Return to:
Oklahoma Department of
Environmental Quality

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Industrial Permits Section

Oklahoma DEQ

Application for Permit to Land Apply Industrial Wastewater and/or Sludge

Form 2L - Land Application of Industrial Wastewater and/or Sludge

This form must be completed by all persons applying for a permit to land apply industrial wastewater and/or sludge. This form must be completed in addition to Form 1 and any other applicable forms.

See Form 1, Attachment 1 for instructions for the submittal of applications and the public notice requirements.

INSTRUCTIONS - FORM 2L
LAND APPLICATION OF INDUSTRIAL WASTEWATER OR SLUDGE

This form must be completed by all applicants who check "yes" to Item B-4 in Form 1.

Your application will not be considered complete unless you answer every question on this form and on any other required forms. If an item does not apply to you, enter "NA" (for not applicable) to show that you considered the question.

Public Availability of Submitted Information

You may not claim as confidential any information required by this form or by any other required forms, whether the information is reported on the forms or in an attachment. This information will be made available to the public upon request.

Any information you submit to the Oklahoma Department of Environmental Quality (DEQ) which goes beyond that required by this or any other forms you may claim as confidential, but claims for information which is effluent data will be denied. If you do not assert a claim of confidentiality at the time of submitting the information, DEQ may make the information public without further notice to you. Claims of confidentiality will be handled in accordance with the Oklahoma Public Records Act.

Definitions

All significant terms used in these instructions and in Form 2L are defined in the glossary found in the General Instructions to Form 1.

Item A

Enter the facility's official or legal name. Do not use a colloquial name.

Item B

Give the name, title, work telephone number, and email address of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by reviewing offices if necessary.

Item C

If the land applier is different than the facility, give the name, work telephone number, and address of the land applier.

Item D

Provide a brief description of the facility's processes that generate the wastewater or sludge to be land applied.

Item E-1

Provide the source and type of wastewater or sludge to be land applied. Sources may be described in general terms *(for example, "cattle truck washing" or "cooling tower blowdown")*. The type of wastewater or sludge may be classified as solid, semi-solid, or liquid.

If the wastewater/sludge is a *solid or semi-solid*, provide the daily volume, annual volume, the percent solids, the dry tons per day, and dry tons per year to be land applied. If the wastewater/sludge is a *liquid*, provide only the daily volume and annual volume of liquid to be land applied

Item E-2 & E-3

Provide laboratory test results for each wastewater source that is to be land applied in Item E-2, and for each sludge source in Item E-3. Wastewater must be tested for all parameters listed in Item E-2, and sludge must be tested for all parameters listed in Item E-3. Units of measure for wastewater parameters should be mg/l, except for pH, which should be in standard units. Units of measure for sludge parameters should be mg/kg or parts per million (ppm), except for pH, which should be in standard units. Testing should be performed by a lab certified by DEQ. If you have an analysis that is less than six months old, you may use it.

Samples taken for wastewater and/or sludge analysis should be grab samples.

Item F-1

For each land application site, list the legal description (¼, ¼, ¼, Section, Township, Range) and the area of the site in acres.

Land application site numbers should consist of the letter L (for land application) followed by two digits. For example, if you have four (4) land application sites, they would be numbered L01, L02, L03, and L04.

Use the same numbers throughout Form 2L to identify the land application sites. If you have an existing permit, use the same numbering scheme in the application as that used in your current permit, where applicable.

Item F-2

If the owner of the land application site(s) is different from the facility, provide the name, address, and telephone number of the site owner and lessee (if any) for each land application site. Provide written documentation of the facility's right to use each site, including time restrictions, if any.

Item F-3

List the type(s) of soil [series name(s) and USDA texture(s)] and soil properties (permeability, available water capacity, and shrink/swell potential) for each site. This information can be found in the appropriate Soil Survey for the county in which the facility is located. Soil Surveys are published by the United States Department of Agriculture Soil Conservation Service, and are available online at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

Item F-4

For each land application site, provide laboratory test results of the soil at the site for each of the listed parameters. The Mehlich-3 Extraction method should be used for the phosphorus and potassium analyses. Units of measure should also be reported for soil nitrogen, phosphorus, and potassium concentrations. *Soil samples should be composite samples*. Composite samples shall be obtained by combining 15-20 core soil samples per land application site. Core samples should go 6-8 inches into the soil. The core samples should be collected and mixed thoroughly and a single sample taken from the composited sample. Fields that produce cultivated crops should be sampled any time after harvest but before planting. Non-cultivated fields should be sampled during the dormant season. *Do not* sample either cultivated or non-cultivated fields immediately after lime, fertilizer, or manure application.

Units of measure for soil nitrogen, phosphorus, and potassium concentrations may vary depending on what laboratory performed the analysis. Laboratory test results will generally be reported in mg/kg (equivalent to parts per million or ppm), pounds/acre (sometimes reported as pounds available per acre), or soil test index. Soil test index is equivalent to pounds/acre.

Also list the type of crop grown at each land application site, the expected yield of the crop, and the final use. Expected yields should be reported in bushels/acre for grain or tons/acre for hay.

Item F-5

For each land application site, list the legal location of any wells within ¼ mile of the site. Also list the total depth of the well and the water level in the well. If known, list the depth to groundwater at each land application site, as well as the gradient or direction of groundwater flow. Attach copies of any well logs or other information used to determine these parameters.

If there are no wells within ¼ mile of the outside boundaries of the site, enter "N/A" under the column "Legal Description of Well".

You may list multiple land application sites on the same line, provided the same well was used to determine the groundwater information for all sites. If you cannot determine the direction of groundwater flow, enter "XX" in the column "Direction of Flow" to show that you considered the question.

Well logs may be obtained from OWRB by utilizing the online tool at http://www.owrb.ok.gov/wd/search/search.php.

Item G-1

For each land application site, list the wastewater/sludge application rate, the duration of application, the frequency of application, and the rest period between applications in the appropriate column.

Item G-2

Provide a brief description of the wastewater/sludge application equipment and how the equipment is to be used. Include a description of land application methods and related details including the design and specifications of irrigation systems and/or depth and frequency of incorporation or injection.

Item G-3

Provide a brief description of methods used to control surface drainage, stormwater runoff, and erosion at each site and the plan for the control, capture, and disposal of all surface water runoff.

Item G-4

Provide a description of the method(s) used to transport the wastewater/sludge to the application sites.

Item H

For each land application site, list all facilities or surface impoundments where wastes to be land applied are stored (sources). Provide the legal description of each storage location. If the source is an impoundment, the number used on Form 2SI should be used to identify the impoundment. Continue on additional sheets if necessary.

Item I-1

Attach a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the following items:

1. Outline of the facility;
2. Location of each existing or proposed land application site;
3. Surface impoundments;
4. Nearest resident;
5. Nearest business or industry;
6. Access roads to site; and
7. Streams and bodies of water, including all ponds, drainage ditches, and wetlands.

If a land application site(s) is greater than one (1) mile away from another, included separate maps for each site.

Item I-2

Attach a separate topographic map that shows the following items:

1. Public water supply sources, both surface water and groundwater on or within ½ mile of each site;
2. Public water and wastewater collection, treatment, and distribution facilities on or within two (2) miles of site;
3. Public and private groundwater wells on or within ¼ mile of site; and
4. 100 year flood plain located on or within ¼ mile of site.

If a land application site(s) is greater than two (2) miles away from another, included separate maps for each site.

Item I-3

Attach a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the following items:

1. On-site pipelines and utility easements; and
2. On-site producing oil or gas wells or drilling sites.

If a land application site(s) is greater than one (1) mile away from another, included separate maps for each site.

Item J

State statutes provide for penalties for submitting false information on this application form.

27A O.S. §2-6-206(G)(4) provides that, "Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Oklahoma Pollutant Discharge Elimination System Act... shall upon conviction be punished by a fine of not more than Ten Thousand Dollars ($10,000.00), or by imprisonment for not more than two (2) years, or by both."

All applications must be certified as provided on the forms furnished by the Department, and must be signed by the applicant. Signatures must be original signatures; photostatic copies of signatures will not be accepted. Permit applications must be signed as follows:

A. If the applicant is a private corporation, the application must be signed by:

   1. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

   2. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

B. If the applicant is a partnership, sole proprietorship or individual person, the application must be signed, respectively, by a general partner, the proprietor or the individual.

C. If the applicant is a municipality, political subdivision, the State or Federal government or other public agency or entity, the application must be signed by the principal executive officer of the entity or the ranking elected official.

FORM 2L OPDES	OKLAHOMA DEQ	OPDES APPLICATION TO DISCHARGE AND/OR DISPOSE OF INDUSTRIAL WASTEWATER OR SLUDGE **LAND APPLICATION OF INDUSTRIAL WASTEWATER & SLUDGE**

A. NAME OF FACILITY

B. FACILITY CONTACT

1. Name & Title	2. Phone (area code & number)	3. Email Address

C. WASTEWATER/SLUDGE APPLIER INFORMATION (if wastewater/sludge applier is other than facility)

1. Name of Wastewater/Sludge Applier	2. Phone (area code & number)

3. Mailing Address

D. WASTEWATER/SLUDGE SOURCES

1. Provide a brief description of the facility's processes that generate the wastewater/sludge to be land applied. Continue on additional sheets if necessary.

E. WASTEWATER/SLUDGE CHARACTERISTICS

1. If the wastewater/sludge is a solid or semi-solid, provide the daily volume, annual volume, the percent solids, the dry tons per day, and dry tons per year to be land applied. If the wastewater/sludge is a liquid, provide only the daily volume and annual volume of liquid to be land applied.

a. Wastewater/ Sludge Source	b. Daily Volume	c. Annual Volume	d. Percent Solids	e. Dry Tons/Day (sludge only)	f. Dry Tons/Year (sludge only)

2. For each wastewater source, provide test results for the following parameters. Parameters must be tested for by a state-certified lab. If you have an analysis that is less than six months old, you may use it.

All parameters should be reported in **mg/l** except for pH, which shall be reported in **standard units (s.u.)**.

a. Wastewater Source	b. Testing Parameters							
	(1) Total Kjeldahl Nitrogen	(2) Ammonia Nitrogen	(3) Nitrate Nitrogen	(4) Nitrite Nitrogen	(5) Phosphorus	(6) Potassium	(7) BOD_5	(8) pH

3. For each sludge source, provide test results for the following parameters. Parameters must be tested for by a state-certified lab. If you have an analysis that is less than six months old, you may use it.

All parameters should be reported in **mg/kg** except for pH, which shall be reported in **standard units (s.u.)**.

a. Sludge Source	b. Testing Parameters						
	(1) Total Kjeldahl Nitrogen	(2) Ammonia Nitrogen	(3) Nitrate Nitrogen	(4) Nitrite Nitrogen	(5) Phosphorus	(6) Potassium	(7) pH

F. LAND APPLICATION SITE CHARACTERISTICS

1. In the table below, number each land application site and list the legal description of the location. Site numbers should consist of the letter L followed by two digits (i.e., L01, L02, etc.). Use the same numbers throughout this form to identify the land application sites. Continue on additional sheets if necessary.

a. Land ID No.	**b. Legal Description** (¼, ¼, ¼, Section, Township, Range)	**c. Area** (acres)

2. If the owner of the land application site(s) is different from the facility, provide the name, address, and telephone number of the site owner and lessee (if any) for each land application site. Provide documentation of the facility's right to use each site, including time restrictions, if any. Continue on additional sheets if necessary.

a. Land ID No.	**b. Name and Address**	**c. Phone** (area code & number)

3. For each land application site, list the description of soil type, soil permeability, and infiltration. Continue on separate sheets if necessary.

a. Land ID No.	**b. Soil Type and Properties**				
	(1) Series Name	**(2) USDA Texture**	**(3) Permeability** (units)	**(4) Available Water Capacity** (inches/inch of soil)	**(5) Shrink/Swell Potential** (low/moderate/high)

4. For each land application site, provide test results for the following parameters. Parameters must be tested for by a state-certified lab. If you have an analysis that is less than six months old, you may use it. Also provide information on crop type, expected yield, and final use of crop for each land application site.

For nitrogen, phosphorus, and potassium, please specify the units of measurement, which will be listed on the lab report. **Phosphorus and potassium should be tested using the Mehlich-3 Extraction method**.

a. Land ID No.	b. Testing Parameters							c. Crop Description		
	(1) Nitrogen Concentration	(2) Units	(3) Phosphorus Concentration	(4) Units	(5) Potassium Concentration	(6) Units	(7) pH	(1) Crop	(2) Expected Yield	(3) Final Use of Crop

5. For each land application site, list the legal location, total depth, and water level of any public or private water wells within ¼ mile of the site. Also list the depth to groundwater at each land application site (if known), and the direction of groundwater flow (if known).

a. Land ID No.	b. Legal Description of Well	c. Total Depth	d. Water Level	e. Depth to Groundwater	f. Direction of Flow

G. OPERATIONS

1. For each land application site, list the application rate, duration, frequency of application, and rest period between applications.

a. Land ID No.	b. Application Rate	c. Duration (hours)	d. Frequency (days)	e. Rest Period (days)

2. Provide a brief description of the wastewater/sludge application equipment and how the equipment is to be used. Include a description of land application methods and related details including the design and specifications of irrigation systems and/or depth and frequency of incorporation or injection.

3. Provide a brief description of methods used to control surface drainage, stormwater runoff, and erosion at each site and the plan for the control, capture, and disposal of all surface water runoff.

4. Provide a description of the method(s) used to transport the wastewater/sludge to the application sites.

H. STORAGE

For each land application site, list all facilities or surface impoundments where wastes to be land applied are stored (sources). Provide the legal description of each storage location. If source is an impoundment, the number used on Form 2SI should be used to identify the impoundment. Continue on additional sheets if necessary.

1. Land ID No.	2. Storage Site (Name or Number)	3. Legal Description of Storage Site (¼, ¼, ¼, Section, Township, Range)

I. MAPS

1. Attach a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility, the location of each existing or proposed land application sites, and surface impoundments. Also identify the nearest resident, nearest business or industry, access roads to site, streams and bodies of water, including all ponds, drainage ditches and wetlands.
2. Attach a separate topographic map with the following items identified: public water supply sources, both surface water and groundwater, on or within ½ mile of site; public water and wastewater collection, treatment, and distribution facilities on or within two (2) miles of site; public and private groundwater wells on or within ¼ mile of site; and 100 year flood plain located on or within ¼ mile of site.
3. Attach a separate topographic map of the area extending to at least one (1) mile beyond property boundaries identifying the location of on-site pipelines and utility easements and the location of on-site producing oil or gas wells or drilling sites.

J. CERTIFICATION (see instructions)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and true belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1. Name & Official Title (type or print)	2. Signature	3. Date Signed