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# **Guide to**

## **Implementing the Division's**

### **Wastewater Treatment Unit Policy**



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**Colorado Department  
of Public Health  
and Environment**

**Hazardous Materials and Waste Management Division  
(303) 692-3300**

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## **Purpose of this Guidance**

*This document has been developed to provide guidance to facilities that utilize wastewater treatment units as part of their waste management process. The guidance is not meant to modify or replace the promulgated regulations which undergo periodic revisions. In the event of a conflict between this guidance and promulgated regulations, the regulations govern. Some portions of the hazardous waste regulations are complex and this guidance does not go into the details of these complex situations. If a regulatory situation is not described in the guidance or clarification is desired, an official interpretation of a specific hazardous waste regulation can be requested by writing to the Hazardous Materials and Waste Management Division at the address on page 14.*

*The Division would appreciate any comments or suggestion for making improvements to future editions. Suggestions or comments can be sent to the address on page 14.*

***(This document has been reformatted to improve accessibility in Portable Document Format (PDF). No other substantive changes were made unless specifically noted.)***

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# **Guide to Implementing the Division's Wastewater Treatment Unit Policy**

## **1.0 INTRODUCTION**

On June 25, 1991, the Division signed the “Policy on Wastewater Treatment Unit Exemption” (hereinafter referred to as “the policy”). The purpose of the policy is to provide guidance on the scope and limitations associated with the wastewater treatment unit exemption that is found at Section 100.10(a)(6) of the Colorado Hazardous Waste Regulations. This exemption essentially removes wastewater treatment units from hazardous waste regulatory control provided certain conditions are met. Attachment one provides a copy of the policy.

Significant regulatory amendments have been made to the Colorado Hazardous Waste Regulations since the policy was signed, and questions have been raised as to how the Division will implement the wastewater treatment unit exemption. The following sections provide guidance on how the Division will interpret and enforce the wastewater treatment unit exemption.

The Division has developed an additional guidance document entitled “Treatment of Hazardous Waste by Generators Guidance Document” that should be referred to for additional detail regarding treatment methods that are exempt from the hazardous waste permitting requirements. The wastewater treatment unit exemption is also discussed in the referenced document.

## **2.0 DEFINING A WASTEWATER TREATMENT UNIT**

According to Section 100.10(a)(6) of the Colorado Hazardous Waste Regulations, owners and operators of a wastewater treatment unit are exempt from the State RCRA permitting requirements. Section 260.10 defines a wastewater treatment unit as a device which:

1. Is part of a wastewater treatment facility which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act;
2. Receives and treats or stores an influent wastewater which is a hazardous waste as defined in Section 261.3 of the Colorado Hazardous Waste Regulations or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of the Colorado Hazardous Waste Regulations or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of the Colorado Hazardous Waste Regulations; and

3. Meets the definition of a tank or tank system as defined in Section 260.10 of the Colorado Hazardous Waste Regulations.

Criteria number one and three are generally straight forward and are further clarified in the attached policy. However, questions have been raised with regard to the definition of “wastewater”. The interpretation of this term is critical because the wastewater treatment unit exemption only applies where the hazardous waste being treated is actually a “wastewater”.

In addition to the above, the policy identifies two criteria that may impact the regulatory status of a wastewater treatment unit. First, the policy states that off-site wastewater treatment facilities must be part of a “designated facility”, as that term is defined in Section 260.10 of the Colorado Hazardous Waste Regulations. Secondly, the policy states that thermal treatment is not an exempt treatment process unless specifically approved by the Division. This criteria is intended to apply primarily to the thermal treatment of wastewater treatment unit sludge. However, the Division may approve thermal treatment units, such as sludge driers, and include them as part of the exempt wastewater treatment unit on a case by case basis.

### **3.0 DEFINING A WASTEWATER**

A review of the Colorado Hazardous Waste Regulations indicates that the only definition of a “wastewater” is the definition that was developed in association with the land disposal restriction treatment standards. This definition is codified at Section 268.2(f) of the Colorado Hazardous Waste Regulations, but it is overly restrictive when it comes to the treatment of hazardous wastewater. In the absence of a codified definition of “wastewater”, as it applies to the wastewater treatment unit exemption, the Division was forced to develop its own interpretation of this term.

The Division will consider a hazardous waste to be a “wastewater” if it is substantially water containing a few percent contaminants at most. Additionally, the Division has determined that certain criteria must be met for a hazardous waste to qualify as a “wastewater”. Any person who claims that their waste meets the criteria of being a wastewater and that the treatment unit is an exempt wastewater treatment unit must be able to demonstrate that the waste in question meets all of the following criteria:

1. Water content of the waste must be at least 90% by weight;
2. Total Organic Carbon (TOC) of the waste must be less than 1%;
3. Flashpoint of the waste must be greater than 140 degrees Fahrenheit; and

4. The waste must not have any phase which would cause it to exhibit the characteristic of reactivity, as defined in Section 261.33 of the Colorado Hazardous Waste Regulations.

Any facility wishing to utilize the wastewater treatment unit exemption must be able to demonstrate compliance with the above criteria through records of hazardous waste determination, waste characterization or analysis. Failure to be able to demonstrate that the above four criteria can be met will disqualify applicability of the wastewater treatment unit exemption. It should be noted that these wastewater criteria apply to spent “concentrated chemicals” as well as the more traditional wastewaters.

In the event that a waste fails one or more of the above criteria, the generator may request the Division to evaluate the waste on a case-by-case basis to determine whether treatment of the waste in a wastewater treatment unit will be protective of human health and the environment. For example, the Division may allow treatment of a waste containing greater than one percent total organic carbon if the treatment system is designed specifically to treat that type of waste. Additionally, the generator’s pretreatment or discharge permit must specifically allow such treatment.

Any waste that fails one or more of the above criteria and which is not approved by the Division on a case-by-case basis will be deemed by the Division to be a hazardous waste if it exhibits any of the hazardous waste characteristics or meets any of the listing descriptions. This means that the treatment of that waste is subject to hazardous waste regulation and the treatment is no longer exempt pursuant to the wastewater treatment unit policy. As will be discussed in the following sections, however, there are still a number of ways by which a generator can treat hazardous waste without first obtaining a hazardous waste treatment permit.

Although not specifically addressed in the policy, there is one particular type of hazardous waste that the Division will not allow to be treated in an exempt wastewater treatment unit, irrespective of its physical or chemical characteristics. The Division believes that unused or off-specification commercial chemical products were never intended to be included in the definition of “wastewater” as that term applies to the wastewater treatment unit exemption. Therefore, the Division will not allow these types of hazardous wastes to be treated in a wastewater treatment unit, irrespective of whether the above criteria are met.

#### **4.0 TREATMENT OF HAZARDOUS WASTE WITHOUT A TREATMENT PERMIT**

Even if the wastewater treatment unit exemption does not apply, there are a number of ways by which a generator is allowed to treat hazardous waste without first obtaining a hazardous waste treatment permit. Attached at the end of this guidance, Diagrams 1 and 2 will assist hazardous

waste generators with the identification of an appropriate and potentially exempt treatment option. Diagrams 3 and 4 depict the requirements applicable when conducting land disposal restriction treatment or generator treatment.

#### **4.1 Treatment by a Conditionally Exempt Small Quantity Generator**

A conditionally exempt small quantity generator is a generator who generates no more than 100 kilograms of hazardous waste and no more than one kilogram of acutely hazardous waste in a calendar month. Also, a conditionally exempt small quantity generator may accumulate no more than 1,000 kilograms of hazardous waste on-site at any given time. Exceeding these limitations subjects a conditionally exempt small quantity generator to the small quantity generator requirements.

Section 261.5(g)(3) of the Colorado Hazardous Waste Regulations allows a conditionally exempt small quantity generator to treat their own waste on-site without first obtaining a treatment permit or providing prior notification to the Division. Additionally, a conditionally exempt small quantity generator is not subject to the land disposal restriction treatment standards. However, this type of generator must make a hazardous waste determination for all solid wastes generated and must ensure that such wastes are properly disposed.

#### **4.2 Treatment in a Totally Enclosed Treatment Unit**

A hazardous waste generator may also treat hazardous waste without first obtaining a treatment permit if the treatment is conducted in a totally enclosed treatment unit. Treatment under this option is very restrictive and the treatment unit must meet the specific definition of a totally enclosed treatment unit. A definition of a totally enclosed treatment unit is provided at Section 260.10 of the Colorado Hazardous Waste Regulations as follows:

“Totally enclosed treatment facility” means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.”

Essentially, the exemption for a totally enclosed treatment unit only applies where the treatment system is completely contained on all sides and poses little or no potential for escape of waste into the environment, including air emissions, even during periods of process upsets. Generators who believe that their system qualifies for this exemption should contact the Division to ensure that all conditions of the exemption can be met by the treatment unit in question.

### **4.3 Treatment in an Elementary Neutralization Unit**

A generator of a waste that is hazardous *ONLY* because it exhibits the characteristic of corrosivity may treat (i.e., neutralize) that waste in a container or tank without first obtaining a treatment permit. It is important to note that this exemption does not apply to wastes that exhibit any of the other hazardous waste characteristics or to wastes that meet any of the listing descriptions. Elementary neutralization unit is defined at Section 260.10 of the Colorado Hazardous Waste Regulations.

Generators that conduct elementary neutralization are subject to the notification and certification requirements of Section 268.9(d) of the Colorado Hazardous Waste Regulations. This section of the regulations requires any person who treats a characteristic hazardous waste and remove all of the characteristics to submit a one-time notification and certification to the Division. Additionally, a copy of the notification and certification must be retained in the generator's files for at least three years. The notification must be updated on an annual basis if the process or operation generating the waste changes. The notification must include the information required by Section 268.9(d)(1) of the Colorado Hazardous Waste Regulations. The certification must also include the information required by Section 268.9(d)(2) of the Colorado Hazardous Waste Regulations.

### **4.4 Treatment to Meet Land Disposal Restriction Treatment Standards**

Hazardous wastes that are corrosive and/or exhibit other hazardous waste characteristics and/or are a listed hazardous waste may be treated without first obtaining a treatment permit if the treatment is for the purpose of achieving compliance with a land disposal restriction treatment standard. Treatment to meet a land disposal restriction treatment standard may be conducted in a generator's accumulation tank or container. In order to qualify for this exemption, the tank system or container in which the hazardous waste is being accumulated and treated must be managed in accordance with the standards applicable to generator tanks or containers identified at Part 265, Subpart J or I of the Colorado Hazardous Waste Regulations, respectively.

In the event that hazardous waste is treated in an accumulation tank system, all tanks that are used for the management of that waste must be in compliance with the hazardous waste tank standards codified at Part 265, Subpart J of the Colorado Hazardous Waste Regulations. The extent to which these standards apply at a given facility will depend upon whether a facility is operating as a large or a small quantity generator. The requirements for both types of generators are discussed in Section 5.2 and 5.3, respectively.

#### **4.4.1 Land Disposal Restriction Waste Analysis Plan Requirements**

A generator who is treating hazardous waste in an accumulation tank or container to meet a land disposal restriction treatment standard must develop a waste analysis plan. This plan must be maintained in the generator's file for a period of at least three years. The waste analysis plan



must be based on a detailed chemical and physical analysis of a representative sample of the waste being treated and contain all information necessary to treat the waste in accordance with the applicable land disposal restriction treatment standard. In many cases, site procedures that detail the process for conducting batch treatment of hazardous wastes will be sufficient to meet the waste analysis plan requirements.

#### **4.4.2 Land Disposal Restriction Notification Requirements**

Section 268.7(a)(7) of the Colorado Hazardous Waste Regulations require a generator who is managing a restricted hazardous waste that becomes excluded subsequent to the point of generation (including deactivated wastes that are managed in wastewater treatment systems subject to the Clean Water Act) to maintain a one-time written notice in the facility's file. This one-time notice would apply to a generator who is treating hazardous *wastewaters* (i.e., wastes that meet all of the criteria in the policy) in accordance with a wastewater pretreatment permit and subsequently discharges the treated wastewater to the publicly owned treatment works. The one-time notice must include the following information:

- A description of how the waste is generated and applicable hazardous waste codes;
- A description of how the waste is treated to render the waste non-hazardous; and
- A description of the final disposition of the waste.

Separate notification and certification requirements are identified at Section 268.(9)(d) of the Colorado Hazardous Waste Regulations for generators who are treating *hazardous waste* to remove all of the hazardous waste characteristics. These regulations require a generator to file a one-time notification and certification to the Division and to keep a copy in the generator's file for at least three years. The notification that is placed in the generator's file must be updated on an annual basis if the process or operation generating the waste changes. However, the generator need only notify the Division on an annual basis, no later than December 31, if such changes occur. The notification must include the information required by Section 268.9(d)(1). The certification must include the information required by Section 268.9(d)(2) of the Colorado Hazardous Waste Regulations.

#### **4.5 Generator Treatment as Permit-by-Rule**

In some cases, treatment of a hazardous waste may not achieve compliance with a land disposal restriction treatment standard. In such cases, treatment of that waste may still be conducted in an accumulation tank or container provided the requirements specified for generator treatment are met. The requirements for conducting generator treatment are identified at Section 100.21(d) of the Colorado Hazardous Waste Regulations.

A person conducting generator treatment must follow all applicable generator requirements, including the requirements applicable to the management of hazardous waste in containers or hazardous waste accumulation tank systems. These requirements are discussed in detail in Section 5.0.

In addition, a generator performing generator treatment must comply with the following:

- A notification and waste analysis plan must be submitted to the Division at least 30 days prior to conducting the treatment;
- Thermal treatment of hazardous waste is prohibited; and
- Treatment of reactive hazardous waste, including wastes that are hazardous due to cyanides, is prohibited.

## **5.0 COMPLIANCE WITH THE HAZARDOUS WASTE CONTAINER AND TANK STANDARDS**

A generator who treats hazardous waste to 1) meet a land disposal restriction treatment standard or 2) following the requirements for generator treatment may treat in an accumulation tank or container without a treatment permit. In these cases, the generator must ensure compliance with the requirements applicable to management of hazardous waste in containers or tanks identified at Subpart I and J of Part 265 of the Colorado Hazardous Waste Regulations, respectively.

### **5.1 Container Management Requirements**

A small or large quantity generator of hazardous waste may conduct treatment to meet land disposal restriction treatment standards or conduct generator treatment in an accumulation container provided the requirements of Part 265, Subpart I of the Colorado Hazardous Waste Regulations are met. These requirements include, but are not limited to, the following:

- Containers that hold hazardous waste must be in good condition and if a container begins to leak the waste must be transferred to a container that is in good condition;
- Containers that hold hazardous waste must be compatible with the waste so that the integrity of the container is not impaired and containers of incompatible wastes must be segregated from each other or protected from them by means of a dike, berm, wall or other device;
- Containers that hold hazardous waste must remain closed except for when it is necessary to add or remove waste from the container;

- Containers that hold ignitable wastes must be located at least 15 meters (50 feet) from the facility's property line (NOTE: small quantity generators are not subject to this requirement); and
- Containers that hold hazardous waste must be inspected at least weekly.

## **5.2 Tank Standards Applicable to a Large Quantity Generator**

A large quantity generator may accumulate and treat hazardous waste in an accumulation tank system 1) to meet a land disposal restriction treatment standard or 2) following the requirements for generator treatment provided the requirements of Subpart J of Part 265 of the Colorado Hazardous Waste Regulations are met. The closure and waste analysis requirements of Section 265.197(c) and 265.200 of the Colorado Hazardous Waste Regulations do not apply. The tank standards that apply to a large quantity generator of hazardous waste include, but are not limited to, the following:

- a. Secondary containment must be provided for the tank and ancillary equipment. For tanks that were installed prior to September 30, 1988 (i.e., the effective date of the regulations) the date by which secondary containment is required depends upon the age of the tank. Section 265.193(3) and (4) provide the date by which secondary containment for existing hazardous waste tank systems is required.

Tanks that were installed after September 30, 1988 were required to have secondary containment at the time of construction. Where concrete is used as containment, an impermeable coating must be applied to protect the concrete;

- b. Spill and overflow prevention controls must be provided for the tank and release detection must be provided for the tank and ancillary equipment;
- c. Inspections must be conducted each operating day (i.e., each day hazardous waste is accumulated and treated in the tank system);
- d. Existing tank systems that do not have secondary containment require an integrity assessment. This assessment was required within one year from the effective date of regulation, which was September 30, 1988.

New tank systems (i.e., tank systems installed after September 30, 1988) also require a tank integrity assessment prior to placing the system into use. For existing and new tank systems, this assessment must be completed by an independent, qualified, registered, professional engineer and must be retained on-site as part of the facility's file.

In addition to the tank standards identified above, a large quantity generator of hazardous waste must mark or label accumulation tanks with the words "Hazardous Waste" and track the period

of accumulation. Tracking the period of accumulation may be accomplished by maintaining a log sheet indicating the volume of waste transferred into the tank and the volume of waste removed from the tank during each period of operation.

### **5.3 Tank Standards Applicable to a Small Quantity Generator**

A small quantity generator may accumulate and treat hazardous waste in a tank system to meet a land disposal restriction treatment standard or following the requirements for generator treatment provided the requirements of Section 265.201 of the Colorado Hazardous Waste Regulations are met. These regulations require, among other things, the following:

- a. Hazardous waste must not be placed in the tank if the waste would cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life;
- b. Uncovered tanks must be operated to ensure at least 2 feet of freeboard, unless the tank is operated with secondary containment (e.g., a dike or trench), a drainage control system, or a diversion structure (e.g., a standby tank) with a capacity that equals or exceeds the volume of the top 2 feet of the tank. Note: an impermeable coating must be applied to concrete that is used to meet the intent of these requirements;
- c. Where hazardous waste is continuously fed to the tank, the tank must be equipped with a means to stop this inflow (e.g., waste feed cutoff system or by-pass system to a stand-by tank); and
- d. Discharge control equipment, data from monitoring equipment, and the level of waste in the tank must be inspected at least once each operating day, where such equipment is present. The construction materials of the tank must be inspected at least weekly.

In addition to the tank standards identified above, a small quantity generator of hazardous waste must also mark or label accumulation tanks with the words “Hazardous Waste” and track the period of accumulation. As discussed previously, tracking the period of accumulation may be accomplished by maintaining a log sheet indicating the volume of waste transferred into the tank and the volume of waste removed from the tank during each period of operation.

## Part II FREQUENTLY ASKED QUESTIONS

### 1. Is there any flexibility in how a facility meets the tank standards?

There is some flexibility as to how a facility may meet the tank standards as described below:

- A large quantity generator may choose to inspect ancillary equipment (e.g., transfer piping) each operating day in lieu of providing secondary containment. However, all components must be completely visible for inspection.
- A large quantity generator may choose to visually inspect the hazardous waste tank(s) each operating day in order to meet the release detection requirements.
- A large quantity generator may choose to consider the building itself as secondary containment for a hazardous waste tank system. To meet this requirement, the floor would have to be coated with an impervious lining and the doors would have to be provided with a berm so that releases could be completely contained within the room.
- A large quantity generator may choose to utilize batch transfers of waste with a visual confirmation that the waste will not exceed the tank's capacity as a method of meeting the spill prevention requirements.

### 2. How is the wastewater treatment unit exemption altered if hazardous waste is treated in that same system?

A tank system may qualify as an exempt wastewater treatment unit when hazardous *wastewaters* are being treated and a hazardous waste accumulation tank system when hazardous *waste* is being treated. Essentially, this means that the tank system would have to be in compliance with the applicable portions of the hazardous waste tank standards when hazardous waste is being treated in that system.

For example, assume a plating shop wants to treat two separate plating bath solutions. The first plating bath is analyzed and determined to meet the criteria in Section 3.0 of this guidance. This waste meets the criteria for being a hazardous wastewater, and the treatment system is exempt pursuant to the wastewater treatment unit exemption.

The second plating bath is analyzed and a determination is made that the solution does not meet all of the criteria in Section 3.0 and also exhibits the hazardous waste characteristics for corrosivity and chromium. This waste is a *hazardous waste* and, therefore, must be managed as such. If the waste is treated in a tank system associated with the wastewater treatment unit, all

such tanks and ancillary equipment must be in compliance with the applicable hazardous waste tank regulations. The treatment may be performed without a treatment permit either by following the requirements for conducting land disposal restriction treatment or generator treatment.

**3. Does the policy allow a generator to “bleed” a waste into an exempt wastewater treatment unit for treatment?**

The answer to this question depends upon whether the waste in question meets the criteria for being a wastewater as described in Section 3.0 of this guidance or is a hazardous waste. If the waste meets all of the criteria identified in Section 3.0 then the practice of “bleeding” the waste into the wastewater treatment unit is allowed because the waste in question meets the definition of a wastewater.

On the other hand, if the generator determines that the waste does not meet all of the criteria identified in Section 3.0 and a case-by-case approval is not granted by the Division then the waste is a hazardous waste. The generator then has two options. The first option would be to treat the waste pursuant to one of the exempt treatment options. This may include, treatment in an elementary neutralization unit if the waste is only corrosive, on-site treatment if the generator is conditionally exempt, or treatment in a totally enclosed treatment system.

If the generator cannot meet one of the exempt treatment options, then the second option would be to treat the waste in a tank or container by following the requirements for land disposal restriction treatment or generator treatment. If the generator chooses to treat the waste in a tank system, the tank system must meet the applicable hazardous waste tank standards.

**4. Are thermal treatment units, such as sludge driers, exempt because they are part of the wastewater treatment unit?**

The policy specifically states that thermal treatment of hazardous waste is not an exempt treatment process unless specifically approved by the Division in writing. Generally, the Division will approve thermal sludge drying units. However the Division will consider the following as conditions for not approving such units 1) the unit is not an integral part of the wastewater treatment unit, 2) the unit is a combustion unit, 3) the unit poses a threat to human health or the environment from uncontrolled releases, or 4) the unit is inherently unsafe.

**Part III**  
**EXAMPLES OF IMPLEMENTING**  
**THE WASTEWATER TREATMENT UNIT POLICY**

**Example 1.** Facility A is a large quantity generator who conducts a variety of electroplating activities. Prior to electroplating, parts are cleaned using concentrated nitric acid. The smut that is formed on the parts is removed by immersion in a mixture of concentrated nitric and hydrofluoric acid. When the nitric and hydrofluoric acid mixture becomes spent it is treated in the facility's on-site treatment system. This waste is only regulated as a hazardous waste due to hazardous waste characteristic of corrosivity. How would the Division regulate this activity?

**Answer.** Because this waste is regulated solely due to the hazardous waste characteristic of corrosivity, the treatment of this waste would be exempt from hazardous waste regulation because it is considered to be elementary neutralization as discussed in Section 4.3 above.

As discussed in Section 4.3, there are land disposal restriction requirements that apply to the neutralization of corrosive-only hazardous waste. In particular, the generator must submit a one-time notification and certification to the Division, with a copy placed in the generator's files as required by Section 268.9(d) of the Colorado Hazardous Waste Regulations.

**Example 2.** Facility B is a large quantity generator who conducts chrome plating on aluminum wheels. When the chromic acid baths become spent, they are transferred from the plating baths to an accumulation tank (Tank 1) prior to conducting pH adjustment, chrome reduction, and metals precipitation in a subsequent tank (Tank 2). The spent chromic acid waste exhibits the hazardous waste characteristic of corrosivity and toxicity. Additionally, the generator has determined that the spent plating bath does not meet the criteria for being a wastewater and the Division has not granted a case-by-case approval to classify this waste stream as a wastewater. How would the Division regulate this activity?

**Answer.** In this case, the spent chromic acid is considered to be a hazardous waste rather than a wastewater. Because this hazardous waste is being accumulated prior to treatment, Tank 1 must be managed as a hazardous waste tank system. Tank 2 must also be managed as a hazardous waste tank system because treatment of the waste is occurring in that tank. The filter press associated with this treatment system would be considered to be ancillary equipment and must meet the requirements applicable to ancillary equipment for hazardous waste tank systems.

The pH adjustment step and metal precipitation meet the specified land disposal restriction treatment standard. Therefore, the generator is required to develop and maintain a waste analysis plan because treatment is being conducted to meet land disposal restriction treatment standards. The waste analysis plan may be a procedure dictating how to accomplish treatment of this waste.

The waste analysis plan needs to be maintained in the generator's file for at least three years. Additionally, the generator is required to develop and maintain a one-time land disposal restriction notification and certification, as required by Section 268.9(d) of the Colorado Hazardous Waste Regulations. It is important to note, that because the treatment standard for corrosive hazardous wastes that are not managed in a Clean Water Act system is deactivation and meet the concentration based standards for underlying hazardous constituents, the generator must determine the underlying hazardous constituents and ensure treatment of those constituents before the waste may be land disposed.

**Example 3.** Facility C is a conditionally exempt small quantity generator who conducts electroplating operations that utilizes cyanide in the plating bath. At some point, the owner determines that the plating bath can no longer be used and decides to treat the waste in the on-site treatment system. How would the Division regulate this activity?

**Answer.** Because Facility C is a conditionally exempt small quantity generator, this facility may treat their own waste on-site without first obtaining a hazardous waste treatment permit, as discussed in Section 4.1 above. There is no need to make a determination as to whether this waste meets the criteria for being a wastewater, in this case, because the generator is conditionally exempt.

The land disposal restriction requirements are not applicable to a conditionally exempt small quantity generator. Therefore, there are no requirements to maintain a waste analysis plan or to comply with the land disposal restriction notification requirements.



**Part IV**  
**PHONE NUMBERS**

Colorado Department of Public Health and Environment

Pollution Prevention..... (303) 692-2975  
Hazardous Materials and Waste Management Division  
Receptionist .....(303) 692-3300  
toll-free .....1-888-569-1831  
For a Copy of the Hazardous Waste Regulations..... (303) 692-3300  
Technical Assistance Line..... (303) 692-3320  
For an EPA I.D. Number..... (303) 692-3300  
Colorado 24-Hour Emergency Response Line..... 1-877-518-5608

Other Phone Numbers

National Response Center.....1-800-424-8802  
RCRA Hotline.....1-800-424-9346

Send Questions in Writing to:

Colorado Department of Public Health and Environment  
Hazardous Materials and Waste Management Division  
HMWMD-B2  
4300 Cherry Creek Drive South  
Denver, Colorado 80246-1530

OR

Fax (303) 759-5355

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT  
Hazardous Materials and Waste Management Division

**POLICY ON WASTEWATER TREATMENT UNIT EXEMPTION**

Under Section 100.10(a)(6) of the Colorado Hazardous Waste Regulations, owners and operators of “wastewater treatment units” (WWTU), as defined in 6 CCR 1007-3, Part 260.10, are exempt from State RCRA permitting requirements. The Division’s policy regarding applicability of the WWTU exclusion in Part 100.10 is discussed below, including factors which may prevent a wastewater treatment facility from being eligible for the exclusion.

“Wastewater treatment unit” means a device which:

- (1) Is part of a wastewater treatment facility which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act; and
- (2) Receives and treats or stores an influent wastewater which is a hazardous waste as defined in Section 261.3 of these regulations or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of these regulations or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of these regulations and
- (3) Meets the definition of tank or tank system in Section 260.10 of these regulations.

All three of these requirements must be met for a facility to qualify for the WWTU exclusion.

The first requirement limits the exemption to units which are part of a wastewater treatment facility subject to regulation under a National Pollution Discharge Elimination System (“NPDES”) permit, a Colorado Discharge Permit System (“CDPS”) permit issued by the State Water Quality Control Division, or which are part of a wastewater treatment facility subject to regulation under the Clean Water Act (“CWA”) pretreatment requirements. The CWA pretreatment requirements apply to dischargers to publicly owned treatment works (POTW’s), and the POTW’s themselves.

Whether or not a unit is “part of a wastewater treatment facility” will be determined on a case-by-case basis. Generally, the unit must be in the immediate vicinity of the main structures and/or point(s) of discharge of the wastewater treatment facility, and the unit must be directly involved in the actual treatment or storage of the wastewater. The WWTU may receive wastes, including hazardous wastes if it is a designated facility, from offsite or other onsite facilities. This last point was clarified in the September 2, 1988 Federal Register, page 34080.

The second requirement allows facilities eligible for the exclusion to receive, and treat or store a “wastewater”, or generate, accumulate, treat and store a “wastewater treatment sludge”, which is a hazardous waste. However, the WWTU may not receive a WWTU sludge which is a hazardous waste, unless the facility has interim status or received a RCRA permit for treatment or storage of that waste type in specific units.

A formal definition of “wastewater” has been promulgated by EPA under RCRA for the purpose of determining treatability group under the Land Disposal Restrictions regulations, Section 268.2(f). That definition is as follows:

“Wastewaters” are wastes that contain less than 1% total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS), with certain exceptions for K011, K013, K014, K103, and K104 wastes. Wastes which do not meet the criteria for wastewaters are defined as “nonwastewaters”.

The Division believes that this definition is appropriate for TOC, but unnecessarily restricts TSS for application to the WWTU exclusion. Most WWTU’s are designed to remove solids as an integral part of the treatment process, producing a wastewater treatment sludge.

EPA guidance regarding the WWTU exemption refers to “wastewater” as being substantially water containing a few percent contaminants at most. (See July 31, 1981 letter to Richard Boynton, EPA from John Lehman, EPA HQ.) While this definition does not provide a specific quantifiable limit on wastewater, it is interpreted by the Division to refer to wastes which are predominantly water as opposed to concentrated chemical solutions or non-aqueous wastes. The Division’s interpretation agrees with guidance obtained from EPA.

It is apparent that EPA hazardous waste codes alone are not adequate to determine if a hazardous waste being treated in a wastewater treatment facility is a “wastewater”. However, waste codes will provide information on the constituents or characteristics of the waste.

The Division has determined that the following criteria must be met for a hazardous waste to qualify as a “wastewater”, and for the WWTU exclusion to apply to a wastewater treatment facility receiving hazardous wastes from off-site sources:

- 1.) The WWTU must be part of a “designated facility”, as defined in 6 CCR 1007-3, Part 260.
- 2.) Water content of the waste must be at least 90% by weight.
- 3.) Total Organic Carbon (TOC) of the waste must be less than 1% (from 6 CCR 1007-3, Part 268 definition).
- 4.) Flash point of any phase of the waste must be above 140 degree F.
- 5.) The waste must not have any phase which would cause the waste to exhibit the characteristic of reactivity, as defined in 6 CCR 1007-3, Section 261.23.
- 6.) Any facility utilizing the WWTU exemption must be able to demonstrate compliance with the above criteria through records of hazardous waste determination, waste characterization or analysis.
- 7.) Thermal treatment is not an exempt treatment process unless specifically approved by the Division in writing.

Other prohibitions on waste composition or operation of a WWTU claiming the exclusion may be implemented by the Division on a case-by-case basis in order to protect human health and the environment. Exceptions to the above prohibitions will be determined by the Division on a case-by-case basis. For example, a higher TOC level may be allowed for treatment of oily wastestream in a biological treatment plant.

Generators wishing to utilize the WWTU exemption and treat their own wastes in an on-site WWTU must be able to demonstrate that conditions (2)-(7) above are met.

A Publicly Owned Treatment Works (POTW) is deemed to have a RCRA Permit by Rule, and may accept hazardous wastes for treatment if the POTW complies with 6 CCR 1007-3, Section 100.21(c).

Many wastewater treatment facilities generate a sludge. In the case where the sludge is a hazardous waste, storage or treatment of the sludge in the WWTU is exempt from permitting requirements provided that the facility has appropriate management techniques for the resulting waste type. For example, should the WWTU sludge exhibit the characteristic of reactivity (D003), the facility must manage the waste accordingly. Failure to do so jeopardizes the exclusion.

The third requirement is that the unit must meet the definition of a "tank" or "tank system" in Section 260.10. It is important to note that EPA clarified the definition of WWTU in the September 2, 1988 Federal Register (53 FR 34086) including "tank system" in the definition in requirement 3.

Tanks which manage wastewater or wastewater treatment sludge must be a dedicated part of the WWTU. The exemption does not apply to tanks which are used to store or treat a wastewater or wastewater treatment sludge prior to shipment (either on a part-time or full-time basis) to off-site facilities for further management, rather than manage it in an on-site wastewater treatment facility. This point was also addressed in the September 2, 1988 notice.

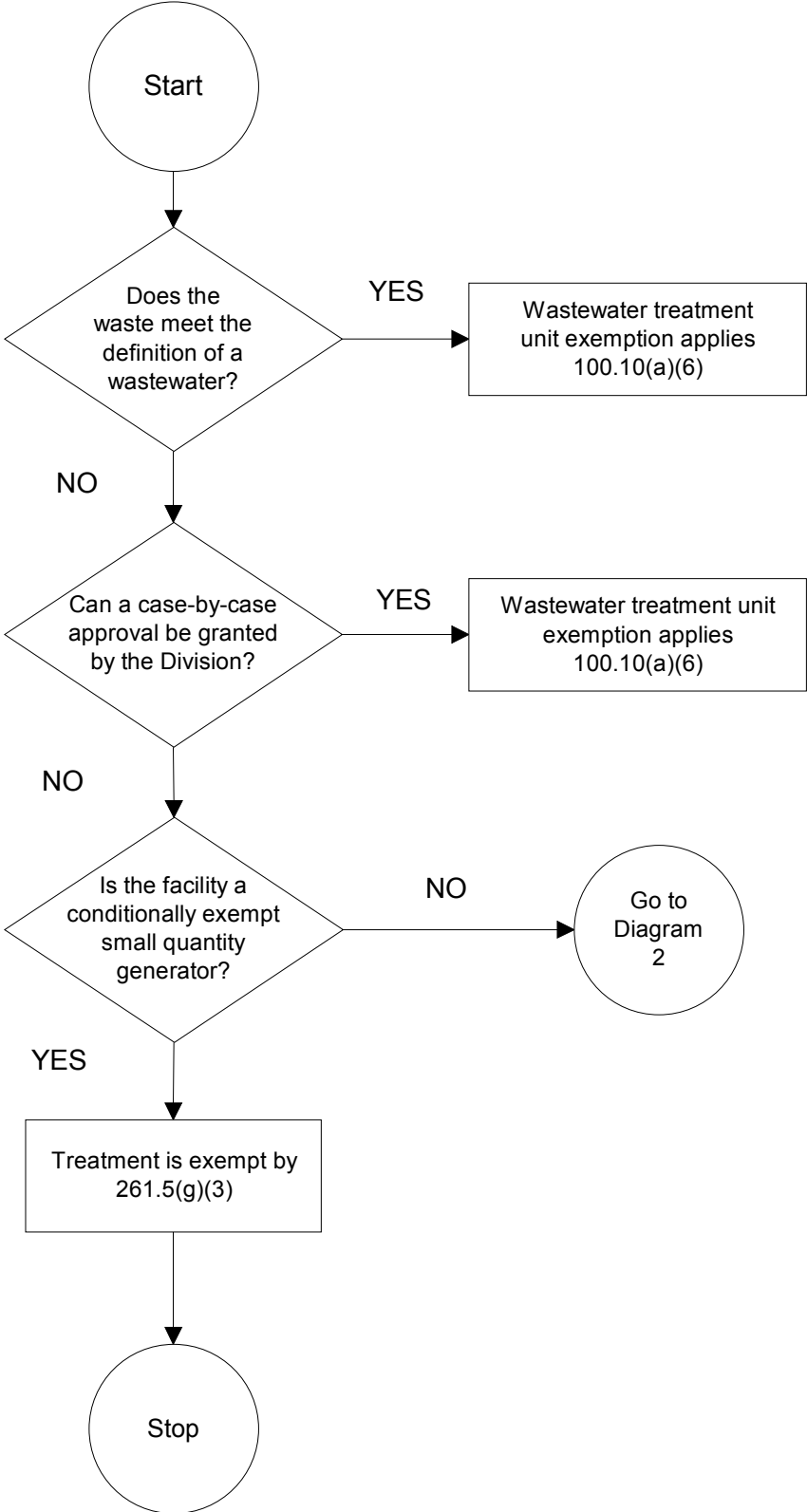
The Division and EPA consider hazardous wastes managed in a WWTU to be hazardous wastes throughout the process, unless it meets an exclusion other than the WWTU exclusion. A WWTU sludge resulting from treatment of listed waste remains a listed waste after treatment. A sludge produced from treatment of characteristic waste which no longer exhibits characteristics of a hazardous waste after treatment would no longer be a hazardous waste.

If a WWTU is known to be leaking to the environment, then appropriate enforcement action can be taken for illegal disposal of hazardous wastes. The owner/operator may then be required to repair or close the tank system and initiate corrective actions addressing the contamination.

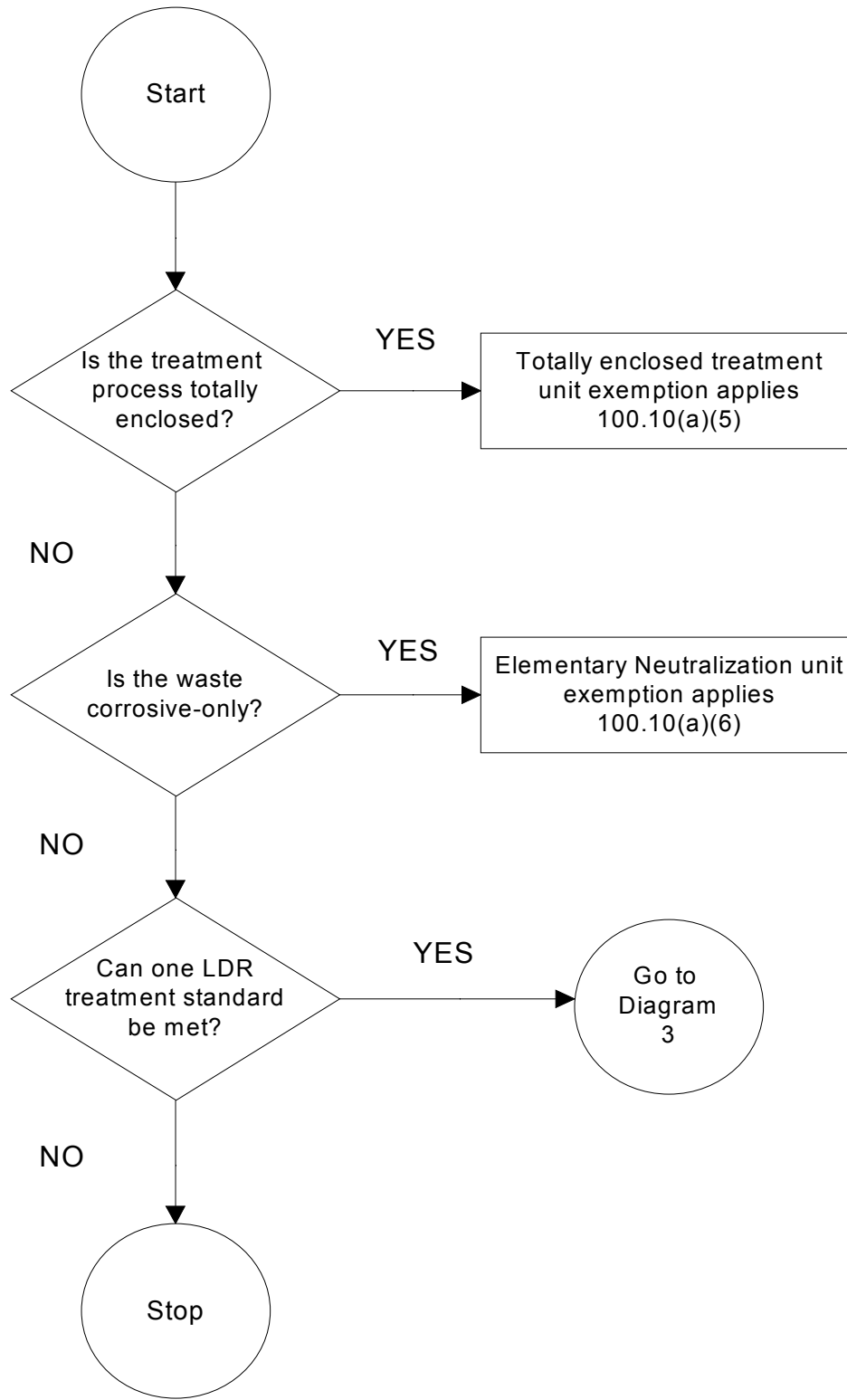
It should be noted that WWTU's which qualify for the exemption may be subject to certain generator requirements of Part 262. These requirements include the hazardous waste determination for hazardous wastes generated by the WWTU. Wastewater treatment sludges produced by the WWTU which are hazardous wastes and are removed from the WWTU for further management, and WWTU effluent which may be unacceptable for discharge under the CWA provisions must be managed in accordance with the Colorado Hazardous Waste Regulations.

ADOPTED	<u>Original Signed by</u>	<u>25 June 91</u>
	Joan W. Sowinski, Section Chief	Date
	Hazardous Waste Control	

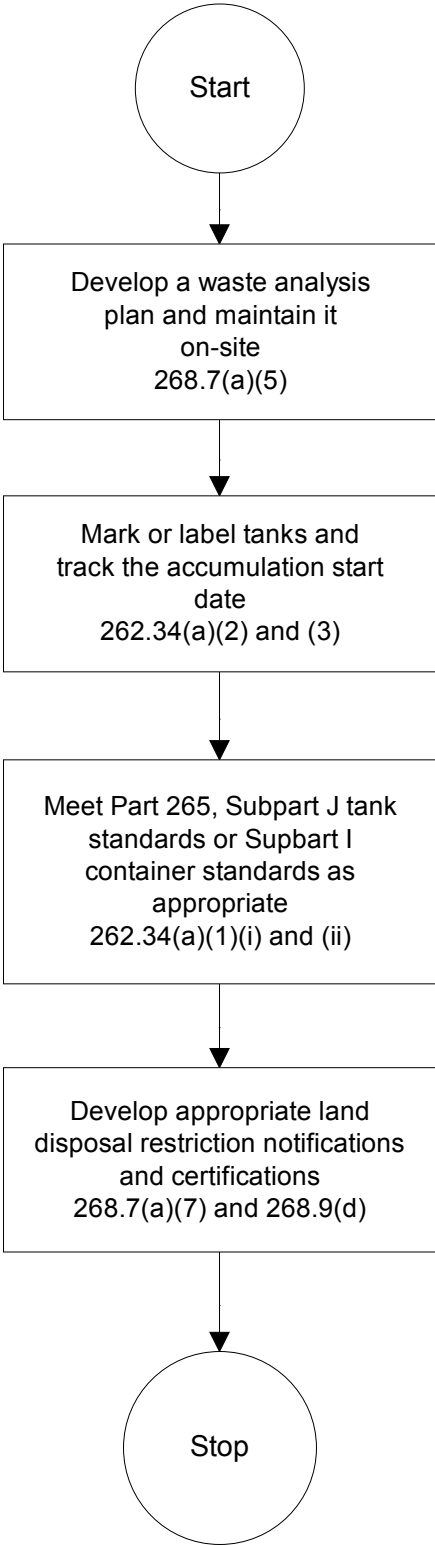
**DIAGRAM 1 - EXEMPT TREATMENT OPTIONS**



## DIAGRAM 2 - EXEMPT TREATMENT OPTIONS



**DIAGRAM 3 - LAND DISPOSAL RESTRICTION TREATMENT**



## DIAGRAM 4 - GENERATOR TREATMENT

