

US EPA ARCHIVE DOCUMENT

NH III

**RULES AND REGULATIONS FOR INDUSTRIAL WASTE MANAGEMENT**

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**TABLE OF CONTENTS**

Chapter one	Definitions . . . . .	1
Chapter two	Incorporation by Reference . . . . .	2
Chapter three	Additional Generator Requirements . . . . .	3
Chapter four	Additional Transporter Requirements . . . . .	4
Chapter five	Additional TSD Requirements . . . . .	5
Chapter six	Permit Procedures . . . . .	6
Chapter seven	Miscellaneous . . . . .	10
Chapter eight	Class I Injection Wells . . . . .	17

Waste Management Service  
Environmental Health Services  
OKLAHOMA STATE DEPARTMENT OF HEALTH

Chapter One  
DEFINITIONS

- 100 In addition to the definitions contained in the Oklahoma Controlled Industrial Waste Disposal Act, 63 O.S. 1981, Sections 1-2001 et seq., as amended, the following definitions shall apply for these Regulations:
- 110 "Act" means the Oklahoma Controlled Industrial Waste Disposal Act, 63 O.S. 1981, Sections 1-2001 et seq., as amended.
- 120 "Commissioner" means the State Commissioner of Health.
- 130 "Fresh water" means all water sources with a maximum of 10,000 mg/l total dissolved solids and all waters that are present or designated potential sources of drinking water, livestock, or irrigation water.
- 140 "Potentially affected zone" means that area surrounding an injection well or injection well pattern in which the pressure change resulting from an injection operation may cause a rise in pressure of injected fluid, formation fluid, or a combination thereof sufficient to enter an underground fresh water source.

Chapter Two  
**INCORPORATION BY REFERENCE**

- 200 When reference is made to the Code of Federal Regulations, 40 CFR 260 et seq., it shall mean (unless otherwise specifically provided) the Hazardous Waste Regulations, Monday, May 19, 1980 as amended through July 1, 1987.
- 210 The following Parts of 40 CFR are, unless otherwise specified, incorporated by reference in their entirety:
- Part 260 (Hazardous Waste Management System: General), with the exception of 260.20 through 260.22 (which relate to delisting)
  - Part 261 including Appendices I through X (Identification and Listing of Hazardous Waste)
  - Part 262 (Standards Applicable to Generators of Hazardous Waste)
  - Part 263 (Standards Applicable to Transporters of Hazardous Waste)
  - Part 264 (Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities)
  - Part 265 (Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities)
  - Part 266 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities)
  - Part 268 (Land Disposal Restrictions)
  - Part 270 (Permit Programs)
- The provisions of Part 124 which are required by 40 CFR 271.14
- 220 For purposes of interfacing with 40 CFR 260 et seq., the following terms apply:
- Administrator is synonymous with Commissioner;
  - Regional Administrator is synonymous with Commissioner;
  - Hazardous waste is synonymous with controlled industrial waste;
  - Act is synonymous with Controlled Industrial Waste Disposal Act;
  - State is synonymous with Department; and
  - EPA is the Environmental Protection Agency.
- 230 When a provision of the Code of Federal Regulations is incorporated by reference, all citations contained therein are also incorporated by reference, and the definition of terms contained in 40 CFR 260.10 shall apply.
- 240 In the event that there are inconsistencies or duplications in the requirements of those provisions incorporated by reference from 40 CFR 260 et seq., and the regulations herein set out, the provisions incorporated by reference from 40 CFR 260 et seq., shall prevail except where the regulations herein set out are more stringent.

Chapter Three  
**ADDITIONAL GENERATOR REQUIREMENTS**

- 300 Disposal plans.** All persons generating controlled industrial waste within Oklahoma or generating wastes to be treated or disposed of in Oklahoma shall file a disposal plan with the Department for approval, on forms provided by the Department.
- 301** The Department will assign each generator a disposal plan number upon approval of the plan. The approved disposal plan number must be entered on each hazardous waste manifest in the State Generator's I.D. space.
- 302** The generator must update the disposal plan as needed and must notify the Department of any proposed changes in the plan within five working days of the changes. Changes shall not be implemented until approved by the Department.
- 303** Generators of recyclable materials shall keep the Department informed, in writing, of the types and quantities of materials being recycled and the recycling methods used, but shall not be required to include recycled wastes on their disposal plans. For the purpose of complying with Sections 1-2004 and 1-2009.1 of the Act the Department shall assign facsimile disposal plan numbers to those generators reporting recyclable materials. Generators may use their actual disposal plan when reporting recyclable materials, at their discretion.
- 304** One-time disposal plans may be issued for emergency clean-up or waste removal.
- 310** Small quantity generators and conditionally exempt small quantity generators are not subject to the disposal plan requirement.
- 320** All generators of controlled industrial waste or recyclable materials shall submit the information required by 40 CFR 262.41, including the total amount of waste generated and also including copies of manifests signed by receiving facilities for wastes transported outside the State of Oklahoma, quarterly to the Department on forms provided by the Department.

Chapter Four  
**ADDITIONAL TRANSPORTER REQUIREMENTS**

- 400 Each person who owns or leases one or more vehicles which engage in the transportation of controlled industrial waste shall be required to register for transportation on forms available from the Department. Persons who transport controlled industrial waste only within the confines of a generator's plant site, or within the boundaries of a disposal site or processing facility, shall not be required to register so long as no movement occurs along a public right-of-way.
- 410 The transporter shall insure that the waste will be adequately contained so as to prevent any leakage, spillage, blowing, or dumping of the waste while in transport.
- 420 No person shall transport, receive or dispose of controlled industrial waste without a completed manifest containing the disposal plan number of the generator(s) thereon.
- 430 Transporters shall not mix or combine shipments of waste from separate containers.

Chapter Five  
**ADDITIONAL T S D REQUIREMENTS**

- 500 No endangerment or degradation.** All controlled industrial waste disposal sites and facilities shall be located, constructed, maintained, operated, and closed in a manner so as to prevent any endangerment of the public health and safety, or degradation of the environment. Degradation of the environment shall be deemed to have occurred if the site or facility in question causes or may cause a discharge to either the air, land, or water external to the facility which statistically increases (or decreases, in the case of pH) the level of a controlled industrial waste chemical or compound, or a parameter indicative of controlled industrial waste contamination, over what may normally be expected to be found in the environment at that time, except that discharges in compliance with all requirements of any state or federal pollution control agency shall not be deemed as degradation. A statistical increase (or decrease) shall be determined by use of the tests specified in 40 CFR Parts 264 and 265. (Note: 40 CFR 264, Subpart F, provides certain exceptions to this.)
- 510 Reporting.** The information required by 40 CFR 264.75 or 265.75, including the identification of the transporter of the waste and copies of the manifests, shall be submitted monthly as required by the Act.
- 520 Financial Security Mechanisms.**
- 521 The owner shall word the instruments as provided in 40 CFR 264.151, except that the phrase "Oklahoma State Department of Health, ("OSDH" or "the Department"), an agency of the State of Oklahoma" shall be used in lieu of phrases containing the words "Environmental Protection Agency"; "Commissioner of Health" shall be used in lieu of phrases containing the words "Regional Administrator;" "OSDH" shall replace "EPA"; "Act" shall replace "Section 3008 of the Resource Conservation and Recovery Act;" and "Department operations permit" shall replace "RCRA permit;" and
- 522 The certification in each instrument that the language is identical to respective provisions of 40 CFR 264.151 shall include the phrase "United States Environmental Protection Agency approved amendment, for the State of Oklahoma,".
- 530 Buffer Zones.** No treatment, storage or disposal shall occur within the buffer zones as follows:
- 531 Surface impoundments and Landfills - 200 feet of the site perimeter.
- 532 Land treatment facilities - 50 feet of the site perimeter.

Chapter Six  
PERMIT PROCEDURES

**600 Application Procedure.**

- 601 A proposal for a major modification to a permitted facility shall require an operation permit. A proposal which amounts to reconstruction of the facility shall also require a construction permit. Reconstruction occurs when the capital investment in the cumulative changes to the facility exceeds fifty percent of the capital cost of the original facility adjusted for inflation.
- 602 For the purposes of these Regulations, the area considered to be within one mile of the facility, for determination of affected property owners, shall be determined from the perimeter of the property of the site or facility as applied for in the construction permit application, including any buffer zones.
- 603 An application for a construction permit shall, in addition to the application fee, include in triplicate:
- A. an application on a form prepared by the Department;
  - B. materials addressing each item described on the form;
  - C. a certification by the applicant of the affected property owners (and their mailing addresses) upon whom notice of submission of the construction permit application, and emergency plans if applicable, has been served; and
  - D. an application for an operation permit.
- 604 When the Department determines to issue a draft permit (and not a draft denial) upon an application, the applicant shall tender the operation permit fee and publish notice, as required by Section 1-2006(C) of the Act, offering 45 days:
- A. for the request of a public meeting (or "hearing" as the term is used in 40 CFR 124.10) upon both the construction permit and upon the operation permit as described in the draft permit; and
  - B. for the request by affected property owners and qualified interest groups for a hearing as described in Section 1-2006(D) of the Act.
- 605 An application by an existing facility for an operation or post-closure permit shall, in addition to the fee, include in triplicate:
- A. an application on a form prepared by the Department; and
  - B. materials addressing each item described on the form.

**610 County Commissioners.**

- 611 The Department shall not issue a construction permit for a new facility in the absence of either:
- A. the failure of the appropriate board(s) of county commissioners to act as provided in paragraph (C) of Section 1-2005.3 of the Act; or
  - B. a resolution from the appropriate board(s) of county commissioners as provided in paragraph (B)(1) of Section 1-2005.3 of the Act; or
  - C. an agreement between the applicant and the appropriate board(s) of county commissioners reflecting the upgrading provided in paragraph (B)(2) of Section 1-2005.3 of the Act; or
  - D. a final order from the appropriate district court(s) resolving grievances between the applicant and the appropriate board(s) of county commissioners, as provided at paragraph (D) of Section 1-2005.3 of the Act.
- 612 The Department shall not issue an operation permit for a facility subject to Rules 611 (C) or (D) in the absence of a certificate of acceptance of the completed upgrades by the appropriate board(s) of county commissioners or the Oklahoma Department of Transportation, as appropriate and according to custom, pursuant to subparagraph (B)(2) of Section 1-2005.3 of the Act.

**620 Emergency Plans Relating to Affected Property Owners.**

- 621 In addition to the plans required by 40 CFR 264 Subpart D (contingency plans and emergency response procedures), applicants for off-site treatment, storage or disposal construction permits (under Paragraphs D and E of Section 1-2014 of the Act) shall also prepare separate Emergency Plans designed to provide for the minimization of hazards to the health and property (environment) of each parcel of land owned by affected property owners. Each additional Emergency Plan shall follow the criteria of 40 CFR 264 Subpart D but shall specifically relate to each parcel.
- 622 **Parcel.** For purposes of these Regulations, a parcel of land owned by one or more affected property owners is a present possessory fee simple estate in land, excluding future interests.
- A. All discrete parcels, regardless of size, as specified in the county land records on the day the permit application is submitted, shall be counted equally, regardless of the number of affected property owners who may own concurrent interests in such parcel.
  - B. The owner who is occupying a parcel, if there is only one owner in occupancy, or a majority of the owners, or the executor, administrator or trustee on behalf of a parcel undergoing probate or otherwise, shall represent the approval or disapproval of the Emergency Plan on behalf of the parcel for purposes of the Act.

- C. A calculation of approval or disapproval by a majority of the affected property owners shall be made by summing the numbers of parcels approving and disapproving the Emergency Plan. A majority is a simple majority of the parcels.
- D. Approval or disapproval of the Emergency Plan by an affected property owner does not signify approval or disapproval of the technical aspects of the facility, nor limit the right under the Act of any affected property owner to oppose the construction permit or to oppose the Emergency Plan. Issues under this paragraph may be joined at any hearing conducted under Paragraph D of Section 1-2006 of the Act.

623 If an applicant has obtained the written approval of the Emergency Plan from the affected property owners of all or a majority of the parcels, the applicant shall certify this to the Department. When the Department determines that all necessary approvals have been obtained then it shall then proceed with the process of issuance or denial of the permit.

624 Failure of the affected property owners of a parcel of land to specify, to the satisfaction of the Department within 45 days of service of notice of the application, reasons for non-approval of the Emergency Plan for that parcel which are based solely upon minimization of hazards to the health and property (environment) of the affected property owner(s) of that parcel, shall cause the Department to exclude that parcel from a calculation of a majority of affected property owners who approve or disapprove of the Emergency Plan under the Act.

**630 Exclusionary Siting Criteria.**

631 **Groundwater resources and recharge areas.** No construction permit shall hereafter be granted for a controlled industrial waste treatment, storage or disposal facility proposed to be located over or through unconsolidated alluvium or terrace deposits, or over or through bedrock aquifers or their recharge areas as shown on the maps described as "Sheet 1 -Unconsolidated Alluvium and Terrace Deposits" and "Sheet 2 - Bedrock Aquifers and Recharge Areas" of the "Maps Showing Principal Ground Water Resources and Recharge Areas in Oklahoma," compiled by Kenneth S. Johnson, Oklahoma Geological Survey (1983). Existing disposal sites may modify capacity, treatment and disposal methods.

632 **Water wells. RESERVED:**

633 **Flood plain.** No construction permit shall hereafter be granted for a controlled industrial waste disposal site proposed to be located within a once in one hundred year/24-hour event floodplain unless diking or building of platforms will prevent inundation, erosion of the site and leaching.

634 **Surface water.** No construction permit shall hereafter be granted for a controlled industrial waste disposal site proposed to be located within

one mile of the conservation pool elevation of any reservoir which supplies water for a public water supply or within one mile of any scenic river.

- 635 **Air pollution.** No construction permit shall hereafter be granted for an off-site controlled industrial waste disposal site proposed to be located within one mile of any public school, educational institution, nursing home, hospital or public park.
- 636 **Injection wells.** No construction permit shall hereafter be granted for a controlled industrial waste injection well proposed to be located in any area where it would have an adverse or unpredictable effect on any existing Class I, II, or III injection well, or any oil or gas well.

Chapter Seven  
MISCELLANEOUS

**700 Confidential Business Information.**

- 701 Information obtained by and copies of official records of the Department regarding controlled industrial waste facilities and sites shall be made available to the public to the extent permitted by and generally in accordance with 40 CFR Part 2, unless otherwise privileged or protected from publication by law. Information obtained by the Department regarding facilities and sites for treatment, storage and disposal of controlled industrial waste shall be made available to the public in substantially the same manner, and to the same degree, as would be the case if the EPA were carrying out the provisions of federal law in Oklahoma. In accordance with Rule II(F) of the Rules of Practice of the Department, copies of all official records of the Department, not privileged or protected from publication by law, may be made and certified by the Commissioner, or designated agent, on the request of any person. The person making such request shall pay the expense of making such copies in accordance with a fee schedule adopted by the Department.
- 702 All records submitted to the Department pursuant to the requirements of the Act and these Regulations shall be made available by the Department to the EPA upon request. Provided that, records claimed to be confidential which are obtained under regulations and authority separate and distinct from the State Program Requirements as set forth in 40 CFR Part 271, and which are separately maintained, need not be made available to the EPA.
- 703 Submission of materials under claim of confidentiality. Each page which the submitter claims to contain confidential information must be clearly marked as "confidential," "proprietary," "trade secret," or similar notation.
- 704 Upon receipt of documents submitted in accordance with Rule 703, the Department will maintain such records as confidential and disclose such records only to the EPA unless otherwise ordered by a court of competent jurisdiction.
- 705 Upon receipt of information which seems to indicate that the submitter desires confidential handling but which is not in substantial compliance with Rule 703 then the Department shall consider such information to be confidential except as to the EPA; and
- A. may return such information to the submitter or may otherwise communicate with the submitter to ascertain whether the submitter wishes to make the records freely available to the public.

- B. If a claim of confidentiality for information is received after the information itself is received, the Department will make such efforts as are administratively practical to associate the late claim with copies of the previously-submitted information in Department files. Such efforts may not be effective due to the possibility of prior disclosure. When the Department determines that information submitted and claimed to be confidential is not required to be submitted by these Regulations, then it shall be returned.
- 706 The Department expressly disclaims and denies any duties, responsibilities or obligations other than as stated in Rule 704. Submitters of records claimed to be confidential are advised that it is their responsibility, not the Department's responsibility, to monitor and/or defend said claims of confidentiality with the EPA. The Department expressly disclaims and denies responsibility or liability for any disclosure by the EPA of records claimed by the submitter to be confidential.
- 710 **Incidents.** If an incident involving the spill, leakage, discharge to surface or ground waters (outside the limits of a discharge permit), or other uncontrolled release of materials which are or become controlled industrial waste arises, the owner, operator, or other responsible person shall immediately notify the Department. Materials which spill or leak, including soils and other matter which may be contaminated with such materials, and which are to be disposed of but cannot be safely disposed of in sewage treatment works or sanitary landfills become either "other industrial waste" under the Oklahoma Solid Waste Management Act or, if tested as hazardous, become controlled industrial waste.
- 711 The Commissioner may assess costs relating to expenses and damages incurred by the Department in responding to the incident. Such costs shall be borne by the person(s) responsible for the incident.
- 720 These regulations shall not abrogate in any way the zoning authority of any duly constituted zoning agency with respect to the siting of any site or facility.
- 730 **Diminish toxicity (reserved).**
- 740 **Fees for Services.**
- A. Fees should be made payable to the Industrial Waste Division.
- B. Application fees for new permits, registrations and disposal plans must accompany the application or the application will not be deemed to have been submitted.
- C. Renewal fees for permits, registrations and disposal plans, and monitoring fees, are payable and must be postmarked no later than 60 days from the invoice date (delinquencies shall be subject to an additional fee of 20% of the renewal fee, both fees not to exceed the

maximum range). Delinquent renewals subject the underlying permits and registrations to administrative sanctions.

- D. **Range of Fees:**  
Disposal plans - \$100 to \$10,000 per generator per year;  
Transporter registration - \$20 per vehicle per year;  
Permit application - \$5,000 to \$50,000;  
Application resubmittal - \$100 to \$10,000;  
Facility monitoring - \$100 to \$10,000 per year;  
Fees will not be reassessed at time of transfer of ownership if units and EPA I.D. number remain unchanged.

**741 Generator fees:**

- A. Disposal Plan. \$100.00 per generator, per year, which may include up to two waste streams.
- 1) The annual fee for each additional waste stream is \$50.00.
  - 2) Emergency Situations. There is no disposal plan fee to handle incidents under Rule 710.
- B. Fees for monitoring and inspection. Small quantity generators shall pay \$25.00, and all other generators within Oklahoma shall pay \$100.00, as an annual fee for monitoring and periodic inspection.

**742 Transporter fees:**

- A. For each trailer or other discrete transportation vehicle used in highway transportation to carry controlled industrial waste, there shall be a yearly registration fee of \$20.00.
- B. The registration period shall be from March 1 of a given year to the last day of February of the following year.
- C. In lieu of a per-vehicle fee, common carriers participating in the "International Registration Plan" may pay a fee of \$20.00 per vehicle equivalent calculated by the ratio of the previous year's Oklahoma manifested waste mileage divided by the total fleet national mileage, multiplied by the total number of fleet trailers and vehicles (excluding power units).

- D. Per trip vehicle rental: Transporters leasing or renting only one vehicle at a time for the transportation of controlled industrial waste may obtain a registration designated as per trip rental by paying a yearly registration fee of \$20.00. Each rental vehicle's identification information shall be reported to the Industrial Waste Division prior to the movement of waste in that vehicle.

**743 Treatment, Storage and Disposal Facility fees:**

- A. Fees for the initial submission of an application for a construction permit, and any subsequent resubmissions, shall be calculated based upon **Table 1**.
- B. Fees for the initial submission of an operations permit and any subsequent resubmissions shall be calculated and based upon **Table 2**.
- C. Post-Closure permit applications shall be charged application fees in accordance with **Table 2**. No fees are to be charged for review of interim status closure plans for which no post-closure permit is required.
- D. Fees for Permit Modifications:
  - 1) There are no fees for Minor Modifications under 40 CFR 270.42.
  - 2) Fees for major modifications are the **Table 2** amounts.
- E. Permit Renewals: The fees for renewal of an existing permit are 1/2 of the amounts listed in **Table 2**, using all units covered by the existing permit.
- F. Application Withdrawals: Any initial permit application voluntarily submitted (i.e., not a "Part B application") shall be entitled to a refund of 90% of the application fee if the Department receives notice of withdrawal from the applicant within 30 days of submission of the application.
- G. Fees for Monitoring and Inspection: All controlled industrial waste facilities shall be charged annual fees for monitoring and inspection by the Department, in accordance with **Table 3**. These fees are in addition to the \$100.00 monitoring fee for generators.

Rule 743 - Table 1 Construction Permit Application Fee

<u>Facility Type or Description</u>	<u>Fee for Submission</u>	<u>Fee for Resubmission</u>
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All	Basic Application Processing Fee:	\$2,500	\$100
Type 1 (Tanks)	Add for treatment or storage in tanks: Plus:	First Tank Battery \$2,500 20% of above for each additional battery	First Tank Battery \$100

(a tank battery is an accumulation of not more than 10 tanks, in one geographically contiguous area, not separated by diking or other means)

Type 2 (Drums)	Add for storage in containers: Plus:	First Area \$2,500 20% of above for each additional area	First Area \$100
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(area means a discrete, geographically contiguous container storage area)

Type 3 (Piles)	Add for treatment or storage in waste piles: Plus:	First Pile \$4,500 50% of above for each additional pile	First Pile \$200
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Type 4 (Incin.)	Add for incinerator or other thermal treatment:	Each Unit \$7,500	Each Unit \$300
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(incinerator unit includes all ancillary equipment such as afterburners & scrubbers)

Type 5 (Deep Well)	Add for disposal by injection well: Plus:	First Well \$20,000 50% of above for each additional well	First Well \$500
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Type 6 (Land Treatment Area)	Add for treatment/disposal by land treatment: Plus:	First Area \$10,000 40% of above for each additional area	First Area \$400
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(area means geologically and hydrologically contiguous area)

Type 7 (Landfill)	Add for storage & treatment by impoundments or piles, disposal by impoundments or landfills: Plus:	First Unit \$25,000 20% of above for each additional unit	First Unit \$750
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Type 8  
(Research)

Add for research units  
or special conditions:

Each  
\$5,000

Each  
\$200

Rule 743 - Table 2 Operations Permit Application Fee

<u>Facility Type or Description</u>	<u>Fee for Submission</u>	<u>Fee for Resubmission</u>
All Basic Application Processing Fee:	\$2,000	\$100
Type 1 (Tanks) Add for facility with Construction Permit: Interim Status: Plus:	First Area \$2,000 \$2,500 20% of above for each additional battery	First Area \$100 \$125
Type 2 (Drums) Add for facility with Construction Permit: Interim Status: Plus:	First Area \$2,000 \$2,500 20% of above for each additional area	First Area \$100 \$125
Type 3 (Piles) Add for facility with Construction Permit: Interim Status: Plus:	First Pile \$2,500 \$3,000 50% of above for each additional pile	First Pile \$125 \$150
Type 4 (Incin.) Add for facility with Construction Permit: Interim Status: (Includes both trial burn and final operations permits)	Each Unit \$12,000 \$12,000	Each Unit \$600 \$600
Type 5 (Deep Well) Add for facility with Construction Permit: Interim Status: Plus:	First Well \$15,000 \$20,000 50% of above for each additional well	First Well \$250 \$500
Type 6 (Land Treatment Area) Add for facility with Construction Permit: Interim Status: Plus: (includes both treatment demonstration and final operations permits)	First Area \$6,000 \$9,000 40% of above for each additional area	First Area \$300 \$450
Type 7 (Landfill) Add for facility with Construction Permit: Interim Status: Plus:	First Unit \$20,000 \$25,000 20% of above for each additional unit	First Unit \$350 \$1,200
Type 8 (Research) Add for facility with Construction Permit: Interim Status:	Each \$3,000 \$4,500	Each \$150 \$250

Rule 743 - Table 3 Annual Facility Monitoring Fees

	<u>Type of Facility</u> <u>(Charges are cumulative)</u>	<u>Annual Monitoring Fee</u>	
		<u>On-site (TSD)</u>	<u>Off-site (TSD)</u>
A.	Storage and Treatment by Tanks and storage by Containers (Types 1 and 2)	\$100.00 per tank battery or container area	\$500.00 per tank battery or container area
B.	Incinerator and Thermal Treatment (Type 4)	\$1,000.00 each	\$5,000.00 each
C.	Land Treatment (Type 6)	\$2,000.00 per area	\$10,000.00 per area
D.	Injection Wells (Type 5)	\$2,000.00 each	\$10,000.00 each
E.	Storage and Treatment by Impoundment or Piles; Disposal by Impoundments or Landfills (Types 3 and 7)	\$2,500.00 each type of unit	\$10,000.00 each type of unit
F.	Research Facilities and Sites Not Otherwise Described (Type 8)	\$2,000.00 each	\$5,000.00 each

Chapter Eight  
**CLASS I INJECTION WELLS**

- 800 "Class I injection well" (see 40 CFR 146) shall be for the subsurface emplacement of waste by means of a bored, driven, drilled, or dug well, where the depth of the well is greater than the largest surface dimension. Placement into an injection well (i.e. well injection) shall be considered as disposal. An injection well shall be taken to include all casing, tubing, packers, and associated equipment and materials, up to the main injection cut-off valve at the well-head, and include all associated meters, gauges or devices (including but not limited to injection and annulus pressure, temperature, flow, pH, viscosity and specific gravity) used to monitor performance of the well regardless of the point of connection.
- 801 Each existing injection well will be evaluated by the Department to determine if such well's construction is adequate to prevent contamination of fresh water and damage to sources of oil or gas. Based upon such evaluation, the Department will either approve or deny the continuation of operation of such injection wells or order remedial measures necessary for issuance of a permit, as appropriate. Upon approval of an existing injection well, the Department shall issue a permit for operation. Injection not authorized by permit or interim status is prohibited.
- 810 **Minimum Specifications for All Class I Injection Wells.**
- 811 An injection well shall be completed, equipped, and maintained in a manner that will not degrade or endanger fresh water, or damage sources of oil or gas, or endanger other natural resources.
- 812 Injection into or above an underground source of fresh water is prohibited.
- 813 Disposal of industrial waste shall be through adequate tubing and below a packer, which is strategically set so as to isolate the waste receiving formation.
- 814 The annular space between tubing and production casing shall be filled with a non-corrosive fluid and the annulus closed off. Unless otherwise specified by the Department, the annulus fluid shall be maintained at a minimum positive pressure of ten (10) p.s.i.g at the well head.
- 815 The injection pressure at the well head, the flow rate, the annulus pressure, and the temperature of the injected fluid shall be monitored and recorded continuously on either a circular or strip chart recorder. If the specific gravity of the injected fluid varies typically from 1.0, then the specific gravity shall also be recorded continuously. The operator shall maintain records accurately reflecting the volume of fluid injected on any given day. As part of the monthly reports

required by the Act, the operator shall submit representative copies of the charts or records which reasonably reflect the well-head and annulus

pressures, the flow rate and temperature of the injected fluid which were encountered on any given day of the month. The operator shall maintain a permanent file of all charts and records obtained under this paragraph as a part of the permanent site records. Monitoring gauges and recorders shall be calibrated routinely so that they will accurately reflect the actual operating conditions of the injection well to avoid any potential hazards which might occur by exceeding the pressures allowed by Rule 818.

- 816 Injection and annulus pressure monitoring taps shall be provided for the use of the Department. Such taps shall be connected near the locations on the well of the facility pressure monitoring recorders. The taps shall provide a one-fourth inch ( $\frac{1}{4}$ " diameter N.P.T. male pipe fitting, valved and capped so as to prevent fluid loss when not in use. Said taps shall allow simultaneous pressure monitoring by facility pressure recorders and Department pressure gauges for comparison.
- 817 Injection fluids shall be analyzed with sufficient frequency, acceptable to the Department, to yield representative data of their characteristics. The physical, chemical and other relevant characteristics of the injected fluids shall be submitted as part of the monthly reports required by the Act and shall remain a part of the permanent site records.
- 818 The maximum total pressure gradient (disposal pressure and fluid pressure) of any injection well shall not exceed sixty-five percent (65%) of the established overburden pressure gradient in pounds per square inch per foot (p.s.i./ft.) of depth from ground surface to the top of the disposal zone. If the effective overburden gradient is not established, the maximum total pressure gradient shall not exceed 0.65 p.s.i./ft. of depth from ground surface to the top of the disposal zone unless otherwise specified by the Department. Allowances in this specified maximum pressure may be made to account for pressure losses due to friction in piping or tubing.
- 819 The tubing shall be tested at One Hundred Fifty percent (150%) of its maximum proposed operating pressure or 300 p.s.i., whichever is greater, before operation of an injection well, and each five (5) years thereafter.
- 820 At least each five (5) years of operation, the operator shall conduct such tests, such as cement bond logs, temperature or noise logs, or tracer surveys, as are necessary to insure the continued integrity of the cementing. Such tests shall be conducted no more than 90 days prior to application for permit or permit renewal, and the results shall be included with said application. The owner shall notify the Department at least seven (7) days in advance of the time and date of such tests, so that Department observers may be present.

- 821 The annulus shall, upon notice by the Department, be pressurized semi-annually to a minimum of 300 p.s.i. unless otherwise specified by the Department. The well shall be shut in and the annulus pressure monitored by the Department for pressure loss or gains.
- 822 A pressure falloff test shall be conducted semi-annually. The pressure falloff test shall be conducted by stabilizing the well to its normal operating injection pressure and flow rate, and then shutting in the well and continuously recording the pressure falloff. The pressure falloff test may be terminated when the well-head pressure changes no more than 3 p.s.i. in one hour, or at the end of 24 hours, whichever occurs first. Results of the pressure falloff test shall be submitted to the Department with the monthly report following completion of the falloff test. The results shall include the continuous chart recordings of the injection flow rate before the test, and the injection pressure before and during the test.
- 823 Pre-treatment shall render substances which are to be disposed of compatible with solids and liquids in the disposal zone. Materials and sludges resulting from pre-treatment or storage of controlled industrial waste, which are not amenable to injection, shall also be considered as controlled industrial waste and disposed of in accordance with these Regulations. For the purposes of disposal of these materials and sludges, the facility shall be considered a controlled industrial waste generator and must file a disposal plan for approval by the Department.
- 824 **Abandonment and Plugging.** Any well to be permanently abandoned shall be immediately plugged. Every well shall be plugged in such a manner as to permanently prevent the migration of any disposed substances out of the disposal zone as well as the migration of oil, gas, or salt water into or out of any productive formations by means of the well bore.
- A. The plugging operator shall notify the Department of the exact time during which all plugging operations will take place. The Department may be present at plugging operations.
  - B. Plugging shall be by a series of continuous cement plugs from the total depth of the well to ground level.
  - C. The top of the plug of any plugged well shall clearly show the well permit number and date of plugging by permanent markings whether inscribed in the cement or on a steel plate embedded in the cement.
  - D. Within fifteen (15) days after a well has been plugged, the owner or operator shall file a plugging record in triplicate with the Department.
  - E. The owner shall submit, at least 180 days prior to cessation of operations, plans for the proper disassembly, decontamination, and restoration of the site. After plan approval, the site restoration

program shall be implemented and completed within six (6) months, unless otherwise specified by the Department.

- F. The submitted plan will include a method for reconditioning, recycling or disposal of all contaminated materials, residual liquids, sludges, and holding tanks, and shall also include proper closure of all pits, ponds, and lagoons, the regrading of the entire site with proper cover to avoid excessive runoff, and the use of ground cover vegetation, i.e. grasses, to control excessive erosion.

**830 Permit Requirements.** These Regulations shall be strictly construed for all new controlled industrial waste injection wells. The following shall be included in a construction permit application:

- 831 Plat certificates and any other records filed with the County Clerk or the Oklahoma Corporation Commission showing every oil, gas, water, irrigation or disposal well and every "dry hole" or other artificial penetration deeper than 25 feet within a two mile radius of the proposed injection well, unless otherwise specified by the Department.
- 832 Scale and schematic drawings of all proposed pre-treating and/or auxiliary surface equipment, including any backup, fail-safe, or standby systems to be utilized in case of well failure.
- 833 Schematic drawing illustrating, in detail, the proposed well construction including dimensions of well bore, casing, cementing, tubing, and packer(s).
- 834 Information on any proposed well testing programs such as any stimulation procedures, drill stem tests and/or injectivity testing.
- 835 Narrative geological, hydrological, and engineering report on the proposed disposal zone including an isopachous and structural map (or maps) of the zone and all available data from logs of other wells in the area; this would include operational status and plugging records. The applicant shall be required to submit information regarding the physical integrity of all wells penetrating the injection formation that lies within the potentially affected zone.
  - A. The potentially affected zone shall be determined by consideration of injection pressure, volumes and characteristics of fluids to be injected, years of operation, and geological characteristics and shall, in all cases, include at a minimum the area within a one (1) mile radius of each proposed well.
  - B. Included in the report required by Rule 835 shall be a discussion of known or potential fluid flow directions and fluid distributions within the receiving formation(s).
  - C. The applicant shall be required to demonstrate with geologic, hydrologic, and engineering data that the proposed disposal zone has sufficient size, porosity, and permeability to accept the proposed waste at the rate and in the volume proposed. The applicant shall further demonstrate the integrity of the seals (aquitards and

aquicludes), including any affecting faults, of the proposed zone to assure that the injected wastes shall be safely contained. Such demonstration may include the use of cores, existing well logs and records.

- 836 Two detailed stratigraphic cross sections showing all formations to be penetrated, both along the axis of the structure and normal to each other. The cross sections shall cover an area large enough to depict both local and regional structure, shall show details of lithologies to be penetrated, and shall be referenced to the information submitted in compliance with Rule 835.
- 837 Information regarding potential adverse effects to any existing injection well. For the purpose of this Section, an existing injection well is defined to be an injection well either currently in operation, under construction, or one which has a complete application submitted to the Department for consideration. Should it be shown that such potential exists, the application shall be denied, except that the operator of the existing injection well may waive this requirement. To waive this requirement, the operator of an existing injection well shall indicate same to the Department in writing and shall certify the ability of his well to be operated in compliance with the Act and these Regulations.
- 838 The following items shall be included in applications for operation permits for injection wells:
- A. Drawing of well (scaled vertically) showing:
    - (1) total depth of well;
    - (2) depth and relative thickness of formations and lithologies penetrated;
    - (3) depth and construction of all casings;
    - (4) depth of packer(s);
    - (5) depth of top and bottom of all cemented areas, verified by a cement bond log;
  - B. geological/hydrological report on disposal zone:
    - (1) depth to top and bottom of disposal zone;
    - (2) porosity and permeability of disposal zone;
    - (3) compatibility with the industrial wastes to be injected;
    - (4) fluid pressure, temperature and fracture pressure of the disposal zone;
    - (5) results of any preliminary flow tests and stimulation practices; such tests shall be conducted using either fresh water or the formation waters encountered;
    - (6) discussion of direction and distribution of flow within the zone;
    - (7) discussion of geologic anomalies, such as faults or caverns, which were not considered or anticipated by the construction permit application;
  - C. logs and surveys including:
    - (1) an electrical resistivity or induction log of the type determined best for the condition of the hole being logged (the log shall have an S.P. Curve and a single or multiple resistivity curve);

- (2) drillers log;
- (3) mechanically recorded drilling time log (geolograph or similar);
- (4) temperature log;
- (5) a porosity log which shall have an s. p. or gamma-ray curve, and a borehole caliper survey, which shall be accompanied by a micro resistivity, interval transit time, compensated density, neutron, or other curve developing similar information regarding porosity and potential faulting;
- (6) gamma-ray/neutron log if disposal zone is cased;
- (7) electro magnetic thickness log and caliper log of the in-place casing;
- (8) fracture finder log;
- (9) bottom hole pressure test made in hole and disposal zone;
- (10) noise logs; and
- (11) mud logs.

D. Detailed lithological description of all formations penetrated and all core data obtained.

839 After completion of the well, all data submitted for the construction permit shall be updated in the operations permit application to reflect the new data.

840 Bifurcation of Injection Well Construction Permit Hearing --Upon the written motion of the applicant, the hearing examiner may order the issuance of a temporary, interim construction permit to allow the drilling of the proposed well so that actual test data and logs from the well may be obtained for consideration at the hearing. Such temporary, interim permits may not have a lifetime in excess of ninety (90) days, and the hearing examiner shall stay all proceedings in the hearing during its duration. The temporary, interim permit shall allow only the drilling, casing, and completion of the well necessary for sampling, cores, logs, or obtaining such data as is needed for consideration of physical and technical suitability of the well itself. All such data shall be submitted and considered when the hearing is reconvened.

841 The temporary, interim permit may not be issued until such time as the applicant supplies a performance bond, acceptable to the Department, guaranteeing the closure and plugging of the well should a full permit not be granted. The issuance of a temporary, interim permit shall not allow controlled industrial waste operations of any kind, and shall not be used as an assumption of final permit issuance. A temporary, interim permit shall not convey any property rights, nor any privilege, exclusive or non-exclusive, regarding full construction and operation of a controlled industrial waste facility.

842 In the absence of a construction permit, no cased well shall be equipped as a Class I injection well.

#### 850 Construction and Operation Standards.

851 The applicant shall provide the Department with sufficient information to prove the integrity of the injection formation and all

penetrations of the confining formations within the potentially affected zone to be such that no contamination of underground fresh water sources, surface waters, the surface of the land or improvements thereon, and damage to sources of oil or gas shall occur.

- 852 Tubing, casing, cement, and all other constructed materials coming in contact with the waste fluid shall be resistant to the corrosive effects of the waste. If the tubing is not designed for the life expectancy of the well, plans for periodic testing and/or replacement are to be presented to the Department.
- 853 The surface casing shall extend from the surface down to a minimum of fifty (50) feet below the lowest freshwater bearing formation.
- 854 All annular spaces between casings and between the casings and the bore hole shall be filled with cement circulated from the bottom of the hole to ground surface, unless otherwise specified.
- 855 As a minimum, at least one (1) monitoring well shall be installed and maintained at the expense of the owner. The Department may require additional wells if they are deemed necessary to adequately monitor groundwater quality and level around the site. Specifications for the location, construction and maintenance of monitoring and/or observation holes must be approved by the Department prior to installation.
- A. Well(s) shall be sufficient to provide monitoring of the lowest fresh water aquifer beneath the site.
  - B. Well(s) shall be arranged so that at least one (1) well will be placed hydraulically down-gradient from the site.
  - C. Unless otherwise specified by the Department, water samples shall be obtained and analyzed at least once each month, and submitted as part of the monthly report.
  - D. Upon issuance of any operational permits, the Department will notify the operator of the parameters to be analyzed from the samples.
- 856 All applications for injection well permits shall be critically evaluated by the Department to determine that the best practical measures for pre-treatment of wastes have been applied.
- 857 **Dedication.** Upon permit approval, all facilities and equipment on-site or off, connected with the disposal operation, as described in the permit, shall be dedicated to sole use for matters described previously for that site's operation. This requirement shall not be taken to include highway or rail transport vehicles used to convey controlled industrial waste to the facility from off-site generators. Transfer of use, or sale of this equipment is prohibited unless Department approval is obtained in writing. Approval may be obtained only if the owner can show that said equipment is not or no longer contaminated and will not contaminate the environment in its future use. Nor will

the absences of such material affect the operational safety of the site.

- 858 **Life-time.** The owner shall submit the life-time expectancy for the injection well based upon that well's potentially affected zone, giving the facility's projected volume of injection, fluid type, and all the geologic and hydrologic factors for that region.
- A. When the projected life-time expectancy of the well is reached and the well is still in operation, the owner must submit plans for immediate shut-down and follow abandonment and plugging procedures.
  - B. If the well is operating effectively and within its permit limits, the owner may submit a revised well life-time expectancy. This submittal should be received by the Department at least 180 days prior to the expiration of the previously projected date. The submittal shall include an explanation of the basis for the revision. An application for a revised well life-time expectancy shall require a construction permit.