

US EPA ARCHIVE DOCUMENT

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OIL AND GAS CONSERVATION DIVISION



POLLUTION ABATEMENT  
Underground Injection Control

January 28, 1999

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DEQ LEGAL

H.A. Caves  
Director, Waste Management Division  
Oklahoma Department of Environmental Quality  
707 North Robinson  
P.O. Box 1677  
Oklahoma City, Ok. 73101-16777

Dear Mr. Caves

Attached is the updated version of the DEQ/OCC Jurisdictional Guidance Document. As you will recall the amendments that were incorporated clarified the DEQ's jurisdiction under the Resource Conservation and Recovery ( RCRA ).

If you have any questions please feel free to contact me.

Sincerely

A handwritten signature in black ink, appearing to read "Tim Baker".

Tim Baker, Manager  
Pollution Abatement Department  
Oil and Gas Conservation Division

cc. M. Battles  
J. Sanger  
M. Thompson  
M. Bernard

## DEQ/OCC Jurisdictional Guidance Document

Under Oklahoma statutes, the Department of Environmental Quality (DEQ) has responsibilities over many/most of the State's environmental programs, including those dealing with public water supply, air quality, hazardous and solid waste management, and wastewater treatment and disposal. DEQ has also been authorized by the U.S. Environmental Protection Agency (EPA) to implement Federal program requirements under several Federal Acts, including public water supply and underground injection of wastes under the Safe Drinking Water Act (SDWA), air quality under the Clean Air Act (CAA), and hazardous waste management and municipal solid waste landfills under the Resource Conservation and Recovery Act (RCRA). For purposes of this document all references to hazardous waste means hazardous waste as defined in 40 CFR §261.3. DEQ is currently seeking authorization to implement the NPDES Program for wastewater discharges under the Clean Water Act (CWA).

The Oklahoma Corporation Commission (OCC) has been given broad authority under State statutes over the oil and gas industry, including many environmental responsibilities. In particular, OCC has been given responsibility over transportation, treatment, and disposal of "deleterious substances" associated with oil and gas exploration and production. EPA has delegated to OCC responsibility over underground injection of oil field wastes (i.e., Class II injection wells) under the Federal Safe Drinking Water Act (SDWA).

This document is an attempt to clarify "gray" areas of jurisdiction by providing a guidance document for the local offices of the OCC and the DEQ when responding to complaints. The document is organized by the following five categories of oil and gas industry-related facility types: I. Oil and Gas Exploration and Production; II. Refining and Marketing; III. Transportation; IV. Oil Field Service; and V. Miscellaneous.

### I. Oil and Gas Exploration and Production ("E&P")

Oil and gas exploration and production, as defined by Oklahoma Statutes, Title 52, Section 139(B)(1) (a) through (k), and brine extraction activities as defined by Title 17, Section 503, are under the jurisdiction of the Oklahoma Corporation Commission, with the following exceptions (See Attachment A, including figure 1, for clarification of what E&P includes):

- A. Air emissions or potential for air emissions required or requested to be permitted under the Clean Air Act are under the jurisdiction of the Department of Environmental Quality. All sources of air emissions of regulated pollutants from oil and gas exploration and production which are less than Title V major source thresholds are the jurisdiction of OCC except those which may be covered by NSPS, NESHAPs, PSD, or other applicable federal regulations requiring an air quality permit. Any source under OCC jurisdiction which elects to submit a permit application or applicability determination request to DEQ may do so. (See Attachment B for examples of what activities may require DEQ Air Quality permits.)

B. Disposal of any solid waste, including exempted oil field wastes, at a landfill regulated by the DEQ may require prior approval of the DEQ. (See Attachment C for details.)

C. Spills

OCC has jurisdiction for activities to contain and remediate spills of RCRA exempt oil field waste and certain non-exempt non-hazardous waste, with the exception of that which is disposed of in a DEQ-regulated landfill. DEQ regulates hazardous waste and has approval authority for disposal of certain spill-related wastes in a DEQ-regulated landfill.

Additionally, for purposes of this document the terms exempt waste, RCRA exempt waste and exempt oil field waste refer to waste drilling fluids, production waters, and other waste intrinsically associated at the wellhead with the exploration, development, or production of crude oil, natural gas, or geothermal energy which are specifically exempted from regulation as hazardous waste under 40 CFR § 261.4(b)(5). EPA issued guidance regarding this exemption in a Federal Register notice, Wednesday, July 6, 1988, Volume 53, Number 129, on pages 25453 and 25454 & 58 FR 15284, March 22, 1993. (See Attachment D for examples of RCRA exempted wastes.)

All handling, storage, treatment, recycling and disposal activities associated with *hazardous waste* are under the jurisdiction of the DEQ.

D. Other Related Wastes

Wastes generated at oil and gas facilities that are not associated with exploration, development, or production activities are regulated by DEQ (whether they are hazardous or not). Examples of these wastes are included in Attachment D. (See item I.C. above.)

Non-exempt non-hazardous wastes may be disposed of under OCC regulations unless taken to a DEQ permitted facility, in which case they must meet DEQ non-hazardous industrial waste rules.

E. Permitted wastewater & storm water discharges

The U.S. Environmental Protection Agency (EPA), through its Region 6 office in Dallas, retains authority over wastewater and storm water discharges from E&P sites under its NPDES Program. With certain exceptions, Federal rules generally prohibit the discharge of wastes associated with E&P.

## II. Refining and Marketing

Refining and Marketing, as the term is used in this document, includes 1) facilities for processing oil and gas after being transported from the oil field, such as oil refineries and natural gas processing plants, and 2) facilities which market oil and gas products on a retail or wholesale basis, such as gasoline service stations and bulk terminals.

### A. Refineries

DEQ has primary jurisdiction over air emissions, wastewater, solid waste, and hazardous waste treatment and disposal and groundwater remediation at refineries. Exceptions include underground fuel or other underground product storage tanks at refineries, which are the responsibility of OCC (see UST discussion under II.D. below).

### B. Natural Gas Processing Plants

DEQ has primary jurisdiction over air emissions, wastewater, solid waste, and hazardous waste treatment and disposal created from the processing of natural gas. Specific examples include:

1. contaminated soil, water and snow resulting from leaks, spills, or routine practices,
2. waste mercury from meters and gauges, and
3. pump lube oil.

Exceptions to this include handling of "exempted" oil field waste and "exempted" contamination from the gathering of natural gas prior to reaching the gas processing plant.

### C. Natural Gas Liquids Extraction Plants

DEQ has primary jurisdiction over air emissions, wastewater, solid waste, and hazardous waste treatment and disposal at natural gas liquid extraction facilities. Specific examples include:

1. contaminated soil, water and snow resulting from leaks, spills, or routine practices,
2. waste mercury from meters and gauges, and
3. pump lube oil.

Exceptions to this include handling of "exempted" oil field waste and "exempted" contamination created from the gathering of natural gas prior to reaching the liquids extraction plant.

D. Service Stations (Gasoline, Diesel, etc.)

With some exceptions, OCC has primary responsibility for above-ground storage tanks (ASTs) at retail facilities and underground storage tanks (USTs). The DEQ has jurisdiction over hazardous waste stored in ASTs and USTs. The DEQ also has jurisdiction over contaminated soil, media or debris which is hazardous waste.<sup>1</sup> This responsibility includes implementing requirements for the installation, registration, operation, and removal of the tanks themselves. It also includes overseeing remediation of leaks and spills from the tanks. Exceptions include:

1. While OCC has jurisdiction over on-site disposal or treatment of soils contaminated by such leaks, DEQ has responsibility for contaminated soils which are removed from the site for treatment or disposal. Soils contaminated with refined petroleum products may not be disposed of at OCC disposal sites.
2. The DEQ has responsibility for regulating discharges from underground storage tank-related groundwater remediation projects (e.g., "pump and treat") otherwise regulated by OCC.
3. DEQ regulates the disposal of contaminated material due to spills from any above-ground storage tanks which a) contain motor fuel, gasoline, kerosene, diesel, or aviation fuel, and b) are not used for retail sales, that result in an environmental impact.
4. DEQ has responsibility for (removed) tanks that still contain fluids or sludge and are disposed of improperly.
5. DEQ has jurisdiction over releases from tanks which:
  - a. contain hazardous waste,
  - b. contain non-hazardous industrial waste, and sumps which receive this waste,
  - c. store used oil or non-commercial heating oil for consumptive use on the premises,
  - d. are located in underground areas such as basements, mine shafts, or tunnels,
  - e. are used to collect storm water or wastewater,
  - f. are used as emergency backup tanks, or
  - g. are septic tanks for industrial or domestic wastewater.

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<sup>1</sup> See 40 CFR 261.4(b)(10) regarding certain petroleum contaminated media and debris which is not regulated as hazardous waste.

6. DEQ has responsibility for determination of the need for air emission permits. Examples include VOC or toxic emissions (above de minimis levels) from soil remediation.

### III. Transportation

#### A. Pipelines (including Booster Stations)

Under 52 O.S. 1994, § 139(B)(1)(h), OCC has exclusive jurisdiction regarding *"...the construction and operation of pipelines and associated rights-of-way, equipment, facilities or buildings used in the transportation of oil, gas, petroleum, petroleum products, anhydrous ammonia or mineral brine, or in the treatment of oil, gas or mineral brine during the course of transportation but not including line pipes associated with processing at or in any:*

- (1) *natural gas liquids extraction plant,*
- (2) *refinery,*
- (3) *reclaiming facility other than for those specified within subparagraph e of this subsection,*
- (4) *mineral brine processing plant, and*
- (5) *petrochemical manufacturing plant,..."*

[NOTE - "...subparagraph e of this subsection..." referred to in this quote gives OCC exclusive jurisdiction regarding *"...reclaiming facilities only for the processing of salt water, crude oil, natural gas condensate and tank bottoms or basic sediment from crude oil tanks, pipelines pits and equipment associated with the exploration, drilling, development, producing or transportation of oil or gas,..."*]

Examples of issues within DEQ's authority which are associated with pipeline transportation include:

1. waste mercury from meters and gauges,
2. pump lube oil (e.g., from booster stations, etc.), and
3. air emissions from engines in compressor service, glycol dehydration, storage tanks, other fuel burning sources.
4. transportation pipeline wastes and soil contamination that are hazardous waste or transported off site for disposal.

#### B. Rail

DEQ has jurisdiction to regulate the transportation, discharge, or release of waste from trains or rail facilities.

#### C. Highway / Roadway

DEQ has jurisdiction to regulate the transportation, discharge, or release of waste during roadway transit, except "exempted" oil field waste (see NOTE under I.C.

above). Roadway transportation of exempted oil field waste is regulated by OCC, including activities to contain and remediate spills of such materials.

#### D. Bulk Terminals

Under 52 O.S. 1994, § 139(B)(1)(g), OCC has exclusive jurisdiction regarding "...*tank farms for storage of crude oil and petroleum products which are located outside the boundaries of the refineries, petrochemical manufacturing plants, natural gas liquid extraction plants, or other facilities which are subject to the jurisdiction of the Department of Environmental Quality with regard to point source discharges...*" Exceptions to this exclusive jurisdiction include tanks which are the responsibility of the DEQ.

##### 1. Storm Water

52 O.S. 1994, § 139(B)(4) states that "*(F)or purposes of the Federal Clean Water Act, any facility or activity which is subject to the jurisdiction of the Corporation Commission pursuant to paragraph 1 of [O.S. 52 § 139(B)] and any other oil and gas extraction facility or activity which requires a permit for the discharge of a pollutant or storm water to waters of the United States shall be the subject to the direct jurisdiction of the United States Environmental Protection Agency and shall not be required to be permitted by the Department of Environmental Quality or the Corporation Commission for such discharge.*"

##### 2. Waste

OCC has jurisdiction for all exempt oil field waste and certain non-exempt non-hazardous waste, with the exception of that which is disposed of in a DEQ-regulated landfill. DEQ regulates hazardous waste and has approval authority for disposal of certain wastes in a DEQ-regulated landfill.

#### E. OTHER TRANSPORTATION

The DEQ has jurisdiction over any spills or contamination by other means of transportation, including barges, which result in the generation of hazardous waste.

#### IV. Oil Field Service

Oil field service companies handling exempted wastes are the responsibility of OCC. Exceptions to OCC's responsibility over oil field service companies include those listed for E&P (Section I). OCC will notify DEQ when OCC has reason to believe that non-exempted wastes have been co-mingled with exempted wastes.

V. Miscellaneous

A. Open Burning

DEQ prohibits burning of hazardous waste without prior DEQ approval and generally prohibits *open burning of refuse* or other combustible material. Exceptions include:

1. fires set to remove a fire hazard which cannot be safely removed any other way.
2. the burning of hydrocarbons which are spilled or lost as a result of pipeline breaks or other accidents involving the transportation of such materials or which are generated as wastes as the result of oil exploration, development, refining, or processing operations if the following conditions are met:
  - a. the material is not hazardous waste and cannot be practicably recovered or otherwise lawfully disposed of in some other manner;
  - b. the burning must not be conducted within a city or town or in such proximity thereto that the ambient air of such city or town may be affected by the air contaminants being emitted;
  - c. the initial burning may begin only between three hours after sunrise and three hours before sunset and additional fuel may not be intentionally added to the fire at times outside the limits stated above; and,
  - d. the burning must be controlled so that a traffic hazard is not created as the result of the air contaminants being emitted.
3. burning of wasted petroleum products in safety release flares when the flares are correctly designed and operated as smokeless atmospheric flares.
4. fires set to remove toxic or hazardous materials when no other safe or legal way is possible. These fires must be approved in advance by DEQ and must comply with the following requirements:
  - a. burning does not begin before 3 hours after sunrise and the fire is put out before sunset, and
  - b. smoke or other products of burning do not cause a traffic hazard on nearby roads or highways.
5. fires set during training of fire-fighting personnel, when authorized by the appropriate governmental entity, including the local fire department, and the local DEQ Representative or the Enforcement Section of DEQ's Air Quality Division.

B. Sewage Disposal Systems

Oklahoma law requires sewage disposal systems to be constructed and operated in accordance with DEQ rules and regulations. All septic tank/lateral line sewage disposal systems must have a soil percolation test performed by a qualified person and a final inspection and approval by DEQ prior to backfilling the system. This

requirement includes temporary or permanent oilfield sites if sewage disposal facilities are included on site. NOTE: "Rat holes" are not an acceptable means of sewage disposal.

C. Public Water Supplies

Any system which provides drinking water to 25 or more persons is considered a Public Water Supply (PWS) under DEQ regulations. A PWS must be permitted through DEQ's Water Quality Division, and meet its requirements for both construction and operation.

NOTE: Use of groundwater or surface water supplies may require securing water rights through the Oklahoma Water Resources Board.

D. NORM

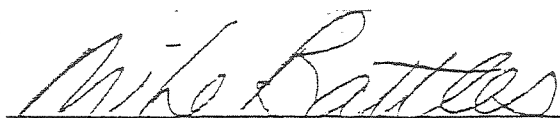
There are currently no State or Federal regulations which specifically regulate the disposal of Naturally Occurring Radioactive Materials (NORM). Questions regarding disposal of NORMs may be directed to the Waste Management Division at DEQ or Pollution Abatement at OCC.

For the Oklahoma Department of  
Environmental Quality:



H.A. Caves, Director  
Waste Management Division  
Oklahoma Department of  
Environmental Quality

For the Oklahoma Corporation Commission:



Mike Battles, Director  
Oil & Gas Conservation Division  
Oklahoma Corporation Commission

As amended this 27 day of January, 1999.

Attachment A

Oil and Gas Exploration and Production

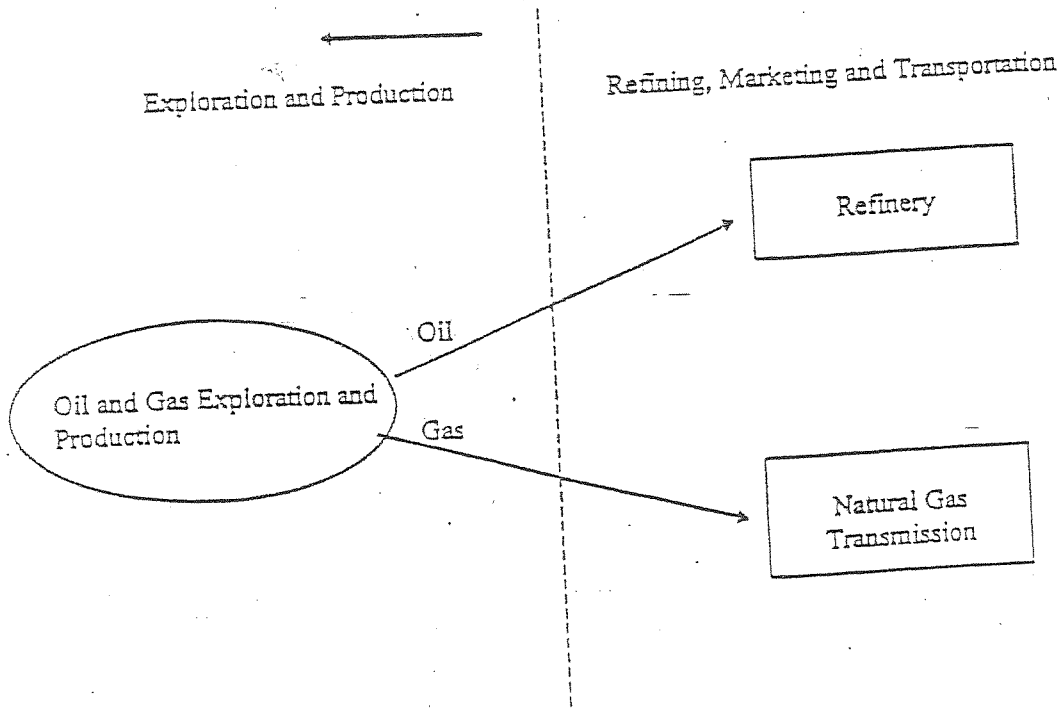


FIGURE 1

The figure above illustrates the distinction between Oil and gas exploration and production (E&P) and other segments of the oil industry, including Transportation and Refining & Marketing. The following table lays out E&P, as it is described by Oklahoma Statutes, Title 52, Section 139 (B) (1) (a) through (k), and 139 (B) (2).

Table 1: Exploration and Production Activities

Title 52 Section 139 B(1)	Common Activities Include:
a. the conservation of oil and gas	oil, gas and salt water disposal well spacing and location
b. field operations for geologic and geophysical exploration for oil, gas and brine, including seismic survey wells, stratigraphic test wells and core test wells	test borings and seismic survey wells for oil and gas exploration
c. the exploration, drilling, development, producing or processing for oil and gas on the lease site	drilling or producing wells on a lease
d. the exploration, drilling, development, production and operation of wells used in connection with the recovery, injection or disposal of mineral brines produced from geological strata three hundred (300) feet in depth from the surface,	mineral extraction and associated activities from brine wells
e. reclaiming facilities only for the processing of salt water, crude oil, natural gas condensate and tank bottoms or basic sediment from crude oil tanks, pipelines, pits and equipment associated with the exploration, drilling, development, producing or transportation of oil or gas	crude oil reclaiming facilities
f. injection wells known as Class II wells under the federal Underground Injection Control Program. Any substance that the United States Environmental Protection Agency allows to be injected into a Class II well may continue to be so injected,	oil and gas salt water disposal and enhanced recovery wells
g. tank farms for storage of crude oil and petroleum products which are located outside the boundaries of the refineries, petrochemical manufacturing plants, natural gas liquid extraction plants, or other facilities which are subject to the jurisdiction of the Department of Environmental Quality with regard to point source discharges	tank farms located outside refineries and gas processing plants
h. the construction and operation of pipelines and associated rights-of-way, equipment, facilities or buildings used in the transportation of oil, gas, petroleum, petroleum products, anhydrous ammonia or mineral brine, or in the treatment of oil, gas or mineral brine during the course of transportation but not including line pipes associated with processing at or in any: (1) natural gas liquids extraction plant, (2) refinery, (3) reclaiming facility other than for those specified within subparagraph e of this subsection, (4) mineral brine processing plant, and (5) petrochemical manufacturing plant	pipelines located outside refineries, gas processing plants

Table 1: Exploration and Production Activities

Title 52 Section 139 B(1)	Common Activities Include:
<p>i. the handling, transportation, storage and disposition of salt water, mineral brines, waste oil and other deleterious substances produced from or obtained or used in connection with the drilling, development, producing and operating of oil and gas wells, at:</p> <p>(1) any facility or activity specifically listed in paragraphs 1 and 2 of this subsection as being subject to the jurisdiction of the Commission, and,</p> <p>(2) other oil and gas extraction facilities and activities</p>	<p>disposal, transportation and storage of salt water and all other RCRA exempt substances produced from drilling, repair or producing oil and gas wells</p>
<p>j. spills of deleterious substances associated with facilities and activities specified in paragraph 1 of this subsection or associated with other oil and gas extraction facilities and activities</p>	<p>all spills, excluding spills of hazardous waste, from facilities associated with oil and gas production facilities except for unused products such as unspent acid</p>
<p>k. subsurface storage of oil, natural gas and liquefied petroleum gas in geologic strata</p>	<p>liquefied petroleum gas storage fields and associated surface operations</p>
<p>2. ... the construction, operation, maintenance, site remediation, closure and abandonment of the facilities and activities described ... [above].</p>	<p>Surface and groundwater remediation and abandonment activities, excluding hazardous waste, associated with the activities described above.</p>

## Attachment B

### Air Quality Permitting Issues in the Petroleum E & P Industry

Air emissions or potential for air emissions required or requested to be permitted under the Clean Air Act are under the jurisdiction of the Department of Environmental Quality. All sources of air emissions of regulated pollutants from oil and gas exploration and production which are less than Title V major source thresholds are the jurisdiction of OCC, except those which may be covered by NSPS, NESHAPs, PSD, or other applicable federal regulations requiring an air quality permit. Any source under OCC jurisdiction which elects to submit a permit application or applicability determination request to DEQ may do so.

For equipment that currently is in existence, Title V permitting may be required. If a source either (1) has the potential to emit (PTE) over the major source level: 100 tons/year of any regulated pollutant or 10/25 tons/year of any/all hazardous air pollutants (HAPs), (2) is subject to a New Source Performance Standard (NSPS), (3) is subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP), or (4) is an affected acid rain source. Each of these applicability criteria is delineated in OAC 252:100-8-3(a)(1)-(5).

Typical equipment with emissions of criteria or hazardous air pollutants include the following:

- ▶ Tanks and Vessels
  - hydrocarbon
  - non-fired separators
  - produced water
- ▶ External Combustion Sources
  - line heaters
  - heater treaters
  - glycol dehydrators burners
  - incinerators
  - boilers
- ▶ Internal Combustion Engines (reciprocating or turbine)
  - compressors
  - pumps
  - generators
  - pumping units
- ▶ Tank Truck Loading
- ▶ Fugitive Sources
  - valves
  - flanges
  - compressor seals
  - threaded fittings
  - relief valves
- ▶ Flares
- ▶ Glycol Dehydrator Reboiler Vents
- ▶ Sulfur Recovery Unit
  - sulfur removal units
- ▶ Miscellaneous
  - sump tanks
  - waste water ponds
  - bleed-type controllers
  - cooling towers
  - vents not included above

Each of these emission sources would be included or exempt from ODEQ jurisdiction and the concurrent Title V permitting process based, not on the type of source, but rather on the emission rate.

The following flow chart shows the permitting path. As mentioned previously, if a source has the potential to emit greater than the major source threshold, it would be subject to Title V. The State of Oklahoma allows sources that can limit their PTE to below major source levels to do so with a synthetic minor or state operating permit. This would avoid subjecting them to the full battery of Title V requirements, if no other criteria applies. If a source cannot achieve emission levels below the major source level or is subject to one of the other requirements listed above, then a synthetic minor permit could not be an option. The flow chart shows that if a source is not subject to Title V in any respect, no permit would be required.

**CAUTION!** To determine if the listed requirement does apply, you must refer to the referenced regulation, because certain exemptions are available.

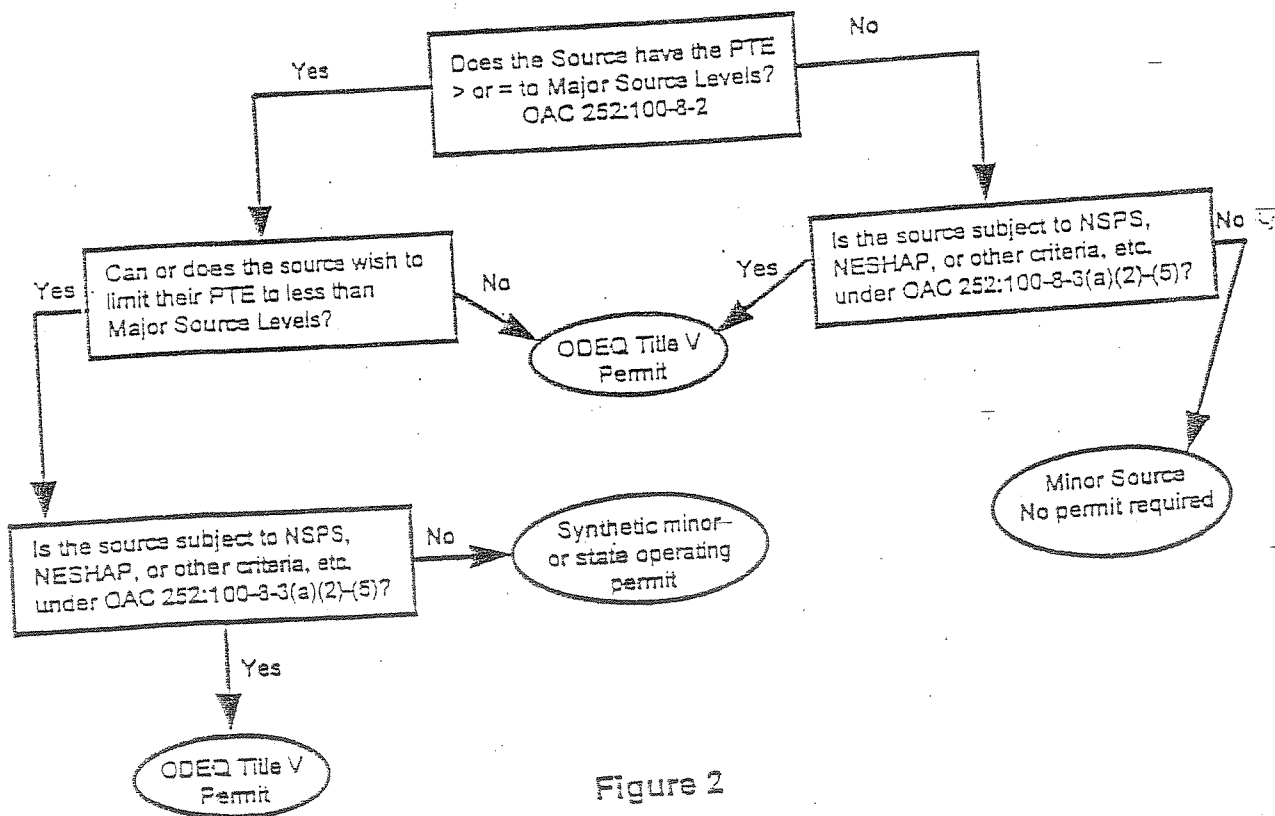


Figure 2

The following table lists the common types of oil and gas exploration and production equipment and what permitting requirements could apply. In air quality permitting, the emissions are evaluated from various sources within a facility. Therefore, to determine whether a facility needs a permit or not, the applicant must know what emission sources exist at their facility. One or more of these sources might require the facility to have a permit. For example, if a facility has a stationary gas turbine compressor engine with greater than 10 MMBTU/HR of fuel input, it is subject to an NSPS. Since it is subject to an NSPS, then it must have a permit. Therefore the purpose of the table is to provide a reference for the general types of equipment in the industry that need to be permitted, and what triggers that need. There often may be sources where the determination for the need for a permit is not entirely straightforward. Upon request, the DEQ will make an applicability determination for a source based on relevant data submitted by the facility.

Table 2: Air Emissions Sources Associated with E&P

Equipment Type	Equipment Size/Capacity	Type of DEQ Air Quality Permit Required	Citation of Applicable Regulations
Petroleum Liquid Storage Tank	≥ 251.5 Barrels or ≥ 10,566 gallons	NSPS	40 CFR Part 60 Subpart K, Ka, or Kb (Production tanks generally qualify for an exemption)
Flammable Material* Storage Tank	≥ 9.5 Barrels or ≥ 400 gallons, but < 10,566 gallons	Minor Source Applicability Determination Permit Optional	OAC 252:100-7 Jurisdictional agreement with OCC
	< 9.5 Barrels or < 400 gallons	No Permit Required	Below <i>de minimis</i> levels
Internal Combustion Compressor Engine (Caution! Potential permit does vary widely between engines of similar horsepower.)	> 75 hp, but < 500 hp (approximate)	Minor Source Applicability Determination Permit Optional	OAC 252:100-7 Jurisdictional agreement with OCC
	> 500 hp, but < 1250 hp (approximate)	Major source (synthetic minor or Title V)	OAC 252:100-8, 40 CFR Part 70
	> 1250 hp (approximate)	PSD Source (Major) - Title V	OAC 252:100-8, 40 CFR Part 70
Stationary Gas Turbine Compressor Engine	≥ 10 MMBTU/hr	NSPS	40 CFR Part 60 Subpart GG
	< 10 MMBTU/hr	Minor or Major Applicability Determination	OAC 252:100-7 OAC 252:100-8, 40 CFR Part 70

Oil Dehydrator	No minimum or maximum	Minor or Major Applicability Determination	OAC 252:100-7 OAC 252:100-8, 40 CFR Part 70
VOC Emissions	If the equipment which the fugitives are from is in VOC service (process fluid contains at least 10% VOC by weight)	NSPS	40 CFR Part 60 Subpart VV and KKK (Onshore natural gas processing plants)
	pump or compressor handling organic materials	NSPS, or Minor or Major Applicability Determination	40 CFR Part 60, Subpart GGG OAC 252:100-7 OAC 252:100-8, 40 CFR Part 70
Natural gas treatment vents, SO <sub>2</sub> , H <sub>2</sub> S emissions	No minimum or maximum	Minor or Major Applicability Determination	OAC 252:100-7 OAC 252:100-8, 40 CFR Part 70
Flares	No minimum or maximum	NSPS, or Minor or Major Applicability Determination	40 CFR Part 60, Subpart Kb OAC 252:100-7 OAC 252:100-8, 40 CFR Part 70

\* "Organic Material" means chemical compounds of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides, metallic carbonates, and ammonium carbonate.

ATTACHMENT C: DISPOSAL OF OIL AND GAS WASTES

DESCRIPTION OF WASTE ITEMS	RCRA EXEMPT STATUS	OCC DISPOSAL OPTIONS NOTE: SEE OAC 165:10-7-24 FOR LEGAL REQUIREMENTS	TREATMENT OR TESTING REQUIRED BY DEQ FOR LANDFILL DISPOSAL	WRITTEN APPROVAL OF DEQ FOR LANDFILL DISPOSAL
Glycol filters	YES	Recycle; landfill (as approved by DEQ); underground injection	Recommendation: Drain; air dry 48 hrs; TPH**; total benzene*	YES
Dehydration filter media	YES	Recycle; landfill (as approved by DEQ); underground injection; burial	Recommendation: Drain; air dry 48 hrs; TPH**; total benzene*	YES
Gas condensate filters	YES	Recycle; landfill (as approved by DEQ); underground injection	Recommendation: Drain; air dry 48 hrs; TPH**; total benzene*	YES
Molecular sieves	YES	Landfill (as approved by DEQ); burial	Recommendation: Cool in nonhydrocarbon, inert atmosphere; hydrate in ambient air 24 hrs; TPH**; total benzene*	YES
Amine filters	YES	Recycle; landfill (as approved by DEQ); underground injection	Recommendation: Drain; air dry 48 hrs; TPH**; total benzene*	YES
Iron sponge	YES	Landfill (as approved by DEQ); burial	Allow to oxidize completely to prevent threat of combustion.	YES
Saltwater filters	YES	Recycle; landfill (as approved by DEQ); underground injection	Recommendation: Drain; air dry 48 hrs; pH; chlorides**; TPH**	YES
Cooling tower filters	YES	Recycle; landfill (as approved by DEQ); underground injection	Recommendation: Drain; air dry 48 hrs; total chromium*	YES
Ferrous sulfur, elemental sulfur & soil contaminated with sulfur	YES	Recycle; landfill (as approved by DEQ); underground injection; burial	If uncontaminated, recover & sell as raw material. If contaminated, requires case-by-case approval.	YES
Water treatment backwash solids; and filters	YES	Recycle; landfill (as approved by DEQ); underground injection; burial (except filters)	Total metals*; NORM	YES
Produced sand	YES	Landfill (as approved by DEQ); underground injection; burial; land application; bioremediation	TPH**; total benzene*; NORM	YES

ATTACHMENT C: DISPOSAL OF OIL AND GAS WASTES

DESCRIPTION OF WASTE ITEMS	RCRA EXEMPT STATUS	OCC DISPOSAL OPTIONS NOTE: SEE OAC 165:10-7-24 FOR LEGAL REQUIREMENTS	TREATMENT OR TESTING REQUIRED BY DEQ FOR LANDFILL DISPOSAL	WRITTEN APPROVAL OF DEQ FOR LANDFILL DISPOSAL
Pipe scale and other deposits removed from piping & equipment	YES	Recycle; landfill (as approved by DEQ); underground injection; land application; bioremediation; burial	TPH**, TOX**, total metals*, NORM	YES
Hydrocarbon bearing soils (crude oil)	YES	Recycle; road application; land application; on-site bioremediation	TPH**, total benzene*	YES
Hydrocarbon bearing soils (tube oil)	NO	Determine if hazardous; If hazardous - DEQ regulated; if not hazardous - on-site bioremediation	Determine if hazardous; TPH**, total benzene*, PCB**	YES
Pigging waste from gathering lines	YES	Recycle; landfill (as approved by DEQ); underground injection; burial	TPH**, total benzene*, total metals*, NORM; MSDS sheets for common inhibitors	YES
Pigging waste from transmission lines	NO	Test to determine if hazardous; if hazardous; as approved by DEQ; if not hazardous; on-site bioremediation; bioremediation	Test to determine if hazardous; TPH**, total benzene*, total arsenic*, NORM; MSDS for corrosion inhibitors	YES
Used oil filters: (1) entire unit is inside metal container (2) replaceable inside units (paper/fiber)	NO	Recycle; DEQ regulated	Separate & recycle oil & metal parts. Drain thoroughly of oil for 24 hrs; total metals *	NO
Plastic pit liners	YES	Recycle; burial; landfill (as approved by DEQ)	Clean well.	NO
Unused pipe dope	NO	Recycle; DEQ regulated	Recycle if possible. Otherwise; test to determine if hazardous; MSDS sheets.	YES
Drill cuttings	YES	Water based: commercial disposal Oil based: land fill (DEQ approval); road appl. For BOTH types: recycle; burial; underground injection; land appl.	Only cuttings; no fluids. MSDS sheets for additives; chlorides** may be a problem.	YES
Unused mud additives	NO	Recycle; DEQ regulated	Approval only for small quantities. Determine if hazardous; MSDS sheets.	YES
Sacks of unused drilling mud	NO	Recycle	Return to vendor or use at other site if usable. If unusable; determine if hazardous; MSDS sheets.	YES

Sorbent pads (crude oil & other exempt wastes)	YES	Recycle; landfill (as approved by DEQ); burial	TPH <sup>1</sup> ; total benzene, <sup>2</sup>	YES
Sorbent pads (lubricating oil & other non-exempt wastes)	NO	Burial	Determine if hazardous; TPH <sup>1</sup> ; total benzene* totals for metals of concern. None required unless contaminated.	Can be disposed in unpermitted site; if uncontaminated
Uncontaminated concrete from production facilities	NO	Burial	Testing determined on case-by-case basis.	YES
Contaminated concrete from gas plants, compressor stations & other oil & gas facilities	NO	Burial if non-hazardous. If hazardous, DEQ regulated	Testing determined on case-by-case basis.	YES
Asbestos;	YES	DEQ regulated	Comply with federal and state regulations for asbestos materials. Remove asbestos from steel pipe and boilers-recycle steel.	NO
asbestos - contaminated waste material	YES	DEQ regulated	Remove asbestos from steel pipe and boilers-recycle steel. Bags must be empty.	dispose only in sites approved to take asbestos
Paper; paper bags	NO		Testing determined on case-by-case basis.	NO
Soiled rags/gloves	NO		Testing determined on case-by-case basis.	NO
Wooden pallets	NO		Testing determined on case-by-case basis.	NO
Detergent buckets	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Grease buckets	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Empty containers	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Barrels/drums; 5-gallon buckets	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Metal plate; metal pipe; metal cable	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Junked pumps; valves; etc.	NO	Recycle; landfill (as app. by DEQ)	Testing determined on case-by-case basis.	NO
Uncontaminated brush & vegetation from clearing land	NO		Testing determined on case-by-case basis.	NO
Fiberglass tanks	NO		Testing determined on case-by-case basis.	NO
Unused fracturing fluids or acids	NO	Recycle	Testing determined on case-by-case basis.	YES <sup>2</sup>
Gas plant cooling tower cleaning wastes	NO		Testing determined on case-by-case basis.	YES <sup>2</sup>

Painting w/s.	NO	Determined on a case by case basis	Determine if hazardous; Metals; semi-volatiles; volatiles or MSDS; TCLP	YES?
Oil & gas service company wastes such as empty drums; drum rinsate; vacuum truck rinsate; sandblast media; painting wastes; spent solvents; spilled chemicals and waste acid	NO		Testing determined case by case, make hazardous waste determination.	YES?
Vacuum truck and drum rinsate and drums transporting or containing non-exempt waste	NO		Testing determined case by case, make hazardous waste determination.	YES?
Refinery waste	NO	Recycle; underground injection; road application; land application; on-site bioremediation	If not listed; case by case testing, make hazardous waste determination.	YES?
Liquid and solid wastes generated by crude oil and tank bottom reclaimers	NO	Recycle	Testing determined case by case, make hazardous waste determination.	YES?
Used equipment lubrication oils	NO	Recycle; landfill (as app. by DEQ); burial (except fillers)	Metals; TPH Make hazardous waste determination.	YES?
Waste compressor oil; filters; and blowdown	NO	Recycle	Metals; TPH Make hazardous waste determination.	YES?
Used hydraulic fluids	NO	Recycle	MSDS; or demonstrate not listed/characteristic Make hazardous waste determination.	YES?
Waste solvents	NO	Recycle	BTEX; TPH; others case by case Make hazardous waste determination.	YES?
Waste in transportation related pits	NO	Determine if hazardous; If hazardous - as app. by DEQ; If non-hazardous - OCC approval	Metals; others case by case Make hazardous waste determination.	YES?
Caustic or acid cleaners	NO	Recycle	Metals; others case by case Make hazardous waste determination.	YES?
Boiler cleaning wastes	NO		Metals; others case by case, make hazardous waste determination.	YES?
Boiler scrubber fluids; sludges; and ash	NO		Metals; others case by case, make hazardous waste determination.	YES?
Incinerator ash	NO		MSDS; or demonstrate not listed/characteristic, make hazardous waste determination.	YES?
Laboratory wastes	NO		Can be landfilled only if treated	YES?
Sanitary wa	NO			YES?

Pesticide wastes	NO		MSDS, or demonstrate not listed/characteristic, make hazardous waste determination.	YES?
Radioactive tracer wastes	NO		NOT allowed in landfill	N/A
Trash and Debris	NO	Burial as approved by OCC; landfill (as app. by DEQ)	Testing determined case by case	YES

EXPLANATION OF ABBREVIATIONS:

MSDS Material Safety Data Sheet (s)  
 NORM Naturally Occurring Radioactive Materials  
 PCB Polychlorinated biphenyls (or polybrominated biphenyls)  
 TCLP Toxicity characteristic leaching procedure  
 TOX Total organic halogen (halide)  
 TPH Total petroleum hydrocarbons (EPA Method 8015 modified)

\* If a total analysis (i.e. Total Lead, Total Benzene, etc. exceeds the limits listed below, then TCLP must be performed and TCLP results must not exceed the stated limits:

Analyte	Total Limit	TCLP Limit
Benzene	10 mg/Kg	0.5 mg/L
Arsenic	36 mg/Kg	5.0 mg/L
Barium	2000mg/Kg	100 mg/L
Cadmium	10 mg/Kg	1.0 mg/L
Chromium	100 mg/Kg	5.0 mg/L
Lead	30 mg/Kg	5.0 mg/L
Mercury	4 mg/Kg	0.2 mg/L
Selenium	20 mg/Kg	1.0 mg/L
Silver	100 mg/Kg	5.0 mg/L

\*\* Results of the following analyses must be within the limits stated for disposal in a municipal solid waste landfill:

Analyte	Limit
TPH	> 1000 mg/Kg - requires disposal on composite liners
PCBs	< 50 mg/Kg

Original waste generators must complete nonhazardous Industrial Waste Disposal Request Forms, submit appropriate analytical, and sign accompanying certification. The waste is nonhazardous.  
 Liquids Restriction - Liquid Wastes can only be accepted by landfills which have a Bulking plan specifically approved by the DEQ

# RCRA-Exempt Exploration and Production Wastes<sup>1</sup>

Produced water  
 Produced solids  
 Produced gases  
 Produced wash  
 Produced drilling fluids and cuttings from offshore operations disposed of onshore  
 Produced geothermal production fluids  
 Produced hydrogen sulfide abatement wastes from geothermal energy production  
 Produced well completion, treatment and stimulation fluids  
 Produced casing sediment, water, and other tank bottoms from storage facilities that hold product and exempt wastes  
 Produced accumulated materials such as hydrocarbons, solids, sands, and emulsion from production separators, fluid treating vessels and production impoundments  
 Produced tank sludges and contaminated bottoms from storage or disposal of exempt wastes  
 Produced gas plant dehydration wastes, including glycol-based compounds, glycol filters, and filter media, backwash, and molecular sieves  
 Produced Workover Wastes  
 Produced cooling tower blowdown  
 Produced gas plant sweetening wastes for sulfur removal, including amines, amine filters, amine filter media, backwash, precipitated amine sludge, iron sponge, and hydrogen sulfide scrubber liquid and sludge.

Spent filters, filter media, and backwash (assuming the filter itself is not hazardous and the residue in it is from an exempt waste stream)  
 Pipe scale, hydrocarbon solids, hydrates, and other deposits removed from piping or equipment prior to transportation  
 Produced sand  
 Packed fluids  
 Hydrocarbon-bearing soil  
 Pigging wastes from gathering lines  
 Wastes from subsurface gas storage and retrieval, except for the non-exempt wastes listed below  
 Constituents removed from produced water before it is injected or otherwise disposed of  
 Liquid hydrocarbons removed from the production stream but not from oil refining  
 Gases from the production stream, such as hydrogen sulfide and carbon dioxide, and volatilized hydrocarbons  
 Materials ejected from a producing well during blowdown  
 Waste crude oil from primary field operations  
 Light organics volatilized from exempt wastes in reserve pits, impoundments, or production equipment

# Non-Exempt Exploration and Production Wastes<sup>1</sup>

Unused fracturing fluids or acid  
 Gas plant cooling tower cleaning wastes  
 Painting wastes  
 Oil and gas service company wastes such as empty drums, drum rinsate, sandblast media, painting wastes, spent solvents, spilled chemicals, and waste acids  
 Vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste  
 Refinery wastes  
 Liquid and solid wastes generated by crude oil and tank bottom reclaimers  
 Used equipment lubricating oils  
 Waste compressor oil, filters, and blowdown

Used hydraulic fluids  
 Waste in transportation pipeline related pits  
 Caustic or acid cleaners  
 Boiler cleaning wastes  
 Boiler refractory bricks  
 Boiler scrubber fluids, sludges, and ash  
 Incinerator ash  
 Laboratory wastes  
 Sanitary wastes  
 Pesticide wastes  
 Radioactive tracer wastes  
 Drums, insulation and miscellaneous solids

<sup>1</sup> As listed by EPA guidance in Federal Register notice, Wednesday, July 6, 1988, 53 FR 25453, 25454 & 58 FR 15284, March 22, 1993.