

ARKANSAS DEPARTMENT OF
POLLUTION CONTROL AND ECOLOGY

MINUTE ORDER NUMBER 82-62

LOCATION - SUBJECT: PERMITS BRANCH

SOLID WASTE SECTION

PAGE 1 OF 2 PAGES

The Commission hereby approves the permit applications submitted by the following firms, subject to the provisions of the Solid Waste Management Act, the Solid Waste Management Code, and the permit terms and conditions.

Dow Chemical Company

Dow Chemical Company Sanitary Landfill - Russellville

Additional Summary Conditions: (a) This permit shall expire when the approximate 4.04 acre disposal area described in the final engineering plans has been filled to design capacity. (b) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill. (c) Material to be placed in this facility shall be limited to the non-putrescible wastes listed in the approved engineering narrative as submitted August, 1982. (d) Wastes will receive final cover monthly during normal plant production periods. No daily cover is requested due to the non-putrescible nature of the wastes.

Arkansas Power & Light Company

Independence Steam Electric Station Ash Disposal Landfill

Additional Summary Conditions: (a) This permit shall expire when the approximate 335 acre disposal area described in the final engineering plans has been filled to design capacity. (b) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill. (c) Final Cover(30") shall be applied as final waste elevations are reached as indicated on the submittal plans. No daily cover is required due to the cement-like nature of the fly-ash, the thick clay bottom on the fill area, and the containment of all affected runoff. (d) The following metals shall be included among the parameters analysed in the AP&L local groundwater monitoring program: Cd, Se, Ag, Cr, As. Analyses shall be conducted quarterly after the commencement of disposal operations and the results reported to the Department. The requirements of this condition may be eliminated with the approval of the Department, if no significant amounts of these metals are detected for a period of one year.

Chem-Ash, Inc.

Arkansas Power & Light White Bluff Ash Disposal Landfill

Additional Summary Conditions: (a) This permit shall expire when the approximate 110 acre disposal area described in the final engineering plans has been filled to design capacity. (2) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill. (c) 30" final cover shall be applied as each area indicated on the submitted plans is completed. No daily cover is required due to concrete-like qualities of the fly-ash.

COMMISSIONERS

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CT

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DF

JP
JP

John D. Ward
Chairman

SUBMITTED BY John D. Ward DATE PASSED 10-1-82

ARKANSAS DEPARTMENT OF
POLLUTION CONTROL AND ECOLOGY

LOCATION - SUBJECT: PERMITS BRANCH

SOLID WASTE SECTION

MINUTE ORDER NUMBER 82-62

PAGE 2 OF 2 PAGES

Sunray Sanitation

Sunray Sanitary Landfill #3-Tontitown

Additional Summary Conditions: (a) The final fill elevations of permit #S-0123 will receive approximately twenty feet over the originally permitted final contours. This will involve adding approximately 220,162 cubic yards of waste and extending the site life by approximately 52 weeks. (b) No additional land area will be utilized in the permit modification. Additional waste will be placed only on areas that have received waste previously. (c) The additional waste received will be restricted to residential and commercial waste outlined in the original permits. No hazardous waste will be allowed in the landfill.

Sunray Sanitation

Sunray Sanitation Landfill #4-Tontitown

Additional Summary Conditions: (a) Permit #S-0162 will receive approximately twenty feet of final fill over the originally permitted final contours. This additional fill will required approximately 24,251 cubic yards of waste and an extension of six weeks in the site life. (b) No additional land will be utilized in the permit modification. Additional waste will be placed only on areas that have received waste previously. (c) The additional waste received will be restricted to residential and commercial waste as outlined in the original permits. No hazardous waste will be allowed in the landfill.

COMMISSIONERS

512
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John P. Sauters
Chairman

SUBMITTED BY John D. Ward

DATE PASSED 10-1-82

1. Name of Applicant Dow Chemical, U.S.A.
Address P. O. Box 1048, Russellville, Arkansas 72801
 2. Name of Facility Dow Chemical Sanitary Landfill Site 81-1
 3. Engineer/Firm Ronald A. Fulcher, P.E./Mehlburger, Tanner, Renshaw
Address 201 S. Izard, P. O. Box 3837, Little Rock, Arkansas 72201
 4. Pre-application Date 6/29/81 Application Date 7/21/82
 5. Site Location - General On plant property, 2 miles south of Russellville.
Specific Part of NE $\frac{1}{4}$, SW $\frac{1}{4}$, part of SE $\frac{1}{4}$ of SW $\frac{1}{4}$, and part of SW $\frac{1}{4}$, SW $\frac{1}{4}$
Section 20, T 7N, R 20W, Pope County.
 6. Operation Area fill with remote borrow area.
 7. Residences Within $\frac{1}{2}$ Mile Nearest residence 1,600 feet. Numerous residences
within $\frac{1}{2}$ mile most across Arkansas River.
 8. Water Supplies Within Vicinity Bordered by the Arkansas River on the South-
west. Dow water supply well 1,300 feet.
 9. Soils/Groundwater Water table at River level. Cover material silty clay
(unified CH) brought from a location approximately 1 mile East.
 10. Drainage Sequence 2%-5% slope to the Arkansas River(Southwest).
 11. Hearing Date None Required Dept. Represented N/A Remarks See
Attached Memorandums.
 12. Recommended Additional Permit Provisions See Attached Sheet.
 13. Summary Comments This facility is for non-putrescible "hard" solid waste
from Dow Chemical. ALL wastes are non-hazardous. Corp of Engineers approved
operation with no permits as long as operation stays above elevation 308.
- Approval Recommended yes Engineer Mark Witherspoon Date 8/23/82

Dow Chemical Company(Sanitary Landfill)

Additional Summary Conditions

12. (a) This permit shall expire when the approximate 4.04 acre disposal area described in the final engineering plans has been filled to design capacity.
 - (b) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill.
 - (c) Material to be placed in this facility shall be limited to the non-putrescible wastes listed in the approved engineering narrative as submitted August, 1982.
 - (d) Wastes will receive final cover monthly during normal plant production periods. No daily cover is requested due to the non-putrescible nature of the wastes.
-

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
 8001 National Drive
 Little Rock, Arkansas 72209
 Solid Waste Control Division 371-2130

APPLICATION
 SOLID WASTE DISPOSAL PERMIT
 (Sanitary Landfill)

The undersigned is a registered professional engineer with the state of Arkansas. A permit will be issued following submission and approval of engineering plans and specifications in accordance with the Arkansas Solid Waste Disposal Code.

1. Applicant's name Dow Chemical U.S.A. Phone No. 501/968-3404
 Address P. O. Box 1048, Russellville, AR 72801
2. Engineer's name Mehlburger Tanner Renshaw & Assoc. Phone No. 501/375-5331
 Address 201 S. IZARD, P.O. Box 3837, Little Rock, AR 72201
3. Legal description and acreage NE $\frac{1}{4}$ of SW $\frac{1}{4}$; part of SE $\frac{1}{4}$ of SW $\frac{1}{4}$; and
part of SW $\frac{1}{4}$ of SW $\frac{1}{4}$ of Section 20, T-7-N, R-20-W acres 96.06
Pope County Arkansas
4. Total area of site to be used as a sanitary landfill 4.04 acres.
5. Land is to be leased , rented , owned X. (If land is to be rented or leased, a copy of rental or lease agreement will be provided in narrative portion of plans.)
6. Present land use surrounding site Industrial Use
7. Distance from nearest public road 2,800 ft. and nature of access road present or planned asphalt pavement access road with gravel drive onto site.
8. Distance to nearest residence 1,600 feet
9. Distance to nearest water well 1,300 feet
10. Distance to nearest lake or stream 80 ft. Name Arkansas River
11. Soil profile description, including depth of soil, wetness, permeability, and soil texture. Include a statement about any evident limitations or hazards such as flooding, character of bedrock, if known, permeable substrate or other factor. This information should be obtained from the Soil Conservation Service or other reliable source (attach copy of report).
12. Depth of minimum water table >6.5 feet. Determined by Soil Conservation Service, Danville, Arkansas (responsible authority).

13. Type of operation: Trench fill _____ Area fill X or Combination _____.

14. Types, quantities, and sources of materials to be disposed of:

<u>Type</u>	<u>Quantity</u>	<u>Source</u>
Residential/ Commercial	_____	_____
Industrial	500-1200 C.Y. per year	see attached "Materials disposed of
Other	_____	in Landfill"

NOTE: No hazardous wastes, sewage solids or liquids, septic tank pumpings, or other liquids are allowed to be disposed of at a sanitary landfill without written approval from the Department. Any landfill intended for these wastes may required a special permit.

15. Procedures for prevention of unauthorized use of the site the gate to the site driveway can be locked.

16. The proposed use of the site upon termination of the disposal operation Not determined at this time.

17. Type collection service provided or planned as needed.

18. What city/county ordinance control solid waste collection/disposal in the area served by the proposed landfill? N/A

REMARKS: _____

NAME OF ENGINEER Ronald A. Fulcher, P.E.

TITLE

SIGNATURE Ronald A. Fulcher

DATE

SEAL

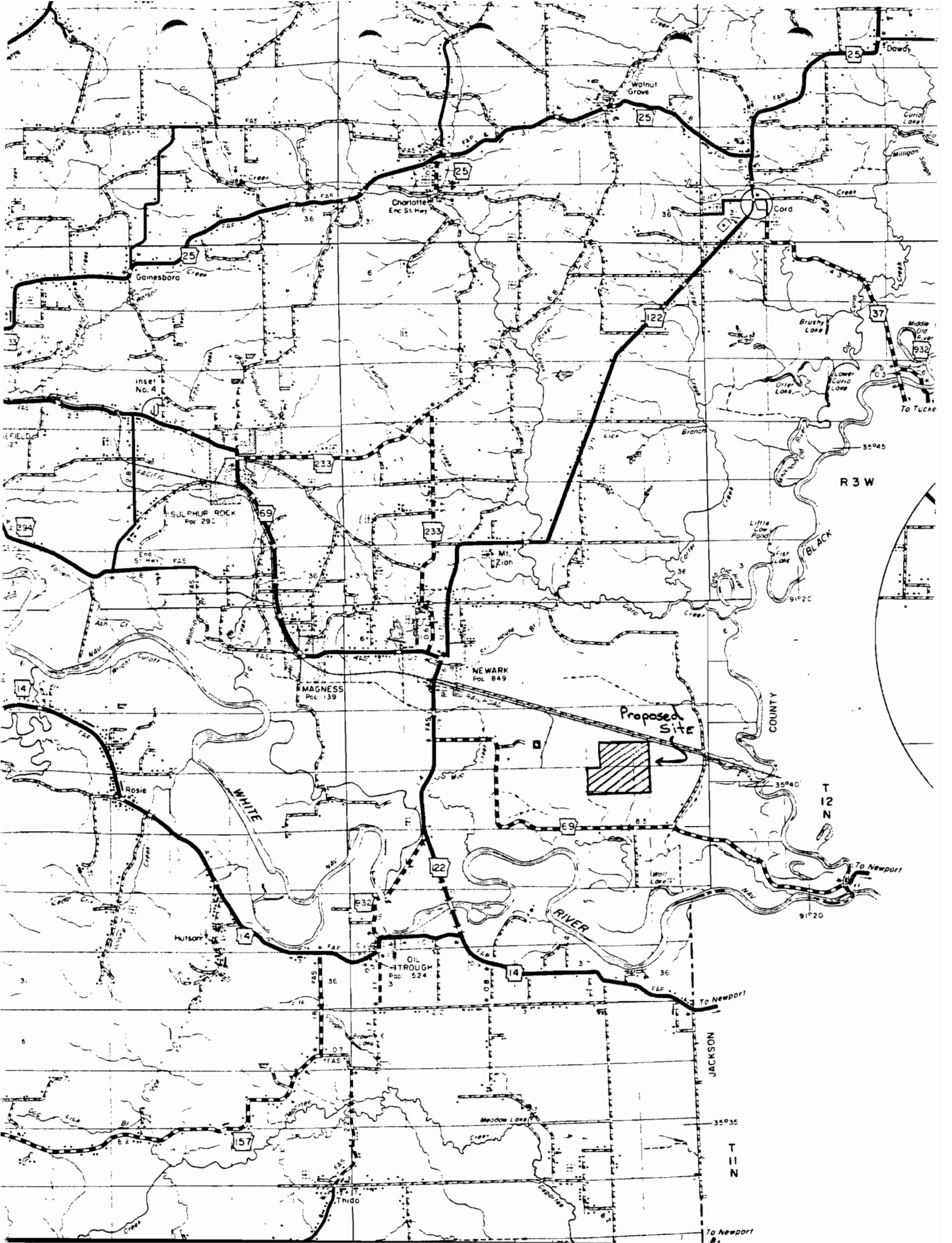


1. Name of Applicant Arkansas Power & Light Company
 Address P.O. Box 551 Little Rock, Arkansas 72203
 2. Name of Facility Independence Steam Electric Station Ash Disposal Area
 3. Engineer/Firm William E. Rodgers, P.E./AP&L
 Address P. O. Box 551 Little Rock, Arkansas 72203
 4. Pre-application Date 12/18/81 Application Date 6/1/82
 5. Site Location - General On AP&L coal-fired electric generating plant property near Newark, (excluding the W 1/2 of the SW 1/4, T 12N, R 4W), Independence County)
 Specific 335 acres in South 1/2 of Section 11
 6. Operation Area fill
 7. Residences Within 1/2 Mile Site is located on plant property. No residences within 1/2 mile.
 8. Water Supplies Within Vicinity Steam Electric Station production Wells.
 9. Soils/Groundwater Very heavy(CH-CL) clays at least 20 feet thick under site. Water table about 24 feet(estimated by Dames & Moore)
 10. Drainage Sequence All drainage diverted into SES Plant water treatment system.
 11. Hearing Date None Required Dept. Represented N/A Remarks See Attached Memorandums.
 12. Recommended Additional Permit Provisions See Attached Sheet.
 13. Summary Comments This facility is for the disposal of bottom Ash(13 tons/hour), fly ash(52 tons/hr.), and some sewage sludge all generated at the SES plant. The fly ash tends to be self-hardening when exposed to water.
- Approval Recommended yes Engineer Mark Witherspoon Date 8/11/82

Arkansas Power & Light Company

Additional Summary Conditions

12. (a) This permit shall expire when the approximate 335 acre disposal area described in the final engineering plans has been filled to design capacity.
 - (b) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill.
 - (c) Final Cover(30") shall be applied as final waste elevations are reached as indicated on the submittal plans. No daily cover is required due to the cement-like nature of the fly-ash, the thick clay bottom on the fill area, and the containment of all affected runoff.
 - (d) The following metals shall be included among the parameters analysed in the AP&L local groundwater monitoring program: Cd, Se, Ag, Cr, As. Analyses shall be conducted quarterly after the commencement of disposal operations and the results reported to the Department. The requirements of this condition may be eliminated with the approval of the Department, if no significant amounts of these metals are detected for a period of one year.
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REC
6/9/8 211/15/77
32-004

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY
8001 National Drive
Little Rock, Arkansas 72209
Solid Waste Control Division 371-2130

APPLICATION
SOLID WASTE DISPOSAL PERMIT
(Sanitary Landfill)

The undersigned is a registered professional engineer with the state of Arkansas. A permit will be issued following submission and approval of engineering plans and specifications in accordance with the Arkansas Solid Waste Disposal Code.

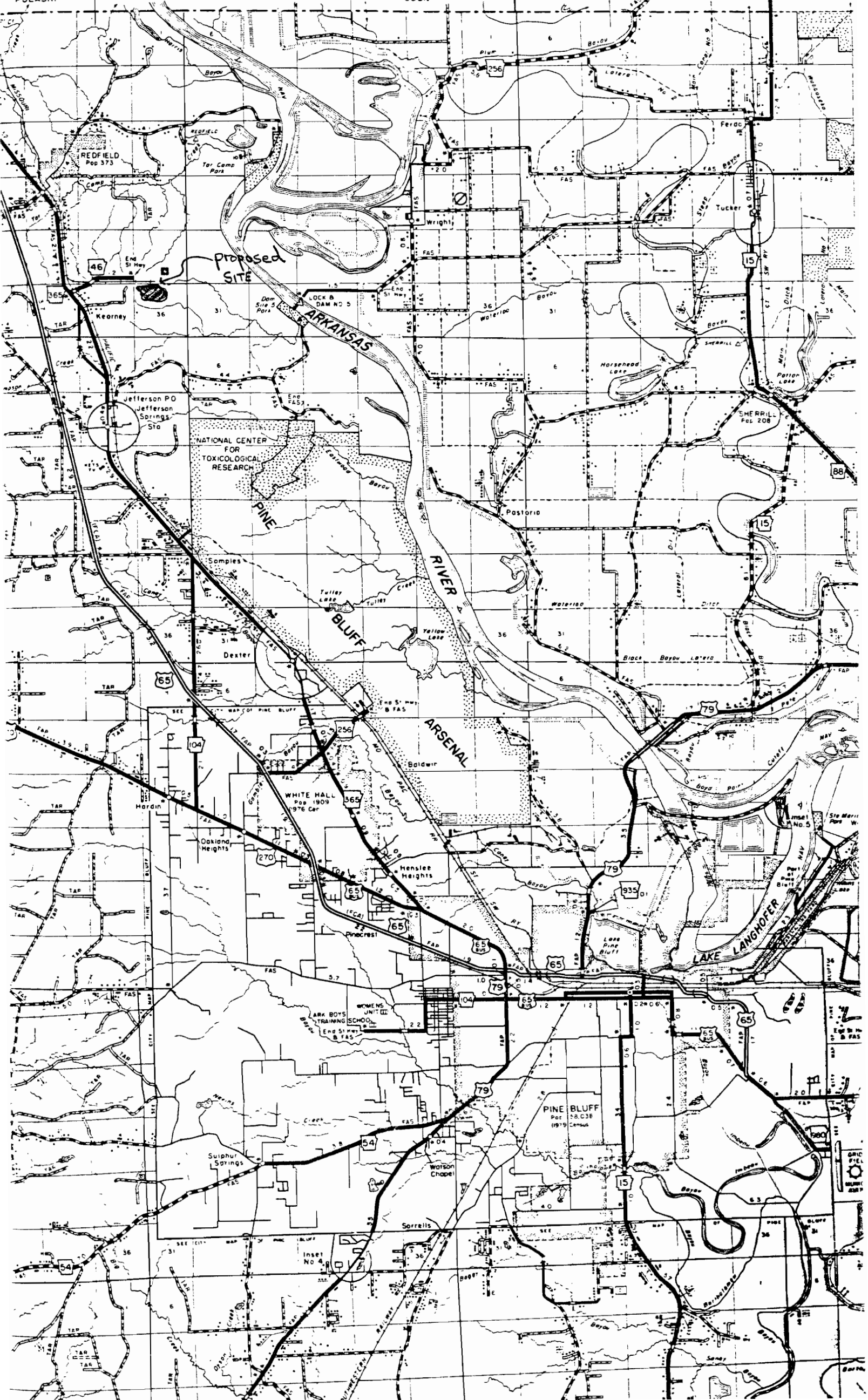
1. Applicant's name Arkansas Power & Light Company Phone No. 371-4000
Address P.O. Box 551, Little Rock, Arkansas 72203
2. Engineer's name William E. Rogers Phone No. 371-4164
Address P.O. Box 551, Little Rock, Arkansas 72203
3. Legal description and acreage See attachment.
acres 335
4. Total area of site to be used as a sanitary landfill 335 acres.
5. Land is to be leased , rented , owned X. (If land is to be rented or leased, a copy of rental or lease agreement will be provided in narrative portion of plans.)
6. Present land use surrounding site Agricultural
7. Distance from nearest public road 0.44 mile and nature of access road present or planned In-plant access road.
8. Distance to nearest residence 0.525 mile
9. Distance to nearest water well 0.525 mile
10. Distance to nearest lake or stream 1 mile Name White River
11. Soil profile description, including depth of soil, wetness, permeability, and soil texture. Include a statement about any evident limitations or hazards such as flooding, character of bedrock, if known, permeable substrate or other factor. This information should be obtained from the Soil Conservation Service or other reliable source (attach copy of report).
12. Depth of minimum water table 24 feet. Determined by Dames & Moore
Consulting Engineers (responsible authority).

1. Name of Applicant Chem-Ash, Inc. (for disposal of Ash from AP&L Coal
fire Power Plant at White Bluff)
Address P. O. Box 193 Redfield, Arkansas 72132
 2. Name of Facility White Bluff Ash Disposal Landfill
 3. Engineer/Firm Ronnie Hall/Garver & Garver, Inc.
Address P. O. Box C-50 Little Rock, Arkansas 72203
 4. Pre-application Date 5/4/81 Application Date 7/14/82
 5. Site Location - General On AP&L White Bluff Power Plant Property east of
State Highway 365 and about 2.8 miles southeast of Redfield.
Specific A portion of the North ½, Section 36, T 3S, R 11W, Jefferson
County, AR
 6. Operation Area fill in existing gulleys.
 7. Residences Within ½ Mile Nearest residence is one mile.
 8. Water Supplies Within Vicinity Power plant water supply
 9. Soils/Groundwater Uniform soils consisting of silts and clays. Regional
water table in the Sparta Sands over 100 feet below the site.
 10. Drainage Sequence Surface drainage diverted into existing storm water
run-off pond and into waste water treatment facility.
 11. Hearing Date None Required Dept. Represented N/A Remarks See Attached Memorandums.
 12. Recommended Additional Permit Provisions See Attached Sheet.
 13. Summary Comments This landfill will dispose of 320,000 cubic yards of
bottom and fly ash generated at the White Bluff Power Plant.
- Approval Recommended yes Engineer Mark Witherspoon Date 8/12/82

Chem-Ash, Inc.

Additional Summary Conditions

12. (a) This permit shall expire when the approximate 110 acre disposal area described in the final engineering plans has been filled to design capacity.
 - (b) Proper preparation of the site shall be supervised and reported in writing to the Department by a Registered Professional Engineer prior to placement of any waste in the landfill.
 - (c) 30" final cover shall be applied as each area indicated on the submitted plans is completed. No daily cover is required due to containment and treatment of all affected runoff and due to concrete-like qualities of the fly-ash.
-



Proposed Site

LOCK & DAM NO 5

NATIONAL CENTER FOR TOXICOLOGICAL RESEARCH

PINE BLUFF

ARKANSAS RIVER

ARSENAL

WHITE HALL Pop 1909 1976 Cer

PINE BLUFF Pop 28,038 (1970 Census)

LAKE LANGHOFFER

LAKE LATTA

REDFIELD Pop 373

SHERILL Pop 208

Jefferson PO Jefferson Springs Sta

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ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO: Commissioners On Pollution Control and Ecology
Jarrell Southall, Director

FROM: Mark Witherspoon, Permits Engineer *MW*

DATE: September 8, 1982

SUBJECT: PROPOSED PERMIT REVISIONS ON SUNRAY SANITATION
PERMITS # S-0123 AND # S-0162 LOCATED NEAR TONTITOWN

The attached material is submitted for review in determining the appropriate action to be taken on the subject proposal.

The details of the proposed are summarized in the Notice of Public Hearing memorandum dated August 12, 1982.

The attached material includes:

- 1) A copy of permit # S-0123 and permit # S-0162.
- 2) Notice of Public Hearing dated August 12, 1982.
- 3) Memorandum on Public Hearing dated September 1, 1982.
- 4) Agenda for August 26, 1982 public hearing.
- 5) Copies of February 8, 1982 and March 12, 1982 letters from Sunray Sanitation detailing the proposal.

MW:ch

Permit No. 162SR-1
Sunray Sanitation
Springdale

7. Permit #S-0162 will receive approximately twenty feet of final fill over the originally permitted final contours. This additional fill will require approximately 24,251 cubic yards of waste and an extension of six weeks in the site life.
8. No additional land will be utilized in the permit modification. Additional waste will be placed only on areas that have received waste previously.
9. The additional waste received will be restricted to residential and commercial waste as outlined in the original permits. No hazardous waste will be allowed in the landfill.

Permit No. 123SR-1
Sunray Sanitary Landfill #3
Springdale

7. The final fill elevations of permit #S-0123 will receive approximately twenty feet over the originally permitted final contours. This will involve adding approximately 220,162 cubic yards of waste and extending the site life by approximately 52 weeks.
 8. No additional land area will be utilized in the permit modification. Additional waste will be placed only on areas that have received waste previously.
 9. The additional waste received will be restricted to residential and commercial waste outlined in the original permits. No hazardous waste will be allowed in the landfill.
-

NOTICE OF PUBLIC HEARING

The Arkansas Commission on Pollution Control and Ecology will hold a public hearing at the Washington County Courthouse in Fayetteville, Arkansas, beginning at 7:00 p.m., August 26, 1982. The hearing is being conducted jointly by the Commission and Washington County and will be held in the County Quorum Court Room. The subject of the hearing will be the application by Sunray Sanitation of Springdale to expand the volume of waste being deposited at two permitted sanitary landfills near Tontitown in Washington County.

Sunray has submitted a request to modify sanitary landfill permit #S-0123 (Sunray Sanitary Landfill #3) and permit #S-0162 (Sunray Sanitary Landfill #4) issued to Sunray Sanitation. The two landfills are located approximately three miles southeast of Tontitown near Arkansas Highway 68 on property within Section 23, Township 17 North, Range 31 West.

The permit modifications will involve the following:

- 1) Sunray proposes to raise the final fill elevations of Permit #S-0123 approximately twenty feet in order to match the surrounding land elevations and create a flatter finished area than originally designed. This will involve adding approximately 220,162 cubic yards of waste and extending the site life by approximately 52 weeks.
- 2) Permit #S-0162 would also receive approximately twenty feet of final fill as described above. This additional fill will require approximately 24,251 cubic yards of waste and an extension of six weeks in the site life.

No additional land area would be utilized in either of these permit modifications. Additional waste would only be placed on areas that have received waste previously.

The additional waste received would be restricted to residential and commercial waste as outlined in the original permits. No hazardous waste would be permitted into the landfill.

The public is invited to attend and participate in the hearing. For accuracy of the record, comments should be submitted in writing at the time of the hearing, although oral comments are welcomed.

Dated this 12th day of August, 1982

Jarrell E. Southall, Director
Department of Pollution Control and Ecology

ARKANSAS DEPARTMENT OF POLLUTION CONTROL AND ECOLOGY

MEMORANDUM

TO: Commissioners on Pollution Control & Ecology
Jarrell Southall, Director

FROM: Mark Witherspoon, Permits Engineer, Land Disposal Section

DATE: September 1, 1982

SUBJECT: PUBLIC HEARING ON PERMIT REVISION FOR SUNRAY SANITATION
PERMIT #S-0123 AND #S-0162

The subject hearing was conducted on August 26, 1982 as scheduled. This hearing was to receive comments on a proposal from Sunray Sanitation of Springdale to revise their existing permits as described in the public notice.

Jim Brooks conducted the hearing in conjunction with the Washington County Quorum Court. Jim Bearden, Richard Kersh, and Mark Witherspoon attended from the Little Rock office.

The opposition to the revisions could be considered minimal. Major concerns were in the following areas:

- 1.) Lack of State Inspections on permitted facilities.
- 2.) Blowing Paper from the Landfill.
- 3.) Problems with the trucks transporting waste to the landfill.
- 4.) Late operating hours.
- 5.) Water Well contamination.
- 6.) Dead animals disposal at the landfill.
- 7.) Runoff from the landfill sites.

Most comments mentioned that the landfill operation and public relation program had greatly improved since the new management started with Sunray Sanitation.

The Department staff present at the hearing tried to respond to the questions and concerns presented at the hearing. The commenters present indicated an understanding of the proposed revisions and the benefits associated with the improved final closed-out.

The entire hearing was recorded and is ready for your review.

MW:ch

PUBLIC HEARING

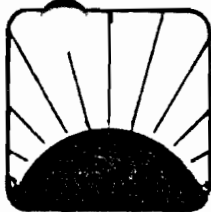
on

APPLICATION FOR SUNPAY SANITATION LANDFILL EXPANSION

Washington County Quorum Court Room
August 26, 1982
7:00 p.m.

A G E N D A

1. Call to Order -----Judge Johnson
 2. Registration of All Attendants -----Jim Bearden
 3. Requirements of County Ordinances -----Judge Johnson
 4. Rules of Conduct -----Jim Bearden
 5. Statement of Proposal -----*Gail Maward* Applicant's Engineer
 6. Statement by Applicant -----Richard Adams
 7. Department of Pollution Control & Ecology
Statement of Findings -----Mark Witherspoon
 8. Statement in Support of the Proposal:
 - A. Local Governments
 - B. Organizations
 - C. Citizens
 9. Statements of Opposition to the Proposal:
 - A. Local Governments
 - B. Organizations
 - C. Citizens
 10. Rebuttal:
 - A. Local Governments
 - B. Organizations
 - C. Citizens
 11. Questions and Answers
 12. Adjournment
-



Residential - Commercial - Industrial
Hauling - Disposal
Services

February 8, 1982

Mark Witherspoon
Department of Pollution Control and Ecology
Solid Waste Division
8001 National Drive
Little Rock, Arkansas 72209

Dear Mark:

Please find enclosed the following:

1. Plans for elevation revision on Sun-Ray number three (3)
A. Operations will remain the same including borrow areas.
2. Plans for elevation revision on Sun-Ray number four (4)
A. Operations will remain the same including borrow areas.
3. Proposed operation plan for Carroll County, Arkansas

Per our telephone conversation February 8, 1982 I will be glad to meet with you at your office or in Springdale at your convenience.

Thank you for your time in this matter.

Richard B. Adams, Sr.
President

RBA, sr
/
mw

P.O. Box 793 Springdale, Arkansas 72764



Residential - Commercial - Industrial
Hauling - Disposal
Services

8
3-15-82

March 12, 1982

Mark Witherspoon
8001 National Drive
Little Rock, Arkansas 72209

Dear Mark:

Enclosed are the revised plans and air space calculations.

If any questions please call.

Richard B. Adams, Sr.
President

RBA, sr

/

mw

P.S. Thanks for reviewing plans so quickly.

Sun-Ray

P.O. Box 793 Springdale, Arkansas 72764

YARDAGE CALCULATIONS

<u>Station</u>	<u>Volume (C.Y.)</u>	<u>Final Cover Volume (C.Y.)</u>
2+25	18,356	3,775
4+00	34,733	8,167
6+00	30,670	8,009
8+00	37,326	8,602
10+00	47,356	10,102
12+00	54,918	11,685
14+00	56,452	10,472
16+00	45,515	8,685
18+00	11,134	2,771
19+30.7	_____	_____
Totals	336,460 C.Y.	72,268 C.Y.

FILL YARDAGE AVAILABLE:

$$336,460 \text{ C.Y.} - 72,268 \text{ C.Y.} = 264,192 \text{ C.Y.}$$

DAILY COVER MATERIAL REQUIRED: @ a 1:5 ratio to waste volume
(264,192 C.Y.) x .167 = 44,030 C.Y. daily cover

AVAILABLE WASTE STORAGE:

$$264,192 \text{ C.Y.} - 44,030 \text{ C.Y.} = 220,162 \text{ C.Y.}$$

TIME AVAILABLE: @ 850 C.Y. of in place refuse per day
 $220,162 \text{ C.Y.} / (850 \text{ C.Y./day}) = 259 \text{ days}$
 $259 \text{ days} / (5 \text{ days/week}) = 52 \text{ weeks}$

YARDAGE COMPUTATION

<u>Station</u>	<u>Volume (C.Y.)</u>	<u>Volume lost to Final Cover (C.Y.)</u>
1+00		
	3,907	958
2+00		
	16,518	3,509
4+00		
	8,704	1,592
5+00		
	6,720	1,514
6+00		
	1,184	359
6+50	<u> </u>	<u> </u>
Totals	37,033 C.Y.	7,932 C.Y.

FILL YARDAGE AVAILABLE:

$$37,033 \text{ C.Y.} - 7,932 \text{ C.Y.} = 29,101 \text{ C.Y.}$$

DAILY COVER MATERIAL REQUIRED: @ a 1:5 ratio to waste volume

$$(29,101 \text{ C.Y.}) \times .167 = 4,850 \text{ C.Y.}$$

AVAILABLE WASTE STORAGE:

$$29,101 \text{ C.Y.} - 4,850 \text{ C.Y.} = 24,251 \text{ C.Y.}$$

TIME AVAILABLE IN SMALL RAVINE: @ 850 C.Y. in place/ day

$$24,251 \text{ C.Y.} / (850 \text{ C.Y./day}) = 28 \text{ days}$$

$$28 \text{ days} / (5 \text{ days/week}) = 5.6 \text{ weeks}$$

*Sunray
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