Abrazo Medical Group	Sasi K Gbakra	525 S Watson Rd # 200	Buckeye, AZ	85326	(602) 726-8750	

referenceUSA

U.S. Businesses
1,026 Results
90 with e-mail addresses [more info]

Page 1 of 42

Details Heat Map Summary Charts Download Print Save Search

25 records selected

Company Name	Executive Name	Street Address	City, State	ZIP	Phone	Corp. Tree
1 Buckeye Plumbing	Frank Blo	23400 W Galpin Rd	Buckeye, AZ	85326	(623) 386-0710	
2b Wireless-Buckeye		940 S Watson Rd	Buckeye, AZ	85326	(623) 223-1000	
360 Development LLC	Todd Scholes	20472 W Springfield St	Buckeye, AZ	85396	(602) 684-7477	
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Note pop up box stating number of records selected. From this point forward select by page, again staying under the 250 maximum download.

After selecting pages 1 through 10 choose “Download”

www.referenceusa.com/UsBusiness/Result/1f3a0bda740b42e79788e128e7a12685

<input checked="" type="checkbox"/>	Carl's Jr	416 S Watson Rd	Buckeye, AZ	85326	(623) 327-3667	ONE PAGE
<input checked="" type="checkbox"/>	Carlucci, Erick DDS	Erick Carlucci	675 S Watson Rd # 106	Buckeye, AZ	85326	(760) 900-7586
<input checked="" type="checkbox"/>	Carniceria Durango Inc	Mikayla Merez	502 E Monroe Ave	Buckeye, AZ	85326	(623) 386-7002
<input checked="" type="checkbox"/>	CARQUEST Auto Parts		710 N 195th Ave	Buckeye, AZ	85326	(623) 853-1000
<input checked="" type="checkbox"/>	Carter Manufacturing Co	Robert A Carter Sr	22701 W Euclid Ave	Buckeye, AZ	85326	(623) 386-7320
<input checked="" type="checkbox"/>	Casa De Yogurt	Oscar Alvarez	940 S Watson Rd # 103	Buckeye, AZ	85326	(623) 386-6267
<input checked="" type="checkbox"/>	Cellular Store		730 E Monroe Ave # B	Buckeye, AZ	85326	(623) 327-3032
<input checked="" type="checkbox"/>	Central Arizona Escort Svc Inc	Lorayne Niedermeier	6702 S Dean Rd	Buckeye, AZ	85326	(623) 393-0079
<input checked="" type="checkbox"/>	Century Glass & Mirror	Richard Sawyer	824 E Monroe Ave	Buckeye, AZ	85326	(623) 444-6204

Page 10 of 42

Details Heat Map Summary Charts **Download** Print Save Search

Revise Search New Search

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For accuracy and as a means to prevent duplication of records use “Email Records” to send the data set your email account. This is an extra step. However it does provide documentation should you need to verify the data sets when importing a large number of records.

www.referenceusa.com/UsBusiness/Download/1f3a0bda740b42e79788e128e7a12685

U.S. Businesses

Download

Step One: Select your file format

- Comma Delimited (Most Popular)
- Excel
- Excel (2007/2010)
- Tab Delimited

Step Two: Select your level of detail

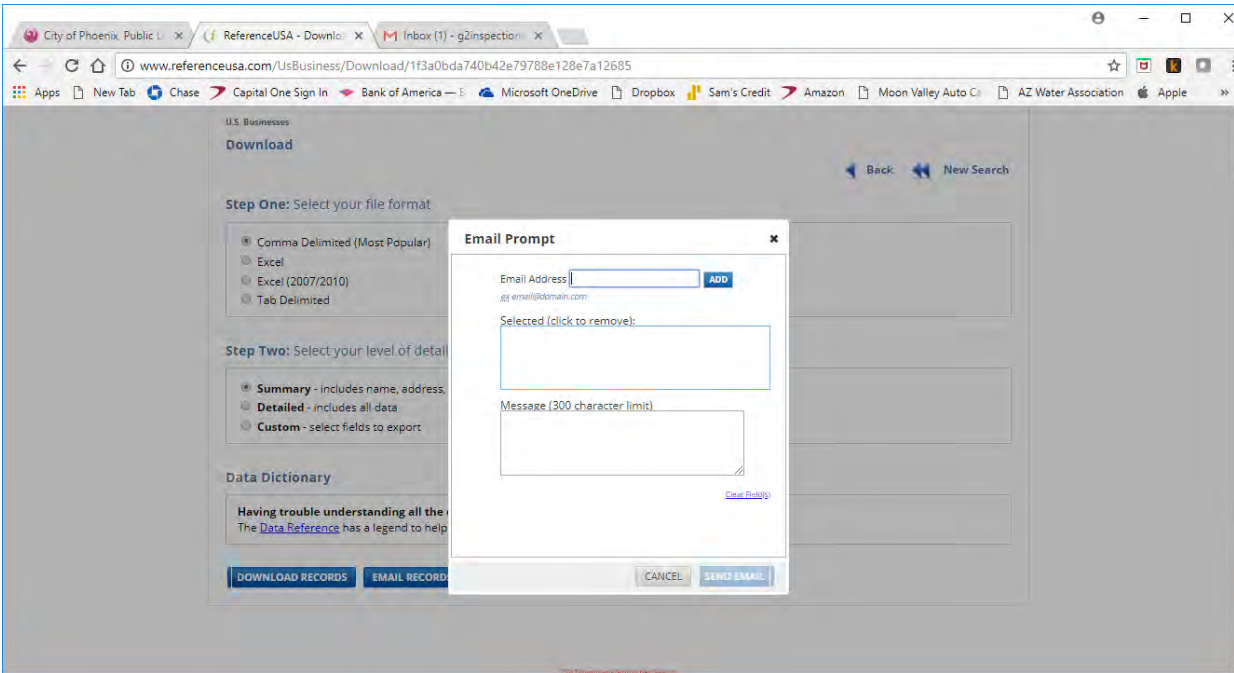
- Summary - includes name, address, phone number and 17 additional data fields
- Detailed - includes all data
- Custom - select fields to export

Data Dictionary

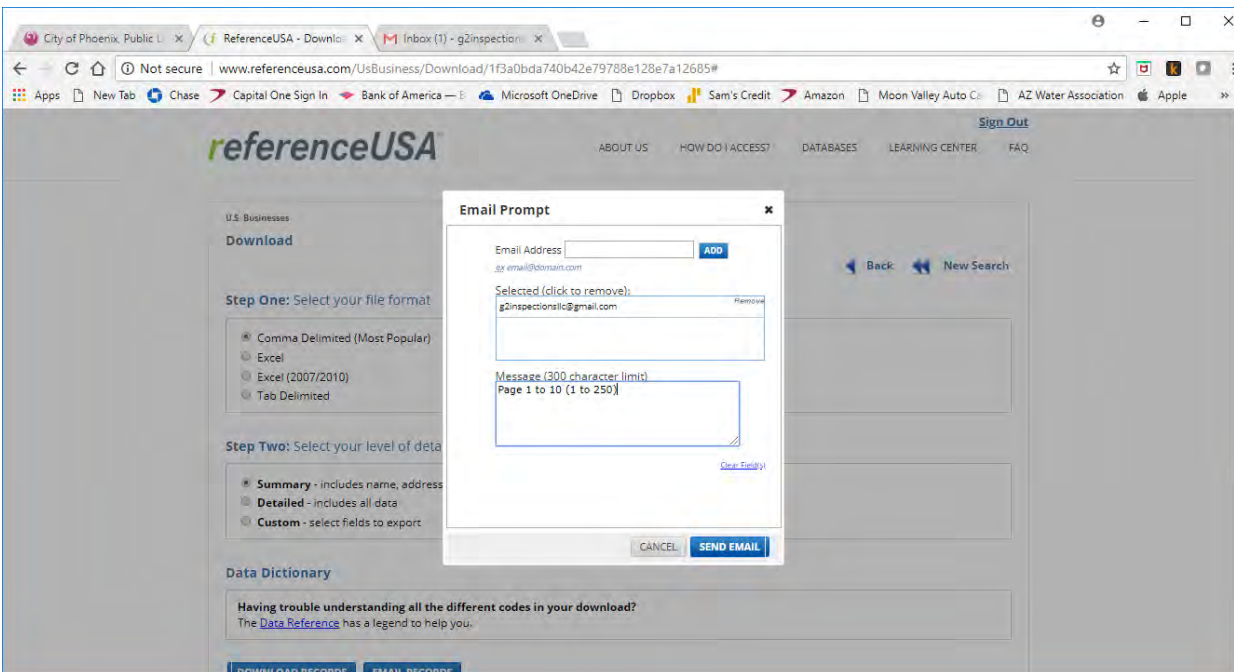
Having trouble understanding all the different codes in your download?
The [Data Reference](#) has a legend to help you.

DOWNLOAD RECORDS **EMAIL RECORDS**

Enter your email address, click add.



Enter description of data set – Pages 1 to 10 (1 to 250)



Your subsequent download descriptions shall appear as follows:

Page 11 to 20 (251 – 500)

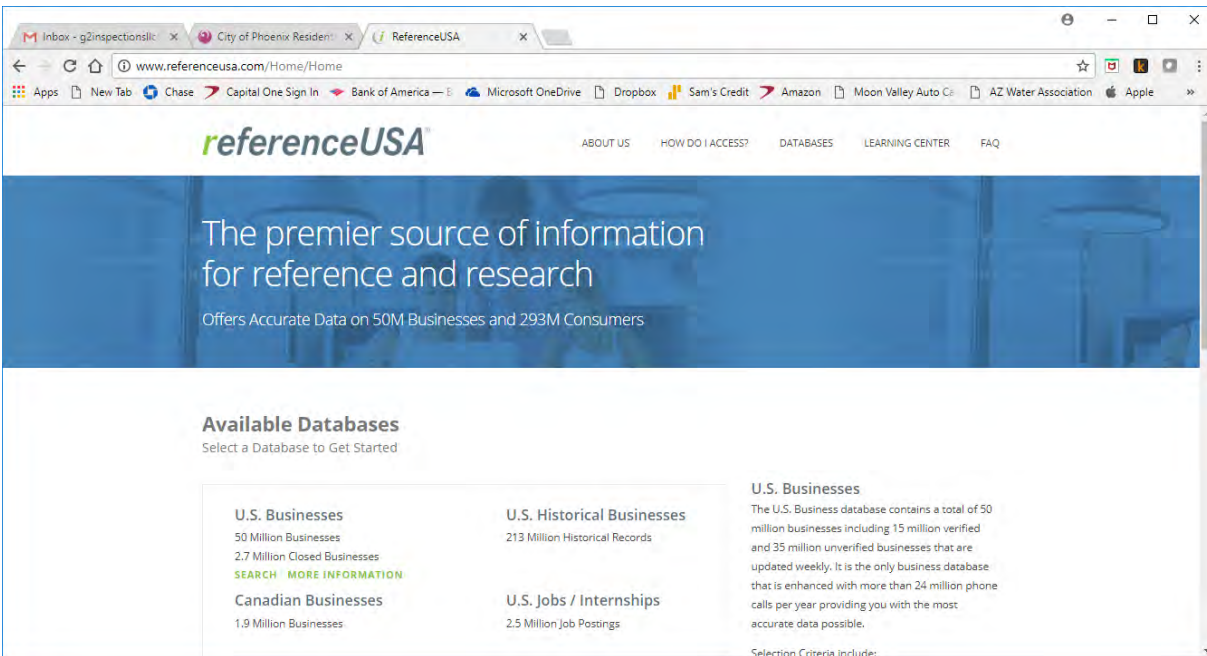
Page 21 to 30 (501 – 750)

Page 31 to 40 (751 to 1000)

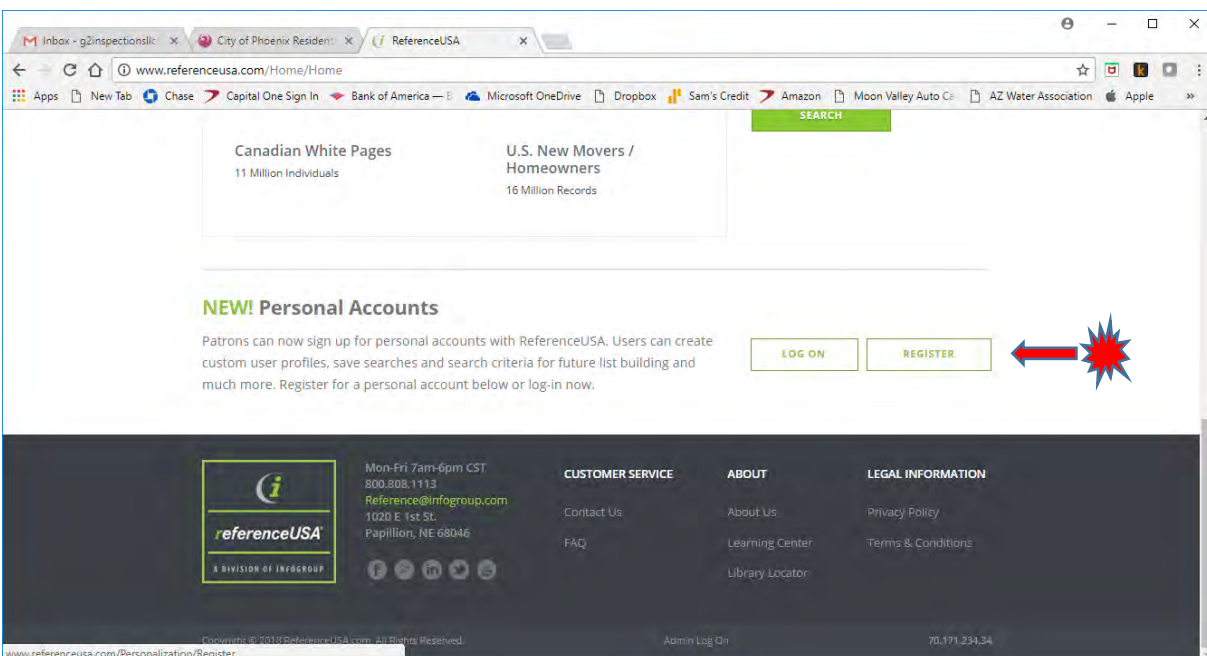
Page 41 to 42 (1001 to 1226)

Open your email and download each data set. After opening the first data set, copy the CSV data into a new Excel worksheet and then paste each subsequent data set into the Excel worksheet (do not copy the header data (record 1) each time).

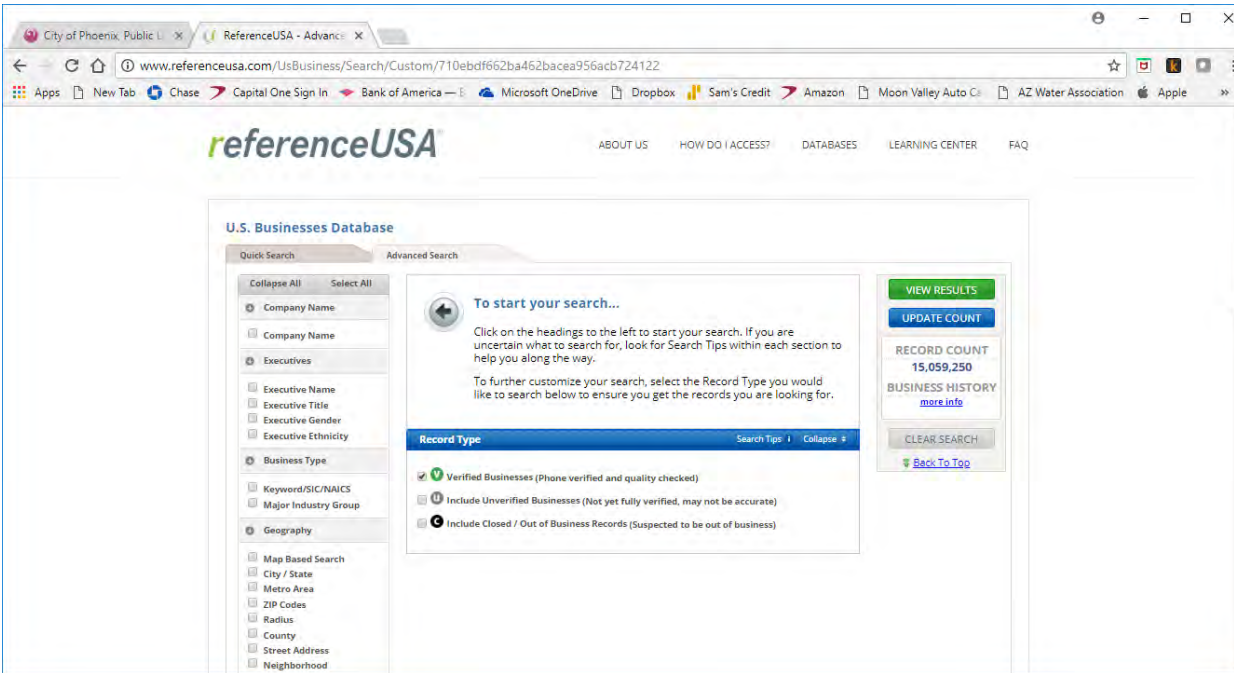
Reference USA allows individuals to access their products by registering. Select “Register” to create your own account. Scroll down to the bottom of the page depicted below.



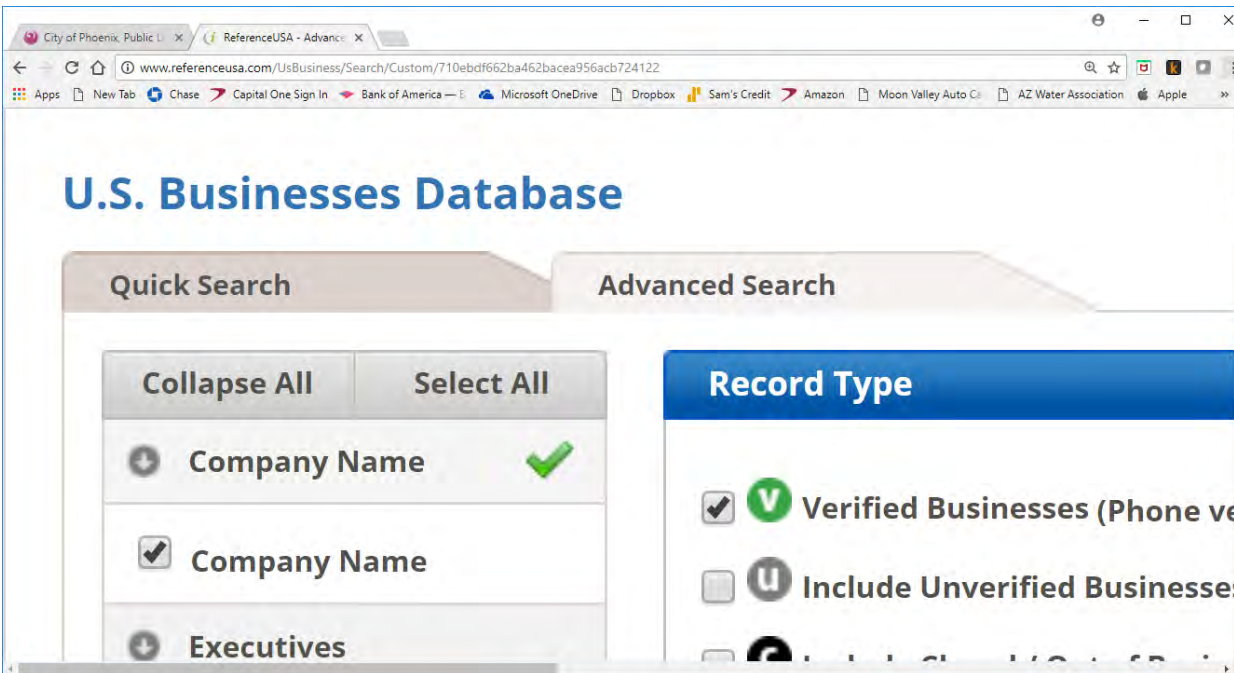
Select “Register” and follow the instructions provided.



Select "Advanced Search" NOT COMPLETED OR EDITED



The initial search provided the basic company information. More detailed information is available which has been phone verified by Reference USA. Searching by SIC and NAICS codes are possible. Note - You should select "Verified Businesses" initially.



Select the following from the left hand side of the screen

There are multiple options in the RefUSA search features. Below are the commonly used search strings. It is recommended that searched be kept as simple as possible. With initial data in hand you can then drill down by selecting the specific company under "Company Name heading" or is looking for a specific EPA category enter the associated SIC or NAICS ID.

Other options (not inclusive of list)

"Business Type" select Keyword/SIC/NAICS identifier,

"Geography" select City/State, and/or Street Address,

"Phone" select Business Phone, Area Code

"Business Size" select Number of Employees

"Special Select" select Web Address

Each category selected will result in a search box being opened. Enter information known that is specific to the iU or leave the search boxes blank. If data is located it will be presented in the data search results.

Once entered please select "Go"



CITY OF BUCKEYE
WATER RESOURCES DEPARTMENT
ENVIRONMENTAL COMPLIANCE

«IU_Name»
«SiteAddr1»
«SiteCity», «SiteState» «SiteZip»

Subject: Completion of Industrial User Survey

Dear Buckeye Water Resources Customer:

The city of Buckeye is required by the Arizona Department of Environmental Quality (ADEQ) to implement a citywide pretreatment program to protect our personnel and wastewater collection and treatment infrastructure. As part of this requirement, we are currently collecting information on the wastewater discharged by our non-residential customers, through an "Industrial User Survey".

This survey will allow us to collect required and detailed information from all non-residential customers, (not just what most people consider "industry"). The Water Resources Department will use this information to properly administer a wastewater discharge permit program after it is approved by ADEQ.

The information obtained from the survey will help us identify discharges into the wastewater system that may pose a problem to the publicly owned treatment works (POTW), which is comprised of the collection system and the wastewater treatment plants. Buckeye is responsible for collecting and maintaining non-domestic user information, and will continuously update the data by conducting surveys and performing onsite inspections of the users as authorized by Section 16-14 of the Buckeye City Code.

The attached survey form will be completed together by a representative of the city and a member of your staff. During the on-site survey we will look for things such as chemical use and storage, determine if water is used to produce or manufacture items and if a discharge to the sewer is occurring. If you already know that your current or future wastewater discharge may require a wastewater discharge permit, please contact the Buckeye's Environmental Compliance Officer, Ashley Pennell, at 623-349-6115 to obtain a discharge application.

All responses are considered "Public Information" and are subject to the Freedom of Information act and Section 16-15 of the Buckeye City Code. Claims of confidentiality must be made at the time the information is provided to the city. Information of pollutants in the effluent discharged to the POTW, by law, is public information.

An employee of the city will conduct the survey at your business anywhere between December 3rd through December 14th. If you have any questions call me at 623-349-6115 or contact me by email at apennell@buckeyeaz.gov.

Sincerely,

Ashley Pennell
Environmental Compliance Officer

City of Buckeye
Water Resources Department
Environmental Compliance
Pretreatment Notice of Inspection Rights

Instructions to the inspector upon arrival for survey and/or inspection:

1. Present photo identification.
2. State purpose and legal authority for conducting survey and/or inspection. Buckeye City Code Section 16-14-1 authorizes right of entry for the purpose of determining compliance with Chapter 16.
3. Invite the facility representative to accompany you on the inspection unless it is for the purposes of a confidential interview.
4. Obtain the signature of the facility representative on the bottom of this form. If they refuse to initial or sign or are not present, note that below the signature line. **A lawful inspection may proceed if signature is refused or if there is no facility representative on site.**
5. Both the representative and inspector must initial the bottom of this side of the form.
6. During the inspection: (1) if you record any conversation, inform the person being recorded of that fact; (2) inform anyone you interview that their statements may be included in the inspection report and (3) when photo documentation is necessary state what is being photographed and ask for acknowledgement.

.....
To the facility representative:

I, the undersigned, have read and understand the following rights as they relate to the inspection:

1. I have the right to be presented with photo identification by the inspector.
2. I have the right to be informed of the purpose of the inspection and the legal authority for the inspection.
3. I have the right to know of any inspection fees. There is no fee for this inspection.
4. I have the right to accompany the inspector during the inspection, unless the inspection is for the purposes of a confidential interview.
5. I have the right to obtain copies of any original documents taken from the premises during the inspection.
6. I have the right to obtain a split or duplicate of any samples taken during the inspection if the split or duplicate of any samples, where appropriate, would not prohibit an analysis from being conducted or render an analysis inconclusive.
7. I have the right to obtain copies of any analysis performed on samples taken during the inspection.
8. I have the right to be informed if any conversation with the inspector is recorded.
9. I have the right to be informed that each person interviewed during the inspection shall be notified that statements made by the person may be included in the inspection report.

I understand that if any final decision is made by Buckeye as a result of this inspection, I will have appeal rights. I also understand that questions about this inspection and any appeal rights may be directed to the Water Resources Environmental Compliance Officer's Supervisor at (623) 349-6103.

By signing this form, I acknowledge that I have read this document and have been notified of my inspection and due process rights. Note: If you decline to sign this form, a lawful inspection of the premises may proceed.

Notice of Inspection Rights	
I acknowledge I have read this form and have been informed of my inspection rights.	
Signatures	
Facility Representative	City of Buckeye Representative
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Date: _____	Date: _____

I opt to obtain a copy of this Notice by:

photocopying this completed form

having this form e-mailed to me at: _____ **Date:** _____



Non-Domestic User Survey

City of Buckeye

Water Resources Department

21749 W Yuma Rd Ste 107, Buckeye, AZ 85326

Phone 623-349-6115

NAIC Code:

Business Type:

Meter ID:

Potable BF:

Fire Line BF:

PVB DC RP
DC RP

Business Name:

Address:

Contact Name:

Website URL:

Date: Time:

Phone No.:

Email:

Business Information

Type of Business:

NAICS Code(s):

Number of Employees: Days of Operation: Hours of Operation:

Describe water use, processes, and any associated discharge to the sanitary sewer:

Confirmation of Sewer Service Connection

The facility does have sewer service? Yes No If Yes, indicate how connection was confirmed.
 ___ Permit Inspection ___ Photos Available ___ GIS Data ___ Witnessed tap being made ___ Dye Testing

Chemicals and Hazardous Waste

Are there any chemicals on site?	Yes	No	Are all containers properly labeled?	Yes	No
Are all containers properly stored?	Yes	No	Are floors drains located in the storage area?	Yes	No
Can spills reach the sewer?	Yes	No	Can spills reach the environment?	Yes	No

Describe location of storage area:

Does the facility generate hazardous waste? Yes No If yes, select generator size: CESQ SQG LQG
 Are manifests available for review? Yes No EPA Hazardous Waste Generator ID:

If waste is being generated and manifests are not available for review inform user to visit <http://www.azdeg.gov/EPAID> to obtain access to their account with ADEQ.

Other Information

Quantity of floor drains and locations:

Does the facility discharge any process, rinse, or wash down/wash out water to the sanitary sewer? Yes No

Describe any form of pretreatment in place at time of survey:

Does the facility discharge anything to the environment which has potential to enter the MS4? Yes No

Is follow-up required? Yes No If yes, check the appropriate reason below:

- Research and/or review processes employed for clarification
- Complete Secondary Survey Form
- Stormwater Quality Program¹
- Consult with other City Departments
- Provide Application/Questionnaire packet
- Other: _____

Anticipated follow-up date: _____

¹ If checked – notify and send copy of this form to the Stormwater Quality Program.

IU Name	SiteAddr1	SiteCity	SiteState	SiteZip
River Ridge Veterinary Hosp	10300 S Miller Rd	Buckeye	AZ	85326
South Buckeye Equestrian Evnts	10300 S Miller Rd	Buckeye	AZ	85326
Wild West Cowboy Steakhouse	104 E Monroe Ave	Buckeye	AZ	85326
Coinstar	1060 S Watson Rd	Buckeye	AZ	85326
Desert Schools Federal Cu	1060 S Watson Rd	Buckeye	AZ	85326
Kaminski, Michael S OD	1060 S Watson Rd	Buckeye	AZ	85326
Linn III, Elias	1060 S Watson Rd	Buckeye	AZ	85326
Mc Donald's	1060 S Watson Rd	Buckeye	AZ	85326
Regal Nails	1060 S Watson Rd	Buckeye	AZ	85326
Smartstyle	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Bakery	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Garden Ctr	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Grocery Pickup	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Pharmacy	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Photo Printing	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Supercenter	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Tires & Auto Parts	1060 S Watson Rd	Buckeye	AZ	85326
Walmart Vision & Glasses	1060 S Watson Rd	Buckeye	AZ	85326
Panda Express	1100 S Watson Rd	Buckeye	AZ	85326
Arizona Children's Assn	111 E Monroe Ave	Buckeye	AZ	85326
Broadbant Leavitt Bldg	111 E Monroe Ave	Buckeye	AZ	85326
Jeremy Dudleston-State Farm	111 E Monroe Ave	Buckeye	AZ	85326
Powers, Charlene A Agt	111 E Monroe Ave	Buckeye	AZ	85326
Powers-Leavitt Insurance Agcy	111 E Monroe Ave	Buckeye	AZ	85326
Re/Max Assured	111 E Monroe Ave	Buckeye	AZ	85326
State Farm Insurance	111 E Monroe Ave	Buckeye	AZ	85326
Brakes Plus	1116 S Watson Rd	Buckeye	AZ	85326
BMO Harris Bank	1160 S Watson Rd	Buckeye	AZ	85326
Taco Bell	1164 S Watson Rd	Buckeye	AZ	85326
Chase Bank	1240 S Watson Rd	Buckeye	AZ	85326
Aaron's	1260 S Watson Rd	Buckeye	AZ	85326
Anytime Fitness	1280 S Watson Rd	Buckeye	AZ	85326
Gonzalez, Ulises	1300 S Watson	Buckeye	AZ	85326
Grace Fellowship Academy	1300 S Watson	Buckeye	AZ	85326
Grace Fellowship Preschool	1300 S Watson	Buckeye	AZ	85326
Fry's Food Store	1300 S Watson	Buckeye	AZ	85326
Fry's Food Store	1300 S Watson	Buckeye	AZ	85326
CARBAS PROPERTIES	1300 S Watson	Buckeye	AZ	85326
Allied Couriers	1300 S Watson Rd	Buckeye	AZ	85326
Allied Legal Servers	1300 S Watson Rd	Buckeye	AZ	85326
Angels Nails	1300 S Watson Rd	Buckeye	AZ	85326
Arizona's Choice Chiropractic	1300 S Watson Rd	Buckeye	AZ	85326
Azbugz LLC	1300 S Watson Rd	Buckeye	AZ	85326
Banet, Diane M	1300 S Watson Rd	Buckeye	AZ	85326
Booty's Wings Burgers & Beer	1300 S Watson Rd	Buckeye	AZ	85326
Buckeye Family Dentistry	1300 S Watson Rd	Buckeye	AZ	85326
C & R Construction Svc	1300 S Watson Rd	Buckeye	AZ	85326
Caribbean Pools & Spas	1300 S Watson Rd	Buckeye	AZ	85326
Club Tan	1300 S Watson Rd	Buckeye	AZ	85326
Coinstar	1300 S Watson Rd	Buckeye	AZ	85326
Contempo Furniture & Design	1300 S Watson Rd	Buckeye	AZ	85326

Desert Hills Baptist Church	1300 S Watson Rd	Buckeye	AZ	85326
Eco ATM/Gazelle	1300 S Watson Rd	Buckeye	AZ	85326
Family Dentistry	1300 S Watson Rd	Buckeye	AZ	85326
Family Dentistry	1300 S Watson Rd	Buckeye	AZ	85326
First Care	1300 S Watson Rd	Buckeye	AZ	85326
Fry's Food Store	1300 S Watson Rd	Buckeye	AZ	85326
Geek It School	1300 S Watson Rd	Buckeye	AZ	85326
Integrated Medical Svc	1300 S Watson Rd	Buckeye	AZ	85326
Integrated Medical Svc	1300 S Watson Rd	Buckeye	AZ	85326
J&D Logistics Inc	1300 S Watson Rd	Buckeye	AZ	85326
Johnson, Kenra E Np	1300 S Watson Rd	Buckeye	AZ	85326
Little Clinic	1300 S Watson Rd	Buckeye	AZ	85326
Penrod, Jason	1300 S Watson Rd	Buckeye	AZ	85326
Pizza Hut	1300 S Watson Rd	Buckeye	AZ	85326
Postnet	1300 S Watson Rd	Buckeye	AZ	85326
Proforce LLC	1300 S Watson Rd	Buckeye	AZ	85326
Starbucks	1300 S Watson Rd	Buckeye	AZ	85326
US Bank	1300 S Watson Rd	Buckeye	AZ	85326
Us Bank Atm	1300 S Watson Rd	Buckeye	AZ	85326
Yi Kyong, Steve DDS	1300 S Watson Rd	Buckeye	AZ	85326
Jack In The Box	1460 S Watson Rd	Buckeye	AZ	85326
H&R Block	1480 S Watson Rd	Buckeye	AZ	85326
Lee's Blackbelt Academy	1480 S Watson Rd	Buckeye	AZ	85326
North Buckeye Animal Hosp Plc	1480 S Watson Rd	Buckeye	AZ	85326
Allstate Insurance Agent	1510 S Watson	Buckeye	AZ	85326
Cricket Wireless Auth Retailer	1510 S Watson	Buckeye	AZ	85326
Gecko Communications II	1510 S Watson Rd	Buckeye	AZ	85326
Great Clips	1510 S Watson Rd	Buckeye	AZ	85326
SUBWAY	1510 S Watson Rd	Buckeye	AZ	85326
Firestone Complete Auto Care	1520 S Watson	Buckeye	AZ	85326
Fresh Donuts	1520 S Watson Rd	Buckeye	AZ	85326
Musical Chairs Salon	19491 N Canyon Springs Blvd	Buckeye	AZ	85396
Salon One Eleven	19491 N Canyon Springs Blvd	Buckeye	AZ	85396
Pizza Factory	21699 W Yuma	Buckeye	AZ	85326
Murco Wall Products Inc	228 E Arizona Eastern Ave	Buckeye	AZ	85326
Jones Ford Buckeye	24600 W Yuma	Buckeye	AZ	85326
Hamiltons Towing	25212 W Edison Rd	Buckeye	AZ	85326
Roger's Gulf Towing & Repair	25212 W Edison Rd	Buckeye	AZ	85326
Del WEBB Homes	26415 W Desert Vista Blvd	Buckeye	AZ	85396
Sun City Festival By Del WEBB	26415 W Desert Vista Blvd	Buckeye	AZ	85396
Copper Canyon Golf Club	26577 W Desert Vista Blvd	Buckeye	AZ	85396
Choices In Community Housing	303 N 4th St	Buckeye	AZ	85326
Sheep Camp Inc	304 E HWY 85	Buckeye	AZ	85326
Adelante Healthcare Buckeye	306 E Monroe Ave	Buckeye	AZ	85326
Pump Co	327 N 1st	Buckeye	AZ	85326
R & T Drilling & Pump	327 N 1st	Buckeye	AZ	85326
Discount Tire	393 S Watson Rd	Buckeye	AZ	85326
Reinalt-Thomas Corp	393 S Watson Rd	Buckeye	AZ	85326
Garden City Child Devmnt Ctr	406 N 1st	Buckeye	AZ	85326
Absolute Screen Printing	407 E Monroe Ave	Buckeye	AZ	85326
Cafe 25 35 LLC	409 E Monroe Ave	Buckeye	AZ	85326
SUBWAY	410 E HWY 85	Buckeye	AZ	85326

LA Placita Cafe	424 E Monroe Ave	Buckeye	AZ	85326
Twisted Alloy LLC	427 N 1ST	Buckeye	AZ	85326
Native Grill & Wings	457 S Watson Rd	Buckeye	AZ	85326
Federico's Mexican Food	485 S Watson Rd	Buckeye	AZ	85326
Firehouse Subs	485 S Watson Rd	Buckeye	AZ	85326
Key Crafts & Specialties	485 S Watson Rd	Buckeye	AZ	85326
Liberty Tax Svc	485 S Watson Rd	Buckeye	AZ	85326
Third Rock Recycling	485 S Watson Rd	Buckeye	AZ	85326
UPS Store	485 S Watson Rd	Buckeye	AZ	85326
Bealls Outlet	500 S Watson Rd	Buckeye	AZ	85326
Carniceriadurange Inc	502 E Monroe Ave	Buckeye	AZ	85326
Abrazo Buckeye Emergency Ctr	525 S Watson	Buckeye	AZ	85326
Abrazo Buckeye Emergency Ctr	525 S Watson	Buckeye	AZ	85326
Abrazo Medical Group	525 S Watson	Buckeye	AZ	85326
Abrazo Medical Group	525 S Watson	Buckeye	AZ	85326
Circle K	537 S Watson Rd	Buckeye	AZ	85326
Wells Fargo Bank	540 S Watson Rd	Buckeye	AZ	85326
Mc Donald's	587 S Watson Rd	Buckeye	AZ	85326
Arizona Public Svc	600 N Airport Rd	Buckeye	AZ	
Cracker Barrel Old Country Str	606 S Watson Rd	Buckeye	AZ	85326
Super Cigar	608 E Monroe Ave	Buckeye	AZ	85326
Juliobertos Fresh Mexican Food	626 E Monroe Ave	Buckeye	AZ	85326
Carlucci, Erick DDS	675 S Watson Rd	Buckeye	AZ	85326
Dunkin' Donuts	675 S Watson Rd	Buckeye	AZ	85326
Every Kid's Dentist	675 S Watson Rd	Buckeye	AZ	85326
Every Kids Dentist & Orthdntcs	675 S Watson Rd	Buckeye	AZ	85326
Every Kids Dentist & Orthdntcs	675 S Watson Rd	Buckeye	AZ	85326
Little Caesars Pizza	675 S Watson Rd	Buckeye	AZ	85326
Sprint	675 S Watson Rd	Buckeye	AZ	85326
Titi Nails	675 S Watson Rd	Buckeye	AZ	85326
Desert Laundry	705 E Monroe Ave	Buckeye	AZ	85326
Family Dollar Store	709 E Monroe Ave	Buckeye	AZ	85326
Circle K	721 N 195TH	Buckeye	AZ	85326
Bank Of America	733 S Watson Rd	Buckeye	AZ	85326
El Pollo Loco	758 S Watson Rd	Buckeye	AZ	85326
Peter Piper Pizza	764 S Watson Rd	Buckeye	AZ	85326
Easy Money Pawn Second Hand	7707 W HWY 85	Buckeye	AZ	85326
Job Center	7707 W HWY 85	Buckeye	AZ	85326
Labor Systems	7707 W HWY 85	Buckeye	AZ	85326
Argento's Pizza & Wings	805 E Monroe Ave	Buckeye	AZ	85326
Wendy's	816 S Watson Rd	Buckeye	AZ	85326
Connect Wireless	818 S Watson Rd	Buckeye	AZ	85326
Jimmy John's	818 S Watson Rd	Buckeye	AZ	85326
Dollar Tree	860 S Watson Rd	Buckeye	AZ	85326
Fantastic Sams	860 S Watson Rd	Buckeye	AZ	85326
Jeff Caler-State Farm Ins	860 S Watson Rd	Buckeye	AZ	85326
Nationwide VISION	860 S Watson Rd	Buckeye	AZ	85326
Pretty Nails & Spa LLC	860 S Watson Rd	Buckeye	AZ	85326
State Farm Insurance	860 S Watson Rd	Buckeye	AZ	85326
Crooked Putter Rstrnt At	900 S Sundance Pkwy	Buckeye	AZ	85326
Sundance Community Ctr	930 S Sundance Pkwy	Buckeye	AZ	85326
Sundance Golf Club	930 S Sundance Pkwy	Buckeye	AZ	85326

2b Wireless-Buckeye	940 S Watson	Buckeye	AZ	85326
Casa De Yogurt	940 S Watson Rd	Buckeye	AZ	85326
T-Mobile	940 S Watson Rd	Buckeye	AZ	85326
Wingstop	940 S Watson Rd	Buckeye	AZ	85326
Chipotle Mexican Grill	944 S Watson Rd	Buckeye	AZ	85326
Jt Boba House	944 S Watson Rd	Buckeye	AZ	85326
Papa John's Pizza	944 S Watson Rd	Buckeye	AZ	85326
Sport Clips	944 S Watson Rd	Buckeye	AZ	85326
Mattress Firm	980 S Watson Rd	Buckeye	AZ	85326
One Health Urgent Care	980 S Watson Rd	Buckeye	AZ	85326
Ricks, Annette Y Np	980 S Watson Rd	Buckeye	AZ	85326

	Class #	IU Name	SiteAddr1	City	State	Zip
1	0000	River Ridge Veterinary Hosp	10300 S Miller Rd	Buckeye	AZ	85326
2	0000	South Buckeye Equestrian Evnts	10300 S Miller Rd	Buckeye	AZ	85326
3	0000	Helena Agri-Enterprises	26675 W Baseline Rd	Buckeye	AZ	85326
4	0000	QUIKRETE	26807 W Baseline Rd	Buckeye	AZ	85326
5	0000	Parker Fasteners, LLC	26815 W BASELINE RD	Buckeye	AZ	85326
6	0000	Thatcher Company of Arizona	6321 S RAINBOW RD	Buckeye	AZ	85326
7	0000	Wilbur-Ellis Co	6415 S Rainbow Rd	Buckeye	AZ	85326
8	9999	Coinstar	1060 S Watson Rd	Buckeye	AZ	85326
9	9999	Desert Schools Federal Cu	1060 S Watson Rd	Buckeye	AZ	85326
10	9999	Linn III, Elias	1060 S Watson Rd	Buckeye	AZ	85326
11	9999	Regal Nails	1060 S Watson Rd	Buckeye	AZ	85326
12	9999	Walmart Garden Ctr	1060 S Watson Rd	Buckeye	AZ	85326
13	9999	Walmart Grocery Pickup	1060 S Watson Rd	Buckeye	AZ	85326
14	9999	Walmart Pharmacy	1060 S Watson Rd	Buckeye	AZ	85326
15	9999	Walmart Vision & Glasses	1060 S Watson Rd	Buckeye	AZ	85326
16	9999	BMO Harris Bank	1160 S Watson Rd	Buckeye	AZ	85326
17	9999	Chase Bank	1240 S Watson Rd	Buckeye	AZ	85326
18	9999	Aaron's	1260 S Watson Rd	Buckeye	AZ	85326
19	9999	Anytime Fitness	1280 S Watson Rd	Buckeye	AZ	85326
20	9999	CARBAS PROPERTIES	1300 S Watson	Buckeye	AZ	85326
21	9999	Gonzalez, Ulises	1300 S Watson	Buckeye	AZ	85326
22	9999	Grace Fellowship Academy	1300 S Watson	Buckeye	AZ	85326
23	9999	Grace Fellowship Preschool	1300 S Watson	Buckeye	AZ	85326
24	9999	Allied Couriers	1300 S Watson Rd	Buckeye	AZ	85326
25	9999	Allied Legal Servers	1300 S Watson Rd	Buckeye	AZ	85326
26	9999	Angels Nails	1300 S Watson Rd	Buckeye	AZ	85326
27	9999	Arizona's Choice Chiropractic	1300 S Watson Rd	Buckeye	AZ	85326
28	9999	Azbugz LLC	1300 S Watson Rd	Buckeye	AZ	85326
29	9999	C & R Construction Svc	1300 S Watson Rd	Buckeye	AZ	85326
30	9999	Caribbean Pools & Spas	1300 S Watson Rd	Buckeye	AZ	85326
31	9999	Club Tan	1300 S Watson Rd	Buckeye	AZ	85326
32	9999	Coinstar	1300 S Watson Rd	Buckeye	AZ	85326
33	9999	Eco ATM/Gazelle	1300 S Watson Rd	Buckeye	AZ	85326
34	9999	Geek It School	1300 S Watson Rd	Buckeye	AZ	85326
35	9999	J&D Logistics Inc	1300 S Watson Rd	Buckeye	AZ	85326
36	9999	Johnson, Kenra E Np	1300 S Watson Rd	Buckeye	AZ	85326
37	9999	Penrod, Jason	1300 S Watson Rd	Buckeye	AZ	85326
38	9999	Postnet	1300 S Watson Rd	Buckeye	AZ	85326
39	9999	Proforce LLC	1300 S Watson Rd	Buckeye	AZ	85326
40	9999	US Bank	1300 S Watson Rd	Buckeye	AZ	85326
41	9999	Us Bank Atm	1300 S Watson Rd	Buckeye	AZ	85326
42	9999	H&R Block	1480 S Watson Rd	Buckeye	AZ	85326
43	9999	Lee's Blackbelt Academy	1480 S Watson Rd	Buckeye	AZ	85326
44	9999	Allstate Insurance Agent	1510 S Watson	Buckeye	AZ	85326
45	9999	Cricket Wireless Auth Retailer	1510 S Watson	Buckeye	AZ	85326
46	9999	Gecko Communications II	1510 S Watson Rd	Buckeye	AZ	85326
47	9999	Reinalt-Thomas Corp	393 S Watson Rd	Buckeye	AZ	85326
48	9999	Key Crafts & Specialties	485 S Watson Rd	Buckeye	AZ	85326
49	9999	Liberty Tax Svc	485 S Watson Rd	Buckeye	AZ	85326
50	9999	Third Rock Recycling	485 S Watson Rd	Buckeye	AZ	85326
51	9999	UPS Store	485 S Watson Rd	Buckeye	AZ	85326
52	9999	Bealls Outlet	500 S Watson Rd	Buckeye	AZ	85326
53	9999	Wells Fargo Bank	540 S Watson Rd	Buckeye	AZ	85326
54	9999	Sprint	675 S Watson Rd	Buckeye	AZ	85326
55	9999	Titi Nails	675 S Watson Rd	Buckeye	AZ	85326
56	9999	Bank Of America	733 S Watson Rd	Buckeye	AZ	85326
57	9999	Connect Wireless	818 S Watson Rd	Buckeye	AZ	85326
58	9999	Dollar Tree	860 S Watson Rd	Buckeye	AZ	85326
59	9999	Jeff Caler-State Farm Ins	860 S Watson Rd	Buckeye	AZ	85326
60	9999	Nationwide VISION	860 S Watson Rd	Buckeye	AZ	85326
61	9999	Pretty Nails & Spa LLC	860 S Watson Rd	Buckeye	AZ	85326
62	9999	State Farm Insurance	860 S Watson Rd	Buckeye	AZ	85326

	Class #	IU Name	SiteAddr1	City	State	Zip
63	9999	2b Wireless-Buckeye	940 S Watson	Buckeye	AZ	85326
64	9999	T-Mobile	940 S Watson Rd	Buckeye	AZ	85326
65	9999	Choices In Community Housing	303 N 4th St	Buckeye	AZ	85326
66	9999	Garden City Child Devmnt Ctr	406 N 1st	Buckeye	AZ	85326
67	9999	Arizona Children's Assn	111 E Monroe Ave	Buckeye	AZ	85326
68	9999	Broadbant Leavitt Bldg	111 E Monroe Ave	Buckeye	AZ	85326
69	9999	Jeremy Dudleston-State Farm	111 E Monroe Ave	Buckeye	AZ	85326
70	9999	Powers, Charlene A Agt	111 E Monroe Ave	Buckeye	AZ	85326
71	9999	Powers-Leavitt Insurance Agcy	111 E Monroe Ave	Buckeye	AZ	85326
72	9999	Re/Max Assured	111 E Monroe Ave	Buckeye	AZ	85326
73	9999	State Farm Insurance	111 E Monroe Ave	Buckeye	AZ	85326
74	9999	Easy Money Pawn Second Hand	7707 W HWY 85	Buckeye	AZ	85326
75	9999	Job Center	7707 W HWY 85	Buckeye	AZ	85326
76	9999	Labor Systems	7707 W HWY 85	Buckeye	AZ	85326
77	9999	Mattress Firm	980 S Watson Rd	Buckeye	AZ	85326
78	9999	Super Cigar	608 E Monroe Ave	Buckeye	AZ	85326
79	9999	Family Dollar Store	709 E Monroe Ave	Buckeye	AZ	85326
80	9999	Musical Chairs Salon	19491 N Canyon Springs Bl	Buckeye	AZ	85326
81	9999	Salon One Eleven	19491 N Canyon Springs Bl	Buckeye	AZ	85326
82	9999	Hamiltons Towing	25212 W Edison Rd	Buckeye	AZ	85326
83	9999	Roger's Gulf Towing & Repair	25212 W Edison Rd	Buckeye	AZ	85326
84	9999	Del WEBB Homes	26415 W Desert Vista Blvd	Buckeye	AZ	85396
85	9999	Copper Canyon Golf Club	26577 W Desert Vista Blvd	Buckeye	AZ	85396
86	9999	Sundance Community Ctr	930 S Sundance Pkwy	Buckeye	AZ	85326
87	9999	Sundance Golf Club	930 S Sundance Pkwy	Buckeye	AZ	85326
88	9999	Smartstyle	1060 S Watson Rd #(INSID	Buckeye	AZ	85326
89	9999	Great Clips	1510 S Watson Rd #104	Buckeye	AZ	85326
90	9999	Fantastic Sams	860 S Watson Rd #103	Buckeye	AZ	85326
91	9999	Sport Clips	944 S Watson Rd #C-104	Buckeye		85326
92	9999	The Barber on Miller	6213 S MILLER RD #108	Buckeye	AZ	85326
93	9999	Sundance Barbershop, LLC	485 S WATSON RD #104	Buckeye	AZ	85326
94	9999	K & K Barber Shop, LLC	21765 W YUMA RD #104	Buckeye	AZ	85326
95	9999	Arizona Public Svc	600 N Airport Rd	Buckeye	AZ	85326
96	9999	Contempo Furniture & Design	1300 S Watson Rd	Buckeye	AZ	85326
97	9999	Desert Hills Baptist Church	1300 S Watson Rd	Buckeye	AZ	85326
98	9999	Walmart Photo Center	1060 S Watson Rd	Buckeye	AZ	85326
99	AUTO-0001	Walmart Tires & Auto Parts	1060 S Watson Rd	Buckeye	AZ	85326
100	AUTO-0002	Brakes Plus	1116 S Watson Rd	Buckeye	AZ	85326
101	AUTO-0003	Firestone Complete Auto Care	1520 S Watson	Buckeye	AZ	85326
102	AUTO-0004	Jones Ford Buckeye	24600 W Yuma	Buckeye	AZ	85326
103	AUTO-0005	Pump Co	327 N 1st	Buckeye	AZ	85326
104	AUTO-0006	R & T Drilling & Pump	327 N 1st	Buckeye	AZ	85326
105	AUTO-0007	Discount Tire	393 S Watson Rd	Buckeye	AZ	85326
106	AUTO-0008	Don Lalo Auto Repair Tire-Tow	298 E US Highway 85	Buckeye	AZ	85326
107	AUTO-0009	J&G Auto Svc	805 N 1st St	Buckeye	AZ	85326
108	AUTO-0010	Kirks Automotive	105 N 2nd St	Buckeye	AZ	85326
109	AUTO-0011	Sna Tire Shop Auto Repair	112 E Monroe Ave	Buckeye	AZ	85326
110	AUTO-0014	Cherry Motors LLC	325 N 1st St # 3	Buckeye	AZ	85326
111	AUTO-0015	Twisted Alloy LLC	427 N 1st St # B	Buckeye	AZ	85326
112	AUTO-0016	West Valley Tire	824 N 1st St	Buckeye	AZ	85326
113	AUTO-0017	3 Minute Express Car Wash	1075 S WATSON RD	Buckeye	AZ	85326
114	AUTO-0018	Quick Quack Car Wash	23395 W YUMA RD	Buckeye	AZ	85326
115	AUTO-0019	Vans Auto Parts	126 S 4th St	Buckeye	AZ	85326
116	AUTO-0020	Llantera 2 Amigos	213 S 4th St	Buckeye	AZ	85326
117	AUTO-0021	Brake Masters	431 S Watson Rd	Buckeye	AZ	85326
118	AUTO-0022	Turbine Repair Services	401 E JACKSON AVE	Buckeye	AZ	85326
119	DT-0001	Mt. Shawdow Family Dentistry	21765 W Yuma Rd #101	Buckeye	AZ	85326
120	DT-0002	Buckeye Pediatrtric Dentistry	23374 W Yuma Rd #102	Buckeye	AZ	85326
121	DT-0003	Sunwest Dental Ctr	407 N 4th St	Buckeye	AZ	85326
122	DT-0004	Sundance Dental Group	946 S Watson Rd #101	Buckeye	AZ	85326
123	DT-0005	Buckeye Dental Care	306 E Monroe Ave	Buckeye	AZ	85326
124	DT-0006	Family Dentistry	1300 S Watson Rd # 100	Buckeye	AZ	85326

	Class #	IU Name	SiteAddr1	City	State	Zip
125	DT-0007	Mt Shadow Family Dental	21765 W Yuma Rd #101	Buckeye	AZ	85326
126	DT-0008	Buckeye Pediatric Dentistry	23374 W Yuma Rd # 102	Buckeye	AZ	85326
127	DT-0009	Sunwest Dental Ctr	407 N 4th St	Buckeye	AZ	85326
128	DT-0010	Every Kids Dentist & Orthdntcs	675 S Watson Rd # 105	Buckeye	AZ	85326
129	DT-0011	Sundance Dental Group	946 S Watson Rd #101	Buckeye	AZ	85326
130	DT-0012	Buckeye Dental Care	306 E Monroe Ave	Buckeye	AZ	85326
131	DT-0013	Carlucci, Erick DDS	675 S Watson Rd #106	Buckeye	AZ	85326
132	DT-0013	Every Kid's Dentist	675 S Watson Rd #106	Buckeye	AZ	85326
133	DT-0013	Every Kids Dentist & Orthdntcs	675 S Watson Rd #106	Buckeye	AZ	85326
134	DT-0014	Banet, Diane M	1300 S Watson Rd #A-100	Buckeye	AZ	85326
135	DT-0014	Buckeye Family Dentistry	1300 S Watson Rd #A-100	Buckeye	AZ	85326
136	DT-0014	Family Dentistry	1300 S Watson Rd #A-100	Buckeye	AZ	85326
137	DT-0014	Family Dentistry	1300 S Watson Rd #A-100	Buckeye	AZ	85326
138	DT-0014	Yi Kyong, Steve DDS	1300 S Watson Rd #A-100	Buckeye	AZ	85326
139	DT-0015	Palm Valley Pediatric Dntstry	20755 W Mcdowell Rd # 10	Buckeye	AZ	85326
140	DT-0016	Sandstone Oral Maxillofacial	20755 W Mcdowell Rd # 11	Buckeye	AZ	85326
141	DT-0017	De Los Santos, Jose E DDS	26700 S US Highway 85	Buckeye	AZ	85326
142	DT-0018	Dawson, Vanessa L DDS	4120 N 19th Ave	Buckeye	AZ	85326
143	DT-0019	Sundance Dental Group	825 S Watson Rd # 101	Buckeye	AZ	85326
144	DT-0020	Dental Partners, LLC	944 S WATSON RD #106	Buckeye	AZ	85326
145	FOG-0001	Papa John's Pizza	944 S Watson Rd #103	Buckeye	AZ	85326
146	FOG-0002	Wild West Cowboy Steakhouse	104 E Monroe Ave	Buckeye	AZ	85326
147	FOG-0003	Mc Donald's	1060 S Watson Rd #(INSID	Buckeye	AZ	85326
148	FOG-0004	Walmart Supercenter	1060 S Watson Rd	Buckeye	AZ	85326
149	FOG-0005	Panda Express	1100 S Watson Rd	Buckeye	AZ	85326
150	FOG-0006	Taco Bell	1164 S Watson Rd	Buckeye	AZ	85326
151	FOG-0007	Fry's Food Store	1300 S Watson Rd	Buckeye	AZ	85326
152	FOG-0008	Fry's Food Store	1300 S Watson Rd	Buckeye	AZ	85326
153	FOG-0009	Booty's Wings Burgers & Beer	1300 S Watson Rd #109	Buckeye	AZ	85326
154	FOG-0010	Fry's Food Store	1300 S Watson Rd	Buckeye	AZ	85326
155	FOG-0011	Pizza Hut	1300 S Watson Rd #A-103	Buckeye	AZ	85326
156	FOG-0012	Buckeye Elks Lodge #2686	109 N 5TH ST	Buckeye	AZ	85326
157	FOG-0013	Jack In The Box	1460 S Watson Rd	Buckeye	AZ	85326
158	FOG-0014	SUBWAY	1510 S Watson Rd #B106	Buckeye	AZ	85326
159	FOG-0015	Fresh Donuts	1500 S Watson Rd #100	Buckeye	AZ	85396
160	FOG-0016	Pizza Factory	21765 W Yuma #103	Buckeye	AZ	85326
161	FOG-0017	Sun City Festival By Del WEBB	26415 W Desert Vista Blvd	Buckeye	AZ	85326
162	FOG-0018	Sheep Camp Inc	304 E HWY 85	Buckeye	AZ	85326
163	FOG-0019	Cafe 25 35 LLC	409 E Monroe Ave	Buckeye	AZ	85326
164	FOG-0020	SUBWAY	410 E HWY 85 Suite B	Buckeye	AZ	85326
165	FOG-0021	LA Placita Cafe	424 E Monroe Ave	Buckeye	AZ	85326
166	FOG-0022	Tailgaters Sports Grill & IL Primo Pizza &	457 S Watson Rd	Buckeye	AZ	85326
167	FOG-0023	Federico's Mexican Food	485 S Watson Rd #101	Buckeye	AZ	85326
168	FOG-0024	Firehouse Subs	485 S Watson Rd #107	Buckeye	AZ	85326
169	FOG-0025	Carniceriadurange Inc	502 E Monroe Ave	Buckeye	AZ	85326
170	FOG-0026	Circle K	537 S Watson Rd	Buckeye	AZ	85326
171	FOG-0027	Mc Donald's	587 S Watson Rd	Buckeye	AZ	85326
172	FOG-0028	Cracker Barrel Old Country Str	606 S Watson Rd	Buckeye	AZ	85326
173	FOG-0029	Tacos Los Tres Compadres	626 E Monroe Ave	Buckeye	AZ	85326
174	FOG-0030	Dunkin' Donuts	675 S Watson Rd	Buckeye	AZ	85326
175	FOG-0031	Little Caesars Pizza	675 S Watson Rd # 101	Buckeye	AZ	85326
176	FOG-0032	Circle K	721 N 195TH	Buckeye	AZ	85326
177	FOG-0033	El Pollo Loco	758 S Watson Rd	Buckeye	AZ	85326
178	FOG-0034	Peter Piper Pizza	764 S Watson Rd	Buckeye	AZ	85326
179	FOG-0035	Argento's Pizza & Wings	805 E Monroe Ave	Buckeye	AZ	85326
180	FOG-0036	Wendy's	816 S Watson Rd	Buckeye	AZ	85326
181	FOG-0037	Jimmy John's	818 S Watson Rd #101	Buckeye	AZ	85326
182	FOG-0038	Crooked Putter Rstrnt At	900 S Sundance Pkwy	Buckeye	AZ	85326
183	FOG-0039	Wingstop	940 S Watson Rd #104	Buckeye	AZ	85326
184	FOG-0040	Chipotle Mexican Grill	944 S Watson Rd #101	Buckeye	AZ	85326
185	FOG-0041	Jt Boba House	944 S WATSON RD #102	Buckeye	AZ	85326
186	FOG-0042	Walmart Bakery	1060 S Watson Rd	Buckeye	AZ	85326

	Class #	IU Name	SiteAddr1	City	State	Zip
187	FOG-0043	Bueno Sushi, Inc.	940 S WATSON RD #103	Buckeye	AZ	85396
188	FOG-0044	Burger King	1315 S Watson Rd	Buckeye	AZ	85326
189	FOG-0045	Burger King	1552 S Miller Rd	Buckeye	AZ	85326
190	FOG-0046	Carl's Jr	416 S Watson Rd	Buckeye	AZ	85326
191	FOG-0047	Denny's	441 S Watson Rd	Buckeye	AZ	85326
192	FOG-0048	Domino's	6213 S Miller Rd # 102	Buckeye	AZ	85326
193	FOG-0049	Dutch Bros Coffee	1005 S Watson Rd	Buckeye	AZ	85326
194	FOG-0050	Filiberto's Mexican Food	4370 S Miller Rd # 102	Buckeye	AZ	85326
195	FOG-0051	KFC	682 S Watson Rd	Buckeye	AZ	85326
196	FOG-0052	LA Fiesta Market	7707 SW US Highway 85 #	Buckeye	AZ	85326
197	FOG-0053	La Fiesta Restaurant #3	6213 S Miller Rd # 107	Buckeye	AZ	85326
198	FOG-0054	Las Gemelas Mexican Food	105 E Mc 85	Buckeye	AZ	85326
199	FOG-0055	Millstone Cafe	801 E Monroe Ave	Buckeye	AZ	85326
200	FOG-0056	Nana & Tatas Dessert LLC	109 N 4th St	Buckeye	AZ	85326
201	FOG-0057	P T Noodles	940 S Watson Rd #102	Buckeye	AZ	85326
202	FOG-0058	Palermos Pizza	1500 S Watson Rd # 106	Buckeye	AZ	85326
203	FOG-0059	Pizza Hut	1217 E US Highway 85	Buckeye	AZ	85326
204	FOG-0060	Ramiro's Mexican Food	1321 E US Highway 85	Buckeye	AZ	85326
205	FOG-0061	Taqueria Las Monarcas Mexican Food	416 E MONROE AVE	Buckeye	AZ	85326
206	FOG-0062	Cafe Rio, Inc.	1177 S WATSON RD	Buckeye	AZ	85326
207	FOG-0063	Sonic Drive-In	1111 E US Highway 85	Buckeye	AZ	85326
208	FOG-0064	SUBWAY	1610 S Miller Rd	Buckeye	AZ	85396
209	FOG-0065	Baskin-Robbins	485 S Watson Rd #106	Buckeye	AZ	85326
210	FOG-0066	Ranchero's	416 E MONROE AVE	Buckeye	AZ	85326
211	FOG-0067	Molina's Creperie Crepes & Coffee	6213 S MILLER RD #101	Buckeye	AZ	85326
212	FOG-0068	West Valley Processing	1045 E MONROE AVE	Buckeye	AZ	85326
213	FOG-0069	The Butcher & The Farmer Marketplace	224 E MONROE AVE	Buckeye	AZ	85326
214	PT-0001	Abrazo Buckeye Emergency Ctr	525 S Watson Suite 200	Buckeye	AZ	85326
215	PT-0002	Abrazo Buckeye Emergency Ctr	525 S Watson Suite 200	Buckeye	AZ	85326
216	PT-0003	Abrazo Medical Group	525 S Watson Suite 200	Buckeye	AZ	85326
217	PT-0004	Abrazo Medical Group	525 S Watson Suite 200	Buckeye	AZ	85326
218	PT-0005	One Health Urgent Care	980 S Watson Rd Suite 103	Buckeye	AZ	85326
219	PT-0006	Southwest Welding	25148 W US Highway 85	Buckeye	AZ	85326
220	PT-0007	First Care	1300 S Watson Rd #A-104	Buckeye	AZ	85326
221	PT-0007	Integrated Medical Svc	1300 S Watson Rd #A-104	Buckeye	AZ	85326
222	PT-0007	Integrated Medical Svc	1300 S Watson Rd #A-104	Buckeye	AZ	85326
223	PT-0008	Little Clinic	1300 S Watson Rd #(INSID	Buckeye	AZ	85326
224	PT-0009	North Buckeye Animal Hosp Plc	1480 S Watson Rd #102	Buckeye	AZ	85326
225	PT-0010	Adelante Healthcare Buckeye	306 E Monroe Ave	Buckeye	AZ	85326
226	PT-0011	Absolute Screen Printing	25560 W, MC 85	Buckeye	AZ	85326
227	PT-0012	Desert Laundry	705 E Monroe Ave	Buckeye	AZ	85326
228	PT-0015	Buckeye Funeral Home	104 E Baseline Rd	Buckeye	AZ	85326
229	PT-0016	Lapels Dry Cleaning	1510 S Watson Rd # 100	Buckeye	AZ	85326
230	SIU-0001	Cardinal IG Co	6415 S Apache Rd	Buckeye	AZ	85326
231	SIU-0002	Walmart Distribution Center	23701 W Southern Ave	Buckeye	AZ	85326
232	WH-0001	Ducks Septic Pump & Install	826 E Monroe Ave	Buckeye	AZ	85326
233	WH-0002	Love's Travel Stop	1610 S Miller Rd	Buckeye	AZ	85326

«DATE»
«IU_Name»
«SiteAddr1 »
«SiteCity», «SiteState» «SiteZip»

Subject: **DETERMINATION OF INDUSTRIAL USER CLASSIFICATION;
REQUIREMENT TO OBTAIN A WASTEWATER DISCHARGE PERMIT**

Dear Buckeye Water Resources Customer:

The City of Buckeye is required by the Environmental Protection Agency (EPA) and the Arizona Department of Environmental Quality (ADEQ) to develop a Pretreatment Program. The purpose of the Pretreatment Program is to safeguard the Publicly Owned Treatment Works (POTW), the environment, City of Buckeye employees, and local citizens by partnering with the community and businesses to prevent harmful discharges from entering the system.

Based on information gathered during site visits previously conducted by the City at your facility and/or from information provided on forms submitted by the facility, the City has identified your facility as a Significant Industrial User (SIU).

An SIU is defined as:

- An industrial user subject to categorical pretreatment standards.
- An industrial user that:
 - Discharges an average of twenty-five thousand (25,000) gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater).
 - Contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW.
 - Is designated as such by the City on the basis that it has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement.

Pursuant to the Buckeye City Code, Chapter 16, Article 16-11 you must obtain an Individual Wastewater Discharge Permit. Attached to this letter is an information packet. **Please complete and return the application for a permit contained in the packet within 90 calendar days of receiving this notice.**

The information packet contains :

- Chapter 16 of the Buckeye City Code ⁽¹⁾
- Wastewater Discharge Permit Application ⁽¹⁾
- RCRA Information Brochure ⁽¹⁾
- Hazardous Waste Reporting Factsheet ⁽¹⁾

Please review the enclosures and if you have any questions please contact the Buckeye's Environmental Compliance Officer, Ashley Pennell, at 623-349-6115 or by email at apennell@buckeyeaz.gov.

Sincerely,

Ashley Pennell
Environmental Compliance Officer

(1) The legal references in these documents may be amended from time to time and, therefore, it is the responsibility of the User to ensure it is in full compliance with the most current applicable rules and regulations.

	Application Number: _____ Due Date: _____
---	--

Wastewater Discharge Permit Application

Refer to Chapter 16, Article 16-11 of the Buckeye City Code and to applicable 40 CFR 403 regulations.

Type of Permit:

<input type="checkbox"/>	Categorical discharge	<input type="checkbox"/>	Noncategorical – SIU
<input type="checkbox"/>	Categorical no discharge	<input type="checkbox"/>	Non-categorical non SIU
<input type="checkbox"/>	Other/Special discharge		

I. Company Profile

A. Business Name: _____

Property Owner: _____

B. Service Address: _____

C. Billing Address: _____

D. Telephone Number: _____

Facsimile Number: _____

E. Name of Plant Manager: _____

Title: _____ Telephone Number: _____

F. Individual Responsible for Wastewater Disposal: _____

G. Emergency Contact (If different from above):

Title: _____ Telephone No.: _____

H. List any other places and the length of time at each location that this company is currently or has previously been in business, and any current or previous discharge permits.

i. Location:

Time Period:

Discharge Permit Number:

Effective dates (From/to):

ii. Location

Time Period:

Discharge Permit Number:

Effective dates (From/to):

II. Plant Operational Characteristics

A. North American Industry Classification System (NAICS) or Standard Industrial Classification(S.I.C.) Codes as Stated in City of Buckeye, State or Federal Tax Record (primary and secondary):

1. _____ 2. _____ 3. _____ 4. _____

Additional Codes:

B. Brief Description of Process Operations on Premises:

C. Number of Employees: _____ Total

Please indicate breakdown of shifts.

	OFFICE		PRODUCTION (No. of employees per shift)					
			Day Shift		Swing Shift		Grave Shift	
	No.	Hrs.	No.	Hrs.	No.	Hrs.	No.	Hrs.
Monday Friday								
Saturday								
Sunday								

Describe below, if necessary:

D. Is Business Continuous Through the Year? _____ Seasonal? _____

If Seasonal, Circle Months of Operation:

Jan Feb Mar Apr May June July Aug Sept Oct Nov Dec

III. Water Flow

A. Water Source(s):

_____ Public _____ Private Well _____ Other
 _____ Metered _____ Unmetered _____ Multi-tenant

B. Water Account Numbers (Refer to utility billing for account number.)

1) _____ 5) _____
 2) _____ 6) _____
 3) _____ 7) _____

C. Daily Water usage (all sources):

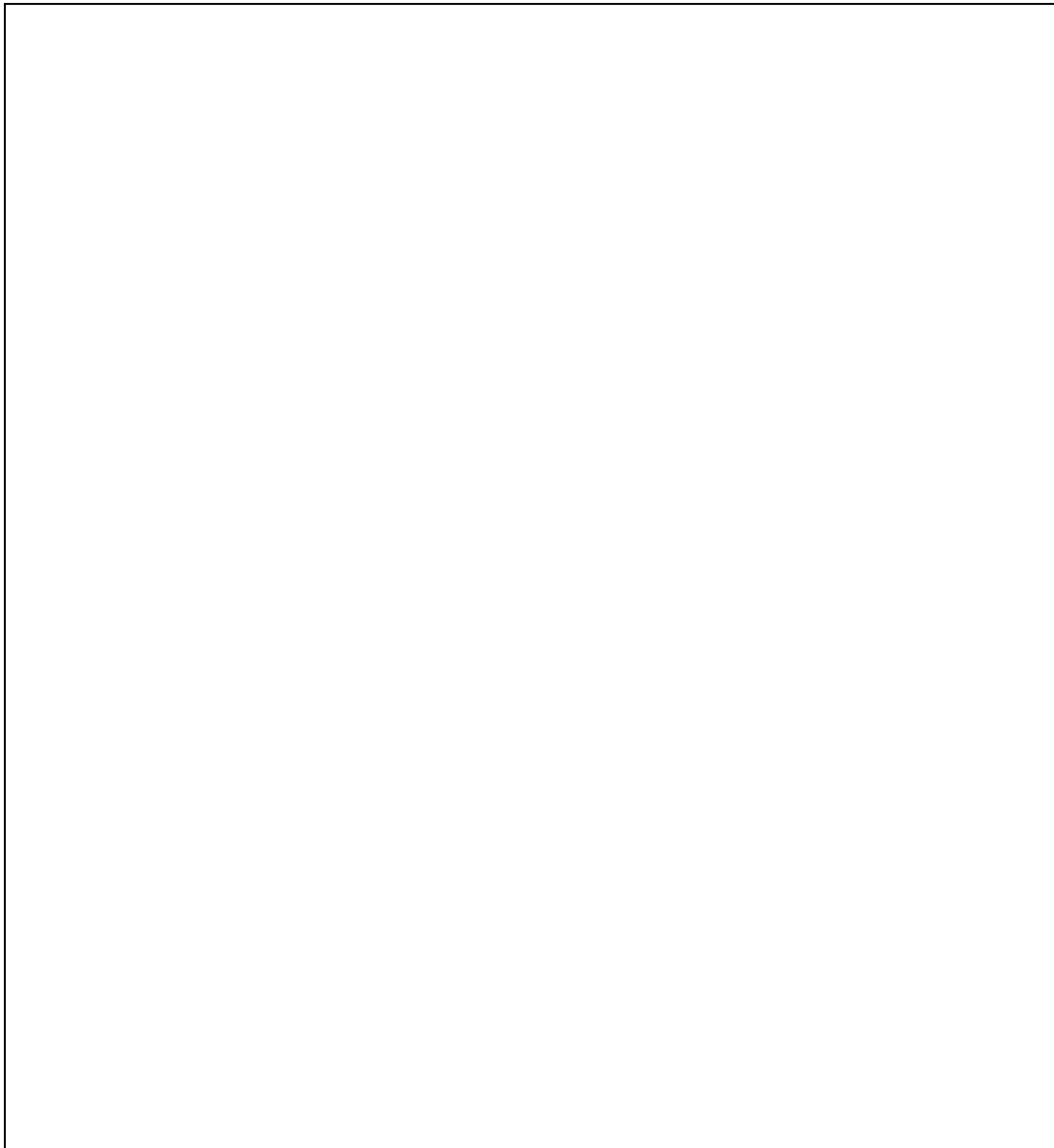
Maximum _____ gal. Time of Day _____ Minimum _____ gal. Average _____ gal.

IV. Wastewater Discharge Point Sources

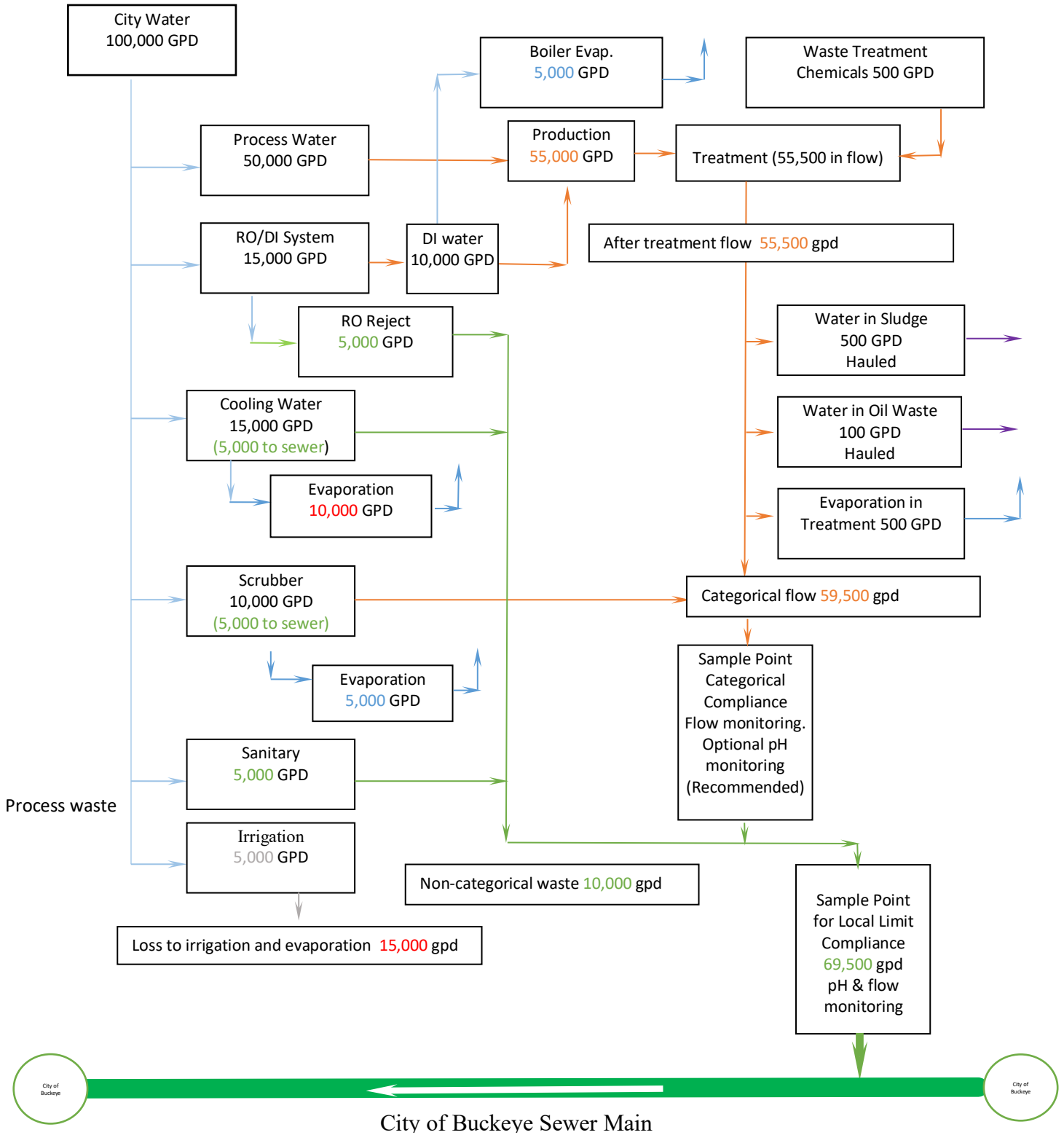
A. Process Diagram and Building Layouts:

For each major process in which wastewater is generated, diagram the flow of materials and water from start to completed product, showing all unit processes generating wastewater and estimated volumes (gals/day) from each process. Number each unit process having discharges to community sewers. Use the resultant numbers when completing the Facility Layout. **Attach as many sheets as necessary.**

SEE EXAMPLE ON NEXT PAGE.



EXAMPLE OF PROCESS FLOW DIAGRAM



B. Show or describe the location of all wastewater flow meters - include model number, manufacturer, serial number and last calibration date:

C. Show or describe the location of all wastewater control manholes or available sampling points

D. List Average Volume of Discharge or Water Loss Per Day:

WATER USED FOR:	%	GPD	MEASUREMENTS DETERMINED BY:
Process Industrial Waste			
Sanitary Domestic Waste			
Waste Hauler			
Evaporation			
Contained in Material			
Contained in Product			
Cooling Water			
Scrubber Water From Air Pollution Control			
Boiler Feed			
Other:			

V. Pretreatment Facilities (Plans and locations must be submitted)

(Attach added sheets if necessary)

A. Volume of Grease Trap: **Current:** _____ gals/lbs. **Proposed:** _____ gals/lbs.

B. Number and Volume of Settling Tanks: # _____ _____ gals

C. Pretreatment Systems (Check appropriate boxes):

TYPE OF SYSTEM	EXISTING	PROPOSED
Clarifier		
Screen		
Filter		
Centrifuge		
Ion Exchange		
Grit Removal		
Grease/Oil Removal		
Chemical Treatment		
Biological Treatment		
pH Correction		
Solvent Separation		
Spill Protection		
Rainwater Diversion		
Evaporation		
Air Flotation		
Flow Equalization		
Export or Hauling (Specify disposal location)		
Silver Recovery Unit		
Solvent Still		
Cyanide Destruction		
Other		

D. Is there a spill prevention control and counter-measure plan (SPCC) in effect and on file with the City of Buckeye Water Resources Department for this facility?

Yes _____ No _____

Date of last update to the City _____

E. Have you upgraded the pretreatment facility during this period?

Yes _____ No _____

If you have marked yes, list what was added and give approximate cost figure.
(Add extra sheets, if necessary.)

F. Does this facility have underground tanks?

Yes _____ No _____

If so, complete the following information. (Write empty if tank is empty.)

TANK #	SIZE	MATERIAL STORED

VI. Priority Pollutants						
Chemical	Final Disposition (Estimated)					
	#1 Lbs./Gal. on Site	#2 Amount Used/Day	#3 Percent in Product	#4 Percent to Sewer	#5 Percent to Evap.	#6 Percent to Waste Hauler

1) Acenaphthene						
2) Acrolein						
3) Acrylonitrile						
4) Benzene						
5) Benzidine						
6) Carbon tetrachloride						
7) Chlorobenzene						
8) 1,2,4-trichlorobenzene						
9) Hexachlorobenzene						
10) 1,2-dichloroethane						
11) 1,1,1-trichloroethane						
12) Hexachloroethane						
13) 1,1-dichloroethane						
14) 1,1,2-trichloroethane						
15) 1,1,2,2-tetrachloroethane						
16) Chloroethane						
17) (Removed)						
18) Bis(2-chloroethyl) ether						
19) 2-chloroethyl vinyl ethers						
20) 2-chloronaphthalene						
21) 2,4,6-trichlorophenol						
22) Parachlorometa cresol						
23) Chloroform						
24) 2-chlorophenol						
25) 1,2-dichlorobenzene						
26) 1,3-dichlorobenzene						
27) 1,4-dichlorobenzene						
28) 3,3-dichlorobenzidine						

VI. Priority Pollutants						
Chemical	Final Disposition (Estimated)					
	#1 Lbs./Gal. on Site	#2 Amount Used/Day	#3 Percent in Product	#4 Percent to Sewer	#5 Percent to Evap.	#6 Percent to Waste Hauler
29) 1,1-dichloroethylene						
30) 1,2-trans-dichloroethylene						
31) 2,4-dichlorophenol						
32) 1,2-dichloropropane						
33) 1,3-dichloropropylene						
34) 2,4-dimethylphenol						
35) 2,4-dinitrotoluene						
36) 2,6-dinitrotoluene						
37) 1,2-diphenylhydrazine						
38) Ethylbenzene						
39) Fluoranthene						
40) 4-chlorophenyl phenyl ether						
41) 4-bromophenyl phenyl ether						
42) Bis(2-chloroisopropyl) ether						
43) Bis(2-chloroethoxy) methane						
44) Methylene chloride						
45) Methyl chloride						
46) Methyl bromide						
47) Bromoform						
48) Dichlorobromomethane						
49) (Removed)						
50) (Removed)						
51) Chlorodibromomethane						
52) Hexachlorobutadiene						
53) Hexachlorocyclopentadiene						
54) Isophorone						
55) Naphthalene						
56) Nitrobenzene						

VI. Priority Pollutants						
Chemical	Final Disposition (Estimated)					
	#1 Lbs./Gal. on Site	#2 Amount Used/Day	#3 Percent in Product	#4 Percent to Sewer	#5 Percent to Evap.	#6 Percent to Waste Hauler
57) 2-nitrophenol						
58) 4-nitrophenol						
59) 2,4-dinitrophenol						
60) 4,6-dinitro-o-cresol						
61) N-nitrosodimethylamine						
62) N-nitrosodiphenylamine						
63) N-nitrosodi-n-propylamine						
64) Pentachlorophenol						
65) Phenol						
66) Bis(2-ethylhexyl) phthalate						
67) Butyl benzyl phthalate						
68) Di-N-Butyl Phthalate						
69) Di-n-octyl phthalate						
70) Diethyl Phthalate						
71) Dimethyl phthalate						
72) Benzo(a) anthracene						
73) Benzo(a) pyrene						
74) Benzo(b) fluoranthene						
75) Benzo(k) fluoranthene						
76) Chrysene						
77) Acenaphthylene						
78) Anthracene						
79) Benzo(ghi) perylene						
80) Fluorene						
81) Phenanthrene						
82) Dibenzo(h) anthracene						
83) Indeno (1,2,3-cd) pyrene						
84) Pyrene						

VI. Priority Pollutants						
Chemical	Final Disposition (Estimated)					
	#1 Lbs./Gal. on Site	#2 Amount Used/Day	#3 Percent in Product	#4 Percent to Sewer	#5 Percent to Evap.	#6 Percent to Waste Hauler

85) Tetrachloroethylene						
86) Toluene						
87) Trichloroethylene						
88) Vinyl chloride						
89) Aldrin						
90) Dieldrin						
91) Chlordane						
92) 4,4-DDT						
93) 4,4-DDE						
94) 4,4-DDD						
95) Alpha-endosulfan						
96) Beta-endosulfan						
97) Endosulfan sulfate						
98) Endrin						
99) Endrin aldehyde						
100) Heptachlor						
101) Heptachlor epoxide						
102) Alpha-BHC						
103) Beta-BHC						
104) Gamma-BHC						
105) Delta-BHC						
106) PCB-1242 (Arochlor 1242)						
107) PCB-1254 (Arochlor 1254)						
108) PCB-1221 (Arochlor 1221)						
109) PCB-1232 (Arochlor 1232)						
110) PCB-1248 (Arochlor 1248)						
111) PCB-1260 (Arochlor 1260)						
112) PCB-1016 (Arochlor 1016)						
113) Toxaphene						

VI. Priority Pollutants						
Chemical	Final Disposition (Estimated)					
	#1 Lbs./Gal. on Site	#2 Amount Used/Day	#3 Percent in Product	#4 Percent to Sewer	#5 Percent to Evap.	#6 Percent to Waste Hauler
114) Antimony						
115) Arsenic						
116) Asbestos						
117) Beryllium						
118) Cadmium						
119) Chromium						
120) Copper						
121) Cyanide, Total						
122) Lead						
123) Mercury						
124) Nickel						
125) Selenium						
126) Silver						
127) Thallium						
128) Zinc						
129) 2,3,7,8-TCDD						
The current list of 126 Priority Pollutants can also be found at 40 CFR Part 423, Appendix A. Chemical 17, 49, and 50 have been removed.						

VI. (Continued)

- B. List other chemicals used in the manufacturing process or other processes that may be or have potential to be discharged to the sewer that do not appear in VI. A. above. Please use extra paper if necessary. For common names or manufacturer names, supply MSDS.

Chemical	Chemicals on Site #/Gal.	Amount Used /Day	Final Disposition (Estimates)				
			% in Product	% to Sewer	% to Storm Sewer	% to Waste Hauler	% to Evaporative

- C. List any environmental permits which have been issued to you by other agencies, i.e., Air Quality, ADEQ, Fire Department, or other agencies.

PERMIT TYPE/AGENCY NAME	PERMIT NUMBER	EXPIRATION DATE

D. Does your facility generate hazardous wastes?

_____ Yes _____ No

If yes, please provide the following information:

1. Generator's EPA ID Number: _____

2. Transporter 1 Company Name: _____

Phone: _____ US EPA ID Number: _____

State Transporter's ID: _____

Transporter 2 Company Name: _____

Phone: _____ US EPA ID Number: _____

State Transporter's ID: _____

Transporter 3 Company Name: _____

Phone: _____ US EPA ID Number: _____

State Transporter's ID: _____

Transporter 4 Company Name: _____

Phone: _____ US EPA ID Number: _____

State Transporter's ID: _____

E. Does your facility treat hazardous waste?

_____ Yes _____ No

F. If you answered yes above complete the Waste Generated Form.

TYPE OF WASTE GENERATED (Hazard Class) List by RCRA Code; i.e., F006, D001, etc.	VOLUME/YEAR
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

* Specify volume in the appropriate units of measure

G = Gallons

P = Pounds

T = Tons (2,000 lbs.)

L = Liters

K = Kilograms

M = Metric Tons (1,000 kg)

N = Cubic Meters

G. Does this facility have a Waste Minimization/Pollution Prevention Plan in place?

_____ Yes _____ No _____ N/A

_____ In progress _____ Need more information

H. Does this facility have a Water Conservation Plan in place?

_____ Yes _____ No _____ N/A
_____ In progress _____ Need more information

VII. If sampling results indicate noncompliance, complete a schedule showing what steps will be taken to achieve compliance, including dates of commencement and date of completion for each step.

VIII. Certification by Company Official

A. This report must be signed by:

1. a responsible corporate officer, if the user is a corporation. A corporate officer shall be a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship.
3. a duly authorized representative of the individual if:
 - A. the authorization is made in writing by the individual described in #1 or #2 above;
 - B. the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the discharge originates, such as the position of plant manager or equivalent position having overall responsibility for environmental matters for the company, and that
 - C. the written authorization is submitted to the City of Buckeye Water Resources Department.

- B. If an authorization under paragraph 1, 2 or 3 is no longer accurate, a new authorization satisfying the above must be submitted to the City prior to or together with any signed reports.

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

Name: _____

Signature: _____

Title: _____

Phone: _____

Date: _____

CITY OF BUCKEYE WATER RESOURCES DEPARTMENT

Total Toxic Organic Response Form

Name of Facility: _____

Facility Address: _____

Contact Person: _____

Contact Title: _____ Contact Phone No.: _____

Please check the appropriate line below:

___ No toxic organic compounds as listed in Appendix A are used or stored at this facility.

___ I elect to have this facility monitored for Total Toxic Organics (TTO's). I understand the potential exists that this facility could be required to assume all or part of the cost of sampling and laboratory fees for the implementation of this program. TTO monitoring shall be done on an annual basis.

___ This facility elects to submit the attached Solvent Management Plan in lieu of the required TTO monitoring. I understand that this Plan must be recertified every six months on our Periodic Compliance Report.

_____ Date

_____ Signature of Responsible Company Official

_____ Printed Name of Above Official

_____ Title of Above Official

Please submit this report to:

City of Buckeye Water Resources Department
Attention: Pretreatment Officer
423 Arizona Eastern Avenue
Buckeye, Arizona 85326

CITY OF BUCKEYE WATER RESOURCES DEPARTMENT

Solvent Management Plan Form

Please submit one form page for each product you use or store at your facility containing a toxic organic compound from Appendix A.

1. Name of Product: _____

2. Appendix A constituent(s): _____

3. Indicate your usage for product: _____

- | | | |
|---|-----------------------------------|-------------------------------------|
| <input type="checkbox"/> degreasing | <input type="checkbox"/> coolant | <input type="checkbox"/> metal etch |
| <input type="checkbox"/> paint stripping | <input type="checkbox"/> catalyst | <input type="checkbox"/> metal prep |
| <input type="checkbox"/> biocide | <input type="checkbox"/> flux | <input type="checkbox"/> fuel |
| <input type="checkbox"/> other (describe) | | |

4. Indicate procedure(s) for spent solvents:

- solvent recycled on-site
 still used as fuel
 chemical extraction other (describe) _____
 physical extraction

solvent shipped off-site
 recycler (name of company): _____

waste disposal (name of company): _____

solvent lost or destroyed _____

evaporation incinerated destroyed in usage

oxidized to non-toxic (describe method): _____

other (describe): _____

5. Describe procedures for assuring toxic organics do not enter sewer systems: Evidence for Parts 4 and 5 will be asked to be presented during the City's inspection of your facility.

CITY OF BUCKEYE WATER RESOURCES DEPARTMENT

Toxic Organic Management Certification

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for Total Toxic Organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last Periodic Compliance Report (Semiannual Report). I further certify that this facility is implementing the Solvent Management Plan as described in our Plan.

_____ Date

_____ Signature of Responsible Official

_____ Printed Name of Above Official

_____ Title of Above Official

_____ Name of Facility

Please attach this to your report or submit separately to:

City of Buckeye Water Resources Department
Attention: Environmental Compliance Officer - Pretreatment
423 Arizona Eastern Avenue
Buckeye, Arizona 85326

APPENDIX A

The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than .01 milligrams per liter for the following toxic organics:

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobenzene
1,2,-Dichloroethane
1,1,1-Trichloroethane
Hexachloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-Chloroethyl vinyl ether (mixed)
2-Chloronaphthalene
2,4,6-Trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-Chlorophenol
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
1,1-Dichloroethylene
1,2-Trans-dichloroethylene
2,4-Dichlorophenol
1,2-Dichloropropane
1,3-Dichloropropylene (1,3-dichloropropene)
2,4-Dimethylphenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Ethylbenzene

Appendix A - continued:

Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
4,6-Dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
Benzo(a)anthracene
(1,2-Benzanthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-Benzofluoranthene
Benzo(k)fluoranthene
(11,12-Benzofluoranthene)
Chrysene
Acenaphthylene
Anthracene

Appendix A - continued:

Benzo(ghi)perylene (1,12-Benzoperylene)
Fluorene
Phenanthrene
Dibenzo(a,h)anthracene
(1,2,5,6-Dibenzanthracene)
Indeno(1,2,3-cd) pyrene (2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
A-endosulfan-Alpha
B-endosulfan-Beta
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
(PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
2,3,7,8-Tetrachlorodibenzo-p-dioxin
(TCDD)

RCRA INFORMATION BROCHURE⁽¹⁾

This brochure is designed to give you an understanding of the Resource Conservation and Recovery Act (RCRA) and how the Act affects you as an industry that generates or transports “hazardous” wastes. The brochure’s intent is to provide you with basic guidance about applicable RCRA provisions. However, due to the Act’s technical complexity, its staggered deadline for program implementation and compliance, and the potential for your State hazardous waste management program requirements to differ from Federal regulation, questions will undoubtedly arise that require assistance beyond the brochure’s scope. Questions or problems not completely addressed here should be referred to your State solid waste management office or the appropriate EPA Regional office.

Congress enacted the Resource Conservation and Recovery Act in 1976 (and subsequently amended it in 1978, 1980, and 1984) to define a Federal role in solid waste and resource management and recovery. The Act’s primary goals are: (1) to protect human health and the environment from hazardous and other solid wastes; and (2) to protect and preserve natural resources through programs of resource conservation and recovery. Its principal regulatory focus is to control hazardous waste. To this end, RCRA mandates a comprehensive system to identify hazardous wastes and to trace and control their movement from generation through transport, treatment, storage, and ultimate disposal.

Extensive hazardous waste regulations have been promulgated under RCRA’s authority. These regulations are codified under 40 CFR Parts 260, 261, 262, 263, 264, 265, 266, and 270. Specifically, RCRA provisions are focused in the following way:

- Part 260: General
- Part 261: Hazardous waste identification and listing
- Part 262: Hazardous waste generators
- Part 263: Hazardous waste transporters
- Part 264-265: Owners and operators of hazardous waste facilities
- Part 266: Special requirements
- Part 270: Hazardous waste permits.

This brochure briefly outlines 40 CFR Parts 261, 262, and 263.

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HOW TO DETERMINE IF YOUR WASTE IS HAZARDOUS

As part of a comprehensive program to regulate hazardous wastes from “cradle to grave,” Section 3001 of RCRA directs EPA to establish ways to determine what waste materials are considered hazardous for regulatory purposes. The Section 3001 regulations are codified in 40 CFR Part 261. In addition, 40 CFR Part 262 requires solid waste generators to determine whether their wastes are hazardous.

If your business generates any material which is discarded or disposed of, you must determine if that material is a “solid waste,” according to the regulatory definition. In January 1985, EPA proposed its final definition of solid waste. According to this definition, “solid waste” is any material that is abandoned or being disposed of, burned, or incinerated -- or stored, treated, or accumulated before or in lieu of these activities. The term includes essentially all forms of waste (i.e., solids, liquids, semisolids, or contained gaseous substances).

In addition, most recycled material are now considered solid wastes by EPA, depending on both the recycling activity itself and the nature of the recycled material. The following four types of recycling activities are potentially subject to RCRA regulation:

- Uses which actually constitute ultimate disposal (for example, land spreading of wastewater treatment sludges for fertilizer)
- Burning waste or waste fuels for energy recovery or using wastes to produce a fuel
- Reclamation -- regeneration of wastes or the recovery of material from wastes
- Speculative accumulation -- either accumulating wastes that are potentially recyclable but for which no recycling (or no feasible recycling) market exists, or accumulating wastes before recycling unless 75 percent of the accumulated material is recycled during a one-year period.

Five categories of recycled (termed secondary) materials also fall under this solid waste definition:

- Spent material -- materials that have been used and no longer serve the purpose for which they were originally produced without being regenerated, reclaimed, or otherwise reprocessed. Examples include spent solvents and spent acids.
- Sludges -- residues from pollution control processes, such as wastewater treatment sludges and air emission control wastes.
- By-products -- residual materials resulting from industrial, commercial, mining, and agricultural operations that are not primary products, are not produced separately, and are not fit for a desired end use without substantial further processing. Examples are process residues from manufacturing or mining processes, such as distillation, column residues or mining slags.

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- Commercial chemical products -- products listed in 40 CFR Part 261.33 when they are recycled in ways that differ from their normal use.
- Scrap metal -- metal parts discarded after consumer use or that result from metal processing operations. Examples include scrap automobiles and scrap radiators.

Some materials, however, are NOT considered solid wastes under RCRA, including domestic sewage or any mixture of domestic sewage and other wastes that pass through a sewer system to a POTW. Also excluded are wastes regulated under other Federal laws, such as industrial wastewater discharge directly to public waters (which must be properly permitted) and many nuclear or radioactive materials (regulated by the Department of Energy and/or the Nuclear Regulatory Commission).

There are two ways to know if your waste is regulated as a hazardous waste under Federal law:

- If it exhibits one or more of the following four characteristics -- ignitability, corrosivity, reactivity, and toxicity (based on EPA extraction procedures) -- it is considered a characteristic waste under RCRA.
- If it (or any part of it) is listed in 40 CFR 261.31-261.33, it is commonly called a listed waste in RCRA regulations. EPA developed these lists of hazardous wastes based on what was known about specific chemicals and wastestreams. Whether or not a waste is hazardous according to the characteristic wastes criteria, if your firm's waste appears on any of the lists, it is considered a listed hazardous waste. Thus, your firm must comply with the notification requirements of RCRA Section 3010 and with the requirements outlined in 40 CFR 262-266 and 270-271 (described below). Most listed substances are considered toxic; however, some wastes or substances appear on the list solely because they exhibit one or more of the characteristics of hazardous waste.

Whether a waste is regulated as a hazardous waste may also depend on two other factors.

First, as 1984 RCRA amendments go into effect, some new wastes that previously were not regulated will come under hazardous waste regulations. Second, some States apply their own hazardous waste regulations to wastes in addition to those listed in Federal regulations. Thus, if you are in doubt about whether your waste is regulated under Federal or State hazardous waste regulations, you should contact the State hazardous waste agency or EPA Regional office.

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RCRA REQUIREMENTS APPLICABLE IF YOUR INDUSTRY GENERATES HAZARDOUS WASTE

Section 3002 of RCRA gives EPA authority to regulate generators of hazardous waste in order to protect human health and the environment. These regulations, in 40 CFR 262, specify hazardous waste management procedures for generators, including recordkeeping, labeling, use of appropriate containers, information reporting, and use of shipping manifests. Basic requirements for generators of hazardous waste are explained below.

These requirements for hazardous waste generators are also affected by whether EPA considers your facility to be a “small quantity generator.” As of August 5, 1985, EPA distinguishes three classes of small quantity generators for regulatory purposes:

- Those generating between 100 and 1,000 kilograms of nonacutely hazardous waste per calendar month
- Those generating up to 100 kilograms of nonacutely hazardous waste per calendar month
- Those generating less than one kilogram of acutely hazardous waste per calendar month.

In general, the latter two classes of small quantity generators are subject to less stringent requirements than establishments producing large quantities of hazardous waste. The small quantity generator exclusion is discussed in more detail below. If you have questions about how these regulations apply, contact your State hazardous waste agency or EPA Regional office.

Notify EPA

If your facility generates, transports, treats, stores, or disposes of hazardous wastes and is not exempt from regulation, you must notify EPA or an authorized State and obtain an identification number. Most small quantity generators are not required to notify EPA. It is important to note that many States have regulations that differ from Federal requirements. If your business is involved in hazardous waste activities, you should contact the appropriate State agency to determine which regulations are applicable to you.

The RCRA Amendments of 1984 extend notification requirements to industries covered by the Domestic Sewage Exemption, that is industries which discharge “solid and dissolved materials in domestic sewage” that would be defined as “hazardous waste” were they not mixed with domestic sewage and discharged to sewers. EPA has yet to formally implement this expanded notification requirement. If you fall under this exemption, you should periodically contact your State or EPA Region to keep abreast of these impending notification requirements.

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Off-Site Disposal of Hazardous Wastes

If you generate, transport, treat, store or dispose of any hazardous wastes (and your waste activities are not exempt from regulation), you must comply with applicable Federal, State, and local hazardous waste management requirements, both when the waste remains on your premise and when it is transported off-site. Basic requirements for the off-site disposal of hazardous wastes include:

- **Obtain EPA Identification Number** -- Most Federally regulated generators and transporters of hazardous waste must have EPA identification numbers. An EPA identification number is required prior to any transportation, treatment, storage, or disposal of hazardous waste. A generator must not deliver hazardous waste to any transporter or TSD facility without an EPA identification number.
- **Complete Manifests** -- Generators of hazardous waste are required to prepare a manifest containing the following information for each load of hazardous waste transported:
 - Generator name, address, telephone number and EPA identification number
 - Transporter name and EPA identification number
 - Name, address, and EPA identification number of permitted facilities receiving waste
 - Description of hazardous wastes transported
 - Waste quantities, types and number of containers
 - Certification for proper packaging, marking, labeling and transportation
 - Waste minimization certification
 - Manifest document number.

Upon delivery of waste to the transporter, the generator should sign and date the manifest, have the transporter sign the manifest, retain one copy, and provide the transporter with all remaining copies. A generator who does not receive, within 35 days, a manifest copy signed by the facility designated to receive the waste must contact the transporter or designated facility to determine what happened to the waste. A generator who has not received, within 45 days, a signed manifest copy must submit an exception report to the EPA Region.

It is important to remember that, before transporting any hazardous waste off-site, a generator must comply with packaging, labeling, marking, and placarding requirements. RCRA pretransport requirements generally incorporate U.S. Department of Transportation regulations, described in 49 CFR Part 171-172. In addition, all generators must keep records of any test results, waste analyses, or other determinations made in accordance with 40 CFR Part 262.11 for at least three years.

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- **Prepare Biennial Report** -- Generators that ship hazardous wastes off-site must prepare and submit a report to the appropriate EPA Region by March 1 of each even-numbered year. This report covers hazardous waste generator activities during the previous odd-numbered calendar year. Some States require annual reports.

Exceptions and Exemptions to RCRA Regulations for Generators

If the wastes your business generates would normally be subject to hazardous waste regulations, they may be exempt in three specific circumstances:

- Domestic Sewage Exemption. In order to regulate hazardous waste generators under 40 CFR 261.4(a), materials which would normally be subject to hazardous waste regulations are exempt because they are not defined as “solid waste.” Thus, the domestic sewage exception covers:
 - “Untreated sanitary wastes that pass through a sewer system”
 - Any mixture of domestic sewage and other wastes that passes through a sewer system to a POTW for treatment.
- On-site Treatment or Disposal Exemption. RCRA regulations contain a broad exemption for the on-site treatment and storage of wastewaters, including the following types of facilities:
 - **Wastewater Treatment Units** -- Devices which: (1) are part of a wastewater treatment facility subject to regulation under Sections 307 or 402 of the Clean Water Act (i.e., direct dischargers of wastewaters); (2) receive and treat or store hazardous influent wastewater, or generate and accumulate a hazardous wastewater treatment sludge, or treat or store hazardous wastewater treatment sludge; and (3) meet the EPA definition of a tank.
 - **Totally Enclosed Treatment Facilities** -- Facilities to treat hazardous waste which are directly connected to an industrial production process, and constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. EPA states that “a totally enclosed treatment facility” must: (1) be completely contained on all sides, (2) pose negligible potential for escape of constituents to the environment, (3) be connected directly by pipeline or similar totally enclosed device to an industrial production process. The Agency also indicated that effluent discharged to a POTW is exempt from RCRA regulation. However, it is subject to pretreatment regulations.
 - **Elementary Neutralization Units** -- Devices used for neutralizing waste defined as hazardous solely because it is corrosive and which meets the definitions of tank, container, transport vehicle or vessel in 40 CFR 260.10.

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The treatment and storage exception cited above does not apply to any on-site facility which does not qualify as a wastewater treatment unit, a totally enclosed treatment facility, or an elementary neutralization unit. Consequently, open storage facilities (e.g., waste pile or surface impoundments) and on-site disposal operations (e.g., landfills, land application, or incineration) are governed by storage and disposal facility requirements and RCRA permitting requirements.

RCRA is designed to provide stringent regulations for open facilities, such as surface impoundments, which are more likely to result in a release of hazardous wastes, while providing somewhat more flexible regulation of enclosed or semi-enclosed systems (e.g., treatment tanks, etc.) which tend to pose less risk to the environment. The RCRA Amendments of 1984 strengthen Federal regulatory authority over all of these systems. EPA is in the process of revising regulations for these systems and developing standards for corrective action for them. For more complete and current information, you should contact your State hazardous waste agency or EPA Region.

- **Small Quantity Generator Exclusion.** EPA does not currently regulate generators of small quantities of hazardous waste as stringently as it regulates generators of larger quantities. Small quantity generators are exempt from notification, generator, transporter, TSDF, and RCRA permitting requirements. The Agency now divides small quantity generators into three classes:
 - Generators of less than one kilogram per month of acutely hazardous waste
 - Generators of less than 100 kilograms per month of nonacutely hazardous waste
 - Generators of between 100 and 1,000 kilograms per month of nonacutely hazardous waste.

The first two classes of hazardous waste generators are required only to perform a hazardous waste determination, store, treat, or dispose of hazardous waste on-site in accordance with regulations, or ensure its delivery to an authorized hazardous or nonhazardous treatment, storage, or disposal facility.

The third class of generators, those who generate between 100 and 1,000 kilograms of hazardous waste per month, while still exempt from the bulk of RCRA requirements, are now required to accompany all off-site shipments of hazardous waste with a single copy of the Uniform Hazardous Waste Manifest (EPA Forms 8700-22 and 8700-22 A) or the State equivalent. This form must contain the following information:

- Name and address of the waste generator
- U.S. Department of Transportation description of the waste, including shipping name, hazard class, and identification number (UN/NA)
- Number and type of containers

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- Quantity of waste in the shipment
- Name and address of the facility designated to receive the waste.

Although EPA does not regulate small quantity generators as stringently as large quantity generators, several States have small quantity generator requirements. Thus, if you have any questions about requirements for hazardous waste management, you should contact the State hazardous waste agency or EPA.

RCRA REQUIREMENTS APPLICABLE IF YOUR INDUSTRY TRANSPORTS HAZARDOUS WASTE

EPA, the U.S. Department of Transportation, and many States regulate transportation of hazardous waste in order to protect human health and the environment from hazardous waste releases. EPA's regulatory authority for transporters is based on Section 3003 of RCRA. EPA and the Department of Transportation have jointly set standards for hazardous waste transportation, which are described in 40 CFR Parts 262 and 263, and 49 CFR Parts 171 and 172. These standards include recordkeeping, labeling, and manifest requirements, as well as the requirement to transport hazardous wastes only to permitted facilities for treatment, as designated on hazardous waste shipping manifests. Hazardous waste transporters hauling wastes to POTW collection systems or treatment plants must ensure that these wastes meet all local, State, and Federal pretreatment standards, in addition to RCRA requirements.

Notification to EPA and EPA Identification Number

If your firm transports hazardous waste, you must notify EPA or an authorized State hazardous waste agency and obtain an EPA identification number. Transporters must not move hazardous wastes without an EPA identification number. EPA Regional Offices have special procedures to issue provisional identification numbers to generators and transporters of hazardous waste under emergency or other unusual circumstances when it becomes necessary to transport the waste to an authorized hazardous waste management facility. In emergency situations, the transporters should telephone the EPA Regional Office and obtain a provisional identification number and additional instructions.

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Manifests and Reports

Transporters may not accept hazardous waste from generators unless each load is accompanied by a completed manifest. The manifest must accompany the hazardous waste at all times. Upon delivery of the hazardous waste to another transporter or designated facility, transporters must:

- Have the transporter or owner/operator of the designated facility sign and date the manifest
- Retain one copy of the manifest and give the remaining copies to the transporter or facility accepting the waste.

Transporter or Generator Agreements With Designated Facilities

In many cases, treatment, storage, and disposal facilities (including POTWs) will accept deliveries of hazardous waste only if they have agreements with transporters and/or generators. These agreements may designate types, strengths, and quantities of hazardous waste which the facility will accept, limit conditions of waste to be accepted (for example, “no liquid hazardous wastes”), designate times and locations for accepting deliveries, and designate treatment, storage, or disposal fees. Hazardous waste transporters are legally responsible for delivery of the entire quantity of hazardous waste accepted from a generator or another transporter to the facility designated by the manifest, or to designated alternate facilities. Before accepting any consignment of hazardous waste for transportation, you should make sure that the treatment, storage, or disposal facility designated on the manifest or an alternate designated facility will accept delivery of your waste.

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PERMIT COVER PAGE

Permit No. [cite permit number]

INDUSTRIAL USER PERMIT

In accordance with the provisions of Buckeye City Code, Chapter 16 Sewer Utilities and Use of Public Sewers

[Industrial user's name]

[Mailing address (optional)]

is hereby authorized to discharge industrial wastewater from the above-identified facility and through the outfalls identified herein into the City of Buckeye sewer system in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards, or requirements under local, state, and federal laws, including any such regulations, standards, requirements, or laws that might become effective during the term of this permit.

Noncompliance with any term or condition of this permit will constitute a violation of the City of Buckeye sewer use ordinance.

This permit will become effective [date] and will expire at midnight [date].

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of Article 16-12-7 of the Buckeye City Code, a minimum of 90 days before the expiration date.

By: [Signature of Control Authority representative]

[Name and title of Control Authority representative]

Issued this [date] day of [month], 20__

A Petition for review of the conditions and limitations contained in this Permit may be filed with the Water Resources Director within twenty (20) days of the receipt of this Permit as provided by Article 16-12-3 of the Buckeye City Code.

PART 1 – EFFLUENT LIMITATIONS

A. During the period of [effective date of permit] to [expiration date of permit], the permittee is authorized to discharge process, non-process, and sanitary wastewater to the City of Buckeye sewer system from the outfalls listed below.

Description of outfalls:

<u>Outfall</u>	<u>Description</u>
001	<p><i>(Note to the permit writer: The permit writer must clearly identify the outfalls using brief, detailed narrative descriptions and diagrams, as necessary. For this sample permit, only categorical process wastewater is discharged through outfall. Outfall 001 is considered an end-of-process sampling location.)</i></p> <p>Outfall 001 is also considered sampling point 001 as is located at the Parshall flume after the facility’s wastewater treatment system in the southeast corner of Building A.</p>
002	<p><i>(Note to the permit writer: For this sample permit, categorical and noncategorical process wastewater and sanitary wastewater are discharged through outfall 002. Outfall 002 is considered an end-of-pipe sampling location.)</i></p> <p>Outfall 002 is also considered sampling point 002 and is located at the manhole in the southwest parking lot.</p>

B. (Note to the permit writer: The permit writer should provide a description of the categorical process discharges that are combined at this sampling location.)

During the period of [date] to [date], the discharge from outfall 001 must not exceed the following effluent limitations. Effluent from this outfall consists of plating rinse waters from the facility’s gold and silver plating lines. The facility is considered a new source subject to the pretreatment standards for new sources (PSNS) at Title 40 of the *Code of Federal Regulations* (CFR) Part 433, subpart A.

CATEGORICAL EFFLUENT LIMITATIONS

<u>Parameter</u>	<u>Daily maximum (mg/L)</u>	<u>Monthly average (mg/L)</u>
Cadmium (Total)	0.11	0.07
Chromium (Total)	2.77	1.71
Copper (Total)	3.38	2.07
Lead (Total)	0.69	0.43
Nickel (Total)	3.98	2.38
Silver (Total)	0.43	0.24
Zinc (Total)	2.61	1.48
Cyanide (Total)	1.20	0.65
Total Toxic Organics (TTO)*	2.13	N/A

* Federal regulations require monitoring for Total Toxic Organic (TTO) compounds for specific industry classifications. If TTO monitoring is required a list of parameters are contained in the section titled **Total Toxic Organics** in this permit. Permittee may request that the city allow a written certification in lieu of monitoring as allowed by the applicable federal categorical standard.

Total Toxic Organics

The Electroplating and Metalfinishing categorical standards (40 CFR Parts 413 & 433) regulate the discharge of Total Toxic Organics as the summation of all quantifiable values greater than 0.01 milligram per liter (mg/L) for the following toxic organics:

Acenaphthene	Methyl bromide (bromomethane)	Dieldrin
Acrolein	Bromofom (tribromomethane)	Chlordane (technical mixture and metabolites)
Acrylonitrile	Dichlorobromomethane	4,4-DDT
Benzene	Chlorodibromomethane	4,4-DDE (p,p-DDX)
Benzidine	Hexachlorobutadiene	4,4-DDD (p,p-TDE)
Carbon tetrachloride (tetrachloromethane)	Hexachlorocyclopentadiene	Alpha-endosulfan
Chlorobenzene	Isophorone	Beta-endosulfan
1,2,4-Trichlorobenzene	Naphthalene	Endosulfan sulfate
Hexachlorobenzene	Nitrobenzene	Endrin
1,2,-Dichloroethane	2-Nitrophenol	Endrin aldehyde
1,1,1-Trichloroethane	4-Nitrophenol	Heptachlor
Hexachloroethane	2,4-Dinitrophenol	Heptachlor epoxide (BHC-hexachloro- cyclohexane)
1,1-Dichloroethane	4,6-Dinitro-o-cresol	Alpha-BHC
1,1,2-Trichloroethane	N-nitrosodimethylamine	Beta-BHC
1,1,2,2-Tetrachloroethane	N-nitrosodiphenylamine	Gamma-BHC
Chloroethane	N-nitrosodi-n-propylamine	Delta-BHC
Bis (2-chloroethyl) ether	Pentachlorophenol	(PCB-polychlorinated biphenyls)
2-Chloroethyl vinyl ether (mixed)	Phenol	PCB-1242 (Arochlor 1242)
2-Chloronaphthalene	Bis (2-ethylhexyl) phthalate	PCB-1254 (Arochlor 1254)
2,4,6-Trichlorophenol	Butyl benzyl phthalate	PCB-1221 (Arochlor 1221)
Parachlorometa cresol	Di-n-butyl phthalate	PCB-1232 (Arochlor 1232)
Chloroform (trichloromethane)	Di-n-octyl phthalate	PCB-1248 (Arochlor 1248)
2-Chlorophenol	Diethyl phthalate	PCB-1260 (Arochlor 1260)
1,2-Dichlorobenzene	Dimethyl phthalate	PCB-1016 (Arochlor 1016)
1,3-Dichlorobenzene	1,2-Benzanthracene (benzo(a)anthracene)	Toxaphene
1,4-Dichlorobenzene	Benzo(a)pyrene (3,4-benzopyrene)	2,3,7,8-Tetrachlorodibenzo-p- dioxin (TCDD)
3,3-Dichlorobenzidine	3,4-Benzofluoranthene (benzo(b)fluoranthene)	
1,1-Dichloroethylene	11,12-Benzofluoranthene (benzo(k)fluoranthene)	
1,2-Trans-dichloroethylene	Chrysene	
2,4-Dichlorophenol	Acenaphthylene	
1,2-Dichloropropane	Anthracene	
1,3-Dichloropropylene (1,3-dichloropropene)	1,12-Benzoperylene (benzo(ghi)perylene)	
2,4-Dimethylphenol	Fluorene	
2,4-Dinitrotoluene	Phenanthrene	
2,6-Dinitrotoluene	1,2,5,6-Dibenzanthracene (dibenzo(a,h)anthracene)	
1,2-Diphenylhydrazine	Indeno(1,2,3-cd) pyrene (2,3-o- phenylene pyrene)	
Ethylbenzene	Pyrene	
Fluoranthene	Tetrachloroethylene	
4-Chlorophenyl phenyl ether	Toluene	
4-Bromophenyl phenyl ether	Trichloroethylene	
Bis (2-chloroisopropyl) ether	Vinyl chloride (chloroethylene)	
Bis (2-chloroethoxy) methane	Aldrin	
Methylene chloride (dichloromethane)		
Methyl chloride (chloromethane)		

- C. During the period of **[date]** to **[date]**, the effluent from outfall 002 will be of domestic, categorical, and noncategorical wastewaters and must comply with the local limits listed below (see Buckeye City Code Chapter 16, Article 16-9-3).

LOCAL EFFLUENT LIMITATIONS

Parameter	Daily maximum (mg/L)	Monthly average (mg/L)
BOD	--	
TSS	--	
TKN	--	
Arsenic (T)	0.035	
Boron (T)	1.1	
Cadmium (T)	0.028	
Chromium (T)	--	
Copper (T)	5.0	
Cyanide (T)	0.78	
Fluoride	0.11	
Lead (T)	0.74	
Mercury (T)	0.0080	
Nickel (T)	--	
Selenium (T)	0.0074	
Zinc	166	
pH	5–10.5 S.U.	

- D. In addition to the local effluent limits, the permittee is required to implement the following best management practices (BMPs) to control its discharge of **[parameter]** into the publicly owned treatment works (POTW):
- a.
 - b.
- E. All discharges must comply with all other applicable laws, regulations, standards, and requirements contained in **[cite specific section of ordinance]** and any applicable state and federal pretreatment laws, regulations, standards, and requirements, including any such laws, regulations, standards, or requirements that might become effective during the term of this permit.

PART 2 – MONITORING REQUIREMENTS

- A. All samples must be collected, preserved, and analyzed in accordance with the procedures established in 40 CFR Part 136, and amendments.
- B. ***(Note to the permit writer: The following parameters are an example of what might be included in this section of the permit. The permit writer must include all parameters identified in Part 1B & 1C unless the Control Authority has granted the user the right to waive monitoring of pollutants not present or expected to be present.)***

From the period beginning on the effective date of the permit until [date], the permittee must monitor outfalls 001 and 002 for the following parameters, at the indicated frequency:

<u>Sample Parameter (units)</u>	<u>Measurement Location</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow (gpd)	001, 002	Continuous	Meter ^a
TTO (mg/L)	See note b	1/6 months	Grab ^c
BOD (mg/L)	002	1/year	24-hr composite ^d
TSS (mg/L)	002	1/year	24-hr composite ^d
Arsenic (mg/L)	002	1/6 months	24-hr composite ^d
Cadmium (mg/L)	001, 002	1/6 months	24-hr composite ^d
Chromium ^e (mg/L)	001, 002	Not Applicable	Not applicable ^c
Copper (mg/L)	001, 002	1/week	24-hr composite ^d
Cyanide ^e (mg/L)	001, 002	Not Applicable	Not applicable ^c
Lead ^f (mg/L)	001, 002	1/year	24-hr composite ^d
Mercury (mg/L)	002	1/6 months	24-hr composite ^d
Nickel (mg/L)	001, 002	1/month	24-hr composite ^d
Silver (mg/L)	001	1/6 months	24-hr composite ^d
Zinc (mg/L)	001, 002	1/6 months	24-hr composite ^d
pH (s.u.)	002	Continuous	Meter ^g

NOTES:

^a Daily flows are to be recorded from the permittee's flow meter.

^b The permittee has submitted a toxic organics management plan. Therefore, in lieu of monitoring for TTOs, the permittee may submit the certification statement as set forth in Part 3.C of this permit.

If the permittee fails to certify, sign, and submit the certification statement, the permittee will be required to conduct the required TTO monitoring at the frequency specified in the table above and submit the subsequent results.

(Note to the permit writer: For this sample permit, the permittee has submitted a toxic organic management plan, TOMP, and the permit writer is allowing the permittee to submit the certification statement in lieu of monitoring for TTOs. If the permittee did not have a TOMP, the permittee would be required to monitor for the TTO pollutants.)

The permittee has submitted a toxic organics management plan. Therefore, in lieu of monitoring for TTOs, the permittee may submit the certification statement as set forth in Part 3.C of this permit.

If the permittee fails to certify, sign, and submit the certification statement, the permittee will be required to conduct the required TTO monitoring at the frequency specified in the table above and submit the subsequent results.

^c A minimum of four grab samples at equal intervals (but at least 1 hour apart) over a period of daily discharge.

^d Flow-proportional composite sample over daily duration of discharge.

(Note to the permit writer: The permit writer must determine the type of composite sample (time-proportional or flow-proportioned) and the sampling duration (8-hour, 12-hour, or 24-hour) that is most appropriate for the industrial user and define it here or in the standard conditions.)

^c (Note to the permit writer: For this sample permit, the permit writer has waived monitoring requirements for chromium and cyanide. Before implementing this option, the permit writer must ensure that the pollutant is neither present nor expected to be present, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the permittee.)

Monitoring for chromium and cyanide is not required because the permittee has demonstrated that chromium and cyanide are not present and are not expected to be present in the permittee’s discharge.

^f The monitoring frequency for lead has been reduced to once a year because the permittee’s discharge complies with the conditions set forth at 40 CFR 403.12(e)(3).

^g pH will be monitored and recorded continuously by the permittee’s pH meter.

B. (Note to the permit writer: The permit writer has the option to waive monitoring requirements for pollutants not expected to be present. Before using this option, the permit writer must ensure that the pretreatment program has adequate authority to waive monitoring requirements for pollutant not present or expected to be present and that the program has been modified in accordance with 40 CFR Part 403.)

During the period of [date] to [date] the [name of the POTW] is granting [industry name] a monitoring waiver for *chromium and cyanide*. If either chromium or cyanide is found to be present or is expected to be present because of changes that occur in the permittee’s operations, the permittee must immediately begin monitoring for the pollutant as outlined below.

Sample Parameter (units)	Measurement Location	Frequency	Sample Type
Chromium (T)	001, 002	1/month	24-hour composite
Cyanide (T)	001 ^a , 002	1/month	Grab

^a Monitoring for cyanide must be conducted after the cyanide treatment unit, before dilution with other wastestreams, and when cyanide is expected to be present at its maximum concentration.

C. (Note to the permit writer: The permit writer has the option to reduce the monitoring and reporting requirements for a CIU if it complies with the conditions set forth at 40 CFR 403.12(e)(3). Before using this option, the permit writer must ensure that the pretreatment program has adequate authority to reduce monitoring and reporting requirements and the program has been modified in accordance with 40 CFR Part 403)

During the period of [date] to [date], [industry name] has a reduced monitoring and reporting requirement for *lead*. If the permittee no longer meets the conditions listed at 40 CFR 403.12(e)(3)(i) or (ii), the permittee must immediately begin monitoring for the pollutant as outlined below.

Sample Parameter (units)	Measurement Location	Frequency	Sample Type
Lead (T)	001, 002	1/6 month	24-hour composite

PART 3 – REPORTING REQUIREMENTS

A. Monitoring Reports

Monitoring results obtained must be summarized and reported on an Industrial User Monitoring Report Form.

Reports for parameters with a continuous monitoring frequency must be submitted monthly. The reports are due within 15 days after the end of each calendar month. The first monthly report is due **[date]**.

Reports for parameters with a 1/6 months monitoring frequency must be submitted within 15 days after each reporting period. The reporting periods are January–June and July–December. The first 1/6 month report is due **[date]**.

Reports for parameters with a 1/year monitoring frequency must be submitted within 15 days after each reporting period. The reporting period is January–December (calendar year). The first 1/year report is due **[date]**.

All monitoring reports must indicate the nature and concentration of all pollutants in the effluent for which sampling and analysis were performed during the reporting period preceding the submission of each report, including measured maximum and average daily flows.

B. BMP Reports

Report once every 6 months (January–June and July–December) the information regarding the frequency of maintenance (date of each maintenance service) of **[summarize the BMP requirements from Part 1D]**. Each report is due within 15 days after the end of the reporting period. The first BMP report is due **[date]**.

Each report required by the BMP must be certified and signed by an appropriate, authorized person.

C. Certification Statements

The permittee is required to sign and submit the following certification statements with each monitoring report:

(Note to the permit writer: This certification submittal is required only if the permit writer has granted a monitoring waiver for a pollutant not present or expected to be present.) Based on my inquiry of the person directly responsible for managing compliance with the pretreatment standard for 40 CFR Part 433, I certify that, to the best of my knowledge and belief, there has been no increase in the level of *chromium and cyanide* in the wastewaters due to the activities at the facility since filing of the last periodic report under 40 CFR 403.12(e)(1).

(Note to the permit writer: This certification submittal is required only if the permit writer has granted the use of a TOMP and TTO certification in lieu of monitoring for TTOs.) Based on my inquiry of the permit or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the Control Authority.

The permittee is required to sign and submit the following certification statement with all monitoring reports:

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 ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

D. (Note to the permit writer: This reporting requirement is required only if the permit writer has granted a monitoring waiver for pollutant not present or expected to be present.)

If either the *chromium* or *cyanide* is found to be present or is expected to be present because of changes that occur in the permittee's operations, the permittee must immediately notify the Water Resources Department.

E. (Note to the permit writer: This reporting requirement is required only if the permit writer has granted a reduced monitoring and reporting frequency.)

The permittee is required to notify the Water Resources Department immediately if the permittee's categorical wastewater flow exceeds the following conditions:

1. 5,000 gallons per day **[0.01 percent of the POTW's design dry weather flow or 5,000 gallons per day, whichever is smaller]** as measured by a continuous effluent flow monitoring device
2. 20.85 pounds per day of biochemical oxygen demand (BOD) or 20.85 pounds per day of total suspended solids (TSS) **[0.01 percent of the design dry weather organic treatment capacity]** of the POTW
3. **0.015 POUND PER DAY OF LEAD [0.01 PERCENT OF THE MAXIMUM ALLOWABLE HEADWORKS LOADING FOR ANY POLLUTANT REGULATED BY THE APPLICABLE CATEGORICAL PRETREATMENT STANDARD FOR WHICH APPROVED LOCAL LIMITS WERE DEVELOPED].**

F. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by the U.S. Environmental Protection Agency (EPA) or as specified in this permit, the results of such monitoring must be included in any calculations of actual daily maximum or monthly average pollutant discharge, and results must be reported in the monthly report submitted to the Water Resources Department. Such an increased monitoring frequency must also be indicated in the monthly report. (Note to the permit writer: As an alternative, this requirement may be put in the standard conditions section.)

G. Automatic Resampling

If the results of the permittee's wastewater analysis indicate that a violation of this permit has occurred, the permittee must do the following:

1. Inform the Water Resources Department of the violation within 24 hours, and
2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of becoming aware of the first violation.

H. Accidental Discharge Report

1. The permittee must notify the Water Resources Department immediately upon the occurrence of spills, including accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, slug loads or slug discharges that might cause potential problems for the POTW or spills that might enter the public sewer. During normal business hours the Water Resources Department should be notified by telephone at **[telephone number]**. At all other times, the Water

Resources Department should be notified by telephone at **[telephone number]** or **[telephone number]**. The notification must include location of discharge; date and time of discharge; type of waste, including concentration and volume; and corrective actions taken. The permittee's notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that arise under local, state, or federal laws.

Within 5 days following an accidental discharge, the permittee shall submit to the Water Resources Department a detailed written report. The report must specify the following:

- a. Description and cause of the upset, slug load, or accidental discharge; the cause thereof; and the impact on the permittee's compliance status. The description should also include location of discharge and type, concentration, and volume of waste.
- b. Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.
- c. All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

(Note to the permit writer: As an alternative, the above requirement may be put in the standard conditions section.)

I. Notification of the Discharge of Hazardous Waste

(Note to the permit writer: The municipality may choose to prohibit the discharge of hazardous wastes.)

- a. Any permittee who begins discharging hazardous waste must notify, in writing, the POTW, the EPA Regional Waste Management Division Director, and state hazardous waste authorities of any discharge into the POTW of a substance that, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the permittee discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification also must contain the following information to the extent such information is known and readily available to the permittee: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the wastestream discharged during that calendar month, and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months. All notifications must take place no later than 180 days after the discharge begins. Any notification under this paragraph must be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted under **[cite specific section of ordinance]**. The notification requirement in this section does not apply to pollutants already reported by permittee subject to categorical pretreatment standards.
- b. Dischargers are exempt from the requirements of paragraph a above, during a calendar month in which they discharge no more than 15 kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than 15 kilograms of nonacute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the permittee discharges more than such quantities of any hazardous waste do not require additional notification.
- c. If any new regulations are made under section 3001 of Resource Conservation and Recovery Act identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the permittee must notify **[the Control Authority representative]**, the EPA Regional Waste Management Waste Division Director, and state hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.
- d. If any notification is made under this section, the permittee must certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.

- e. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this ordinance, a permit issued under the ordinance, or any applicable federal or state law.
- J. All reports required by this permit must be submitted to the Water Resources Department at the following address:

[NAME OF CONTROL AUTHORITY]

Attention: [Name of Pretreatment Coordinator]
Address: [Address]

PART 4 – SLUG DISCHARGE CONTROL REQUIREMENTS

The permittee is required to submit and implement a slug discharge control plan within [time frame established by the permit writer] days of the effective date of this permit. The slug discharge control plan must include, at a minimum, the following: *(Note to the permit writer: The permit must include requirements to control slug discharges if the Control Authority has determined it to be necessary. If the permittee has already developed and is implementing a slug discharge control plan before the issuance of this permit, the permit writer should include a statement indicating that the permittee is required to comply and implement its existing slug discharge control plan.)*

- a. Description of discharge practices, including nonroutine batch discharges
- b. Description of stored chemicals
- c. Procedures for immediately notifying the Water Resources Department of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up, written notification within 5 days
- d. Procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants, and measures and equipment for emergency response.

PART 5 – SPECIAL CONDITIONS

SECTION 1 – ADDITIONAL/SPECIAL MONITORING REQUIREMENTS.

(Note: The permit writer must include any additional or special monitoring requirements that are applicable to the permittee. Examples are provided below.)

Examples:

- A. One-time monitoring for specific pollutants to verify absence (e.g., “The permittee must submit by [date] sampling data for pentachlorophenol and trichlorophenol”)
- B. Biomonitoring or other toxicity to determine the toxicity of the discharge
- C. Development of sludge disposal plan
- D. Additional monitoring of pollutants that are limited in the permit in response to noncompliance

SECTION 2 - COMPLIANCE SCHEDULE [Example Compliance Schedule]

A. The permittee must accomplish the following tasks in the designated time period:

<u>Event</u>	<u>No Later Than</u>
1. Submit new wastewater pretreatment plant design submission	[Date]
2. Order equipment and materials	[Date]
3. Develop, and submit a copy to the Water Resources Department, a slug discharge control plan to eliminate or minimize the accidental spill or slug discharge of pollutants into the sewer system	[Date]
4. Implement the slug loading control plan	[Date]
5. Complete installation of wastewater pretreatment plant	[Date]
6. Obtain full pretreatment plant operational status and achieve full compliance	[Date]

B. Compliance Schedule Reporting

No later than 14 days following each date in the above schedule, the permittee must submit to the Water Resources Department a report including, at a minimum, whether it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with the increment of progress, the reasons for delay, and the steps being taken to return the project to the schedule established.

City of Buckeye
Water Resources
Permit Standard Conditions
July 01, 2021

SECTION I. GENERAL CONDITIONS AND DEFINITIONS

A. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, will not be affected thereby and will continue in full force and effect.

B. Duty to Comply

The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

C. Duty to Mitigate

The Permittee must take all reasonable steps to maintain or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

D. Permit Modification

The Director of the Water Resources Department (Director) may modify the permit for good cause, including but not limited to, the following reasons:

1. To incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements;
2. To address significant alterations or additions to the User's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
4. Information indicating that the permitted discharge poses a threat to the City's POTW, City personnel, or the receiving waters;
5. Violation of any terms or conditions of the individual wastewater discharge permit;
6. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;
7. Revision of or a grant of variance from Categorical Pretreatment Standards pursuant to 40 CFR 403.13;
8. To correct typographical or other errors in the individual wastewater discharge permit;
or

9. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 16-12-5 of the Ordinance.

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.

E. Permit Termination

This permit may be terminated for the following reasons:

1. Failure to notify the Director of significant changes to the wastewater before the changed discharge;
2. Failure to provide prior notification to the Director of changed conditions;
3. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
4. Falsifying self-monitoring reports or certification statements;
5. Tampering with monitoring equipment;
6. Refusing to allow timely access to the facility premises and records;
7. Failure to meet effluent limitations;
8. Failure to pay fines;
9. Failure to pay sewer charges;
10. Failure to meet compliance schedules;
11. Failure to complete a wastewater survey or the wastewater discharge permit application;
12. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
13. Violation of any Pretreatment Standard or Requirement including required best management practices, or any terms of the wastewater discharge permit or the sewer use ordinance.

F. Permit Appeals

The Permittee may petition to appeal the terms of this permit within twenty (20) business days of the notice.

This petition must be in writing; failure to submit a timely petition for review will be deemed to be a waiver of the administrative appeal. In its petition, the Permittee must indicate the permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to be placed in the permit.

The effectiveness of this permit will not be stayed pending the appeal. If the Director fails to act within thirty (30) calendar days, a request for reconsideration will be deemed to be denied. Decisions not to reconsider a permit, not to issue a permit, or not to modify a permit will be considered final administrative actions for purposes of judicial review.

The Permittee seeking judicial review of the final administrative permit decision must do so by filing a complaint with the Superior Court for Maricopa County, Arizona.

G. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state, or local laws or regulations.

H. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner or operator with prior approval of the Director and the following items occur:

1. The Permittee must give at least sixty (60) days advance notice to the Director.
2. The notice to the Director must include a written certification by the new owner or operator that does the following:
 - a) States that the new owner or operator has no immediate intent to change the facility's operations and processes;
 - b) Identifies the specific date on which the transfer is to occur; and
 - c) Acknowledges full responsibility for complying with the existing permit.
3. The Director approves the permit transfer.

I. Duty to Reapply

In order to continue discharging after the expiration date of this permit, Permittee must apply for permit reissuance by submitting a complete permit application, in accordance with Section 16-12-7, a minimum of ninety (90) days before the expiration of the existing permit.

J. Continuation of Expired Permits

An expired permit will continue to be effective and enforceable until the permit is reissued if

1. The Permittee has submitted a complete permit application at least ninety (90) days prior to the expiration date of the user's existing permit.
2. The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the Permittee.

K. Dilution

A Permittee must not ever increase the use of potable or process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. The Director may impose mass limitations on Permittees who are using dilution to meet applicable Pretreatment Standards or Requirements, or in other cases when the imposition of mass limitations is appropriate.

L. Definitions

1. *Cooling Water*—The clean wastewater discharged from any heat transfer system such as condensation, air conditioning, cooling or refrigeration.
2. *Composite Sample*—
 - a) A combination of individual samples obtained at regular intervals over a specified time period. The volume of each individual sample shall be either proportional to the flow rate during the sample period (flow-proportional composite) or constant and collected at equal time intervals during the composite period (time-proportional composite) as defined in the permit. Aliquots may be collected manually or automatically. Each sample aliquots must be at least 100 ml in volume unless collected using automatic self-purging sampling equipment.
 - b) For volatile pollutants required to be combined for analysis, aliquots must be combined in the laboratory immediately before analysis. The volatile composite samples must be collected by flow proportional means; either the time interval between each aliquot or the volume of each aliquot must be proportional to either

the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- c) If one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends

3. *Daily Discharge* —

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

- 4. *Daily Maximum Limit*—The maximum allowable discharge limit of a pollutant during a calendar day as measured in a representative sample. Where daily maximum limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day. *In determining compliance with the daily average effluent limitation, city samples shall not be combined with non-city samples.*
- 5. *Grab Sample*—An individual sample of at least 100 ml collected over a period not exceeding 15 minutes that is representative of conditions at the time the sample is collected.
- 6. *Instantaneous Maximum Concentration*—The maximum limit allowable concentration of a pollutant determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.
- 7. *Interference*—A discharge which, alone or in conjunction with a discharge or discharges from other sources either:
 - a) Inhibits or disrupts the POTW, its treatment processes, or operations, or its sludge processes, use or disposal.
 - or
 - b) Is a cause of a violation of any requirement of any environmentally related permit issued by a government entity (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA), and state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

8. *Monthly Average*—The arithmetic mean of the values for effluent samples collected during a calendar month or specified 30-day period (as opposed to a rolling 30-day window).
9. *Weekly Average*—The arithmetic mean of the values for effluent samples collected over a period of 7 consecutive days.
10. *Bi-Weekly*—Once every other week.
11. *Bi-Monthly*—Once every other month.
12. *Upset*—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, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.
13. *Bypass*—The intentional diversion of wastes from any portion of a treatment facility.
14. *Pass Through*—A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW NPDES permit (including an increase in the magnitude or duration of a violation) or which causes or contributes to a violation of an applicable numeric or narrative water quality standard.
15. *Slug Discharge or Slug Load*—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, Local Limits or Permit conditions.

M. Prohibited Discharge Standards

The Permittee must comply with all the General and Specific Prohibited Discharge Standards in Article 16-9, Section 16-9-1 of the City of Buckeye Ordinance. Namely, the industrial user must not discharge:

1. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21, or pollutants which cause an exceedance of ten percent of the lower explosive limit (LEL) at any point within the POTW for any single reading or more than five percent for any two consecutive readings;
2. Wastewater having a pH less than 5.0 or more than 10.5, or otherwise causing corrosive structural damage to the POTW or equipment;
3. Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in Interference but in no case solids greater than on-quarter inch (1/4") in any dimension;
4. Pollutants, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause Interference with the POTW;
5. Wastewater having a temperature greater than 150 degrees F (66 degrees C), or which will inhibit biological activity in the treatment plant resulting in Interference, but in no

case wastewater which causes the temperature at the introduction into the treatment plant to exceed 104 degrees F (40 degrees C);

6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or Pass Through;
7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
8. Trucked or hauled pollutants;
9. Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;
10. Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the City's NPDES permit;
11. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or Federal regulations;
12. Storm Water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, Noncontact Cooling Water, and unpolluted wastewater, unless specifically authorized by the Director;
13. Sludges, screenings, or other residues from the pretreatment of industrial wastes;
14. Medical Wastes, except as specifically authorized by the Director in an individual wastewater discharge permit or a general permit;
15. Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;
16. Detergents, surface active agents, or other substances which that might cause excessive foaming in the POTW;
17. Fats, oils, or greases of animal or vegetable in amounts that will cause Interference or Pass Through;
18. Any water or waste which contains any contaminant at a concentration in excess of the limits set below, as measured in a grab sample or composite sample, in units of milligrams per liter (mg/L):

Substance	Limitation mg/L
Benzene	0.035
Chloroform	0.420
Ethylbenzene	0.200
Toluene	0.200
Xylenes	0.200
Polyaromatic hydrocarbons	0.050

Phenols	1.000
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19. Any of the following prohibited substances:

- 1) 4,4'—DDE
- 2) 4,4'—DDT
- 3) Aldrin
- 4) BHC-alpha
- 5) BHC-beta
- 6) BHC-gamma (Lindane)
- 7) Chlorinated phenols

N. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the Permittee from its obligations regarding compliance with any and all applicable local, state and federal Pretreatment Standards and requirements including any such standards or requirements that might become effective during the term of this permit.

SECTION II. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

A. Proper Operation and Maintenance

The Permittee must 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 includes the following: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

B. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the Permittee must, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. Such a requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It will not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this permit.

C. Bypass of Treatment Facilities

1. Bypass is the intentional diversion of wastestreams from any portion of a user's treatment facility is defined as and is prohibited unless:
 - a) the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage.
 - b) there were no feasible alternatives, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.

2. The Permittee may allow bypass to occur if it does not cause effluent limitations to be exceeded but only if it is also for essential maintenance to assure efficient operation.
3. Notification of bypass
 - a) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it must submit prior written notice, at least 10 days before the date of the bypass, to the Director.
 - b) Unanticipated bypass. The Permittee must notify the Director within 24 hours from the time it becomes aware of an unanticipated bypass and submit a written notice to the POTW within 5 days. This report must specify:
 - (i) A description of the bypass, and its cause, including its duration with exact dates and times;
 - (ii) Whether the bypass has been corrected and if the bypass has not been corrected, the anticipated time it is expected to continue; and
 - (iii) The steps being taken or to be taken to reduce, eliminate, and prevent a reoccurrence of the bypass.

SECTION III. MONITORING AND RECORDS

A. Representative Sampling

Samples and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points must not be changed without notification to and with the approval of the Director.

B. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices must be selected and used to ensure the accuracy and reliability of measurement of the volume of monitored discharges. The devices must be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The devices selected must be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

C. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit must be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit. The Water Resources Director in accordance with applicable federal regulations may approve alternative procedures.

Tests and analyses of the characteristics of water and wastes must be performed by an environmental laboratory licensed by the State of Arizona pursuant to A.R.S. Section 36-495 et seq.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures identified in Section IIIC of these Class I Permit Standard Conditions, the results of this monitoring must be included in the Permittee's self-monitoring reports.

E. Inspection and Entry

1. The Director shall have the right to enter the premises of any User to determine whether the User is complying with all requirements of this ordinance and any individual

wastewater discharge permit or general permit or order issued hereunder. Users shall allow the Director ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

- a) Where a User has security measures in force which require proper identification and clearance before entry into its premises, the User shall make necessary arrangements with its security guards so that, upon presentation of a City of Buckeye issued identification badge, the Director shall be permitted to enter without delay for the purposes of performing specific responsibilities.
- b) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the User at the written or verbal request of the Director and shall not be replaced. The costs of clearing such access shall be borne by the User.
- c) Unreasonable delays in allowing the Director access to the User's premises shall be a violation of this ordinance.

2. Monitoring Facilities

- a) The Director shall have the right to set up on the User's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the User's operations.
- b) The Director may require the User to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the User at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at least annually to ensure their accuracy. More frequent calibration may be required by the Director.

3. Digital Images

Digital images may be used to document conditions observed during inspections and investigations and sampling. Digital image means any photograph or video taken using a digital camera or device, including the audio portion of the video. Inspections and sampling are conducted to evaluate a User for the purpose of gathering information to determine if the User is in compliance with applicable environmental requirements. Inspections and sampling may also assess a regulated entity's ability to maintain compliance. Standard Operating Procedures for the taking, use and storage of Digital Images shall be made available to the User.

4. The User has the following rights during any inspection by an authorized employee of the water resources department:

- a) to be presented with City of Buckeye issued photo identification by the inspector;
- b) to be informed of the purpose of the inspection and the legal authority for the inspection;
- c) to know of any inspection fees;
- d) to accompany the inspector during the inspection, unless the inspection is for the purposes of a confidential interview;
- e) to obtain copies of any original documents taken from the premises during the inspection;

- f) to obtain a split or duplicate of any samples taken during the inspection if the split or duplicate of any samples, where appropriate, would not prohibit an analysis from being conducted or render an analysis inconclusive;
- g) to obtain copies of any analysis performed on samples taken during the inspection;
- h) to be informed if any conversation with the inspector is recorded;
- i) to be informed that each person interviewed during the inspection shall be notified that statements made by the person may be included in the inspection report.

F. Retention of Records

- a) The Permittee must retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application.

This period may be extended by request of the Director at any time.

- b) The Permittee must retain and preserve all records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the Director until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

G. Record Contents

Records of sampling and analyses must include the following:

- a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurement;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

H. Falsifying Information

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate is a crime and may result in the imposition of criminal sanction or civil penalties or both.

SECTION IV. ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The Permittee must give notice to the Director 90 calendar days before any facility expansion, production increase, or process modifications that results in new or substantially increased discharges or a change in the nature of the discharge. For purposes of this section any increase or decrease in the volume of discharge or mass of any pollutant discharged that equals or exceeds 20 percent shall constitute a substantial change.

2. Anticipated Noncompliance

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or activity that could result in noncompliance with permit requirements.

3. Automatic Resampling

If the results of the Permittee's wastewater analysis indicate a violation has occurred, the Permittee must notify the Director, within 24 hours of becoming aware of the violation and repeat the sampling and pollutant analysis and submit, in writing, the results of that repeat analysis within 30 days after becoming aware of the violation.

4. Duty to Provide Information

The Permittee must furnish to the Director, within ninety (90) calendar days any information that 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 must also, upon request, furnish to the Director with (30) days copies of any records required to be kept by this permit.

5. Signatory Requirements

All applications, reports, or information submitted to the Director must contain the following certification statement and be signed as required in paragraphs (a), (b), (c), or (d) below.

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

- a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means either of the following:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - (ii) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship, respectively.
- c) The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a federal, state, or local governmental entity, or their agents.
- d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:

- (i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);
 - (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility of environmental matters for the company; and
 - (iii) the written authorization is submitted to the Director.
- e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Director before or together with any reports to be signed by an authorized representative.

6. Notice of Potential Problems

- a) In the case of any discharge, including, but not limited to, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, a Slug Discharge or Slug Load, that might cause potential problems for the POTW, the User shall immediately telephone and notify the Director of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the User.
- b) Within five (5) days following such discharge, the User shall, unless waived by the Director, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification shall not relieve the User of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW, natural resources, or any other damage to person or property; nor shall such notification relieve the User of any fines, penalties, or other liability which may be imposed pursuant to this ordinance.
- c) A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph (a) of this section. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.

7. Annual Publication

A list of all industrial users that were in significant noncompliance during the 12 previous months must be annually published by the Director in a newspaper of general circulation that provides meaningful public notice within the jurisdiction served by City of Buckeye. Accordingly, the Permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

8. Civil and Criminal Liability

Nothing in this permit may be construed to relieve the Permittee from civil and/or criminal penalties for noncompliance.

9. Civil Penalty

A Permittee who has violated, or continues to violate, any provision of the City of Buckeye's sewer use ordinance, a permit or order, or any other Pretreatment Standard or Requirement will be liable to the City of Buckeye for a maximum civil penalty of **\$25,000 per violation, per day**. For continuing violations, each day may constitute a separate offense. If a monthly or other long-term

average discharge limit is in effect, penalties will accrue for each day during the period of the violation.

The Director may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the City of Buckeye.

In determining the amount of civil liability, the Court will take into account all relevant circumstances, including the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the Permittee's violation, corrective actions by the Permittee, the compliance history of the Permittee, and any other factor as justice requires.

Filing a suit for civil penalties will not be a bar against, or a prerequisite for, taking any other action against the Permittee.

10. Criminal Penalty

A Permittee that willfully or negligently violates any provision of the City of Buckeye's ordinance, permit, or any other Pretreatment Standard or Requirement will, upon conviction, be guilty of a Class I misdemeanor, punishable by a fine of not more than **\$2,500** per violation, per day, or imprisonment for not more than six months, or both.

11. Recovery of Costs Incurred

In addition to civil and criminal liability, the Permittee violating any of the provisions of this permit or Article 16 of the City of Buckeye Ordinance or causing damage to or otherwise inhibiting the City of Buckeye wastewater disposal system will be liable to the Director for any expense, loss, or damage caused by such violation or discharge. The Director may also recover the costs for any cleaning, repair, or replacement work caused by the violation or discharge.

FACT SHEET

[Enter **Issuance Date, Renewal Date, or Amendment Date** of permit]: [*Today's date*]

A. INDUSTRIAL USER INFORMATION

[Name of facility]

[Facility location address]

[City, State, ZIP Code]

[Contact person's name], [Title]

[Telephonenumber]

[Permit number]

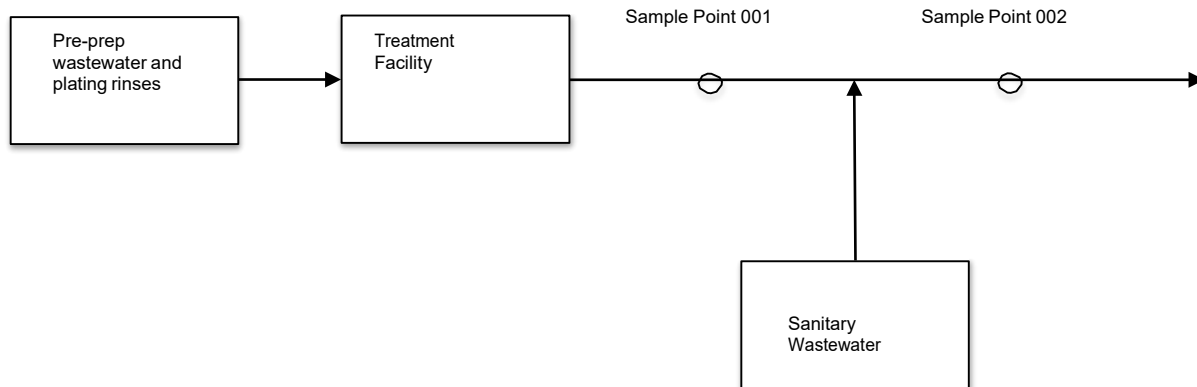
B. DESCRIPTION OF FACILITY OPERATIONS

[Name of facility] is engaged primarily in

[Name of facility] began operations at the facility on [October 15, 1985]. [Name of facility] employs six personnel and operates [5 days a week (Monday through Friday), 10 a.m. to 6:30 p.m.].

C. SAMPLE POINT DESCRIPTION/FACILITY FLOW INFORMATION

INDUSTRIAL WASTEWATER PERMIT	SAMPLE POINT	FLOW PER OPERATIONAL DAY (gpd)		DESCRIPTION
		TOTAL	PROCESS	
[Number]	001	160 gpd	160 gpd	<p>Sample point 001 is at the Parshall flume, which is after the facility's wastewater treatment system. It is in the southeast corner of Building A. The wastewaters discharged through the sampling point include pre-prep wastewater (from cleaning, polishing, and grinding) and plating rinse waters. Sampling point 001 is considered the end-of-process sampling point.</p> <p>Pollutants expected to be present include cadmium, copper, lead,</p>
	002	450 gpd	160 gpd	<p>Sample point 002 is at the manhole in the southwest parking lot. The wastewater discharged through this sampling point includes all the wastewater from sampling point 001, sanitary wastewater from the facility's bathrooms, and wastewater from the facility's break room. Sampling point 002 is downstream from sampling point 001. Sampling point 002 is considered the end-of-pipe sampling point.</p> <p>Pollutants expected to be present include cadmium, copper, lead,</p>
TOTAL		450	160	



D. PROCESS UNIT OPERATION/FLOW INFORMATION

Process wastewater is generated from the mild acid cleaning, polishing, grinding, and electroplating rinses.

The total amount of process wastewater generated from the above operations is 160 gallons per day (gpd), based on 5 operational days per week.

PERMIT NUMBER	SAMPLING POINT	PROCESS UNIT OPERATION CODE	PROCESS DESCRIPTION
[Number]	001	Gold rinse bath	Continuous overflow gold rinse bath (about 90 gpd)
	001	Silver rinse	Single hot tap rinse (about 60 gpd)
	001	Prep cleaning	All prep-cleaning wastewaters from the cleaning, polishing, and grinding are captured in a 10-gallon container. The container is discharged to the wastewater system at the end of each day.

E. DILUTION/AUXILIARY OPERATION/FLOW INFORMATION

No dilution wastestreams combine with process wastewater before or at sampling point 001.

F. FLOW-MEASURING DEVICE

[Name of facility] has installed a parshall flume and an ultrasonic flow transmitter to monitor the wastewater flow discharged to the sewer system.

G. PRETREATMENT UNIT OPERATIONS

All the silver rinse wastewater is first pretreated using silver recovery canister systems (two canisters in series). The effluent from the silver canisters is then discharged into a holding tank (#1 tank) along with the gold rinse wastewater and prep-cleaning wastewaters. All the wastewater in the holding tank is treated in a batch process. The pH is measured, and then soda ash is added manually until the pH is around 10 standard units, at which point a flocculent is added to promote settling. The wastewater is allowed to settle, and then the treated effluent is siphoned into another holding tank (#2 tank). The pH is adjusted by adding hydrochloric acid until it is about 6.5–7.5 standard units. Once the pH is lowered to the desired level, the treated effluent is discharged to the POTW. This treatment is a batch process, and the facility typically discharges two batches per workweek.

The solids from #1 tank are sent to a filter press. The liquid from the filter press is sent back to #1 tank, and the filter cake is sent off-site for disposal or recycling.

H. POLLUTION PREVENTION/BEST MANAGEMENT PRACTICES

[Name of facility] has implemented the following pollution prevention practice(s) and/or best management practice(s):

The facility has installed two silver recovery canisters in series to pretreat silver-laden waste before it is discharged to the wastewater treatment system. The exhausted or used canisters are sent off-site for processing.

In addition, the facility has changed its silver rinse procedures from a continuous overflow rinse to a single-pass rinse that is in operation only when silver plating rinsing is needed.

I. RATIONALE FOR MONITORING LOCATIONS/SAMPLING POINTS

Two sets of concentration-based limits apply to this facility's discharge to the City of Buckeye sewerage system: categorical Pretreatment Standards and the City of Buckeye's local limits. Sampling point 001 is at the end of the regulated process. Therefore, it qualifies as a representative point to determine compliance with applicable federal Pretreatment Standards.

[Name of facility] also has a second sampling point, sampling point 002, which is at the end of the pipe before discharge to the POTW sewer (a different location from sampling point 001). Therefore, sampling point 002 qualifies as a point to determine compliance with the City of Buckeye's local limits.

J. RATIONALE FOR MONITORING FREQUENCY REQUIREMENTS

Rationale for Reduced Monitoring

According to 40 CFR 403.12(e)(3) and the City of Buckeye's sewer use ordinance Section 16-13-4C, the City of Buckeye may reduce [name of facility]'s self-monitoring requirement to once a year (unless required more frequently in the Pretreatment Standard or by the Approval Authority). Reduced monitoring for cadmium, copper, nickel, and silver is not granted because of the basis materials used in the plating process and plating solutions. The Water Resources Director has approved the permittee's request for reduced lead monitoring. Lead is not expected to be present, even though there were instances of minor lead excursions. Such minor lead excursions did not cause the permittee to be in significant noncompliance with the categorical Pretreatment Standards for lead.

[Name of facility]'s categorical wastewater flow does not exceed any of the following: 5,000

gpd, as measured by a continuous effluent flow monitoring device

20.85 pounds per day of biochemical oxygen demand (BOD) and 20.85 pounds per day of total suspended solids (TSS)

0.015 pounds per day of lead

Currently, [name of facility]'s categorical wastewater flow is at 160 gpd, and the organic loading from the facility's categorical wastewater is 0.024 pound per day of BOD (average BOD concentration at sampling point 001 is 15 mg/L) and 0.0168 pound per day of TSS (average TSS concentration at sampling point 001 is 30 mg/L). Furthermore (as shown in the table below, comparing the facility's lead loading with the maximum allowable headworks loading (MAHL) for pollutants with local limits), the facility's loadings is less than 0.01 percent of the MAHLs for any pollutant regulated by the applicable categorical Pretreatment

Standard for which approved local limits were developed. Therefore, the facility is granted reduced monitoring requirements for lead to once per calendar year.

Pollutant name	Facility loading value (lb/day)	Maximum allowable headworks loading (MAHL) (lb/day)	0.01 Percent of MAHL (lb/day)
Lead	0.00053	1.5	0.015

In addition, [name of facility] has not been in significant noncompliance, as defined at 40 CFR 403.8(f)(2)(viii), for any time in the past 2 years. Nor does [name of facility] have daily flow rates, production levels, and pollutant levels that vary so significantly that decreasing the reporting requirement for the facility would result in data that are not representative of conditions occurring during the report period.

Rationale for Any Monitoring Waivers

According to 40 CFR 403.12(e)(2) and the City of Buckeye’s sewer use ordinance Section 16-13-4B, the City of Buckeye may authorize [name of facility] to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if [name of facility] has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without increase in the pollutant due to activities at [name of facility].

[Name of facility] has demonstrated that chromium and cyanide is neither present nor expected to be present by the previous periodic compliance reports (from January 2005 through July 2008), a certification statement from the facility indicating that there are no chromium- or cyanide-laden plating solutions on-site, and copies of raw material order invoices (from January 2005 through July 2008).

Therefore, the City of Buckeye is granting a monitoring waiver for chromium and cyanide in permit [permit number] issued on [Issuance Date]. This monitoring waiver is valid only for the term of this permit. [Name of facility] is required to submit a new request for any monitoring waivers for subsequent permits.

Rationale for TTO Monitoring Waiver

[Name of facility] has an approved Toxic Organic Management Plan (TOMP). Therefore, TTO monitoring is not necessary unless the facility fails to submit its certified TTO statement at a frequency of once every 6 months.

K. RATIONALE FOR REPORTING REQUIREMENTS

TTO Certification Requirements

[Name of facility] has an approved TOMP. Therefore, [name of facility] must submit the TTO certification statement at 40 CFR 433.12 at a frequency of once every 6 months.

Signatory Requirements

According to 40 CFR 403.12(l), periodic compliance reports must be signed by an authorized facility representative. [Name of facility] has designated the following person(s) as authorized facility representative(s).

Reduced Monitoring Reporting Requirements

According to 40 CFR 403.12(e)(3) and the City of Buckeye’s sewer use ordinance Section 16-13-4C, the City of Buckeye has reduced [name of facility]’s self-monitoring requirement for lead to once a year. Therefore, [name of facility] must notify the City of Buckeye if the permittee’s categorical wastewater flow exceeds any of the following conditions:

1. 5,000 gpd, as measured by a continuous effluent flow monitoring device
2. 20.85 pounds per day of BOD or 20.85 pounds of TSS

0.015 pound per day of lead

Monitoring Waiver Reporting Requirements

According to 40 CFR 403.12(e)(2) and the City of Buckeye’s sewer use ordinance Section 16-13-4B, the City of Buckeye has authorized [name of facility] to forego sampling of chromium and cyanide regulated by a categorical Pretreatment Standard. Therefore, [name of facility] must submit, once every 6 months, the certification at 40 CFR 403.12(e)(2)(v).

In addition, if a waived pollutant is found to be present or is expected to be present because of changes that occur in [name of facility]’s operations, [name of facility] must immediately notify the City of Buckeye.

L. RATIONALE FOR SPECIAL CONDITIONS

Not applicable.

M. RATIONALE FOR EFFLUENT LIMITATIONS

[Name of facility] is engaged primarily in specialty precious metal plating (silver and gold), NAICS Code 332813. The core operation(s) performed at the facility are gold and silver electroplating. Ancillary operations include cleaning, grinding, polishing, and tumbling.

New sources are facilities that started operations after the August 31, 1982, publication date of the proposed Metal Finishing Point Source Category. Job shops are facilities that own 50 percent or less of the materials undergoing metal finishing. [Name of facility] started operations October 15, 1985. [Name of facility] owns less than 50 percent of the materials that undergo metal finishing. Therefore, [name of facility] qualifies as a new source job shop metal finisher subject to the federal categorical Pretreatment Standards set at 40 CFR Part 433, Subpart A (Metal Finishing – Pretreatment Standard for New Sources).

According to 40 CFR 403.6(e), the combined wastestream formula (CWF) is applicable where a regulated wastestream combines with one or more unregulated or dilute wastestreams. [Name of facility] has no dilution wastestreams or other regulated wastestreams that combine with the process wastewater. Therefore, use of the CWF is not required.

According to 40 CFR 433.12(a), facilities subject to the Metal Finishing Regulations must analyze for reasonably expected toxic organics or submit a TOMP certification in lieu of monitoring. The list of expected toxic organics is as follows:

Naphthalene
Ethylbenzene

This determination of reasonably expected toxic organics is based on the evaluation of the Water Resources Director and periodic compliance sampling data reported between October 1985 and January 2008.

[Name of facility] has submitted a TOMP for review which the City of Buckeye has approved. The TOMP satisfies the above requirement and [name of facility] will be exempt from monitoring total toxic organics.

According to 40 CFR 433.12(a), facilities subject to the Metal Finishing Regulations must analyze for reasonably expected toxic organics or submit a TOMP certification in lieu of monitoring. On January 15, 2008, [name of facility] submitted a TOMP for the City of Buckeye's approval. Upon review and evaluation, the TOMP was approved on March 1, 2008. Pursuant to this approval, [name of facility] is exempt from toxic organics monitoring. [Name of facility] must submit a TOMP certification statement at least once every 6 months.

N. EXAMPLE CALCULATIONS

Not applicable.

O. SLUG DISCHARGE EVALUATION

The Water Resources Department conducted a slug discharge evaluation of [name of facility] on November 20, 1985; September 3, 1987; July 27, 1989; December 13, 1990; April 6, 1992; March 30, 1994; January 24, 1996; August 15, 1997; August 14, 1999; June 1, 2001; and May 31, 2003.

The Water Resources Director has determined that [name of facility] is required to develop and implement a slug discharge control plan.

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

City of Buckeye

Water Resources

Permit Standard Conditions

July 01, 2021

SECTION I. GENERAL CONDITIONS AND DEFINITIONS

A. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, will not be affected thereby and will continue in full force and effect.

B. Duty to Comply

The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatement.

C. Duty to Mitigate

The Permittee must take all reasonable steps to maintain or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

D. Permit Modification

The Director of the Water Resources Department (Director) may modify the permit for good cause, including but not limited to, the following reasons:

1. To incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements;
2. To address significant alterations or additions to the User's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
3. A change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
4. Information indicating that the permitted discharge poses a threat to the City's POTW, City personnel, or the receiving waters;
5. Violation of any terms or conditions of the individual wastewater discharge permit;
6. Misrepresentations or failure to fully disclose all relevant facts in the wastewater discharge permit application or in any required reporting;
7. Revision of or a grant of variance from Categorical Pretreatment Standards pursuant to 40 CFR 403.13;
8. To correct typographical or other errors in the individual wastewater discharge permit; or
9. To reflect a transfer of the facility ownership or operation to a new owner or operator where requested in accordance with Section 16-12-5 of the Ordinance.

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.

PERMIT STANDARD CONDITIONS

E. Permit Termination

This permit may be terminated for the following reasons:

1. Failure to notify the Director of significant changes to the wastewater before the changed discharge;
2. Failure to provide prior notification to the Director of changed conditions;
3. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
4. Falsifying self-monitoring reports or certification statements;
5. Tampering with monitoring equipment;
6. Refusing to allow timely access to the facility premises and records;
7. Failure to meet effluent limitations;
8. Failure to pay fines;
9. Failure to pay sewer charges;
10. Failure to meet compliance schedules;
11. Failure to complete a wastewater survey or the wastewater discharge permit application;
12. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
13. Violation of any Pretreatment Standard or Requirement including required best management practices, or any terms of the wastewater discharge permit or the sewer use ordinance.

F. Permit Appeals

The Permittee may petition to appeal the terms of this permit within twenty (20) business days of the notice.

This petition must be in writing; failure to submit a timely petition for review will be deemed to be a waiver of the administrative appeal. In its petition, the Permittee must indicate the permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to be placed in the permit.

The effectiveness of this permit will not be stayed pending the appeal. If the Director fails to act within thirty (30) calendar days, a request for reconsideration will be deemed to be denied. Decisions not to reconsider a permit, not to issue a permit, or not to modify a permit will be considered final administrative actions for purposes of judicial review.

The Permittee seeking judicial review of the final administrative permit decision must do so by filing a complaint with the Superior Court for Maricopa County, Arizona.

G. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state, or local laws or regulations.

H. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner or operator with prior approval of the Director and the following items occur:

1. The Permittee must give at least sixty (60) days advance notice to the Director.
2. The notice to the Director must include a written certification by the new owner or operator that does the following:

PERMIT STANDARD CONDITIONS

- a) States that the new owner or operator has no immediate intent to change the facility's operations and processes;
 - b) Identifies the specific date on which the transfer is to occur; and
 - c) Acknowledges full responsibility for complying with the existing permit.
3. The Director approves the permit transfer.

I. Duty to Reapply

In order to continue discharging after the expiration date of this permit, Permittee must apply for permit reissuance by submitting a complete permit application, in accordance with Section 16-12-7, a minimum of ninety (90) days before the expiration of the existing permit.

J. Continuation of Expired Permits

An expired permit will continue to be effective and enforceable until the permit is reissued if

1. The Permittee has submitted a complete permit application at least ninety (90) days prior to the expiration date of the user's existing permit.
2. The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the Permittee.

K. Dilution

A Permittee must not ever increase the use of potable or process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. The Director may impose mass limitations on Permittees who are using dilution to meet applicable Pretreatment Standards or Requirements, or in other cases when the imposition of mass limitations is appropriate.

L. Definitions

1. *Cooling Water*—The clean wastewater discharged from any heat transfer system such as condensation, air conditioning, cooling or refrigeration.
2. *Composite Sample*—
 - a) A combination of individual samples obtained at regular intervals over a specified time period. The volume of each individual sample shall be either proportional to the flow rate during the sample period (flow-proportional composite) or constant and collected at equal time intervals during the composite period (time-proportional composite) as defined in the permit. Aliquots may be collected manually or automatically. Each sample aliquots must be at least 100 ml in volume unless collected using automatic self-purging sampling equipment.
 - b) For volatile pollutants required to be combined for analysis, aliquots must be combined in the laboratory immediately before analysis. The volatile composite samples must be collected by flow proportional means; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.
 - c) If one day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends

PERMIT STANDARD CONDITIONS

3. *Daily Discharge* —

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

4. *Daily Maximum Limit*—The maximum allowable discharge limit of a pollutant during a calendar day as measured in a representative sample. Where daily maximum limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day. *In determining compliance with the daily average effluent limitation, city samples shall not be combined with non-city samples.*

5. *Grab Sample*—An individual sample of at least 100 ml collected over a period not exceeding 15 minutes that is representative of conditions at the time the sample is collected.

6. *Instantaneous Maximum Concentration*—The maximum limit allowable concentration of a pollutant determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.

7. *Interference*—A discharge which, alone or in conjunction with a discharge or discharges from other sources either:

a) Inhibits or disrupts the POTW, its treatment processes, or operations, or its sludge processes, use or disposal.

or

b) Is a cause of a violation of any requirement of any environmentally related permit issued by a government entity (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA), and state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

8. *Monthly Average*—The arithmetic mean of the values for effluent samples collected during a calendar month or specified 30-day period (as opposed to a rolling 30-day window).

9. *Weekly Average*—The arithmetic mean of the values for effluent samples collected over a period of 7 consecutive days.

10. *Bi-Weekly*—Once every other week.

11. *Bi-Monthly*—Once every other month.

12. *Upset*—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, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

PERMIT STANDARD CONDITIONS

13. *Bypass*—The intentional diversion of wastes from any portion of a treatment facility.
14. *Pass Through*—A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW NPDES permit (including an increase in the magnitude or duration of a violation) or which causes or contributes to a violation of an applicable numeric or narrative water quality standard.
15. *Slug Discharge or Slug Load*—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, Local Limits or Permit conditions.

M. Prohibited Discharge Standards

The Permittee must comply with all the General and Specific Prohibited Discharge Standards in Article 16-9, Section 16-9-1 of the City of Buckeye Ordinance. Namely, the industrial user must not discharge:

1. Pollutants which create a fire or explosive hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees F (60 degrees C) using the test methods specified in 40 CFR 261.21, or pollutants which cause an exceedance of ten percent of the lower explosive limit (LEL) at any point within the POTW for any single reading or more than five percent for any two consecutive readings;
2. Wastewater having a pH less than 5.0 or more than 10.5, or otherwise causing corrosive structural damage to the POTW or equipment;
3. Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in Interference but in no case solids greater than on-quarter inch (1/4") in any dimension;
4. Pollutants, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause Interference with the POTW;
5. Wastewater having a temperature greater than 150 degrees F (66 degrees C), or which will inhibit biological activity in the treatment plant resulting in Interference, but in no case wastewater which causes the temperature at the introduction into the treatment plant to exceed 104 degrees F (40 degrees C);
6. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause Interference or Pass Through;
7. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
8. Trucked or hauled pollutants;
9. Noxious or malodorous liquids, gases, solids, or other wastewater which, either singly or by interaction with other wastes, are sufficient to create a public nuisance or a hazard to life, or to prevent entry into the sewers for maintenance or repair;
10. Wastewater which imparts color which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant's effluent, thereby violating the City's NPDES permit;
11. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable State or Federal regulations;

PERMIT STANDARD CONDITIONS

12. Storm Water, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, Noncontact Cooling Water, and unpolluted wastewater, unless specifically authorized by the Director;
13. Sludges, screenings, or other residues from the pretreatment of industrial wastes;
14. Medical Wastes, except as specifically authorized by the Director in an individual wastewater discharge permit or a general permit;
15. Wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail toxicity test;
16. Detergents, surface active agents, or other substances which that might cause excessive foaming in the POTW;
17. Fats, oils, or greases of animal or vegetable in amounts that will cause Interference or Pass Through;
18. Any water or waste which contains any contaminant at a concentration in excess of the limits set below, as measured in a grab sample or composite sample, in units of milligrams per liter (mg/L):

Substance	Limitation mg/L
Benzene	0.035
Chloroform	0.420
Ethylbenzene	0.200
Toluene	0.200
Xylenes	0.200
Polyaromatic hydrocarbons	0.050
Phenols	1.000

19. Any of the following prohibited substances:

- 1) 4,4'—DDE
- 2) 4,4'—DDT
- 3) Aldrin
- 4) BHC-alpha
- 5) BHC-beta
- 6) BHC-gamma (Lindane)
- 7) Chlorinated phenols

N. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the Permittee from its obligations regarding compliance with any and all applicable local, state and federal Pretreatment Standards and requirements including any such standards or requirements that might become effective during the term of this permit.

PERMIT STANDARD CONDITIONS

SECTION II. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

A. Proper Operation and Maintenance

The Permittee must 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 includes the following: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

B. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the Permittee must, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. Such a requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It will not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this permit.

C. Bypass of Treatment Facilities

1. Bypass is the intentional diversion of wastestreams from any portion of a user's treatment facility is defined as and is prohibited unless:
 - a) the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage.
 - b) there were no feasible alternatives, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.
2. The Permittee may allow bypass to occur if it does not cause effluent limitations to be exceeded but only if it is also for essential maintenance to assure efficient operation.
3. Notification of bypass
 - a) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it must submit prior written notice, at least 10 days before the date of the bypass, to the Director.
 - b) Unanticipated bypass. The Permittee must notify the Director within 24 hours from the time it becomes aware of an unanticipated bypass and submit a written notice to the POTW within 5 days. This report must specify:
 - (i) A description of the bypass, and its cause, including its duration with exact dates and times;
 - (ii) Whether the bypass has been corrected and if the bypass has not been corrected, the anticipated time it is expected to continue; and
 - (iii) The steps being taken or to be taken to reduce, eliminate, and prevent a reoccurrence of the bypass.

PERMIT STANDARD CONDITIONS

SECTION III. MONITORING AND RECORDS

A. Representative Sampling

Samples and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points must not be changed without notification to and with the approval of the Director.

B. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices must be selected and used to ensure the accuracy and reliability of measurement of the volume of monitored discharges. The devices must be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The devices selected must be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

C. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit must be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit. The Water Resources Director in accordance with applicable federal regulations may approve alternative procedures.

Tests and analyses of the characteristics of water and wastes must be performed by an environmental laboratory licensed by the State of Arizona pursuant to A.R.S. Section 36-495 et seq.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures identified in Section IIIC of these Class I Permit Standard Conditions, the results of this monitoring must be included in the Permittee's self-monitoring reports.

E. Inspection and Entry

1. The Director shall have the right to enter the premises of any User to determine whether the User is complying with all requirements of this ordinance and any individual wastewater discharge permit or general permit or order issued hereunder. Users shall allow the Director ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.
 - a) Where a User has security measures in force which require proper identification and clearance before entry into its premises, the User shall make necessary arrangements with its security guards so that, upon presentation of a City of Buckeye issued identification badge, the Director shall be permitted to enter without delay for the purposes of performing specific responsibilities.
 - b) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the User at the written or verbal request of the Director and shall not be replaced. The costs of clearing such access shall be borne by the User.
 - c) Unreasonable delays in allowing the Director access to the User's premises shall be a violation of this ordinance.

PERMIT STANDARD CONDITIONS

2. Monitoring Facilities

- a) The Director shall have the right to set up on the User's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the User's operations.
- b) The Director may require the User to install monitoring equipment as necessary. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the User at its own expense. All devices used to measure wastewater flow and quality shall be calibrated at least annually to ensure their accuracy. More frequent calibration may be required by the Director.

3. Digital Images

Digital images may be used to document conditions observed during inspections and investigations and sampling. Digital image means any photograph or video taken using a digital camera or device, including the audio portion of the video. Inspections and sampling are conducted to evaluate a User for the purpose of gathering information to determine if the User is in compliance with applicable environmental requirements. Inspections and sampling may also assess a regulated entity's ability to maintain compliance. Standard Operating Procedures for the taking, use and storage of Digital Images shall be made available to the User.

4. The User has the following rights during any inspection by an authorized employee of the water resources department:

- a) to be presented with City of Buckeye issued photo identification by the inspector;
- b) to be informed of the purpose of the inspection and the legal authority for the inspection;
- c) to know of any inspection fees;
- d) to accompany the inspector during the inspection, unless the inspection is for the purposes of a confidential interview;
- e) to obtain copies of any original documents taken from the premises during the inspection;
- f) to obtain a split or duplicate of any samples taken during the inspection if the split or duplicate of any samples, where appropriate, would not prohibit an analysis from being conducted or render an analysis inconclusive;
- g) to obtain copies of any analysis performed on samples taken during the inspection;
- h) to be informed if any conversation with the inspector is recorded;
- i) to be informed that each person interviewed during the inspection shall be notified that statements made by the person may be included in the inspection report.

F. Retention of Records

- a) The Permittee must retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application.

This period may be extended by request of the Director at any time.

- b) The Permittee must retain and preserve all records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the Director until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

PERMIT STANDARD CONDITIONS

G. Record Contents

Records of sampling and analyses must include the following:

- a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurement;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

H. Falsifying Information

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate is a crime and may result in the imposition of criminal sanction or civil penalties or both.

SECTION IV. ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The Permittee must give notice to the Director 90 calendar days before any facility expansion, production increase, or process modifications that results in new or substantially increased discharges or a change in the nature of the discharge. For purposes of this section any increase or decrease in the volume of discharge or mass of any pollutant discharged that equals or exceeds 20 percent shall constitute a substantial change.

2. Anticipated Noncompliance

The Permittee must give advance notice to the Director of any planned changes in the permitted facility or activity that could result in noncompliance with permit requirements.

3. Automatic Resampling

If the results of the Permittee's wastewater analysis indicate a violation has occurred, the Permittee must notify the Director, within 24 hours of becoming aware of the violation and repeat the sampling and pollutant analysis and submit, in writing, the results of that repeat analysis within 30 days after becoming aware of the violation.

4. Duty to Provide Information

The Permittee must furnish to the Director, within ninety (90) calendar days any information that 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 must also, upon request, furnish to the Director with (30) days copies of any records required to be kept by this permit.

5. Signatory Requirements

All applications, reports, or information submitted to the Director must contain the following certification statement and be signed as required in paragraphs (a), (b), (c), or (d) below.

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

PERMIT STANDARD CONDITIONS

significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

- a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means either of the following:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - (ii) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship, respectively.
- c) The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a federal, state, or local governmental entity, or their agents.
- d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:
 - (i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);
 - (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility of environmental matters for the company; and
 - (iii) the written authorization is submitted to the Director.
- e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Director before or together with any reports to be signed by an authorized representative.

6. Notice of Potential Problems

- a) In the case of any discharge, including, but not limited to, accidental discharges, discharges of a nonroutine, episodic nature, a noncustomary batch discharge, a Slug Discharge or Slug Load, that might cause potential problems for the POTW, the User shall immediately telephone and notify the Director of the incident. This notification shall include the location of the discharge, type of waste, concentration and volume, if known, and corrective actions taken by the User.
- b) Within five (5) days following such discharge, the User shall, unless waived by the Director, submit a detailed written report describing the cause(s) of the discharge and the measures to be taken by the User to prevent similar future occurrences. Such notification shall not relieve the User of any expense, loss, damage, or other liability which might be incurred as a result of damage to the POTW,

PERMIT STANDARD CONDITIONS

natural resources, or any other damage to person or property; nor shall such notification relieve the User of any fines, penalties, or other liability which may be imposed pursuant to this ordinance.

- c) A notice shall be permanently posted on the User's bulletin board or other prominent place advising employees who to call in the event of a discharge described in paragraph (a) of this section. Employers shall ensure that all employees, who could cause such a discharge to occur, are advised of the emergency notification procedure.

7. Annual Publication

A list of all industrial users that were in significant noncompliance during the 12 previous months must be annually published by the Director in a newspaper of general circulation that provides meaningful public notice within the jurisdiction served by City of Buckeye. Accordingly, the Permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

8. Civil and Criminal Liability

Nothing in this permit may be construed to relieve the Permittee from civil and/or criminal penalties for noncompliance.

9. Civil Penalty

A Permittee who has violated, or continues to violate, any provision of the City of Buckeye's sewer use ordinance, a permit or order, or any other Pretreatment Standard or Requirement will be liable to the City of Buckeye for a maximum civil penalty of **\$25,000 per violation, per day**. For continuing violations, each day may constitute a separate offense. If a monthly or other long-term average discharge limit is in effect, penalties will accrue for each day during the period of the violation.

The Director may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by the City of Buckeye.

In determining the amount of civil liability, the Court will take into account all relevant circumstances, including the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the Permittee's violation, corrective actions by the Permittee, the compliance history of the Permittee, and any other factor as justice requires.

Filing a suit for civil penalties will not be a bar against, or a prerequisite for, taking any other action against the Permittee.

10. Criminal Penalty

A Permittee that willfully or negligently violates any provision of the City of Buckeye's ordinance, permit, or any other Pretreatment Standard or Requirement will, upon conviction, be guilty of a Class I misdemeanor, punishable by a fine of not more than **\$2,500** per violation, per day, or imprisonment for not more than six months, or both.

11. Recovery of Costs Incurred

In addition to civil and criminal liability, the Permittee violating any of the provisions of this permit or Article 16 of the City of Buckeye Ordinance or causing damage to or otherwise inhibiting the City of Buckeye wastewater disposal system will be liable to the Director for any expense, loss, or damage caused by such violation or discharge. The Director may also recover the costs for any cleaning, repair, or replacement work caused by the violation or discharge.



City of Buckeye

ONE-TIME COMPLIANCE REPORT FOR DENTAL DISCHARGERS

to Comply with 40 CFR 441.50

Effluent Limitations Guidelines and Standards for the Dental Office Category

Instructions:

Dental facilities must submit in to the City of Buckeye Water Resources Department a **one-time compliance report** as required by the Effluent Limitations Guidelines and Standards for the Dental Office Category (“Dental Amalgam Rule”) pursuant 40 CFR Part 441.

Please return this completed form back to the city within **30 days** upon receipt to apennell@buckeyeaz.gov. There are five (5) sections to complete. Please note, some dental facilities are not required to submit a one-time compliance report. See [the applicability section \(§ 441.10\)](#) to determine if your facility is required to submit a one-time compliance report. Should you have any questions, please call (623)349-6115.

General Information

Name of Facility			
Physical Address of Dental Facility			
City:		State:	Zip:
Mailing Address			
City:		State:	Zip:
Facility Contact			
Phone:		Email:	
Names of Owner(s):			
Names of Operator(s) if different from Owner(s):			

Applicability: Please Select One of the Following

<input type="checkbox"/>	This facility is a dental discharger subject to this rule (40 CFR Part 441) and it places or removes dental amalgam. <i>Complete sections A, B, C, D, and E</i>
<input type="checkbox"/>	This facility is a dental discharger subject to this rule and (1) it does not place dental amalgam , and (2) it does not remove amalgam except in limited emergency or unplanned, unanticipated circumstances. <i>Complete section E only</i>
(Also, select if applicable) Transfer of Ownership (§ 441.50(a)(4))	
<input type="checkbox"/>	This facility is a dental discharger subject to this rule (40 CFR Part 441), and it has previously submitted a one-time compliance report. This facility is submitting a new One Time Compliance Report because of a transfer of ownership as required by § 441.50(a)(4) .

SECTION A

Description of Facility

Total number of chairs:		
Total number of chairs at which amalgam may be present in the resulting wastewater (i.e., chairs where amalgam may be placed or removed):		
Description of any amalgam separator(s) or equivalent device(s) currently operated:		
YES <input type="checkbox"/>	NO <input type="checkbox"/>	The facility discharged amalgam process wastewater prior to July 14th, 2017 under any ownership.

SECTION B

Description of Amalgam Separator or Equivalent Device

<input type="checkbox"/>	The dental facility has installed one or more ISO 11143 (or ANSI/ADA 108-2009) compliant amalgam separators (or equivalent devices) that captures all amalgam containing waste at the following number of chairs at which amalgam placement or removal may occur:	<i>Chairs:</i>	
<input type="checkbox"/>	The dental facility installed prior to June 14, 2017 one or more existing amalgam separators that do not meet the requirements of § 441.30(a)(1)(i) and (ii) at the following number of chairs at which amalgam placement or removal may occur: I understand that such separators must be replaced with one or more amalgam separators (or equivalent devices) that meet the requirements of § 441.30(a)(1) or § 441.30(a)(2) , after their useful life has ended, and no later than June 14, 2027, whichever is sooner.	<i>Chairs:</i>	
Make	Model	Year of installation	
<input type="checkbox"/>	My facility operates an equivalent device.		
Make	Model	Year of installation	Average removal efficiency of equivalent device, as determined per § 441.30(a)(2)i- iii.

SECTION C

Design, Operation and Maintenance of Amalgam Separator/Equivalent Device

<input type="checkbox"/>	YES	I certify that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements in § 441.30 or § 441.40 .	
A third-party service provider is under contract with this facility to ensure proper operation and maintenance in accordance with § 441.30 or § 441.40 .			
<input type="checkbox"/>	YES	Name of third-party service provider (e.g. Company Name) that maintains the amalgam separator or equivalent device (if applicable):	
<input type="checkbox"/>	NO	If none, provide a description of the practices employed by the facility to ensure proper operation and maintenance in accordance with § 441.30 or § 441.40 .	
<i>Describe practices:</i>			

SECTION D

Best Management Practices (BMP) Certifications

<input type="checkbox"/>	<p>The above named dental discharger is implementing the following BMPs as specified in § 441.30(b) or § 441.40 and will continue to do so:</p> <ul style="list-style-type: none"> • Waste amalgam including, but not limited to, dental amalgam from chair-side traps, screens, vacuum pump filters, dental tools, cuspidors, or collection devices, must not be discharged to a publicly owned treatment works (e.g., municipal sewage system). • Dental unit water lines, chair-side traps, and vacuum lines that discharge amalgam process wastewater to a publicly owned treatment works (e.g., municipal sewage system) must not be cleaned with oxidizing or acidic cleaners, including but not limited to bleach, chlorine, iodine and peroxide that have a pH lower than 6 or greater than 8 (i.e. cleaners that may increase the dissolution of mercury).
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SECTION E

Certification Statement

<p>Per § 441.50(a)(2), the One-Time Compliance Report must be signed and certified by a responsible corporate officer, a general partner or proprietor if the dental facility is a partnership or sole proprietorship, or a duly authorized representative in accordance with the requirements of § 403.12(l).</p>			
<p><i>"I am a responsible corporate officer, a general partner or proprietor (if the facility is a partnership or sole proprietorship), or a duly authorized representative in accordance with the requirements of § 403.12(l) of the above named dental facility, and certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."</i></p>			
<p>Authorized Representative Name (<i>print name</i>):</p>			
<p>Phone:</p>		<p>Email:</p>	
<p><i>Authorized Representative Signature</i></p>		<p><i>Date</i></p>	

Retention Period; per [§ 441.50\(a\)\(5\)](#)

As long as a Dental facility subject to this part is in operation, or until ownership is transferred, the Dental facility or an agent or representative of the dental facility must maintain this One Time Compliance Report and make it available for inspection in either physical or electronic form.

City of Buckeye
 Water Resources Department
 Environmental Compliance
 Pretreatment Notice of Inspection Rights

Instructions to the inspector upon arrival for survey and/or inspection:

1. Present photo identification.
2. State purpose and legal authority for conducting survey and/or inspection. Buckeye City Code Section 16-14-1 authorizes right of entry for the purpose of determining compliance with Chapter 16.
3. Invite the facility representative to accompany you on the inspection unless it is for the purposes of a confidential interview.
4. Obtain the signature of the facility representative on the bottom of this form. If they refuse to initial or sign or are not present, note that below the signature line. **A lawful inspection may proceed if signature is refused or if there is no facility representative on site.**
5. Both the representative and inspector must initial the bottom of this side of the form.
6. During the inspection: (1) if you record any conversation, inform the person being recorded of that fact; (2) inform anyone you interview that their statements may be included in the inspection report and (3) when photo documentation is necessary state what is being photographed and ask for acknowledgement.

.....
To the facility representative:

I, the undersigned, have read and understand the following rights as they relate to the inspection:

1. I have the right to be presented with photo identification by the inspector.
2. I have the right to be informed of the purpose of the inspection and the legal authority for the inspection.
3. I have the right to know of any inspection fees. There is no fee for this inspection.
4. I have the right to accompany the inspector during the inspection, unless the inspection is for the purposes of a confidential interview.
5. I have the right to obtain copies of any original documents taken from the premises during the inspection.
6. I have the right to obtain a split or duplicate of any samples taken during the inspection if the split or duplicate of any samples, where appropriate, would not prohibit an analysis from being conducted or render an analysis inconclusive.
7. I have the right to obtain copies of any analysis performed on samples taken during the inspection.
8. I have the right to be informed if any conversation with the inspector is recorded.
9. I have the right to be informed that each person interviewed during the inspection shall be notified that statements made by the person may be included in the inspection report.

I understand that if any final decision is made by Buckeye as a result of this inspection, I will have appeal rights. I also understand that questions about this inspection and any appeal rights may be directed to the Water Resources Environmental Compliance Officer's Supervisor at (623) 349-6103.

By signing this form, I acknowledge that I have read this document and have been notified of my inspection and due process rights. Note: If you decline to sign this form, a lawful inspection of the premises may proceed.

Notice of Inspection Rights	
I acknowledge I have read this form and have been informed of my inspection rights.	
Signatures	
Facility Representative	City of Buckeye Representative
Print Name: _____	Print Name: _____
Signature: _____	Signature: _____
Date: _____	Date: _____

I opt to obtain a copy of this Notice by:

photocopying this completed form

having this form e-mailed to me at: _____ **Date:** _____

City of Buckeye Pretreatment Inspection Check List & Field Notes

Section A - Permit Summary

Company: _____

Service Address: _____

Categorical User: Yes _____ No _____ SIU: Yes _____ No _____ User: _____

Permit Number: _____ Renewal Date: _____

NAICS Code(s): _____

Section B – Activity

Inspection Type/Purpose: Scheduled _____ Unannounced _____ Complaint _____
Spill _____ Other _____

Last Inspection Date: _____ Last Sample Date: _____

Last Enforcement Date: _____ Reason: _____

Section C – Description of Operations

Days of Operation: _____ Hours Operating: _____

Shift Hours if applicable: _____

Primary Contact: _____ Phone #: _____

E-mail: _____

Secondary Contact: _____ Phone #: _____

E-mail: _____

Areas Inspection: Process Operations _____ Pretreatment Area _____ Chemical Storage _____
Haz. Waste Storage _____ Maintenance Area _____ Wash Out Area _____
Interior Warehouse _____ Exterior Storage _____ Loading Area/docks _____

Section D – Description of Discharges

Observed Discharges: Non-contact cooling _____ RO Reject _____ Di Production _____
Process Production _____ Rinses _____ Domestic like _____
Swamp Coolers _____ Other _____

Pretreatment System: Batch Treatment _____ Flow Thru _____ Treat in Place _____
pH Adjustment _____ Intercepto _____ Traps _____
Clarifiers _____ Surge _____ Other _____
Equipment Change? _____ New? _____ Replaced? _____
SOP's Available _____ Reviewed _____

Comments: _____

City of Buckeye Pretreatment Inspection Check List & Field Notes

Monitoring Records	Reviewed?	Yes	No	
	<u>pH data</u>	_____	_____	Timeframe: _____
	pH calibration log:	_____	_____	
	pH < 5 S.U. at any time?	_____	_____	
	pH > 12 S.U.?	_____	_____	
	Comments:			

Flow data

Primary Device type: _____	Secondary Device: _____
Was the following reviewed:	Yes No
Daily flow data?	_____
Maximum Daily flow documented?	_____
Average Daily flow documented?	_____
Signs of Surge, discharge above primary?	_____
Last Calibration date:	Method: _____

Permit Required Sampling

	Timeframe: _____
Self-Monitoring Records reviewed?	_____
IU sampling as required by permit?	_____
IU Parameter violations?	_____
Results properly submitted to City?	_____

Section E – Accidental Spill Plan Review and Slug Load Determination

Assess each area to determine if berms, containment etc., adequate to contain spill?

	Good	Fair	Poor	N/A
Process Area:	_____	_____	_____	_____
Chemical Storage:	_____	_____	_____	_____
Hazardous Waste Stor.	_____	_____	_____	_____
Warehouse Area:	_____	_____	_____	_____
Overall status?	_____	_____	_____	_____

Slug Load Control Plan (SLCP)

	Yes	No	N/A
Potential to Slug load sewer?	_____	_____	_____
If yes is a SLCP in place?	_____	_____	_____
Is the SLCP adequate?	_____	_____	_____

City of Buckeye Pretreatment Inspection Check List & Field Notes

If SLCP is not adequate provide a brief explanation _____

A revised SLCP is required within 30 days of this inspection date: IU Rep initials _____ Insp Initials _____

Section F – Stormwater

Flow that would leave the property would enter?

Waters of US _____ MS4 Retention _____ Detention _____ Drywell _____ Sanitary _____

	Yes:	No:
Are activities identified in 40 CFR 122.26(b)(14) (MSGP) being conducted?	_____	_____
Are activities identified in 40 CFR 122.26(d)(2)(iv)(C)(SARA)being conducted?	_____	_____
Are there signs of discharge into the MS4?	_____	_____
Are there signs of non-stormwater discharge into retention/detention?	_____	_____
Has the facility filed a Notice of Intent for coverage under the ADEQ MSGP?	_____	_____
NOI Submittal Date: _____ Auth. Date: _____ Auth. No.: _____		
Has a No Exposure Certificate been filed with ADEQ?	_____	_____
NEC Submittal Date: _____ NEC Receipt Date: _____ Cert. No.: _____		
Are refuse containers located onsite?	_____	_____
Is the refuse area clean and free of debris?	_____	_____
Are there signs of leakage from refuse containers?	_____	_____
Does the facility have above ground storage tanks?	_____	_____
If yes, are the storage tanks properly maintained?	_____	_____
Are the tanks secondarily contained?	_____	_____
If there is containment is it being properly maintained.	_____	_____

Comments: _____

City of Buckeye Pretreatment Compliance Inspection Report

TO: XYZ Manufacturing File

FROM: First, Last, Environmental Compliance Officer

DATE: [insert date]

SUBJECT: Pretreatment Facility Inspection

On [insert date], an inspection of XYZ Manufacturing was conducted. The following areas were reviewed and inspected:

Site Description

XYZ Manufacturing is located at 1850 West Alignment Blvd in Buckeye Arizona. XYZ is a Significant Industrial User, based on [describe the rationale used in determining the classification of this facility as an SIU]. XYZ was issued a City of Buckeye Class I Wastewater Discharge Permit effective [date] and expiring on [date].

A – Permit Summary

B – Inspection Activity completed

C – Description of Operations

D – Description of Discharges Observed

E – Accidental Spill Plan Review and Slug Load Control Plan Determination

F – Stormwater

G – Facility Evaluation

H – Corrective Actions Identified and Required

An inspection check list and field notes, as well as photographic documentation should be collected. After completing the inspection, using the check sheet and field notes, provide a written narrative of the observations for sections A through H. Include types of equipment used in processing, used in treatment of waste if any, flow equipment etc., used in the process as well as any type of monitoring being conducted.

Region 4
U.S. Environmental Protection Agency
Science and Ecosystem Support Division
Athens, Georgia

OPERATING PROCEDURE

Title: Wastewater Sampling

Effective Date: February 13, 2017

Number: SESDPROC-306-R4

Authors

Name: Bill Simpson
Title: Physical Scientist

Signature:  Date: 2-7-17

Approvals

Name: John Deatrick
Title: Chief, Field Services Branch

Signature:  Date: 2/7/17

Name: Hunter Johnson
Title: Field Quality Manager, Science and Ecosystem Support Division

Signature:  Date: 2/7/17

Revision History

The top row of this table shows the most recent changes to this controlled document. For previous revision history information, archived versions of this document are maintained by the SESD Document Control Coordinator on the SESD local area network (LAN).

History	Effective Date
<p>SESDPROC-306-R4, Wastewater Sampling, replaces SESDPROC-306-R3</p> <p>General: Corrected any typographical, grammatical and/or editorial errors.</p> <p>Title Page: Changed Enforcement and Investigations Branch to the Field Services Branch and changed the Chief from Danny France to John Deatrck. Changed Field Quality Manager from Bobby Lewis to Hunter Johnson.</p> <p>Section 1.5.1: Added language to increase awareness of pathogen and exposure pathways.</p> <p>Section 5.1.2: Added language to discuss the collection of an equipment rinse blank from an automatic sampler.</p> <p>Section 9.0: Added language concerning the collection of a GPS data point at each sample location.</p>	February 13, 2017
<p>SESDPROC-306-R3, Wastewater Sampling, replaces SESDPROC-306-R2</p>	February 28, 2013
<p>SESDPROC-306-R2, Wastewater Sampling, replaces SESDPROC-306-R1</p>	February 19, 2010
<p>SESDPROC-306-R1, Wastewater Sampling, replaces SESDPROC-306-R0</p>	November 1, 2007
<p>SESDPROC-306-R0, Wastewater Sampling, Original Issue</p>	February 05, 2007

TABLE OF CONTENTS

1	General Information.....	4
1.1	<i>Purpose</i>	4
1.2	<i>Scope/Application.....</i>	4
1.3	<i>Documentation/Verification</i>	4
1.4	<i>References</i>	4
1.5	<i>General Precautions.....</i>	6
1.5.1	<i>Safety</i>	6
1.5.2	<i>Procedural Precautions</i>	7
2	Special Sampling Considerations.....	8
2.1	<i>Special Precautions for Wastewater Sampling.....</i>	8
2.2	<i>Sample Handling and Preservation Requirements</i>	8
2.3	<i>Quality Control.....</i>	9
2.4	<i>Records</i>	9
3	General Considerations	10
3.1	<i>Wastewater Sampling Design</i>	10
3.2	<i>Sampling Techniques and Equipment.....</i>	10
3.3	<i>Site Selection for Wastewater Sampling.....</i>	11
3.3.1	<i>Influent.....</i>	11
3.3.2	<i>Effluent</i>	12
3.3.3	<i>Pond and Lagoon Sampling</i>	12
4	Sample Types.....	13
4.1	<i>General</i>	13
4.2	<i>Grab Samples</i>	13
4.3	<i>Composite Samples.....</i>	13
5	Automatic Samplers.....	15
5.1	<i>General</i>	15
5.1.1	<i>Conventional Sampling (Inorganic Parameters)</i>	16
5.1.2	<i>Metals</i>	16
5.1.3	<i>Extractable Organic Compounds, Pesticides and PCBs</i>	17
5.2	<i>Automatic Sampler Security</i>	17
5.3	<i>Automatic Sampler Maintenance, Calibration and Quality Control.....</i>	17
6	Manual Sampling	19
7	Special Sample Collection Procedures	20
7.1	<i>Organic Compounds and Metals</i>	20
7.2	<i>Bacteriological.....</i>	20
7.3	<i>Immiscible Liquids/Oil and Grease</i>	20
7.4	<i>Volatile Organic Compounds.....</i>	21
8	Special Process Control Samples and Tests.....	23
9	Supplementary Data Collection.....	24

1 General Information

1.1 Purpose

The purpose of this procedure is to document both general and specific procedures, methods and considerations to be used and observed when collecting wastewater samples for field screening or laboratory analysis.

1.2 Scope/Application

This document describes both general and specific methods to be used by field personnel when collecting and handling wastewater samples in the field. On the occasion that SESD field personnel determine that any of the procedures described in this section are inappropriate, inadequate or impractical and that another procedure must be used to obtain a wastewater sample, the variant procedure will be documented in the field log book, along with a description of the circumstances requiring its use. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

1.3 Documentation/Verification

This procedure was prepared by persons deemed technically competent by SESD management, based on their knowledge, skills and abilities. The procedure has been tested in practice and reviewed in print by a subject matter expert. The official copy of this procedure resides on the SESD Local Area Network (LAN). The Document Control Coordinator is responsible for ensuring the most recent version of the procedure is placed on the SESD LAN and for maintaining records of review conducted prior to its issuance.

1.4 References

California State University – Sacramento. Operation of Wastewater Treatment Plants - Volumes I, II, III. Sacramento, California.

International Air Transport Authority (IATA). Dangerous Goods Regulations, Most Recent Version

Metcalf and Eddy, Inc. 2003. Wastewater Engineering: Treatment, Disposal, and Reuse. 4th Edition, McGraw-Hill Book Co., New York, NY

SESD Operating Procedure for Control of Records, SESDPROC-002, Most Recent Version

SESD Operating Procedure for Equipment Inventory and Management (SESDPROC-104, Most Recent Version)

SESD Operating Procedure for Field Equipment Cleaning and Decontamination, SESDPROC-205, Most Recent Version

SESD Operating Procedure for Field Equipment Cleaning and Decontamination at the FEC, SESDPROC-206, Most Recent Version

SESD Operating Procedure for Field pH Measurement, SESDPROC-100, Most Recent Version

SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011, Most Recent Version

SESD Operating Procedure for Field Specific Conductance Measurement, SESDPROC-101, Most Recent Version

SESD Operating Procedure for Field Temperature Measurement, SESDPROC-102, Most Recent Version

SESD Operating Procedure for Logbooks, SESDPROC-010, Most Recent Version

SESD Operating Procedure for Packaging, Marking, Labeling and Shipping of Environmental and Waste Samples, SESDPROC-209, Most Recent Version

SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005, Most Recent Version

SESD Operating Procedure for Surface Water Sampling (SESDPROC-201), Most Recent Version

SESD Operating Procedure for Wastewater Flow Measurement, SESDPROC-109, Most Recent Version

Title 40 Code of Federal Regulations (CFR), Part 136.3, Table II, Most Recent Version

US EPA. 1977. Process Control Manual: Aerobic Biological Treatment Facilities MD-14. EPA 430/09-77-006, Office of Water, Washington, D.C.

US EPA. 2000. Activated Sludge Process Control Testing. ESD, Water Compliance Unit, Athens, GA

US EPA. 2001. Environmental Investigations Standard Operating Procedures and Quality Assurance Manual. Region 4 Science and Ecosystem Support Division (SESD), Athens, GA

US EPA. 2004. National Pollutant Discharge Elimination System (NPDES) Compliance Inspection Manual

US EPA. Analytical Support Branch Laboratory Operations and Quality Assurance Manual. Region 4 SESD, Athens, GA, Most Recent Version

US EPA. April 13, 1981. Final Regulation Package for Compliance with DOT Regulations in the Shipment of Environmental Laboratory Samples. Memo from David Weitzman, Work Group Chairman, Office of Occupational Health and Safety (PM-273)

US EPA. Safety, Health and Environmental Management Program Procedures and Policy Manual. Region 4 SESD, Athens, GA, Most Recent Version

Water Environment Federation and ASCE. 1998. Design of Municipal Wastewater Treatment Plants. Manual of Practice No. 8, Fourth Edition.

Water Environment Federation. 1996. Operation of Municipal Wastewater Treatment Plants. Manual of Practice No.11, Fifth Edition

1.5 General Precautions

1.5.1 Safety

Proper safety precautions must be observed when collecting wastewater samples. Wastewater can contain microbiological disease agents (pathogens), chemical poisons (toxins), and other biological, chemical, and physical components that may cause human health problems or disturb natural aquatic ecosystems. Waterborne pathogens in the sewer collection system are different, and potentially more antibiotic resistant, than decades ago. Wastewater workers can be exposed to wastewater pathogens and toxins through several pathways:

- respiratory exposure -face shield and masks protect from droplets and aerosols
- dermal exposure -gloves and hand hygiene protect from direct contact
- surface (fomite) exposure - barriers between skin and surfaces protect from wastewater and plant equipment contact

Refer to Centers for Disease Control and Prevention (CDC) Guidance for Controlling Potential Risks to Workers exposed to Class B Biosolids. DHHS (NIOSH) Publication Number 2002-149. Refer to the SESD Safety, Health and Environmental Management Program Procedures and Policy Manual and any pertinent site-specific Health and Safety Plans (HASP) for guidelines on safety precautions. These guidelines, however, should only be used to complement the

judgment of an experienced professional. Address chemicals that pose specific toxicity or safety concerns and follow any other relevant requirements, as appropriate.

1.5.2 Procedural Precautions

The following precautions should be considered when collecting wastewater samples.

- Special care must be taken not to contaminate samples. This includes storing samples in a secure location to preclude conditions which could alter the properties of the sample. Samples shall be custody sealed during long-term storage or shipment.
- Collected samples are in the custody of the sampler or sample custodian until the samples are relinquished to another party.
- If samples are transported by the sampler, they will remain under his/her custody or be secured until they are relinquished.
- Shipped samples shall conform to all U.S. Department of Transportation (DOT) and/or International Air Transportation Association (IATA) hazardous materials shipping requirements.
- Documentation of field sampling is done in a bound logbook.
- Chain-of-custody documents shall be filled out and remain with the samples until custody is relinquished.
- All shipping documents, such as air bills, bills of lading, etc., shall be retained by the project leader and stored in a secure place.

2 Special Sampling Considerations

2.1 Special Precautions for Wastewater Sampling

- A clean pair of new, non-powdered, disposable gloves will be worn each time a different location is sampled and the gloves should be donned immediately prior to sampling. The gloves should not come in contact with the media being sampled and should be changed any time during sample collection when their cleanliness is compromised.
- Sample containers for samples suspected of containing high concentrations of contaminants shall be stored separately.
- Sample collection activities shall proceed progressively from the least suspected contaminated area to the most suspected contaminated area. Samples of waste or highly contaminated media must not be placed in the same ice chest as environmental (i.e., containing low contaminant levels) or background/control samples.
- If possible, one member of the field sampling team should take all the notes and photographs, fill out tags, etc., while the other members collect the samples.
- Field investigators must use new, verified certified-clean disposable or non-disposable equipment cleaned according to procedures contained in SESD Operating Procedure for Field Equipment Cleaning and Decontamination (SESDPROC-205) for collection of samples for trace metals or organic compound analyses.

2.2 Sample Handling and Preservation Requirements

1. All sample collection and preservation procedures will comply with the requirements outlined in *40 CFR, Part 136.3 (e)*, Table II, and Figure 3-1 of the US EPA Region 4 Analytical Support Branch Laboratory Operations and Quality Assurance Manual (ASB LOQAM), Most Recent Version.
2. Wastewater samples will typically be collected either by directly filling the sample container or by using an automatic sampler or other device.
3. During sample collection, if transferring the sample from a collection device, make sure that the device does not come in contact with the sample containers.
4. Place the sample into appropriate, labeled containers. Samples collected for VOC analysis must not have any headspace (see Section 7.4, Volatile Organic Compounds). All other sample containers must be filled with an allowance for ullage.
5. All samples requiring preservation must be preserved as soon as practically possible, ideally immediately at the time of sample collection. If preserved VOC

vials are used, these will be preserved with concentrated hydrochloric acid by Analytical Support Branch (ASB) personnel prior to departure for the field investigation. For all other chemical preservatives, SESD will use the appropriate chemical preservative generally stored in an individual single-use vial as described in the SESD Operating Procedure for Field Sampling Quality Control (SESDPROC-011). The adequacy of sample preservation will be checked after the addition of the preservative for all samples, except for the samples collected for VOC analysis. If it is determined that a sample is not adequately preserved, additional preservative should be added to achieve adequate preservation.

6. All samples preserved using a pH adjustment (except VOCs) must be checked, using pH strips, to ensure that they were adequately preserved. This is done by pouring a small volume of sample over the strip. Do not place the strip in the sample. Samples requiring reduced temperature storage should be placed on ice immediately.

2.3 Quality Control

Equipment blanks should be collected if equipment is field cleaned and re-used on-site or if necessary to document that low-level contaminants were not introduced by the sampling equipment.

2.4 Records

Information generated or obtained by SESD personnel will be organized and accounted for in accordance with SESD records management procedures found in the SESD Operating Procedure for Control of Records (SESDPROC-002). Field notes, recorded in a bound field logbook, will be generated, as well as chain-of-custody documentation according to the procedures found in SESD Operating Procedure for Logbooks (SESDPROC-010) and SESD Operating Procedure for Sample and Evidence Management (SESDPROC-005).

3 General Considerations

3.1 Wastewater Sampling Design

Wastewater sampling studies focus primarily on collecting wastewater samples of the influent or effluent at domestic and non-domestic facilities. Sampling activities are usually conducted for National Pollutant Discharge Elimination System (NPDES) compliance, compliance assistance, civil and criminal investigations, and water quality studies. Collection of wastewater samples is necessary in order to obtain reliable data that can support compliance or enforcement activities.

The main considerations in developing a wastewater sampling strategy are:

- Type of study (Compliance Sampling Inspection (CSI), Diagnostic Evaluation (DE), etc.).
- Regulated or target pollutants in the wastewater stream to be sampled.
- Selection of the projected sampling locations to satisfy the study objectives.
- Quality control criteria of the parameters to be sampled (oil and grease samples need to be collected as grab samples, trip blanks are taken into the field for the collection of samples for volatile organic compound analyses, etc.).

Complexity of the sampling program will vary with a number of factors. Some primary factors are:

- The number of sampling stations to be monitored. This will be dependent on NPDES permit requirements and the type of study; for example, Toxic CSIs and DEs require a greater amount of sampling stations than a routine CSI.
- Special handling requirements of the target pollutants (sampling equipment for trace organic compounds require special cleaning procedures, etc.).
- Laboratory conducting the analyses (use of a contract laboratory may require shipping from the field, etc.).
- Accessibility to sampling stations.
- Process and operation criteria of the source generator (e.g., batch operation versus continuous discharge).
- Coordination of participating organizations in the study (e.g., state assistance with the sample collection).
- The length of time for sampling activities will dictate logistical considerations (e.g., shipment of samples, additional supplies, etc.).

3.2 Sampling Techniques and Equipment

The wastewater sampling techniques and equipment described in Sections 4 through 9 of this document are designed to minimize effects on the chemical and physical integrity of

the sample. If the procedures in these sections are followed, a representative sample of the wastewater should be obtained.

The variety of conditions at different sampling locations requires that considerable judgment be exercised regarding the methodologies and procedures for the collection of representative samples of wastewater. Each sampling location warrants attention commensurate with its complexity. There are, however, basic rules and precautions generally applicable to sample collection. Acceptable procedures are generally those outlined in the *NPDES Compliance Inspection Manual*. Some important considerations for obtaining a representative wastewater sample include:

- The sample should be collected where the wastewater is well mixed. Therefore, the sample should be collected near the center of the flow channel, at approximately 40 to 60 percent of the water depth, where the turbulence is at a maximum and the possibility of solids settling is minimized. Skimming the water surface or dragging the channel bottom should be avoided. However, allowances should be made for fluctuations in water depth due to flow variations.
- In sampling from wide conduits, cross-sectional sampling should be considered. Rhodamine WT dye may be used as an aid in determining the most representative sampling locations.
- If manual compositing is employed, the individual sample portions must be thoroughly mixed before pouring the individual aliquots into the composite container. For manual composite sampling, the individual sample aliquots should be preserved at the time of sample collection.

3.3 Site Selection for Wastewater Sampling

Where applicable, wastewater samples should be collected at the location specified in the NPDES permit (if the source has a permit). In some instances the sampling location specified in the permit, or the location chosen by the permittee, may not be adequate for the collection of a representative wastewater sample. In such instances, the investigator is not limited by permit specifications and may collect a sample at a more representative location. When a conflict exists between the permittee and the regulatory agency regarding the most representative sampling location, both sites should be sampled, and the reason for the conflict should be noted in the field notes and the inspection or study report. Recommendations and reasons for a change in sampling locations should be given to the appropriate permitting authority.

3.3.1 Influent

Influent wastewaters are preferably sampled at locations of highly turbulent flow in order to ensure good mixing; however, in many instances the most desirable location is not accessible. Preferable influent wastewater sampling locations include: 1) the upflow siphon following a comminutor (in absence of grit

chamber); 2) the upflow distribution box following pumping from main plant wet well; 3) aerated grit chamber; 4) flume throat; 5) pump wet well when the pump is operating; or 6) downstream of preliminary screening. When possible, influent samples should be collected upstream from sidestream returns.

3.3.2 Effluent

Effluent samples should be collected at the site specified in the permit, or if no site is specified in the permit, at the most representative site downstream from all entering wastewater streams prior to discharge into the receiving waters. If a conflict exists between the permittee and inspector regarding the source being sampled or the location of the most representative site, follow the procedures previously described in Section 3.3, Site Selection for Wastewater Sampling.

3.3.3 Pond and Lagoon Sampling

Generally, composite effluent wastewater samples should be collected from ponds and lagoons. Even if the ponds or lagoons have long retention times, composite sampling is necessary because ponds and lagoons have the tendency to have flow paths that short circuit, which changes the designed detention time.

4 Sample Types

4.1 General

For NPDES sampling, two types of sampling techniques are used: grab and composite. For these procedures, the NPDES permit specifies the appropriate sample type. A complete description of all NPDES sampling procedures and techniques is presented in the *NPDES Compliance Inspection Manual*.

4.2 Grab Samples

Grab samples consist of either a single discrete sample or individual samples collected over a period of time not to exceed 15 minutes. The grab sample should be representative of the wastewater conditions at the time of sample collection. The sample volume depends on the type and number of analyses to be performed.

4.3 Composite Samples

Composite samples are collected over time, either by continuous sampling or by mixing discrete samples. A composite sample represents the average wastewater characteristics during the compositing period. Various methods for compositing are available and are based on either time or flow proportioning. The choice of a flow proportional or time composite sampling scheme depends on the permit requirements, variability of the wastewater flow or concentration of pollutants, equipment availability and sampling location. The investigator must know each of these criteria before a sampling program can be initiated. Generally, a time composite is acceptable. However, in enforcement cases where strict adherence to permit requirements are necessary, a flow proportional sample is preferable, if possible.

A time composite sample consists of equal volume discrete sample aliquots collected at constant time intervals into one container. A time composite sample can be collected either manually or with an automatic sampler.

A flow proportional composite sample can be collected using one of two methods. One method consists of collecting a constant sample volume at varying time intervals proportional to the wastewater flow. For the other method, the sample is collected by varying the volume of each individual aliquot proportional to the flow, while maintaining a constant time interval between the aliquots.

Flow proportional samples can be collected directly with an automatic sampler that is connected to a compatible flow measuring device. An automatic sampler can also be used to collect discrete samples. At the end of the compositing period, the discrete samples are composited by volume versus flow chart readings. Field personnel can use the facility's primary flow device and flow measurement system when their accuracy can be

verified. Prior to collecting flow proportional samples, the facility's flow measuring system should be examined for proper installation and accuracy according to SESD Operating Procedure for Wastewater Flow Measurement (SESDPROC-109). If the facility's primary flow measuring device does not meet standard conditions specified in SESDPROC-109 (Most Recent Version), or is in an unsafe or inaccessible location, then the investigator may choose to collect time composite samples or install a portable primary flow device. If the flow measurement system is acceptable, samples should be collected using the appropriate flow proportioning methods.

5 Automatic Samplers

5.1 General

Automatic samplers may be used to collect composite or grab samples when several aliquots are to be collected at frequent intervals or when a continuous sample is required. For composite sampling applications, the automatic samplers may be used to collect time composite or flow proportional samples. In the flow proportional mode, the samplers are activated and paced by a compatible flow meter. Flow proportional samples can also be collected using an automatic sampler equipped with multiple containers and manually compositing the individual sample portions proportional to the flow.

Automatic samplers must meet the following requirements:

- Sampling equipment must be properly cleaned to avoid cross-contamination which could result from prior use per the SESD Operating Procedure for Field Equipment Cleaning and Decontamination (SESDPROC-205).
- No plastic or metal parts of the sampler shall come in contact with the water or wastewater stream when parameters to be analyzed could be impacted by these materials.
- The automatic sampler must be capable of providing adequate refrigeration during the sampling period. This can be accomplished in the field by using ice.
- The automatic sampler must be able to collect a large enough sample for all parameter analyses.
- The individual sample aliquot must be at least 100 mL if the sampler uses a peristaltic pump.
- The automatic sampler should be capable of providing a lift of at least 20 feet and the sample volume should be adjustable since the volume is a function of the pumping head.
- The pumping velocity must be at least two (2) ft. /sec to transport solids and not allow solids to settle.
- The intake line leading to the pump must be purged before each sample is collected.
- The minimum inside diameter of the intake line should be 1/4 inch.

- An adequate power source should be available to operate the sampler for the time required to complete the project. Facility electrical outlets may be used if available.
- Facility automatic samplers should only be used if 1) field conditions do not allow for the installation of EPA sampling equipment, and 2) the facility sampling equipment meets all of the requirements detailed above.

Specific operating instructions, capabilities, capacities, and other pertinent information for automatic samplers are included in the respective operating manuals.

5.1.1 Conventional Sampling (Inorganic Parameters)

Conventional sampling includes all inorganic parameters (e.g., BOD₅, TSS, COD, nutrients) that can be collected using an automatic sampler.

New tubing (Silastic ®, or equal, in the pump and either Teflon ® or Tygon ®, or equal, in the sample train) will be used for each sampler installation.

Installation procedures for installing tubing on a sampler include cutting the proper length of tubing, positioning it in the wastewater stream, and sampler programming. Protective gloves should be worn to reduce exposure and to maintain the integrity of the sample.

For a time composite sample, the sampler should be programmed to collect sufficiently sized aliquots (at least 100-milliliter if using a peristaltic pump) at a frequency that provides a representative sample and enough sample volume to conduct all required analyses.

For a flow proportional sample, the sampler should be programmed to collect a minimum of 100 -milliliters for each sample aliquot with the interval predetermined based on the flow of the monitored stream.

At the end of the compositing period, the sample collected should be properly mixed and transferred into the respective containers, followed by immediate preservation, if required. For routine inspections, the permittee should be offered a split sample.

5.1.2 Metals

When an automatic sampler is used for collecting samples for metals analyses, the entire sample collection system is rinsed with organic-free water and an equipment rinse blank is collected. The equipment rinse blank is taken to ensure that metals contamination is not occurring from the sampling equipment, and to check the effectiveness of the decontamination procedures. To collect an

equipment rinse blank approximately one-half gallon of rinse water should be pumped through the sample tubing into the composite container and discarded. After the purge, another one-half gallon of rinse water is pumped through the sample tubing, into the composite container, and collected as an equipment rinse blank. Once the equipment rinse blank sample is collected, it must be properly preserved with Nitric acid. The automatic sampler may then be positioned in the appropriate location and the sampler program initiated.

If the automatic sampler tubing is attached to a metal conduit pipe, the intake tubing should be carefully installed upstream and away from the conduit to prevent metals contamination. This can be accomplished by clamping the tubing upstream of the conduit using laboratory clamps and wrapping the submerged portion of conduit pipe with a protective barrier (e.g., duct tape).

5.1.3 Extractable Organic Compounds, Pesticides and PCBs

When an automatic sampler is used for collecting samples for the analyses of extractable organic compounds, pesticides and/or PCBs, the installation

procedures include cutting the proper length of new Teflon> tubing, rinsing of the entire sampler collection system with organic-free water and collection of appropriate equipment blanks for organic compounds analysis. For the organic-free water rinse, approximately one-half gallons is initially pumped into the composite sample container and discarded. An additional one and one-half gallons (approximate) are then pumped into the composite sample container for distribution into the appropriate blank container. Finally, the collection tubing should be positioned in the wastewater stream and the sampler programmed and initiated.

5.2 Automatic Sampler Security

Field investigators should take whatever steps are necessary to prevent tampering with EPA equipment. A lock or custody seal may be placed on the sampler to detect tampering. However, this does not prevent tampering with the sample collection tubing. If necessary, seals may be placed on the sampling pole and tubing line to further reduce tampering possibilities.

5.3 Automatic Sampler Maintenance, Calibration and Quality Control

To ensure proper operation of automatic samplers, and thus the collection of representative samples, the following maintenance and calibration procedures should be used and any deviations should be documented in the field logbook.

Prior to being used, the sampler operation should be checked by the field investigator or Field Equipment Center personnel to ensure proper operation. This includes operation

(forward, reverse, and automatic) of at least one purge-pump-purge cycle; checking desiccant and replacing if necessary; checking the 12-volt batteries to be used with the sampler; and repairing any item if necessary.

During each field trip, prior to initiating the automatic sampler, the rinse and purge-pump-purge cycle shall be checked at least once. The pumping volume should be checked at least twice using a graduated cylinder or other calibrated container prior to initiating the sampler. For flow proportional sampling, the flow meter that activates the sampler should be checked to ensure that it operates properly.

Upon returning from a field trip, the structural integrity of the sampler should be examined and repaired, if necessary. The desiccant will be checked and replaced if appropriate. The operation (forward, reverse, automatic, etc.) will be checked and required repairs will be made and documented. The sampler will then be cleaned as outlined in SESD Operating Procedures for Field Equipment Cleaning and Decontamination (SESDPROC-205).

The automatic sampler should be checked against the manufacturer's specifications and documented whenever one or more of the sampler functions appear to be operating improperly.

6 Manual Sampling

Manual sampling is normally used for collecting grab samples and/or for immediate in-situ field analyses. However, it can also be used in lieu of automatic equipment over extended periods of time for composite sampling, especially when it is necessary to evaluate unusual waste stream conditions.

The best method to manually collect a sample is to use the actual sample container which will be used to transport the sample to the laboratory. This eliminates the possibility of contaminating the sample with intermediate collection containers. If the water or wastewater stream cannot be physically reached by the sampling personnel or it is not safe to reach for the sample, an intermediate collection container may be used, from which the sample can be redistributed to other containers. If this is done, however, the container used to collect the sample must be properly cleaned according to the SESD Operating Procedure for Field Equipment Cleaning and Decontamination (SESDPROC-205) and must be made of a material that meets the requirements of the parameter(s) being investigated. Samples for oil and grease, bacteria, and most volatile compounds (both organic and inorganic; see Section 7.4 for specific requirements) must always be collected directly into the sample container.

In some cases it may be best to use a pump, either power or hand operated, to withdraw a sample from the water or wastewater stream. If a pump is used, it is imperative that all components of the pump that come in contact with the sample are properly cleaned according to the SESD Operating Procedure for Field Equipment Cleaning and Decontamination (SESDPROC-205) to ensure the integrity of the sample.

In general, samples are manually collected by first selecting a location in the wastestream that is well mixed then dipping the container in the water or wastewater stream so the mouth of the container faces upstream. The container should not be overfilled if preservatives are present in the container.

7 Special Sample Collection Procedures

7.1 Organic Compounds and Metals

Trace organic compounds and metals detection limits are usually in the parts per billion or parts per trillion ranges, so extreme care must be exercised to ensure sample integrity. All containers, composite bottles, tubing, etc, used for sample collection for trace organic compounds and metals analyses should be prepared as described in the SESD Standard Operating Procedure for Field Equipment Cleaning and Decontamination at the FEC (SESDPROC-206).

When possible, the sample should be collected directly into the appropriate sample container. If the material to be sampled cannot be physically reached, an intermediate collection device may be used. This should be a Teflon®, glass or stainless steel (for non-metals only) vessel on a pole or rope, or Teflon® tubing via a peristaltic type pump and a Teflon® vacuum container attachment, which converts a sample container into a vacuum container. The device used should be cleaned as described in the SESD Operating Procedure for Field Equipment Cleaning and Decontamination (SESDPROC-205).

Sample collection for trace-level mercury analysis will be conducted in accordance with the SESD Operating Procedure for Surface Water Sampling (SESDPROC-201). This procedure is based on EPA Method 1669.

7.2 Bacteriological

Samples for bacteriological analyses must always be collected directly into the prepared glass or plastic sample container. The sample container should be kept unopened until it is to be filled. When the cap is removed, care should be taken not to contaminate the cap or the inside of the bottle. The bottle should be held near the base and filled to within about one inch of the top without rinsing and recapped immediately. During sample collection, the sample container should be plunged with the neck partially below the surface and slightly upward. The mouth should be directed against the current. Preservation procedures and holding times are found in the ASB LOQAM.

When the sample container must be lowered into the waste stream, either because of safety or impracticality (manhole, slippery effluent area, etc.), care must be taken to avoid contamination.

7.3 Immiscible Liquids/Oil and Grease

Oil and grease may be present in wastewater as a surface film, an emulsion, a solution or as a combination of these forms. Since it is very difficult to collect a representative sample for oil and grease analysis, the inspector must carefully evaluate the location of the sampling location. The most desirable sampling location is the area of greatest

mixing. Quiescent areas should be avoided. The sample container should be plunged into the wastewater using a swooping motion with the mouth facing upstream. Care should be taken to ensure that the bottle does not over fill during sample collection.

Because losses of oil and grease will occur on sampling equipment, an automatic sampler should not be used to collect samples for oil and grease analysis. Individual portions collected at prescribed time intervals must be analyzed separately to obtain the average concentrations over an extended period.

7.4 Volatile Organic Compounds

Samples to be analyzed for volatile organic compounds (VOCs) should be collected in 40-mL septum vials with screw caps with a Teflon® -lined silicone disk (septum) in the cap to prevent contamination of the sample by the cap. Samples for VOC analysis must be collected using either stainless steel or Teflon® equipment.

When sampling for VOCs, triplicate samples should always be collected from each location. The investigator should determine if the water to be sampled contains chlorine. If the water contains no chlorine, three pre-preserved 40-ml vials should be filled with the sample. The samples may be held for up to 14 days before analysis. When preservation is not feasible, samples can be held up to seven (7) days before analysis. In the great majority of cases, the preserved vials are used to take advantage of the extended holding time. In some situations, however, it may be necessary to use the unpreserved vials. For example, if the wastewater sample contains a high concentration of dissolved calcium carbonate, there may be an effervescent reaction between the hydrochloric acid and the water, producing large numbers of fine bubbles. This will render the sample unacceptable. In this case, unpreserved vials should be used and arrangements must be confirmed with the laboratory to ensure that they can accept the unpreserved vials and meet the shorter sample holding times.

If the water contains chlorine, collect the sample in an 8-ounce sampling container with two (2) drops of a 25% ascorbic acid solution (the jar with acid should be obtained from the SESD laboratory prior to sample collection). Cap and mix thoroughly but gently by swirling to eliminate residual chlorine. Transfer the sample to three pre-preserved 40-ml vials. The ascorbic acid and preservative must be added in this order and in two separate steps.

The 40-mL vials should be completely filled to prevent volatilization, and extreme caution should be exercised when filling each vial to prevent any turbulence which could also produce volatilization. The sample should be carefully poured down the side of the vial to minimize turbulence. As a rule, it is best to gently pour the last few drops into the vial so that surface tension holds the water in a "convex meniscus." The cap is then applied and some overflow is lost, but air space in the bottle is eliminated. After capping, turn the bottle over and tap it to check for bubbles. If a bubble or bubbles are present, the vial should be topped off using a minimal amount of sample to re-establish the meniscus.

Care should be taken not to flush any preservative out of the vial during topping off. If, after topping off and capping the vial, bubbles are still present, a new vial should be obtained and the sample re-collected.

8 Special Process Control Samples and Tests

During diagnostic evaluations, process control tests may be conducted to evaluate and troubleshoot the performance of the biological treatment processes of a municipal or industrial wastewater treatment facility. The EPA *Activated Sludge Process Control Manual* is the standard reference used by EPA inspectors for activated sludge process control testing. The manual includes a complete description of the step-by-step procedures for each test and the interpretation of the results. The six basic activated sludge process control tests are:

- Sludge settleability (settrometer)
- Centrifuge spins
- Aeration basin Dissolved Oxygen (DO) profiles
- Oxygen uptake rate (OUR) measurements
- Mixed liquor microscopic examinations
- Sludge blanket depth (SBD) measurements

Additional references are available that provide a more comprehensive evaluation of the methods used to conduct a diagnostic evaluation.

9 Supplementary Data Collection

While conducting wastewater sampling, the following information will be obtained, if applicable:

- Field measurements -- pH, dissolved oxygen, total residual chlorine, conductivity and temperature (SESDPROC-100,101,102,106,112 most recent version).
- Flows associated with the samples collected -- continuous flows with composite samples and instantaneous flows with grab samples (SESDPROC-019 most recent version).
- Photographs of pertinent wastewater associated equipment, such as flow measuring devices, treatment units, etc. (keep photolog as specified in the SESD Operating Procedure for Logbooks (SESDPROC-010 most recent version)).
- Global Positioning System (GPS) data point of the location sampled (SESDPROC-110 most recent version)
- Diagrams and/or written descriptions of the wastewater treatment systems (if available).
- Process control information on the wastewater treatment process (if applicable).
- Completion of applicable forms required during specific investigations.

All observations, measurements, diagrams, etc., will be entered in bound field logbooks or as specified in the SESD Operating Procedure for Logbooks (SESDPROC-010 most recent version).

ENFORCEMENT RESPONSE PLAN INDUSTRIAL PRETREATMENT PROGRAM

**Water Resources Department
Buckeye, Arizona**

INTRODUCTION

The National Pretreatment Program outlined in the Code of Federal Regulations (CFR), 40 CFR 403, requires all Publicly Owned Treatment Works (POTW) with approved Pretreatment Programs to develop and implement an Enforcement Response Plan (ERP). The Water Resources Department (Department) is the operator of the City of Buckeye's POTW. This ERP provides guidelines for Department personnel in determining appropriate enforcement actions toward violations encountered in the Pretreatment Program. The authority for enforcement is specified in the Buckeye Sewer Use Ordinance (SUO) which incorporates local, state and federal regulations as specified in 40 CFR 403.

The ERP describes how the Department will investigate instances of noncompliance, describes the types of enforcement actions that the Department may take in response to all anticipated types of violations and the time periods within which these enforcement actions will be taken and followed up. It reflects the Department's primary responsibility to enforce all applicable pretreatment standards and requirements. The plan also includes a general discussion of the criteria to be used in determining a proper response in various noncompliant situations. In addition, a tabular guide is provided to outline recommended responses to various pretreatment violations.

PERSONNEL

The Pretreatment Program's overall administrative operation is carried out by the Water Resources Director (WRD) of the Department. The WRD's main duties include, but are not limited to, the supervision of operations and personnel at the water and wastewater treatment plants, the distribution and collection systems for both facilities and oversight of the Buckeye Pretreatment Program. The WRD is the representative of the Buckeye Water Resources Department in all assigned tasks. To fulfill these duties, the WRD is assisted by other city personnel that are assigned specific duties, including implementation of the Pretreatment Program. Wherever the WRD is called for or cited in this ERP, it shall be understood to include any Department employee designated by the WRD to serve in an enforcement or oversight capacity under the WRD's direction.

To assist the WRD in administering the Pretreatment Program, an Environmental Compliance Officer (ECO) has been designated. The ECO is responsible for the supervision of industrial monitoring and sample collection conducted by the city, industrial user reporting, data assimilation, and industrial user inspections among other implementation tasks. As the WRD's designated representative, the ECO is authorized to initiate specific enforcement proceedings as needed to protect the POTW, the environment and the health and welfare of the general public.

Additional personnel are available at the POTW to assist the ECO as needed. Duties of these personnel include sampling, equipment inspection and maintenance, and laboratory analysis.

Treatment plant personnel are also available to assist in emergency situations as conditions may require.

The WRD and ECO may from time to time procure the assistance of an attorney for any legal services needed in enforcement proceedings. This attorney would advise the ECO on proper enforcement actions and develop any judicial actions deemed necessary by the WRD and/or the ECO.

SEWER USE ORDINANCE

The SUO has been updated to comply with all federal pretreatment regulations and guidelines. The SUO is the authority by which the WRD and ECO operate the Pretreatment Program. All policies outlined in this ERP are in accordance with the requirements and regulations contained in the SUO.

VIOLATION IDENTIFICATION

Violations of the Pretreatment Program are identified from various sources of information gathered through implementation of the program. Such sources include but are not limited to: on-site inspections of Industrial Users (IUs), city compliance monitoring of an IU's discharge, and data submitted from IU self-monitoring reports. Details of these sources are discussed below.

On-site Inspections- The ECO and/or his/her designee conducts pretreatment inspections at each IU site to ascertain if all requirements of the Industrial User Permit and the SUO are being met. Inspections may also be conducted as part of the permit application process and to verify compliance schedule milestone achievement. During the inspection, all areas of the industry used for production, that produce process wastewater, are used to store chemicals or raw materials and that are also involved in pretreatment of the industrial wastewater prior to discharge will be observed. The inspector(s) may also review and/or copy all pretreatment records, examine any new processes and pretreatment equipment, observe monitoring techniques, inspect the condition of sampling equipment, and obtain samples for city compliance monitoring.

The ECO may provide the IU with a 24-hour notice prior to the inspection; however, this is not required. The inspector will look for violations throughout the inspection and note all findings on a report form to be filed for future reference.

City Monitoring - The city will periodically sample the effluent of all IUs; Significant Industrial Users (SIUs) will be sampled at least once each year. Parameters to be analyzed will be, at a minimum, those listed in each IU's Industrial User Permit. In addition, during these compliance sampling events, the city may, at the ECO's discretion, monitor for the full scan of parameters contained in the SUO as a check of compliance. Compliance monitoring for additional pollutants not regulated by the ordinance may also be conducted at the ECO's own discretion. All monitoring and analyses will be conducted in accordance with 40 CFR Part 136 and Part 261 and will be properly documented using chain-of-custody forms and procedures in case future legal action is required.

Self-monitoring – Industrial User Permits contain requirements that the IU conduct self-monitoring of their process discharges at specified frequencies and requirements to submit the results of the self-monitoring to the ECO. Any compliance monitoring conducted at a frequency greater than that required must also be submitted to the ECO. Sampling must be conducted at the approved monitoring point specified in the IU's discharge permit. All sampling and analyses must be conducted in accordance with 40 CFR Part 136 and Part 261. All analytical results are required to be properly signed and certified and submitted to the ECO by the 28th day of the month following the month in which the monitoring occurs, unless

otherwise specified or allowed by the Permit. Each Industrial User Permit describes in detail the requirements for sampling frequency, sampling and analytical methods, reporting, recordkeeping, effluent discharge limitations and other restrictions applicable to the individual IU. The Industrial User Permit is based on and consistent with the SUO and the requirements noted therein.

Demand Monitoring - Monitoring under emergency conditions, in response to identified violations or for litigation purposes may also be conducted as the ECO deems necessary. Proper sampling techniques and analytical procedures will be observed throughout the monitoring period and chain-of-custody forms and other records will be properly maintained at all times.

COMPLIANCE TRACKING

The ECO, or designee, will review all compliance monitoring and self-monitoring reports submitted for each IU within 5 days of receipt of the data. These reports will be examined to determine if they have been submitted on time, are complete for all required parameters and if any violations of permit limits or the SUO have occurred. Compliance schedule milestones and other due dates for reports will also be tracked monthly.

The ECO, or designee, will track the compliance status of each SIU by reviewing all discharge data at the end of each calendar quarter on a rolling six (6) calendar month basis to determine if a SIU meets the definition of Significant Noncompliance.

VIOLATION CATEGORIZATION

Categories of violation include but are not limited to the following:

- (1) **Random Violation** - any violation that exceeds a federal, Arizona, or local discharge limitation or compliance schedule. Random violations may include the first, second, or third offense and may not be severe or frequent enough to be classified as a Pattern Violation or a Significant Noncompliance.
- (2) **Pattern Violation or Pattern of Noncompliance** - a series of random violations that is otherwise not considered to be Significant Noncompliance, but which contribute to a pattern of noncompliance when viewed over a rolling 12-month period. Noncompliance for any two consecutive calendar quarters for the same parameter or four or more instances of noncompliance within a 6-month period would constitute a Pattern Violation.
- (3) **Significant Noncompliance (SNC)** - any violation or series of violations meeting the criteria in paragraphs A through H of this section. This determination is applicable to all Significant Industrial Users (or any other Industrial User that violates paragraphs C, D or H of this Section).
 - A. Chronic violations of wastewater discharge limits, defined here as those in which 66% or more of all the measurements taken for the same pollutant parameter taken during a six- (6-) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in SUO Article 16-4-1;
 - B. Technical Review Criteria (TRC) violations, defined here as those in which 33% or more of wastewater measurements taken for each pollutant parameter during a six- (6-) month period equals or exceeds the product of the numeric Pretreatment

Standard or Requirement including Instantaneous Limits, as defined by SUO Article 16-4-1 multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH);

- C. Any other violation of a Pretreatment Standard or Requirement as defined by SUO Article 16-9 (Daily Maximum, long-term average, Instantaneous Limit, or narrative standard) that the WRD determines has caused, alone or in combination with other discharges, Interference or Pass Through, including endangering the health of POTW personnel or the general public;
- D. Any discharge of a pollutant that has caused imminent endangerment to the public or to the environment, or has resulted in the WRD's exercise of its emergency authority to halt or prevent such a discharge;
- E. Failure to meet, within 90 days of the scheduled date, a compliance schedule milestone contained in an individual wastewater discharge permit or a general permit or enforcement order for starting construction, completing construction, or attaining final compliance;
- F. Failure to provide within 30 days after the due date any required reports, including baseline monitoring reports, reports on compliance with Categorical Pretreatment Standard deadlines, periodic self-monitoring reports, and reports on compliance with compliance schedules;
- G. Failure to accurately report noncompliance; or
- H. Any other violation(s), which may include a violation of Best Management Practices, which the WRD determines will adversely affect the operation or implementation of the local pretreatment program

ENFORCEMENT CRITERIA

The Enforcement Response Guide (ERG) included in this document provides a systematic method to determine appropriate responses to violations and noncompliant situations. The ECO can use this guide to conduct equitable enforcement actions for various anticipated violations. The ERG is included in Appendix A of this document.

Although the ERG is to be utilized to help determine specific responses to various types of violations, the ECO must first evaluate important aspects surrounding the violations. The criteria that should be considered prior to enforcement are as follows:

1. **Magnitude of the Violation(s)** - Generally, an isolated instance of noncompliance can be met with an informal enforcement response. More serious violations such as those that could threaten public health or damage the POTW are cause for the enforcement level to be escalated.
2. **Duration of the Violation** - Violations, regardless of severity, which continue over a prolonged period should be subject to a formal enforcement action. Failure of the user to correct violations are cause for the enforcement level to be escalated. Such escalated actions may include administrative penalties, judicial action or termination of service.
3. **Effect on the Environment** - Any violation which results in environmental harm should be met with an escalated enforcement response. Environmental harm should be evaluated whenever a facility has discharged pollutants into the sanitary sewer

system which are known to pass through the POTW, caused a violation of the POTW's AZPDES permit and/or have a toxic effect on the receiving stream (i.e., toxicity test failure, fish kill, etc.), or resulted in a violation of the city's storm water permit.

4. **Effect on the POTW** - Violation(s) causing harm to the POTW or its collection system may range from the increased cost of treatment or maintenance to the actual destruction of equipment or harm to POTW personnel. Response to the violation(s) should be determined on the seriousness of the harm caused and the cost to the city.
5. **Compliance History of the User** - A pattern of recurring violations may indicate inadequate pretreatment equipment at the facility or a casual approach to operation and maintenance of said equipment. Users exhibiting recurring instances of noncompliance should be addressed with an appropriately escalated response.
6. **Economic Benefit to User** - The economic benefit received by the facility for not installing and/or maintaining pretreatment equipment as necessary to ensure that consistent compliance is achieved should be considered when selecting an enforcement response.
7. **Good Faith of the User** - A facility's efforts to remedy violations, coupled with actions which support the facility's intention to cease all violations, should be considered in the enforcement response initiated; however, good faith does not automatically eliminate the necessity of an enforcement action and should be considered along with other criteria as described above.

ENFORCEMENT ACTIONS

The ECO will be responsible for categorizing the significance of an IU's violation(s) using the criteria discussed previously in this document. Upon making this categorization, the ECO will use the ERG to determine the most appropriate response to be used in addressing the noncompliance. Those responses available through the SUO to the ECO are as follows:

- A. **Notice of Violation (NOV)** - A Notice of Violation is issued when an exceedance of a pretreatment standard or requirement occurs. It is any official communication from the city to the noncompliant IU which informs the user that a pretreatment violation has been recorded. The NOV may be the only response necessary in cases where the violations are isolated and/or minor. The NOV provides the IU with an opportunity to correct noncompliance on its own initiative. The NOV also can act as a short-term compliance schedule by requiring certain corrective actions by the IU within a set period of time. A Notice of Violation documents the city's initial attempts to resolve the noncompliance and, should circumstances require a more stringent approach, the NOV establishes a basis for escalation of enforcement actions according to the ERP and not in an arbitrary manner. The NOV will be issued to the IU in noncompliance within fifteen (15) days of becoming aware of a violation and will be either hand-delivered or sent by registered or certified mail (return receipt requested).
- B. **Administrative Order (AO)** - An Administrative Order is an enforceable document which directs an IU to undertake certain actions or to cease specified activities in order to facilitate a return to compliance. Administrative Orders can be of the types listed below:

Cease and Desist Order - This order directs the noncompliant IU to cease or terminate all illegal, unauthorized and/or noncompliant discharges immediately. This order should be used in cases where the discharge could cause, or is causing, interference or pass-through of the POTW. A Cease and Desist Order may be issued immediately upon discovery of a violation or following a show-cause hearing. In an emergency, the Cease and Desist Order may be verbal and delivered by telephone and followed by a written order (hand-delivered or certified mail). If the IU fails to comply with the order, the WRD or his/her designee may take action to stop the discharge by terminating water service or blocking the IU's discharge point.

Consent Order - The Consent Order is an agreement between the Buckeye Department and the IU in noncompliance. Three (3) elements are present in the order: (1) a compliance schedule agreed to by both parties; (2) stipulated fines or remedial actions; and, (3) signatures of both Department and IU representatives. A Consent Order is appropriate when the IU assumes responsibility for its noncompliance and is willing to correct its causes; however, depending upon the specific terms of the order, signing may or may not be an admission of guilt for purposes of civil litigation and/or criminal prosecution. The Consent Order should specifically be used to prohibit future violations and provide for corrective actions on the part of the IU.

Compliance Order - A Compliance Order directs the IU to achieve or return to compliance by a specified date. This order is most appropriate when noncompliance can be resolved without construction, repair or process changes. It may be issued to require an IU to develop best management practices, waste minimization, spill prevention programs or slug control plans. The milestones set in the Compliance Order must be tracked by the ECO to determine if escalated enforcement actions are needed.

Show-Cause Order - An order to show cause directs the IU to appear before the WRD, explain its noncompliance and show cause as to why more severe enforcement actions should not be taken against the IU. This order may be issued after informal contacts, NOVs or other orders have failed to resolve the noncompliance. The Show Cause hearing can be conducted by the WRD or his/her designee. The WRD may follow up the hearing by issuing a Compliance Order, Consent Order, a compliance schedule or may refer the case to legal counsel for civil litigation or criminal prosecution.

- C. **Administrative Fines** – Failure to timely provide a report as required by the SUO, a permit, or order shall result in the imposition of administrative fines (SUO Article 16-19-1).
- D. **Civil Litigation** - Civil litigation is the formal process of filing lawsuits against IUs to secure court ordered action to correct noncompliance and to secure penalties for violations including the recovery of costs to the POTW for the noncompliance. This process is normally pursued when the corrective action required has not been taken by the IU or when the IU is recalcitrant and unwilling to cooperate. Civil litigation includes enforcement measures which require involvement or approval by the court system, such as injunctive relief and settlement agreements. The Federal Pretreatment

Regulations require the City of Buckeye to have legal authority to seek or assess civil or criminal monetary penalties and require the city to have legal authority to seek injunctive relief for noncompliance by IUs. These requirements have been fulfilled in the SUO (Article 16-18). The WRD or his/her designee shall initiate civil litigation through legal counsel. All data gathered for such a purpose shall be properly collected and documented.

- E. Criminal Prosecution** - Criminal prosecution is the formal process of charging individuals and/or organizations with violations of ordinance provisions that are punishable, upon conviction, by fines and/or imprisonment. The SUO authorizes criminal prosecution for ordinance violations when they are willful or negligent, for false statements or representations, and may be appropriate in cases of repeated violations or when less formal efforts to restore compliance have failed. Criminal prosecution may be brought prior to, concurrently with, or subsequent to civil litigation. The WRD shall initiate criminal prosecution through legal counsel. All data gathered for prosecution shall be properly collected and documented.
- F. Emergency Suspension of Service** – Pursuant to SUO Article 16-17-6, the WRD may immediately suspend an IU’s discharge whenever such suspension is necessary to stop an actual or threatened discharge (which reasonably appears to be present) or cause an imminent or substantial endangerment to the health or welfare of persons. The WRD may also immediately suspend an IU’s discharge, after notice and opportunity to respond, that threatens to interfere with the operation of the POTW, or which presents, or may present, an endangerment to the environment.
- G. Termination of Service** - Under the SUO, the WRD has the authority to immediately and effectively halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of the general public, POTW personnel, or to the environment, or which threatens to interfere with the POTW's operation. The WRD or his/her designee may terminate sewer and/or water service to any user in violation of the SUO. There are three (3) methods that will be used to terminate sewer service: (1) physically sever (or plug) the IU's connection to the sewer; (2) halt the discharge by revoking the IU's Industrial User Permit; or, (3) issue a Cease and Desist Order. All of these methods of termination require notice to the IU and are outlined in the SUO. Advance notice is intended to fulfill the legal due process requirements associated with service termination and enables the IU to halt production in time to avoid backflow, spills and other harm to the IU's facility. The WRD or his/her designee will initiate termination as necessary, depending on specific circumstances, but will work closely with legal counsel toward further litigation as needed.

ABBREVIATIONS

AO	- Administrative Order
City	- City of Buckeye (may refer to Department, as a subdivision of the City)
Department	- Water Resources Department
ECO	- Environmental Compliance Officer
IU	- Industrial User
LC	- Legal Counsel
NOV	- Notice of Violation
POTW	- Publicly Owned Treatment Works
SIU	- Significant Industrial User
SNC	- Significant Noncompliance
WRD	- Water Resources Director

APPENDIX A ENFORCEMENT RESPONSE GUIDE (ERG)

Water Resources Department
Buckeye, Arizona

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
UNAUTHORIZED DISCHARGE			
Unpermitted Discharge	No harm to POTW/environment	Phone call; NOV with Permit Application Form	ECO ECO
	Interference, upset and/or pass-through of the POTW	AO; SNC Notice Civil Action	ECO; WRD WRD; LC
	Failure to apply for permit continues after notice by ECO	NOV Civil or Criminal Action Terminate Service	ECO WRD; LC WRD; LC
	Permit Expired	NOV Terminate Service	ECO WRD

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
EFFLUENT LIMIT DISCHARGE VIOLATIONS			
Exceedance of Permit Limit or Federal Pretreatment Standard	Random; not SNC	Phone call	ECO
	Random; SNC but no harm to POTW, environment or public	NOV AO to develop spill control/sludge discharge plan	ECO ECO;WRD
	Random; SNC and harm to POTW, environment or public	NOV, Show Cause, Consent Order, SNC Notice AO Civil Action	ECO, WRD WRD WRD; LC
	Pattern, not SNC	NOV Civil or Criminal Action Terminate Service	ECO WRD; LC WRD; LC
	SNC, but no harm to POTW, environment or public	NOV, SNC Notice, AO	ECO; WRD
	SNC, and harm to POTW, environment or public	NOV, Show Cause, Consent Order, SNC Notice AO Show Cause, Consent Order Civil or Criminal Action Terminate Service	ECO, WRD WRD WRD WRD; LC WRD

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
REPORTING VIOLATIONS			
Missing or incorrect information	Authorized signature missing	Phone call; NOV	ECO ECO
	Required information missing	Phone call; NOV	ECO ECO
	Failure to report additional monitoring results	Phone call; NOV	ECO ECO
Late report	Less than 5 days late	Phone call; NOV	ECO ECO
	Late by >=5 days, less than 30 days	NOV & \$100/day Admin Fine (Article 16-19-1)	ECO; WRD
	Late by 30 or more days	NOV & SNC Notice; min \$100/day Admin Fine Article 16-19-1) Civil Action	ECO;WRD WRD; LC
Failure to provide required Notices	Changed Conditions Repeated failure	NOV AO	ECO WRD; LC
	Spill, not SNC	NOV	ECO
	Spill, SNC	NOV; SNC Notice AO Civil or Criminal Action	ECO; WRD WRD; LC WRD; LC
Incorrect information submitted	Falsification of data	NOV; SNC Notice Civil or Criminal Action	ECO; WRD WRD; LC

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
MONITORING VIOLATIONS			
Failure to monitor correctly	Failure to Monitor All Pollutants as Required by Permit	Phone call NOV	ECO ECO
	Repeat Violation or Evidence of Intent	NOV Show Cause, Consent Order; AO Civil or Criminal Action	ECO WRD; LC WRD; LC
Improper sampling or analytical method	One or more Pollutants Required by Permit	Phone call NOV	ECO ECO
	Repeat Violation or Evidence of Intent	NOV Show Cause, Consent Order; AO Civil or Criminal Action	ECO WRD; LC WRD; LC
Failure to install monitoring structure or devices	Changed Conditions Repeated failure	NOV AO	ECO WRD; LC
	Spill, not SNC	NOV	ECO
	Spill, SNC	NOV; SNC Notice AO Civil or Criminal Action	ECO; WRD WRD; LC WRD; LC

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
OTHER VIOLATIONS			
Dilution	Initial; unknowing	Phone call NOV	ECO ECO
	Repeat Violation or Evidence of Intent	NOV Show Cause, Consent Order; AO Civil or Criminal Action	ECO WRD; LC WRD; LC
Failure to Mitigate or Halt Production	No harm to POTW or Environment	NOV	ECO
	Harm to POTW or Environment	NOV AO Show Cause, Consent Order Civil or Criminal Action	ECO WRD WRD WRD, LC
Failure to properly operate and maintain pretreatment facility	Changed Conditions	NOV	ECO
	Repeated failure	AO	WRD; LC
	Spill, not SNC	NOV	ECO
	Spill, SNC	NOV; SNC Notice AO Civil or Criminal Action	ECO; WRD WRD; LC WRD; LC
Entry or Records Denial	Entry denied or consent withdrawn	NOV Administrative Warrant	ECO WRD; LC
	Access to records denied or copies refused	NOV Show Cause, Consent Order; AO Civil Action	ECO WRD; LC WRD; LC
Failure to implement or maintain BMPs	Initial	Phone call NOV	ECO ECO
	Repeat Violation or Evidence of Intent	NOV Show Cause, Consent Order; AO Civil or Criminal Action	ECO WRD; LC WRD; LC

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Description	Range of Actions ¹	Responsible Personnel
COMPLIANCE SCHEDULE VIOLATIONS			
Failure to meet Compliance Schedule	Missed milestone by < 30 days; no impact on final milestone	NOV	ECO
	Missed milestone by < 30 days; final milestone affected; Good cause for delay	NOV AO Show Cause, Consent Order Civil Action	ECO WRD WRD WRD; LC
	Missed milestone by < 30 days; final milestone affected; No good cause for delay	NOV AO	ECO WRD; LC
	Repeated missed milestones	NOV AO	ECO WRD; LC
	Missed milestone by 90 days or more	NOV; SNC Notice AO Civil or Criminal Action	ECO; WRD WRD; LC WRD; LC

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

Type of Violation	Impact	Duration/ Frequency	Range of Actions ¹	Responsible Personnel
VIOLATIONS OF CLASS IV PERMIT CONDITIONS				
Failure to maintain cleaning interval of trap or interceptor	None or minor	Less than 3 in year	NOV	ECO
		3 or more in year	NOV and Show Cause or Consent Order	ECO; WRD
Failure to maintain trap or interceptor in proper condition	Visible accumulation in City's collection system	First occurrence 2 nd time in 2 years	NOV NOV, AO, Show Cause, Consent Order	ECO ECO; WRD
	Capacity reduction or Blockage in City system	First occurrence 2 nd time 2 years 3 rd or more in 2 years	NOV NOV and Show Cause or Consent Order Service Termination	ECO ECO; WRD WRD
Failure to maintain records	None or minor	First occurrence 3 rd or more in 2 years	NOV NOV and Show Cause or Consent Order	ECO ECO; WRD
Failure to adhere to BMPs	None or minor	Less than 3 in year 3 or more in year	NOV NOV and Show Cause or Consent Order	ECO ECO; WRD
	Capacity reduction or Blockage in City system	First occurrence 2 nd time 2 years 3 rd or more in 2 years	NOV NOV and Show Cause or Consent Order Service Termination	ECO ECO; WRD WRD
Reporting Violation	None or minor	Less than 3 in year 3 or more in year	NOV NOV and Admin Fine (Article 16-19-1)	ECO ECO; WRD

1. The Range of Actions are not exclusive. The WRD may take any, all, or any combination of actions as provided in the city's ordinance §16-18-4.

**Water Resources Department
Buckeye, Arizona**

TIMEFRAME FOR ENFORCEMENT RESPONSES

- A. All violations will be identified and documented within five (5) days of receiving compliance information.

- B. Initial enforcement responses (involving contact with the industrial user and requesting information on corrective or preventative actions) will occur within fifteen (15) days of violation detection.

- C. Follow up actions for continuing or reoccurring violations will be taken within sixty (60) days of the initial enforcement response. For all continuing violations, the response will include a compliance schedule.

- D. Violations which threaten health, property or environmental quality are considered emergencies and will receive immediate responses such as halting the discharge or terminating service.

- E. All violations meeting the criteria for Significant Noncompliance (SNC) will be addressed with an enforceable order within thirty (30) days of the identification of Significant Noncompliance (SNC).

APPENDIX B

SAMPLE NOTICE OF VIOLATION (NOV)

City of Buckeye
Water Resources Department
21749 W Yuma Rd Ste 106
City of Buckeye, AZ 85326

NOTICE OF VIOLATION

[Date]

[User
Name]
[Address]

LEGAL AUTHORITY

Pursuant to the legal authority vested in the Director of the Buckeye Water Resources Department under the provisions of the City Ordinance Chapter 16, “Sewer Utilities and Use of Public Sewers”, Articles 16-1 and 16-17, the following findings are made and formal notice of violation is hereby issued.

FINDINGS

1. In order for the City of Buckeye to comply with all state and federal laws and regulations as required by the Clean Water Act of 1977 as amended, and the General Pretreatment Regulations at 40 CFR, Part 403, the City enacted by ordinance “Sewer Utilities and Use of Public Sewers”, and through the Water Resources Department administers those regulations.
2. The ordinance sets forth uniform requirements for all contributors to the wastewater collection and treatment system.
3. The ordinance sets forth specific requirements for industrial users by requiring an approved industrial user permit under an established pretreatment program meeting the requirements of 40 CFR, Part 403.
4. In accordance with the requirements of Chapter 16 of the ordinance, [User name] was issued an Industrial User Permit and is required to perform routine sampling and monitoring to assure compliance with specific requirements of the permit and all other conditions of the Sewer Use Regulations.
5. The Industrial User Permit issued to [User name] contains specific numeric limits on the quantity of certain types of pollutants which [User name] may discharge.
6. Compliance monitoring was performed [Date] at [User name] and submitted to the City on [Date].
7. Monitoring results exceeded the numeric discharge limits established in the [User name] approved Industrial User Permit and are considered to be in violation of the Sewer Use Regulations and your permit:

Parameter	Discharge Limit	Monitoring Results
Copper	0.46 mg/L	0.52 mg/L
Lead	0.43 mg/L	0.65 mg/L
Zinc	1.31 mg/L	4.25 mg/L

BASED ON THE ABOVE FINDINGS, NOTICE OF VIOLATION IS HEREBY GIVEN:

NOTICE

1. [User Name], located at [Address] has exceeded individual Industrial User Permit limits.
2. In order to remain compliant with Chapter 16 of the City of Buckeye’s ordinance regulating use of sewers and the approved Industrial User Permit, [User Name] must **within fifteen (15) calendar days of the receipt of this Notice of Violation (NOV)** submit to the Director an explanation of the violation(s) and a plan with specific actions (the corrective action plan) for the satisfactory correction and prevention thereof.
3. Submission of this explanation and corrective action plan in no way relieves the user of the potential liability for a violation occurring before or after receipt of this notice of violation.
4. The corrective action plan shall be submitted to: