FORM 616-G42T	OKLAHOMA DEQ	APPLICATION FOR AUTHORIZATION UNDER OPDES GENERAL PERMIT NO. OKG42T WASTEWATER FROM MEDICAL MARIJUANA GROWING FACILITIES

A. TYPE OF AUTHORIZATION REQUESTED

New ☐	Renewal ☐	Modification ☐

B. NAME OF FACILITY

C. FACILITY CONTACT

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

D. FACILITY MAILING ADDRESS

1. Street or P.O. Box	2. City or Town	3. State	4. Zip Code

E. FACILITY LOCATION

1. Street, Route No., or Other Specific Identifier	2. County	
3. City or Town	**4. State**	**5. Zip Code**

6. Legal Description (¼, ¼, ¼, Section, Township, Range)

F. OPERATOR INFORMATION

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

4. Status of Operator (check appropriate box; and if "Other", specify)

Federal ☐	State ☐	Private ☐	Public (other than Federal or State) ☐	Other (specify):

5. Street or P.O. Box	6. City or Town	7. State	8. Zip Code

G. IS THE FACILITY LOCATED ON INDIAN LAND?

☐ Yes	☐ No	If Yes, describe:	

H. MAPS

1. Attach a facility site plan showing the location of any buildings, surface impoundments, underground tank systems, storage facilities, containment devices, land application sites, driveways, parking areas, and other permanent structures. A site plan prepared for another state agency may be acceptable provided the wastewater storage, treatment, and disposal information is indicated thereon.
2. Attach a topographic map (or plat or aerial image if a topographic map is unavailable) extending to at least one mile beyond the property boundaries. The map must show the outline of the facility, the location of each of its surface impoundments, underground tank systems, storage facilities, containment devices, and land application sites. The map should also show the locations of the nearest resident, nearest business or industry, access roads to site, as well as streams and bodies of water, including all ponds, drainage ditches, and wetlands.
3. 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 the site; public water and wastewater collection, treatment, and distribution facilities on or within two miles of the site; public and private groundwater wells on or within ¼ mile of the site; and any 100 year flood plains located on or within ¼ mile of the site.
4. Attach a separate topographic map of the area extending to at least one 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.

I. WASTEWATER CHARACTERISTICS

1. Describe the amount of wastewater that will be generated.

a. Wastewater Type	b. Daily Volume (gallons)	c. Annual Volume (gallons)
Nutrient Water		
Reverse Osmosis (RO) Reject Water		

2. Provide at least one test result for each parameter listed on the following page and attach the lab report to this application. Wastewater analyses must be performed by a state-certified laboratory.

   Analyzed wastewater should be representative of the wastewater you will be generating. For example, if you expect to be generating 800 gallons of RO reject per day and 200 gallons of nutrient water per day, then the analyzed sample should consist of 80% RO reject and 20% nutrient water.

I. WASTEWATER AND LAND CHARACTERISTICS (continued)		
a. Parameter	**b. Test Result**	**c. Units**
Total Kjeldahl Nitrogen		
Ammonia Nitrogen		
Nitrate Nitrogen		
Nitrite Nitrogen		
Phosphorus as P_2O_5		
Specific Conductance (Analysis required for land application permitting)		
pH		

J. LAND APPLICATION

1. Do you intend to land apply wastewater?

☐ **Yes** (Complete Items J-2 through J-10) ☐ **No** (Continue to Item K)

2. 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 (e.g. 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)

3. 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.

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

4. For each land application site, provide test results for the following parameters. Parameters must be tested for by a state-certified laboratory or by the Oklahoma State University Extension Service's soil laboratory.

a. Land ID No.	b. Nitrogen Concentration	c. Phosphorus Concentration	d. Sodium Adsorption Ratio	e. Soil Specific Conductance	f. Soil pH

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, and the direction of groundwater flow.

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

6. 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)

J. LAND APPLICATION (continued)

7. Provide a brief description of the wastewater 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 irrigations systems and/or depth and frequency of incorporation or injection.

8. 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.

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

10. Provide a description of the method(s) that will be used to store wastewater when it is not being land applied, or when land application is not possible due to rain, freezing temperatures, etc.

K. SURFACE IMPOUNDMENTS AND UNDERGROUND TANKS

1. Will you be using existing surface impoundments and/or underground tanks to store/treat/dispose of wastewater? (Note that DEQ does not regulate surface tanks)

☐ **Yes** (Complete Items K-3 through K-10) ☐ **No** (Continue to Item K-2)

2. Do you plan to construct one or more new surface impoundments, or install one or more new underground tanks?

☐ **Yes** (continue to Item L) ☐ **No** (Continue to Item M)

3. In the table below, number each surface impoundment and underground tank and list the legal description of the impoundment or tank's location. Flow-through surface impoundment numbers should consist of the letter F followed by two digits (e.g. F01, F02, etc.); total retention surface impoundment numbers should consist of the letter T followed by two digits (e.g. T01, T02, etc.); and underground tank numbers should consist of the letter S followed by two digits (e.g. S01, S02).

Note that OAC 252:616-9-1(3) prohibits the use of underground tanks with lateral lines from receiving industrial wastewater.

a. ID No.	b. Legal Description (¼, ¼, ¼, Section, Township, Range)	c. Is the impoundment/tank located in a flood plain?

4. Attach a line drawing showing the flow of wastes or wastewaters through the facility. Indicate sources of intake water, chemicals, raw materials, and other sources of waste. Label all processes or operations that contribute wastes or wastewater, including production areas and waste treatment units (if applicable). Indicate disposal pathways of the wastes and wastewaters, including evaporation, recycle, solid waste storage, tanks, impoundments, land application, landfill, or other pathways. Provide a water balance (measured or estimated) on the line drawing that shows average flows between sources, processes, and disposal pathways.

K. SURFACE IMPOUNDMENT AND UNDERGROUND TANKS (continued)

5. For each impoundment and/or tank, provide a description of: (1) All operations and other sources of pollution which contribute waste to the impoundment or tank, including but not limited to process wastes, sanitary wastes, and stormwater; and (2) The average, maximum, and minimum flows contributed by each operation or other source of pollution. Continue on additional sheets if necessary.

a. ID No.	b. Operation(s)/Source(s)	c. Daily Flow (specify units)		
		(1) Average	(2) Maximum	(3) Minimum

6. For each impoundment, attach plans sufficient to define the following design parameters: (1) Length and width at top and bottom; (2) Total depth; (3) Designed minimum and maximum freeboard; (4) Interior and exterior side-slopes (ratio of horizontal to vertical distances); and (5) Inlet and outlet structures.

   For each tank, attach plans sufficient to define tank dimensions, inlet structures, and outlet structures.

7. For each impoundment, list the holding capacity in gallons (assuming a minimum freeboard) and the dimensions in feet. The following abbreviations are used in the table to indicate the various impoundment dimensions.

   For tanks, list only holding capacity in gallons.

BW = Bottom Width BL = Bottom Length	TW = Top Width TL = Top Length	D = Depth F = Minimum Freeboard MF = Maximum Freeboard	IS = Interior Side-Slope Ratio (Horizontal:Vertical) ES = Exterior Side-Slope Ratio (Horizontal:Vertical)

a. ID No.	b. Holding Capacity (gallons)	c. Dimensions (feet)								
		(1) BW	(2) (BL)	(3) TW	(4) TL	(5) D	(6) F	(7) MF	(8) IS (ratio)	(9) ES (ratio)

8. In the table below, list the type of impoundment liner material (e.g. native soil, compacted clay, flexible membrane, composite, soil/bentonite, concrete, or alternative) to be installed or currently in use. Definitive information and justification is required for alternative liner systems. List the thickness (in inches, feet, or mils, as appropriate) and hydraulic conductivity (permeability) in centimeters/second or other units as appropriate, of each liner as proposed or as built.

   For tanks, list the construction material (e.g. concrete, steel, etc.).

a. ID No.	b. Liner Type (impoundments) Construction Material (tanks)	c. Thickness (specify units)	d. Hydraulic Conductivity (Permeability) (specify units)

9. For each surface impoundment, list the legal location, total depth, and water level of any public or private water wells within ¼ mile of the impoundment. Also list the depth to groundwater at each impoundment (if known), and the direction of groundwater flow (if known). Continue on additional sheets if necessary.

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

K. SURFACE IMPOUNDMENT AND UNDERGROUND TANKS (continued)

10. Briefly describe the rationale used to select the proposed or currently used liner system or construction material.

L. DESIGNING NEW SURFACE IMPOUNDMENTS OR UNDERGROUND TANKS

1. If you do not intend to construct one or more new surface impoundments, then you are not required to complete Item L of this application and may proceed to Item M.
2. All surface impoundments and underground tanks must meet the design and construction requirements of OAC 252:616-7 (impoundments) and OAC 252:616-9 (tanks).
3. In lieu of hiring a Professional Engineer (P.E.) to design an impoundment, you may use the generic impoundment design located in OAC 252:616 Appendix D. Do you plan on using the generic impoundment design in OAC 252:616 Appendix B?

☐ **Yes** (Continue to Item L-4)	☐ **No** (Attach drawings of the P.E.-designed impoundment(s) and continue to Item M)

4. Will there be at least fifteen feet between the bottom of the new impoundment and groundwater?

☐ **Yes** (Attach documentation showing the groundwater separation distance and continue to Item L-5)	☐ **No** (Impoundment must be P.E.-designed)

5. Is the permeability of compacted in-situ soil at least 5.4×10^{-7} cm/s?

☐ **Yes** (Attach documentation showing the permeability and continue to Item L-6)	☐ **No** (Impoundment must be P.E.-designed)

6. If you answered yes to Items L-3 through L-5, please attach a sketch or drawing of the impoundment, including dimensions. You may use the drawing in OAC 252:616 Appendix D as a template.

   If you answered no to Item L-3, L-4, or L-5, then any new impoundment must be designed by a P.E. licensed to practice in the State of Oklahoma.

   If you have any questions concerning impoundment design requirements, please call (405) 702-8100 and request to speak with someone in the industrial permits section.

M. SOURCES OF WATER SUPPLY AND AMOUNT USED

Identify all sources of facility water by entering the appropriate letter(s) in the boxes below and then providing the appropriate description(s), as indicated in parentheses. List each source on a separate line. If you have more than one source of a given type, indicate this by entering the letter, followed by two digits (e.g., if your water comes from three wells, the sources would be indicated as G01, G02, and G03). For each source, estimate of the average daily use. Continue on additional sheets if needed.

G = Groundwater Well	(legal description of well location)
S = Surface Water	(name of stream, river, lake, etc., and legal description of intake)
P = Public Water Supply	(name of entity from which water is obtained)
W = Wastewater Treatment Plant	(name of entity from which water is obtained)
O = Other	(source of supply, and legal description if applicable)

1. Source	2. Description	3. Avg. Daily Use (gpd)

N. INVENTORY OF CHEMICALS AND RAW MATERIALS

List all chemical compounds and raw materials in containers of 55 gallons or more, used in facility operations and stored outside a building (e.g., solvents, cleaning compounds, water treatment chemicals). Describe the storage location and the purpose for which each chemical is used. Continue on additional sheets if needed.

O. SANITARY WASTEWATER DISPOSAL

In the table below, list the estimated volume of sanitary wastewater and the method of sanitary wastewater disposal.

1. Volume of Sanitary Wastewater	2. Method of Sanitary Wastewater Disposal

P. OTHER DISPOSAL METHODS

Briefly describe any other methods of waste disposal used by your facility which have not been previously covered. Examples include disposal wells, septic tanks (with or without leach fields), aboveground or underground storage tanks, and waste hauling. Include information on the nature and volume of wastes disposed of by each of these other methods. Continue on additional sheets if necessary.

Q. DEQ LANDOWNER NOTIFICATION AFFIDAVIT

1. Does applicant own all land subject to the application: ☐ **Yes** ☐ **No**

If yes, proceed to Section R. If no, proceed to Part 2 of this section.

2. Application(s) for which the applicant does not own all the land subject to the application must notify the owner and/or pipeline right-of-ways that a permit application has been submitted to the DEQ. The basis for this requirement is OAC 252:004-7-13(b). DEQ Form 100-810 may be used for this purpose and is available on the DEQ web page.

R. OKLAHOMA MEDICAL MARIJUANA AUTHORITY LICENSE

1. Please list your Oklahoma Medical Marijuana Authority License number:

Attach a copy of your OMMA license to this permit application.

S. CERTIFICATION

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