

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 National Drive
Little Rock, Arkansas 72209

PERMIT
FOR THE CONSTRUCTION AND/OR OPERATION
OF A SOLID WASTE DISPOSAL
FACILITY

CLASS I

Permit No. U162-SK-2

EFFECTIVE DATE September 20, 1991

Sunray Services, Inc.
105 Old Missouri Road
Springdale, Arkansas 72765

Engineering: SCS Engineers
10401 Holmes Road
Suite 400
Kansas City, Missouri 64131

This permit is your authority to construct and/or operate the Solid Waste Disposal Facility set forth in your application dated February 20, 1991. This permit is issued pursuant to the provisions of the Arkansas Solid Waste Management Act (Act 237 of 1971; Sec. 82-2701 et seq., Ark. Stats.), hereinafter called the "Act", the Arkansas Solid Waste Management Code, hereinafter called the "Code", and all other applicable rules and regulations of the Department of Pollution Control and Ecology, hereinafter called "Department", and the following terms and conditions:

1. The disposal facility shall be constructed, maintained, and operated in accordance with the final plans and specifications as approved by the Department and in compliance with all applicable provisions of the Act, the Code, and all other applicable rules and regulations.
2. This permit shall automatically terminate unless construction of the disposal facility has been commenced within N/A day(s) of the date hereof and completed with all reasonable diligence. The Department shall be notified in writing when the disposal facility has been completed in order that it may be inspected.
3. The disposal facility shall be operated by qualified personnel and maintained in good operating condition at all times.
4. This permit may be revoked or modified whenever, in the opinion of the Department, the facilities are no longer in compliance with the Act, the Code, and applicable rules and regulations. This permit shall not relieve the permittee, its agents or employees, from compliance with all provisions of the Act and the Code.
5. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the disposal facility.
6. This permit is issued in reliance upon the statements and representations made in the application and the plans and specifications and the Department has no responsibility for the adequacy or proper functioning of the disposal facility.

PLEASE SEE ATTACHED SHEET FOR ADDITIONAL CONDITIONS.

Approved:

DEPARTMENT OF POLLUTION CONTROL & ECOLOGY

By [Signature]
for Director

20 Sept 91

Date

7. Backhoe test pits or borings shall be installed at 200 feet centers in the proposed 16 acre borrow area. The material encountered must be logged by a registered Engineer or Geologist. Final grades must be adjusted downward based upon the quality and quantity of material available. Upon completion of the geotechnical work a summary report must be submitted to the Department. The report shall contain a revised soil budget for the proposed modification.
8. A 4 foot thick cap shall be incorporated into the final grade design. The cap design shall consist of the following from top to bottom:
 - 6 inches of vegetated topsoil.
 - 1 foot chert-soil drainage layer.
 - 2 feet of compacted clay. The clay cap material must have greater than 35% passing the No. 200 sieve or if all chert over 1 inch in diameter is excluded, 30% passing the No. 200 sieve. Clay cap material is to be segregated and stockpiled in a designated location. Prior to placement on completed portions of the fill. A minimum of 10 representative samples shall be collected from the stockpile. Sieve analyses shall be conducted on each sample to insure conformance with the compliance standard. Material containing an excessive chert content must not be utilized in the compacted clay layer. The clay must be compacted to 95% of standard proctor density and wet of optimum moisture content in 8 inch lifts. Density test shall be performed on each lift every 10,000 square feet of surface area. Permeability of the cap shall not be greater than .000001 cm per second.
 - 6 inches of daily cover.
9. A fill sequence must be developed for the closure plan and approved by the Department prior to initiating the operation. The fill sequence must provide for the orderly progression of the closure plan in order to provide for the following minimization of disturbed areas on site, the phased construction of the cap in order to prevent erosion and to prevent excessive closure cost at the termination of fill operations, and finally, to allow fill operations to cease if suitable quality soils are depleted.
10. Sunray Services shall submit a plan for a hydrogeologic study of the landfill complex. The plan must be submitted within 30 days of the approval date of this modification. The plan can be altered by the Solid Waste Division staff prior to approval.

The plan must include the installation of a series of piezometers into the waste mass in order to assess the effectiveness of the existing leachate collection system and the potential for leakage through the bottom liner of the fills. At least three piezometers must be installed in each fill area. The structures shall be constructed in the following manner:

- each hole must extend to the bottom of the waste mass.
- A minimum of 4 inch I.D. slotted screen must be used with a clean, coarse graded, sand filter pack. The slotted screen and filter pack must extend to within 10 feet of the final grade. A bentonite plug shall extend from 10 feet to the surface.

11. The following materials are suitable for disposal within the Class IV fill area:

- masonry debris
- roofing debris
- stumps and rocks
- appliances and auto bodies
- pallets
- tires shredded or chipped

Any other types of waste must have written authorization from the Department to be placed into the Class IV area.

12. Additional erosion control measures can be required by the Department staff. If the staff determines that excessive erosion is occurring the company will be notified. Additional erosion control measures consisting of mulch, sediment traps, erosion control matting or fabric, terraces and run off let down structures may be required. Time frames for the completion of additional erosion control measures will be specified by the staff. All additional measures and deadlines can be appealed to the Director.

13. The Class IV bottom liner design shall consist of one foot of clean washed limestone and two feet of recompacted clay meeting the following specifications:

The bottom 8 inches can be compacted in place. The other 16 inches shall be taken out and recompacted in eight inch lifts.

Each of the 8 inch layers shall be compacted to 95% standard proctor density.

Each of the 8 inch layers shall be tested and certified as to permeability of no more than 0.000001 cm per second. Density test shall be conducted on each 10,000 square feet of liner on each lift.

The soil-aggregate mixture must have more than 30% passing No. 200 or 30% if all chert over one inch is excluded from the bottom liner material.

The leachate collection area shall be constructed to drain by gravity.

The leachate collection trench shall be double lined with three feet of clay and a 40 mil HDPE liner.

14. A revised set of blueprints shall be submitted that shows all changes to the SCS June 1991 first submittal. The revised plans shall include the revised soil budget addressed in condition #1.
15. The modification application dated 2/18/91 and received on 8/1/91 must be signed by a corporate officer.
16. Post Closure maintenance shall be a minimum of ten years. The Post Closure care and maintenance period may be extended to provide adequate leachate treatment if deemed necessary by the Department.
17. Extraction wells shall be installed in 1992 on Sunray 3 and Sunray 4. Preliminary and final plans shall be presented for approval by registered PG & PE.
18. The Director on November 2, 1991 asked the staff to work up a draft ban on landfilling in the Boone formation. Therefore, if the PC&E Commission adopts this ban as policy this landfill may be closed out before reaching final grades if there becomes other adequate landfill capacity within the region.
19. Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Engineer with reports submitted every four months that address the following components of the design and operation: surface water diversion, access roads on site, proper compaction of waste, amount of waste received, final cap construction, revegetation of completed areas, quantity of leachate removed from trenches, and where the leachate was properly disposed of. In addition compaction density test shall be conducted on every 10,000 square feet of clay liner.
20. Each of the groundwater monitoring wells shall be sampled quarterly unless more frequent monitoring is deemed necessary by the Department.

Results are to be submitted directly to the Department from the contract laboratory and shall include the following parameters: Ammonia (as N), Bicarbonate, Calcium, Chloride, Iron, Magnesium, Manganese, Nitrate, Potassium, Sodium, Sulfate, Chemical Oxygen Demand, Total Dissolved Solids, pH, Arsenic, Barium, Cadmium, Chromium, Cyanide, Lead, Mercury, Selenium, Silver and, the Volatile Organic Compounds listed in Appendix I of 40 CFR Part 258 - the Solid Waste Disposal Facility Criteria; Proposed Rule. All sampling parameters are subject to revision by Department at any time.

21. A statistical method for evaluating increases (or decrease in the case of pH) in inorganic parameters in groundwater must be selected and approved by the Department prior to the receipt of waste at the facility. In addition a contingency plan outline must be developed and approved by the Department listing the logical sequence of measures to be taken by the permittee in the event of a statistically significant increase in inorganic parameters or a positive detection of organic parameters.
22. This facility is for the disposal of all waste eligible for a Class I sanitary landfill including all special materials (as listed in Appendix "A" of the Arkansas Solid Waste Management Code-March 23, 1984) except small quantities of exempt hazardous waste. All other wastes requiring specified written authorization as identified in the Arkansas Solid Waste Management Code shall obtain this authorization from the Arkansas Department of Pollution Control and Ecology prior to disposal.
23. Any change in ownership or control of the operation of this landfill will be considered a major modification of the permit. Failure to notify the Department of a change in ownership or a change of operators will be cause for revocation of this permit.
24. No wet waste or liquid waste shall be received at the facility. Wet waste is defined as material which will not support equipment and typically contains less than 30% solids.
25. Leachate will be trucked to a sewage treatment plant or disposed of in an alternate manner approved in advance by the Department. The quality and quantity of leachate produced shall be analyzed and measured as long as significant amounts are produced as determined by the Department. Leachate storage capability is subject to Department approval, based on actual leachate flow rate. Department approval must be received prior to any changes in leachate disposal methods. Leachate analysis shall be conducted prior to disposal, or as directed by the Department. Volume measurements shall be made weekly. Results shall be submitted directly from the contract laboratory to the Department after each monitoring period, and shall include the following: Volume produced, Chlorides, Total Dissolved Solids, Chemical Oxygen Demand, Biological Oxygen Demand, pH, Zinc, Copper, Nickel, Lead, Chromium, and Cadmium.

26. Quality control records for the construction of the clay liner and the artificial liner shall be maintained on site for review by regulatory officials.
27. Seeding and soil stabilization shall be conducted in the spring and fall on all exposed surfaces. Furthermore, revegetation shall be accomplished immediately after final elevations are completed. Water for irrigation from the sediment basins may be used.
28. The initial amount of financial assurance required is \$76,500.00. The instruments used must be in the exact form set forth in Appendix "B" of the Code and must be filed with the Department before the permit can become effective. A portion or all of the financial assurance may be held by the Department beyond the normal closure dates as set forth in the Code, due to post closure consideration for maintenance of the leachate collection system.

This financial assurance amount must be maintained at the initial amount at all times in order to cover the provisions of Act 531 of 1989, unless other arrangements are met to cover these provisions. Any other arrangements must be approved in writing by the Department. No waste disposal is to take place until financial arrangements are approved by the Department.
29. The as-built grades/elevations as shown on the approved blueprints shall not be adjusted due to settling/consolidation of the waste mass. Therefore, the actual final grades/elevations after closure/post closure will be lower than as-built grades/elevations as shown on the approved blueprints.
30. All cover vegetation shall be mowed one time each year during the growth season so that proper inspection of the cover can be made.
31. Any ash or sewage treatment plant sludges other than from a strictly domestic source shall be disposed of in a monofill with double liners, impervious cap, leachate collection system and separate monitoring well system.
32. The Department, its employees, agents or any authorized person shall have the right to enter the property at any time for any reason as set out in the Arkansas Solid Waste Code for the purpose including but not limited to taking of samples, inspection, and any other enforcement or engineering action, without interference or delay from the permittee.
33. The operation and closure of this landfill is proposed to continue past the time that which new federal regulations will be in place, therefore the operation, construction, and closure/post closure shall also be subject to the Resource Conservation and Recovery Act (RCRA) requirement.