

The Texas Natural Resource Conservation Commission (commission) adopts §§210.51-210.55, Subchapter E, relating to special requirements for use of industrial reclaimed water. Sections 210.51-210.55 are adopted with changes to the proposed text as published in the October 22, 1996, issue of the *Texas Register* (21 TexReg 10370).

EXPLANATION OF ADOPTED RULE

The sections establish criteria for authorization of reclaimed water activities which adequately protect the health of persons who might normally come into contact with industrial reclaimed water, will protect against adverse effects from reclaimed water should crops be irrigated with industrial reclaimed water, and will ensure that the conveyance, storage, and use of reclaimed water will not pose adverse effects upon surface water, ground water, and soil resources. These sections will not in any way establish new or different requirements for the producer, provider, and/or user to hold the appropriate water rights allowing the use of state water. These sections do not affect any current requirements necessitating the need for a commission permit for a water right or amendment, if applicable to a particular industrial reclaimed water use or activity.

TAKINGS IMPACT ASSESSMENT

The commission has prepared a Takings Impact Assessment for these rules pursuant to Texas Government Code Annotated, §2007.043. The following is a summary of that assessment. The specific purpose of the proposed rule is to ease the burden on the commission and those regulated by the rule in authorizing the use of reclaimed water. Promulgation and enforcement of these rules will not affect private real property which is the subject of the rules.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM (CMP)

The commission has reviewed this rulemaking for consistency with the Coastal Management Program (CMP) goals and policies in accordance with the regulations of the Coastal Coordination Council, and has determined that the rulemaking is consistent with the applicable CMP goals and policies.

HEARING AND COMMENTERS

No public hearing was held. The public comment period closed on December 17, 1996. The commission received written comments on the proposal from the following: San Antonio Water System (SAWS), the University of Texas (UT), and the American Water Works Association Committee on Conservation and Reuse (AWWA).

GENERAL COMMENTS:

The text of the rule was reorganized for clarity and to facilitate readability, therefore some of the references discussed in the comments that follow have been moved to different locations within the rule. Additionally, the following changes were made to the proposed rule to provide clarity and to add necessary language for consistency with current industry practices.

New definitions for "discharge" and "commingled wastewater" were added in response to public comment.

The definitions for "Minimum Analytical Level" and "Priority Pollutants" were also revised.

References to metals were eliminated throughout the proposed rule as metals are already listed as

priority pollutants in 40 CFR 122, Appendix D, Tables 2 and 3 which is referenced in the revised definition for priority pollutants.

The word "diversion" was replaced with "disposal" in §210.51[©] for clarification purposes.

The first sentence of §210.55(b) was revised to correct a typographical error.

In order to clarify the term "beneficial use," and its relationship to domestic wastewater, the term "beneficial use" was changed to "reuse" throughout the entire chapter. The commission believes that this term more accurately describes the proposed uses and the intent of this subchapter.

The provisions relating to executive director approval were clarified throughout the proposed rule to add that applications for authorization must be submitted on forms provided by the commission.

APPLICABILITY

SAWS commented that if industrial generated wastewater flows can be returned back into the Publicly Owned Treatment Works (POTW) as an alternate means of disposal, then the wastewater should not adversely impact the POTW's treatment system.

The commission agrees with the commenter and notes that this subchapter does not affect the authority of the POTW to regulate discharges into its system.

RELATIONSHIP TO REQUIREMENTS FOR DOMESTIC RECLAIMED WATER:

SAWS commented that the rule, while appropriate in its goal of maximizing the beneficial use of industrial wastewater, would require changes to insure that additional safeguards are in place to prevent inappropriate uses that could result in environmental degradation of soil and water resources.

Specifically, SAWS commented that "Subchapter E reduces some notification and reporting requirements for the industrial reclaimed water producer, provider, and user which, as a whole, could impair monitoring and enforcement of federally mandated programs, including the continuing implementation of National General Pretreatment requirements and Stormwater program requirements (40 CFR Part 403, and Part 122, 122.26, respectively)." The commenter states that the proposed rules "could result in an industrial producer, provider or user employing inappropriate disposal practices."

The commission agrees with the commenter in that the rules are not intended to pose an impact to the operation of POTWs. A provision has been added at §210.54(a)(2) which requires that facilities intending to reuse their wastewater and who are within the service area of a POTW, be required to notify the POTW prior to commencement of operating under this rule.

AWWA proposed adding a provision which would require a producer of industrial wastewater to 1) notify all water purveyors and POTW operators within whose service area the applicant is located, 2) require the producer to provide assurances that all local regulations and ordinances concerning construction, water quality and provision of recycled water service are followed, and where applicable, 3) provide in the application upon submittal to the executive director verification of local authorization.

The commission agrees in part with the commenter and has added language requiring the producer of industrial wastewater to provide notification to the local water purveyor if applicable. A requirement was not added, however, that would require the industrial producer to verify to the commission that such notification was made. It is the belief of the commission that this information is more appropriately addressed on a local level.

SAWS commented that "industrial reclaimed water that is piped from a producer and/or provider to a user...should follow the design requirements as outlined in §210.25." The commenter asked whether piping leaving the facility site was required to meet the color coding requirements, and questioned how required installation practices would be ensured in public rights-of-way, how the integrity of the distribution system would be ensured for the transfer of industrial reclaimed effluent over the Edwards Recharge Zone, and whether it would be the industrial provider or user who would be responsible for monitoring this.

The commission notes that the exemption from piping requirements only applies to piping on-site or within the boundaries of property contiguous to the producer's property, and the producer, provider, and user are subject to all the requirements of 30 TAC Chapter 213.

SAWS recommended that Section 210.25 (e), (f), and (h) be included as requirements for piping on-site and off-site.

The commission agrees that off-site piping should meet those requirements and notes that §210.53(d) states that only on-site piping is exempt from 210.25(e), (f), and (h).

AWWA recommended that industries be defined by SIC code in order to differentiate between industrial facilities and sites such as universities, which provide wastewater services to campuses and require these users to use purple pipe.

The commission agrees that institutions such as universities should meet color coding requirements for piping, and language has been added at Section 210.53(b) for clarification purposes. The industries were not defined by SIC code, but by narrative description.

AWWA commented that clarification is needed to ensure that any on-site retrofits provide adequate cross-connection prevention.

The commission concurs with the comment; however, at this time the commission has no design criteria for industrial facilities. The commission does note that industrial producers who transport reuse water off-site are required to provide notification to the executive director, which will include a required operation and maintenance plan.

SAWS commented that the "marketing of industrial reclaimed water by individual industrial producers could reduce the viability of some municipal utilities' and other large POTW operator's reuse

programs," and that an individual industrial reclaimed water system would not promote efficient water resource planning.

The commission notes that a producer operating under this subchapter will continue to be subject to local ordinances and requirements of the POTW, and this rule is not intended to interfere with that authority.

AWWA recommended that 210.53(b) be amended to include contiguous properties owned by the same owner in the definition of on-site reuse.

The commission agrees, and this information has been included at §210.54(b)(2)(A) and (B) of the revised version of the rule.

AUTHORIZATION OF INDUSTRIAL RECLAIMED WATER USE:

AWWA recommended that the types of industries not required to provide notification to the commission should be revised to ensure minimal contact by the public with industrial reclaimed water.

The commission agrees in part with the commenter. These uses listed have been determined by staff to be sufficiently restrictive regarding public access. A provision has been added at §210.54(c)(2) which includes uses other than those specifically listed in the rule

The intent of this provision is to ensure that uses not specifically listed in the rule must be reviewed by the executive director. Additionally, the commission notes that producers who are required to obtain authorization to operate under this rule may be subject to public access limitations upon review of their application. Accordingly, a provision was added at §210.54(c)(2) stating that an authorization issued by the executive director may contain additional requirements beyond those that are expressly stated in the rule.

SAWS commented that the waste streams listed "could contain pollutants at levels which could have adverse impact at point of use," and that "no quality standards are established for the above waste streams."

The commission agrees in part with the commenter. The waste streams, which are listed at §210.54(b)(2)(A) of the revised version of the rule, were chosen because they are known to typically contain levels of pollutants below that which is considered acceptable for the uses being proposed. The commission recognizes that the inclusion of "Water treated by Supercritical Oxidation" does not describe a specific waste stream, but rather a treatment technology, and has removed this from the list. A facility utilizing this type of treatment may still be eligible to operate under §210.54(b)(2)(B) or §210.54(c) of this rule. The commission has communicated this information to the known industry in Texas that is utilizing this technology, and no objections were raised.

AWWA commented that the list of pollutants "should be amended to clarify that the intent is to allow for minimal pollutant loading from the various sources. For example, fruit and vegetable washing should be limited to rinsing only and not result in the addition of organic matter to industrial reclaimed water." The commenter recommended that parameters for stormwater should also be established.

The commission agrees in part with the commenter. Section 210.54(b)(2)(A), which, in the revised version of the rule, contains the list of pollutants referenced above, has been amended to include only the wastewater that results from the washing of whole fruits and vegetables. The inclusion of stormwater runoff from non-process areas was not revised, as non-process area stormwater generally contains pollutants at acceptable levels for the intended uses, and has been adequately defined in the rule. As stated above, "Supercritical Oxidation" was removed, as it describes a type of treatment rather than a type of wastewater. Other listed wastewaters are retained, as these wastes generally do not contain significant amounts of pollutants.

SAWS questioned whether it is an appropriate standard for industrial reuse to consider the wastewater equivalent to Type I for the purpose of storage.

The commission notes that Type I storage requirements are appropriate for the wastes covered under this subchapter, as the wastes were deemed to be equivalent to Type I domestic wastes as described in 30 TAC 210, Subchapters A through D.

AWWA recommended that water quality of the industrial reuse water should meet the appropriate Type I and Type II uses for the beneficial uses listed, and that producers should be required to meet the more stringent storage requirements for Type II reclaimed water, as they are more appropriate than the requirements for Type I waters for certain industrial reclaimed waters, particularly in those areas with sensitive groundwater sources.

The commission disagrees with the commenter. As noted above, the commission maintains that Type I lining requirements are appropriate for wastewater covered under this subchapter.

AWWA commented that the definition of commingled wastewater should be revised to state that any domestic wastewater contribution should be incidental to the industrial component of the wastewater to be reused. They recommend that if the flow is more than incidental, then all Type I or II parameters must be met before reuse is allowed.

The commission agrees with the commenter. Section 210.53(h) was added to clarify that an industrial wastewater that is commingled with "any amount of domestic wastewater," will be required to meet all the requirements of Subchapters A through C of this Chapter, in addition to Subchapter E.

SAWS commented that the quality requirements for conventional pollutants are significantly lower than the requirements for municipal reuse water.

The commission agrees that the water quality requirements for certain conventional pollutants in industrial wastewater are not the same as the requirements for municipal reuse water.

Appropriate levels of pollutants were established based on knowledge of industrial wastewater characteristics.

AWWA recommended that sampling and analyses requirements for certain industrial reclaimed waters be amended to ensure that water quality is appropriate for the intended end use. They note that it is especially important that industries which are currently required to meet more stringent requirements of the local pretreatment programs due to the constituents in their discharge be required to meet the same level of pollution prevention for wastewater which is reused. The commenter believes that annual sampling is not adequate and recommends that if the uses listed as acceptable in §210.54(d) are implemented, especially residential and park irrigation, then the same quality and sampling requirements in §210.22-210.34 should be required. AWWA also suggested that the sampling must be complimentary to Safe Drinking Water Act requirements and should not supersede the Clean Water Act requirements for sampling industrial effluents discharged to POTWs.

The commission agrees in part with the commenter. A requirement for notification to the POTW was added to the rule, with the intent that local ordinances would continue to regulate the pollutants that are routed to the POTW. The quality limitations proposed in this rule are appropriate for the listed uses, and since a producer is required to maintain an alternate method of disposal. The commission recognizes that annual sampling may not be appropriate to completely characterize those waste streams that require sampling. The sampling requirements

been adjusted to require sampling once per year for all of the constituents listed, and once per month for all constituents for which there was a measurable quantity during any sampling event. Additionally, a sampling requirement for pH was included at a frequency of once per week.

UT requests clarification on §210.55(a)(2), which suggests that the industrial provider must keep a copy of the contract for five years only for industrial reclaimed water users that do not have separate distribution lines for potable water, which implies that it is possible to distribute industrial reclaimed water through potable water lines.

The commission agrees and has deleted the parenthetical comment in this sentence and at §210.55(a)(3).

UT also requested clarification on §210.55(a)(3) as to whether this subparagraph refers to bulk, discrete deliveries to ponds, tanks, or other storage media via tanker cars, trucks or dedicated piping systems.

The commission agrees that clarification is needed and has reworded this provision to delete the reference to "per delivery." It is expected that complete records will be kept of all water that is transported off-site.

STATEMENT OF AUTHORITY

These rules are adopted under the Texas Water Code, §5.102, which provides the commission with general powers to carry out duties under the Texas Water Code and §5.103, which provides the

commission with the authority to adopt any rules necessary to carry out the powers and duties under the provisions of the Texas Water Code and the laws of this state.

**SUBCHAPTER E : SPECIAL REQUIREMENTS FOR USE
OF INDUSTRIAL RECLAIMED WATER**

§§210.51-210.55

§210.51. When authorization is required and how to obtain it; effect on permitted discharges.

(a) A person who produces, provides, or uses industrial wastewater as industrial reclaimed water must obtain agency authorization if the use constitutes a discharge. A conveyance or use of industrial reclaimed water that does not constitute a discharge does not require authorization.

(b) This subchapter authorizes the use of industrial reclaimed water if the requirements of the subchapter are met. If a use of industrial reclaimed water is authorized by this subchapter then an amendment to any related wastewater discharge permit is not required.

(c) The requirements of this subchapter do not apply to the use of industrial reclaimed water when the use is authorized by permit or by commission rules other than those in this subchapter. However, when a use of industrial reclaimed water is regulated under Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste) the use shall comply with the requirements of Chapter 335 and this subchapter.

(d) The use of industrial wastewater as industrial reclaimed water as authorized by this subchapter shall not be considered a violation of the related permit for the discharge of industrial wastewater. Except as provided by §210.54 of this title (relating to the Authorization of Industrial Reclaimed Water Use), effluent limitations provided in the permit remain in effect for the discharge of the industrial wastewater.

(e) Nothing in this subchapter shall alter any requirement to obtain a water right authorization.

§210.52. Definitions.

The following words and terms when used in this subchapter have the following meanings unless the context indicates otherwise.

Blowdown - The discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts which could damage or impair machinery, equipment, or systems.

Commingled Wastewater - Industrial wastewater that contains any amount of domestic wastewater.

Discharge - to release or disposal of waste into or adjacent to any water in the state which in itself or in conjunction with any other discharge or activity causes, continues to cause, or will cause pollution of any of the water of the state.

Industrial Reclaimed Water - Any industrial wastewater which has been treated, if necessary, to a quality suitable for reuse .

Industrial Wastewater - A non-domestic or non-municipal wastewater.

Minimum Analytical Level or MAL - The lowest concentration at which a particular substance can be quantitatively measured in the matrix of concern (i.e., wastewater) with a defined precision level, using approved analytical methods.

Non-process Area Stormwater - Stormwater which has not come into direct contact with manufacturing or process areas, and has not come into direct contact with manufacturing or process materials .

Non-contact Cooling Water - Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product.

Once-Through Cooling Water - Water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

POTW -Publicly Owned Treatment Works

Priority Pollutants - The pollutants as listed in 40 CFR 122, Appendix D, Tables 2 and 3, plus 2,3,7,8-TCDD and asbestos.

Producer - An entity or person that produces industrial reclaimed water as identified in this subchapter.

§210.53. Requirements in Other Subchapters.

(a) Except as specified in this section, the requirements for a reclaimed water producer, provider, or user described in Subchapters A, B, C, and D of this Chapter of this title (relating to Use of Reclaimed Water) apply to a producer, provider, or user of industrial reclaimed water.

(b) The producer or user of industrial reclaimed water is not required to hold a permit for treatment and disposal as described in §210.1 of this title (relating to Applicability).

(c) A producer that uses industrial reclaimed water only within the boundaries of the industrial facility, or within the boundaries of properties contiguous to the facility and owned by the producer, is not required to comply with §210.4 of this title (relating to Notification). However, the producer must comply with all applicable requirements of this chapter pertaining to the industrial reclaimed water use. Unless the facility provides domestic water or wastewater services to the public, such as at a university, hospital, hotel, or similar institution, all exposed or buried piping receiving industrial reclaimed water constructed within the boundaries of the industrial facility is exempt from the color coding requirements of §210.25 of this title (relating to Special Design Criteria for Reclaimed Water Systems).

(d) The requirements of §210.5 (d) of this title (relating to Authorization for the Use of Reclaimed Water) do not apply to a provider or user of industrial reclaimed water.

(e) The requirements of §210.25 (e), (f), and (h) of this title (relating to Special Design Criteria for Reclaimed Water Systems) do not apply to the producer, provider, or user of industrial reclaimed water within the boundaries of the industrial facility or within the boundaries of properties contiguous to the facility and owned by the producer.

(f) The requirements of §210.31 of this title (relating to Applicability), §210.32 of this title (relating to Specific Uses of Reclaimed Water), §210.33 of this title (relating to Quality Standards for Using Reclaimed Water), §210.34 of this title (relating to Sampling and Analysis), §210.35 of this title (relating to Guidelines for Certain Distribution Systems), and §210.36 of this title (relating to Record Keeping and Reporting), do not apply to the producer, provider, or user of industrial reclaimed water.

(g) For purposes of applying the requirements of §210.23 of this title (relating to Storage Requirements for Reclaimed Water) to the authorized uses of industrial reclaimed water identified in §210.54 of this title (relating to Authorization of Industrial Reclaimed Water Use), industrial reclaimed water which is exempt from authorization will be considered equivalent to Type I reclaimed water. If authorization is required, then the executive director may determine whether other lining requirements are needed.

(h) Notwithstanding subsections (b) through (f) of this section, industrial reclaimed water that consists of industrial wastewater commingled with domestic wastewater is subject to all requirements of §§210.1-210.9 of this title (relating to General Provisions), §§210.21-210.25 of this title (relating to General Requirements for the Production, Conveyance, and Use of Reclaimed Water), and §§210.31-210.36 of this title (relating to Quality Criteria and Specific Uses for Reclaimed Water).

§210.54. Authorization of Industrial Reclaimed Water Use.

(a) In addition to the other requirements in this section, a producer must:

(1) provide an authorized alternative means of disposing of the industrial wastewater when the user cannot use industrial reclaimed water; and

(2) if the producer is within the service area of a POTW, give notice to the POTW of the intent to reuse industrial wastewater under this subchapter.

(b) This subsection authorizes the use of industrial reclaimed waters if the requirements of paragraphs (1) and (2) of this subsection are met:

(1) The use is for one of the following activities:

(A) Residential or industrial irrigation, including landscape irrigation.

(B) Urban uses, including but not limited to irrigation of parks, golf courses with restricted or unrestricted public access, school yards, athletic fields, right-of-ways.

(C) Fire protection.

(D) Dust suppression and soil compaction.

(E) Maintenance of impoundments.

(F) Irrigation of non-food crops, including but not limited to sod farms and silviculture.

(2) The use of the industrial reclaimed waters satisfies the following:

(A) The industrial reclaimed waters are used within the boundaries of the producer's facility or within the boundaries of property that is contiguous to the producer's facility and owned by the producer, and are derived from one or more of the following sources: air conditioning condensate, cooling tower blowdown, washwater from washing whole fruits and vegetables, non-contact cooling water, non-process area stormwater, once through cooling water, or steam condensate;
or

(B) The industrial reclaimed waters are used within the boundaries of the producer's facility or within the boundaries of property that is contiguous to the producer's facility and owned by the producer, and meet the following criteria:

(i) Chemical Oxygen Demand less than or equal to 150 mg/l,

(ii) Total Organic Carbon less than or equal to 55 mg/l,

(iii) Oil and Grease less than or equal to 10 mg/l,

(iv) Nitrate Nitrogen less than or equal to 10 mg/l,

(v) Priority Pollutant concentrations less than or equal to the MAL
(2,3,7,8-TCDD and asbestos are only required to be sampled if believed to be present), and

(vi) pH not less than 6.0 nor greater than 9.0 standard units.

(vii) If the industrial reclaimed water is commingled with any amount of domestic wastewater, then the fecal coliform concentration measured from a grab sample must be less than or equal to 75 CFU/100 ml.

(c) The executive director may authorize uses of industrial reclaimed waters for other types of use, locations of use, and of other water quality, in addition to those uses authorized under subsection (b) of this section.

(1) The executive director may approve the use of industrial reclaimed waters at sites other than within the boundaries of the producer's facility and at sites other than within the boundaries of property that is contiguous to the producer's facility.

(2) The executive director will review any proposed use of industrial reclaimed waters for consistency with the wastewater generated. The executive director may impose additional controls on the proposed use.

(3) The executive director may approve of the reuse of industrial reclaimed water if the concentration of a priority pollutant exceeds a MAL. The executive director will consider the concentration of the constituent and its potential for an adverse impact upon human health or waters in the state in making a determination to approve the use and may include additional monitoring and/or reporting requirements.

(4) A user shall submit an application to the executive director on a form provided by the executive director. The user shall not begin use of industrial reclaimed waters before obtaining the executive director's written authorization.

§210.55. Record Keeping and Reporting.

(a) The industrial reclaimed water provider shall maintain records on site for a period of five years. The records to be maintained by the provider include:

(1) copies of notifications made to the commission concerning industrial reclaimed water projects.

(2) copies of contracts made with each industrial reclaimed water user.

(3) daily records of volume of water delivered to each reclaimed water user.

(b) For industrial reclaimed waters authorized under §210.54 (b)(2)(B) or (c) of this title (relating to Authorization of Industrial Reclaimed Water Use), records of water quality analyses must be kept on-site for a period of at least five years. A grab sample of the reclaimed water must be taken and analyzed at least once per year for all of the constituents listed in §210.54(b)(2)(B) of this title (relating to Authorization of Industrial Reclaimed Water Use), and once per month for only those pollutants that are expected to be present in any detectable amount. Additionally, field measurement of pH is required at a frequency of once per week.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's authority.

Issued in Austin, Texas, on