



## APPLICATION FOR PIT LINER VARIANCE

Instructions: Please complete in detail. Attach additional pages if needed. Omission of information will constitute an incomplete application and denial of drilling permit.

Operator's Name \_\_\_\_\_

Address \_\_\_\_\_

Well Name and Number \_\_\_\_\_

Legal Location \_\_\_\_\_

Name of Surface Owner \_\_\_\_\_

Address \_\_\_\_\_

Name of Mineral Owner \_\_\_\_\_

Address \_\_\_\_\_

1. Describe the proposed method of lining:
  - A. Specify liner type if proposing other than a 12 mil as specified by Rule.
  - B. Attach manufacturers specification sheet for a proposed synthetic liner. Specifications should include liner resistance to ultraviolet light, temperature the liner will become brittle and the bursting or tensile strength of the material.
2. Describe the proposed additives. (The use of additives that are not listed will result in a violation of the drilling permit):
  - A. Specify all possible additives that may be introduced.
  - B. What is the compatibility of the liner with the proposed additives? Chemical compatibility specifications should be obtainable from the manufacturer.
3. What is the expected life of pit?
4. Describe the geology of the well site. The description must include formation and soil types. This information may be obtained from the U.S. Soil Conservation Service soil surveys, from published geological maps or from other reports and publications.

5. Describe the hydrology of the well site:
  - A. A description of the formations encountered from drilling the rat hole using South Dakota equivalent nomenclature. This information should include rock types and geological materials. As an alternative to drilling the rat hole, the site excavation process may be used. If this is used, it must be accompanied by a notarized affidavit from the land owner that no water exists in the area to at least a depth of ten feet below the bottom of the pit. If ground water is encountered during the excavation of the pit, the Department of Environment and Natural Resources should be contacted immediately for further instructions. Information from the rat hole should still be submitted upon completion.
  - B. A description of any formation containing ground water of 10,000 mg/L total dissolved solids (TDS) or less encountered in the rat hole. This information should include the depth to the water table, the rock type of eologic material in which the saturation occurred and the quality of the water (TDS, chlorides, sulfates, sodium, nitrates, hydrocarbons).
  - C. The location of shallow wells (100 feet deep or less) within a one quarter mile radius of the site, the drilling logs, if available, and the water quality if the well is accessible. The location of shallow wells may be included on the map of the well site (see question 6 C).
  - D. The location of any streams, pond, stock dams or other surface waters within a one quarter mile radius of the site, and the water quality, if accessible. The location of surface waters may be included on the map of the well site (see question 6 C).
6. Plans and Specifications of the Pit as specified in the Rule. The compaction of the soil in the pit should be at least 95% of the proctor density.
  - A. What are the dimensions of the pit?
  - B. What are the slopes of the pit walls? Include a cross-section of pit.
  - C. What is the relationship of the pit to natural drainages? Include a map of the well site showing the location of the pit and the natural drainages within a one quarter mile radius.
  - D. What is the permeability of the soils encountered in the pit area?

The applicant certifies that a completed, true and correct copy of this application Form has been sent to the surface owner with instructions to direct all comments to the Department of Environment and Natural Resources, Oil and Gas Section, 2050 West Main, Suite #1, Rapid City, SD 57702, telephone 605-394-2229.

\_\_\_\_\_  
Operator's Signature

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

For the DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Plans and Specifications Reviewed

Date: Approved \_\_\_\_\_ Disapproved \_\_\_\_\_

Staff Engineer \_\_\_\_\_

Variance Review

Date: Approved \_\_\_\_\_ Disapproved \_\_\_\_\_

Oil and Gas Supervisor \_\_\_\_\_