CHAPTER 1
INTRODUCTION

ABOUT THIS GUIDANCE DOCUMENT

The Railroad Commission of Texas (RRC) adopted Statewide Rule 98, "Standards for Management of Hazardous Oil and Gas Waste," on November 7, 1995. Rule 98 took effect on April 1, 1996.

This guidance document is designed to assist you, as a generator or transporter of hazardous oil and gas waste, in determining your needs with respect to complying with Rule 98. As well as complying with Rule 98, you still must continue to comply with the federal hazardous waste regulations under the Resource Conservation and Recovery Act, Subtitle C (RCRA) enforced by the U.S. Environmental Protection Agency (EPA Region 6). This document explains which wastes are subject to regulation under Rule 98 and the role of other federal and state agencies in regulating hazardous waste generated by oil and gas exploration and production operations (see "Interim Period" and "Delegation of Authority" below for further explanation).

This guidance document references various subsections of Rule 98. For the user's convenience, the complete text of Rule 98 is included as Appendix A. Note that Rule 98 continues to adopt by reference the November 7, 1995, edition of the Code of Federal Regulations (CFR). Therefore, federal rule changes that have been made since November 1995 are generally not adopted by Rule 98. For example, oil and gas wastes that are universal wastes are defined in the November 1995 edition of the CFR and do not include hazardous lamps in accordance with more recent federal rule changes.

THE PURPOSE OF RULE 98

Rule 98 establishes standards for management of hazardous oil and gas waste. This includes any waste that:

- arises out of or incidental to the drilling for or producing of oil and gas (including pipeline transportation of oil and gas), brine mining activities, and exploration, development, and production of geothermal resources; and

- is a hazardous waste as defined by EPA (taking into account the E&P exemption in RCRA).

Rule 98 is intended to prevent pollution of surface and subsurface waters of the state and to prevent injury to life or property that may be caused by mismanagement of hazardous oil and gas waste.

DELEGATION OF RCRA AUTHORITY

Rule 98 is as strict as the federal hazardous waste regulations under RCRA. The RRC will pursue authorization from EPA to administer the provisions of RCRA for hazardous oil and gas waste. The time period between the effective date of Rule 98 (April 1, 1996) and the RRC's authorization to administer RCRA is not known. It is important that jurisdiction of the involved state and federal agencies be understood in this interim period.

Interim Period

During the interim period between the effective date of Rule 98 and the RRC's authorization to administer RCRA, generators of hazardous oil and gas waste (as defined in Chapter 2) must comply with RRC Rule 98 ***and*** the federal RCRA hazardous waste regulations enforced by EPA Region 6.

Also, during the interim period, the Texas Commission on Environmental Quality (TCEQ) has jurisdiction over hazardous waste generated in connection with activities at natural gas processing plants, repressurization plants, and pressure maintenance plants.*

The term "Regional Administrator and the RRC" appears in several sections of this document. The federal hazardous waste regulations require that certain reports, notices, and requests for variances from regulatory requirements be submitted to the EPA Regional Administrator. During the interim period the EPA Regional Administrator must be contacted when required by federal regulations. The RRC also must be contacted in each of these instances. Contact with the Regional Administrator may be accomplished by sending a carbon copy of correspondence to the RRC.

Upon obtaining "Delegation of Authority" from EPA, the RRC will be the Regional Administrator's "designee." As the Regional Administrator's designee, the RRC will be authorized to accept most submitted reports, notices, and requests for variances as required by federal regulations.

* Note: Natural gas processing plant (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A separator, dehydration unit, heater treater, sweetening unit, compressor or similar equipment is not considered a part of a natural gas processing plant unless such equipment is physically located within a natural gas processing plant site. Also, a pressure maintenance plant or repressurizing plant is a plant for processing natural gas for reinjection (for reservoir pressure maintenance or repressurizing) in a natural gas recycling project. These terms do not include a compressor station along a natural gas pipeline or a pump station along a crude oil pipeline system.

After Delegation of Authority

Upon delegation of RCRA authority to the RRC by EPA, the RRC will enforce the requirements of federal hazardous waste regulations under RCRA by virtue of enforcing Rule 98. At that time, Rule 98 will also apply to hazardous waste generated in connection with activities at natural gas processing plants and activities at repressurization and pressure maintenance plants. Therefore, operators will then respond only to the RRC with respect to regulation of the management of hazardous waste at RRC-regulated facilities.

WHAT THIS GUIDANCE DOCUMENT PROVIDES

The chapters of this document provide guidance for complying with the provisions of Rule 98 that apply to sites that generate hazardous oil and gas waste. The following discussion provides a brief description of the chapters of this document.

Chapter 2 - Hazardous Waste Determination

The first step, and a requirement of Rule 98, subsection (e), is to determine what, if any, hazardous oil and gas wastes you generate. Chapter 2 discusses the process for determining whether or not an oil and gas waste is hazardous. Many oil and gas operators regulated by the RRC may find that they do not generate hazardous oil and gas waste, and therefore, need not be concerned with Rule 98 standards for managing that waste.

Chapter 3 - Hazardous Waste Generator Classification

If you determine that you are generating hazardous oil and gas waste, the second step must be taken. You must determine the quantity of hazardous waste you are generating in a month. Based upon that quantity, you will fall into one of three classifications: Conditionally Exempt Small Quantity Generator (CESQG), Small Quantity Generator (SQG); or Large Quantity Generator (LQG). Chapter 3 provides the information you need to determine your generator classification and accumulation limits.

Chapter 4 - Notification Requirements

LQGs and SQGs must notify the RRC of their status as a hazardous oil and gas waste generator and obtain an EPA Identification Number. Chapter 4 provides guidance on how and when to provide the required notification.

Chapter 5 - Standards for Management of Hazardous Oil & Gas Waste

The requirements of Rule 98 vary for each generator classification. In general, the requirements become more extensive as the classification goes from CESQG to LQG. Chapter 5 first provides guidance for CESQGs on complying with the requirements of Rule 98 and then provides guidance on Rule 98 compliance for LQGs and SQGs. Federal regulations that Rule 98 adopts by reference are described where applicable.

Chapter 6 - Discharges and Emergency Permits

Generators and transporters must take certain actions in the event of a release or discharge either of hazardous oil and gas waste or of a substance that creates a hazardous oil and gas waste. Chapter 6 describes these actions. In some instances, an emergency permit may be required for treatment, storage, or disposal of hazardous oil and gas waste released, discharged, or created by a release or discharge. Chapter 6 discusses emergency permit requirements and the procedure for obtaining an emergency permit.

Chapter 7 - LQG and SQG Fees

LQGs and SQGs must pay an annual fee. Chapter 7 describes how the fee is calculated, starting with a base fee, and how to determine adjustments to that base fee based on factors such as the waste volumes from spills or discharges and the amount of hazardous oil and gas waste that has been recycled. The chapter also provides information on the method of fee payment.

Chapter 8 - Standards Applicable to Transporters of Hazardous Oil and Gas Waste

Chapter 8 describes the Rule 98 requirements that apply to transporters of hazardous oil and gas waste, including notification and EPA ID Numbers, transfer facility requirements, manifest requirements (and exceptions from manifest requirements), and recordkeeping.

Appendices

The appendices provide examples of the notification forms, referenced lists of hazardous wastes from the Code of Federal Regulations (CFR), and certain procedures under Rule 98. Also, EPA's regulatory determination and clarification (from the *Federal Register*) for the E&P waste exemption are included as an appendix. The last appendix, Appendix L, provides definitions of terms used in the federal hazardous waste regulations.

PERMITS FOR HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL

Rule 98 does not provide for issuance of permits to treat, store, or dispose of hazardous oil and gas waste. (Rule 98 does provide for *emergency* permits. See Chapter 6.) Because relatively small quantities of hazardous oil and gas waste are actually generated, the RRC does not anticipate that there will be sufficient demand from the regulated community for permits to treat, store, or dispose of hazardous oil and gas waste to justify development of a RRC program for issuing these types of permits. Instead, the RRC believes that its resources will be better used through implementing standards that will ensure that hazardous oil and gas waste is properly managed and safely transported to a facility authorized to treat, store, dispose of, recycle, or reclaim the waste. Such authorized facilities include facilities permitted by the TCEQ and the EPA.

WASTE MINIMIZATION

Regulations regarding oil and gas waste management are becoming increasingly more stringent. Costs for disposal of oil and gas wastes, particularly hazardous oil and gas wastes, are also increasing, not only in terms of disposal fees, but also, in many cases, in terms of potential liability. In the case of hazardous oil and gas wastes, operators may incur the costs of generator fees paid to the RRC. The old saying that an ounce of prevention is worth a pound of cure holds true for the oil field. Waste minimization is often cheaper in the long-run than disposal.

Company personnel may consider performing a detailed internal audit to identify the products the company uses, waste-generating processes, wastes generated, classification of the wastes, and waste management practices. This information, along with information concerning environmental conditions of defined areas, could help the company develop specific waste management plans to reduce waste generation and manage waste streams from specific operations in an environmentally sound manner.

Valuable benefits may be gained by reducing or eliminating the hazardous oil and gas waste streams that you generate. First, by eliminating the generation of hazardous oil and gas waste, you will also eliminate the need to comply with the requirements of Rule 98. Second, by eliminating or reducing the volume of hazardous waste, you will reduce the costs associated with managing your wastes. These benefits may be obtained by following the hierarchy of preferred waste management choices:

Most Preferred

Source Reduction

Recycling

Treatment

Disposal

Least Preferred

Source reduction and recycling comprise waste minimization. A brief discussion of these components of waste minimization is provided in the following paragraphs.

Waste Minimization

Source Reduction: First and foremost, the quantity and/or relative toxicity of the waste generated should be reduced. Opportunities for waste volume reduction may be limited for some E&P wastes. However, many technically and economically feasible source reduction opportunities do exist. Every effort should be made to take advantage of these opportunities.

Products that will result in less toxic waste should be substituted for products that are currently being used. For example, biocides, corrosion inhibitors, coagulants,

cleaners (particularly organic solvents), dispersants, emulsion breakers, scale inhibitors, viscosifiers, gas sweetening and dehydration agents, weighting agents, and any other products used in exploration, production operations should be selected with potential environmental impacts and disposal needs in mind. Such substitution is an effective means or reducing the potential for generating hazardous oil and gas waste. Also, segregation of hazardous oil and gas waste streams will reduce waste management concerns. In general, a mixture of hazardous oil and gas waste and nonhazardous waste becomes subject to regulation as hazardous waste. Therefore, as a general rule, waste streams that have a higher pollution potential should be segregated from those with a lower pollution potential.

Good housekeeping, such as installing lined sumps to catch leaks or drips from equipment, and equipment maintenance are also two very simple ways to reduce the volumes of waste that are generated at oil and gas facilities.

Recycling: There are also many opportunities for recycling oil and gas wastes. In many instances, nonexempt oily waste may be sent to a refinery for processing. For example, paraffin from a pipeline pigging operation may be recovered as by-product, processed, and returned to the production stream, thus avoiding its management as hazardous oil and gas waste. Drilling wastes generated at one well site should be reused for plugging or spudding-in of other wells; oil-based drilling fluids should be recovered and sent back to the vendor for reprocessing; tank bottoms should be reclaimed; waste lubricating oils and hydraulic fluids should be segregated, collected, and sent to a recycler; non-contaminated metal should be sent to a metal recycler; empty drums should be sent to a drum recycler; and waste antifreeze should be re-distilled.

The Least Preferred Waste Management Options

Treatment: Techniques should be employed to reduce the volume or the relative toxicity of waste that has been unavoidably generated. A smart company will investigate treatment options to decrease the potential long-term environmental and human health impacts of wastes that are generated. Dewatering, washing, neutralization, and solidification are a few of the treatment options.

Disposal: The choice of a disposal option for a particular waste that has been unavoidably generated should be made after careful consideration of the type of waste, applicable state and federal regulations, the volume of the waste, the disposal environment, short- and long-term impacts to the environment and human health, lease restrictions, and long-term liabilities. If a commercial disposal facility is used, the waste generator should audit the oil and gas waste hauler and the disposal facility for the proper permits, a good compliance history, and environmentally sound waste management practices.

Waste Minimization Assistance Offered by the RRC

The Railroad Commission's Waste Minimization Program offers assistance to oil and gas operators. The Waste Minimization Program is a voluntary pollution prevention program created to help the industry effectively reduce the volume of waste that must be treated or disposed of. Operators who have participated in the program have proven

that the following benefits may be gained through reducing or recycling oil and gas waste:

- Many waste minimization opportunities are cost effective; you can save money and increase revenue.
- Waste minimization can result in more efficient operations.
- Your potential liability associated with generated wastes can decrease.
- Your concerns with regulatory compliance can be lessened.
- Successful waste minimization can improve public relations for the oil and gas industry.
- Successful waste minimization can help "stem the tide" of new regulations.

The Commission's Waste Minimization Program offers the following products and services to help you in your waste minimization efforts

Waste Minimization in the Oil Field: This manual, developed with the assistance of the oil and gas industry, offers source reduction and recycling (i.e., waste minimization) concepts, cost effective and practical examples of source reduction and recycling opportunities in the oil field, and information on how to develop an individualized waste minimization plan. This manual is used as a training aid in the Waste Minimization Workshops. The manual is available free of charge, either in hard copy or from the Waste Minimization Program web page at http://www.rrc.state.tx.us/divisions/og/key-programs/ogkwast.html.

Annotated Bibliography: We have published the Annotated Bibliography of Waste Minimization Technology for Crude Oil and Natural Gas Exploration, Production, and Pipeline Transportation Operations. The bibliography is also available on the Waste Minimization Program web page. The bibliography provides references which offer waste minimization techniques for wastes generated in the entire spectrum of oil and gas operations.

Technology Transfer: We provide oil and gas operators with technical assistance. If you have a question about minimization of oil and gas exploration and production waste, contact the Waste Minimization Program. We can provide citations that include author, title, and an abstract. In many cases, we can also provide hard copies of cited technical papers and articles.

Waste Minimization Workshops: The Waste Minimization Program occasionally offers a one-day Waste Minimization Workshop. The workshop is designed to help operators and their employees reduce oil and gas waste volumes, operating costs and potential liabilities through effective waste minimization. Generally, the workshop is presented once per year at the International Petroleum Environmental Conference.

Service Company and Vendor Information: We maintain a file of companies and vendors who offer services and products that will help you in your waste minimization efforts. Several examples of these companies are cited in the preceding discussions of source reduction and recycling. Upon your request, we will send you materials provided by appropriate companies, along with a RRC disclaimer. Please note also, that any company or vendor who provides services that compliment waste

minimization activities is welcome to provide their materials to the Waste Minimization Program for inclusion in the file.

Waste Minimization Planning Software: We have developed a waste minimization planning software package called *WasteMin*. *WasteMin* is a Windows-based PC program that will assist you in developing a waste minimization plan for a facility or site. Using *WasteMin*, you can tailor and generate, with some data entry, a document that will contain a plan introduction, an inventory of waste streams, specific waste management information, waste minimization opportunities, and pertinent technical references. The program also includes a cursory technical and economic feasibility analysis for selected waste minimization techniques.

On-Site Assistance in Waste Minimization Planning: We will assist oil and gas operators in assessing their operations and developing individualized waste minimization plans. First, we will help develop an inventory of waste streams generated in the operation and help classify each waste stream with respect to applicable regulations. Then we will help identify waste minimization opportunities. The operator can then develop a waste minimization plan that will provide the greatest benefits (e.g., cost savings and added revenue)!

To contact the Waste Minimization Program call
(512) 463-5405 or send e-mail to bart.sims@rrc.state.tx.us.