LEO MILLER & ASSOCIATES, INC.

(606) 573-4300 P.O. BOX 488 HARLAN, KENTUCKY 40831 FAX (606) 573-6722

December 26, 2007

JAN 2 2008

Section Supervisor
Inventory & Data Management Section
KPDES Branch
Division of Water
14 Reilly Road
Frankfort, Kentucky 40601

RE: Nally & Hamilton Enterprises, Inc.
DSMRE #848-0210
Timbertree #1
Form 1 and Form C

Dear Sir or Madam:

Attached, please find a completed Form 1 and Form C for Nally & Hamilton Enterprises, Inc. for their permit #848-8051, located in Harlan County. This application is a renewal to KPDES No. 0106003. Please review the attached application and if there are any questions please contact our office.

Thank you,

Denham York

Denham York
Leo Miller & Associates, Inc.

KPDES FORM 1

AI: 15547

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

JAN 2 2008

PERMIT APPLICATION

This is an application to: (check one)

- ☐ Apply for a new permit.
- ☒ Apply for reissuance of expiring permit.
- ☐ Apply for a construction permit.
- ☐ Modify an existing permit.
  Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:
Form A, Form B, Form C, Form F, or Short Form C

For additional information contact:
KPDES Branch (502) 564-3410

$240.00

I. FACILITY LOCATION AND CONTACT INFORMATION	AGENCY USE	0	1	0	6	0	0	3

A. Name of business, municipality, company, etc. requesting permit
Nally & Hamilton Enterprises, Inc.

B. Facility Name and Location	C. Facility Owner/Mailing Address
Facility Location Name: Timbertree #1	Owner Name: Nally & Hamilton Enterprises, Inc.
Facility Location Address (i.e. street, road, etc.): Timbertree #1, Near the junction of US 119 & Ky. 160	Mailing Street: P.O. Box 157
Facility Location City, State, Zip Code: Cumberland, Kentucky	Mailing City, State, Zip Code: Bardstown, Kentucky 40004
	Telephone Number: 502-348-0084

II. FACILITY DESCRIPTION

A. Provide a brief description of activities, products, etc: Surface contour and auger mining (coal removal)

B. Standard Industrial Classification (SIC) Code and Description

Principal SIC Code & Description:	See II.A. 1-U 1221		
Other SIC Codes:			

III. FACILITY LOCATION

A. Attach a U.S. Geological Survey 7 ½ minute quadrangle map for the site. (See instructions)

B. County where facility is located:	City where facility is located (if applicable):
Harlan	Cumberland

C. Body of water receiving discharge:
Named and un-named tributary's of Poor Fork of the Cumberland River

D. Facility Site Latitude (degrees, minutes, seconds):	Facility Site Longitude (degrees, minutes, seconds):
36-59-00	82-56-43

E. Method used to obtain latitude & longitude (see instructions): Topographic map coordinates

F. Facility Dun and Bradstreet Number (DUNS #) (if applicable): 07-133-3314 Nally & Hamilton Enterprises, Inc.

IV. OWNER/OPERATOR INFORMATION

A. Type of Ownership:

☐ Publicly Owned ☒ Privately Owned ☐ State Owned ☐ Both Public and Private Owned ☐ Federally owned

B. Operator Contact Information (See instructions)

Name of Treatment Plant Operator: N/A	Telephone Number:
Operator Mailing Address (Street):	
Operator Mailing Address (City, State, Zip Code):	
Is the operator also the owner? Yes ☐ No ☐	Is the operator certified? If yes, list certification class and number below. Yes ☐ No ☐
Certification Class:	Certification Number:

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number:	Issue Date of Current Permit:	Expiration Date of Current Permit:
Number of Times Permit Reissued:	Date of Original Permit Issuance:	Sludge Disposal Permit Number:
Kentucky DOW Operational Permit #: KY0106003	Kentucky DSMRE Permit Number(s): 848-0210	

C. Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source		
Solid or Special Waste		
Hazardous Waste - Registration or Permit		

VI. DISCHARGE MONITORING REPORTS (DMRs)

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). The information in this section serves to specifically identify the department, office or individual you designate as responsible for submitting DMR forms to the Division of Water.

A. Name of department, office or official submitting DMRs:	Leo Hamilton
B. Address where DMR forms are to be sent. (Complete only if address is different from mailing address in Section I.)	
DMR Mailing Name:	Bureau of Surface Mining Reclamation & Enforcement
DMR Mailing Street:	1804 East Cumberland Avenue
DMR Mailing City, State, Zip Code:	Middlesboro, Kentucky 40965
DMR Official Telephone Number:	606-248-6166

VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount. Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
Surface Mining Operation	$240

VIII. 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 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.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Stephen Hamilton Secretary-Treasurer	(502) 348-0084
SIGNATURE Stephen Hamilton	DATE: December 20, 2007

KPDES FORM C

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

JAN 2 2008

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, contact KPDES Branch, (502) 564-3410.

Name of Facility: Timbertree #1	County: Harlan							
I. OUTFALL LOCATION	AGENCY USE							

For each outfall list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

Outfall No. (list)	LATITUDE			LONGITUDE			RECEIVING WATER (name)
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	
See attached	charts on	the	following	pages.			

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfall. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.

OUTFALL NO. (list)	OPERATION(S) CONTRIBUTING FLOW		TREATMENT	
	Operation (list)	Avg/Design Flow (include units)	Description	List Codes from Table C-1
See attached	charts on the following pages			

Revised June 1999

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES (Continued)

C. Except for storm water runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ Yes (Complete the following table.) ☒ No (Go to Section III.)

OUTFALL NUMBER (list)	OPERATIONS CONTRIBUTING FLOW (list)	FREQUENCY		FLOW				
		Days Per Week (specify average)	Months Per Year (specify average)	Flow Rate (in mgd)		Total volume (specify with units)		Duration (in days)
				Long-Term Average	Maximum Daily	Long-Term Average	Maximum Daily	

III. MAXIMUM PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ Yes (Complete Item III-B) List effluent guideline category:

☒ No (Go to Section IV)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (or other measures of operation)?

☐ Yes (Complete Item III-C) ☐ No (Go to Section IV)

C. If you answered "Yes" to Item III-B, list the quantity which represents the actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

MAXIMUM QUANTITY			Affected Outfalls (list outfall numbers)
Quantity Per Day	Units of Measure	Operation, Product, Material, Etc. (specify)	

IV. IMPROVEMENTS

A. Are you now required by any federal, state or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders and grant or loan conditions.

☐ Yes (Complete the following table) ☒ No (Go to Item IV-B)

IDENTIFICATION OF CONDITION AGREEMENT, ETC.	AFFECTED OUTFALLS		BRIEF DESCRIPTION OF PROJECT	FINAL COMPLIANCE DATE	
	No.	Source of Discharge		Required	Projected

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered 5-18.

D. Use the space below to list any of the pollutants (refer to SARA Title III, Section 313) listed in Table C-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

POLLUTANT	SOURCE	POLLUTANT	SOURCE
N/A - None			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. Is any pollutant listed in Item V-C a substance or a component of a substance which you use or produce, or expect to use or produce over the next 5 years as an immediate or final product or byproduct?

☐ Yes (List all such pollutants below) ☐ No (Go to Item VI-B)

N/A

B. Are your operations such that your raw materials, processes, or products can reasonably be expected to vary so that your discharge of pollutants may during the next 5 years exceed two times the maximum values reported in Item V?

☐ Yes (Complete Item VI-C) ☐ No (Go to Item VII)

C. If you answered "Yes" to Item VI-B, explain below and describe in detail to the best of your ability at this time the sources and expected levels of such pollutants which you anticipate will be discharged from each outfall over the next 5 years. Continue on additional sheets if you need more space.

N/A

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge of or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (Identify the test(s) and describe their purposes below) ☒ No (Go to Section VIII)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☐ Yes (list the name, address, and telephone number of, and pollutants analyzed by each such laboratory or firm below) ☐ No (Go to Section IX)

NAME	ADDRESS	TELEPHONE (Area code & number)	POLLUTANTS ANALYZED (list)

IX. 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 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.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Stephen Hamilton	502-348-0084
SIGNATURE Stephen Hamilton	DATE December 20, 2007

KPDES FORM C II.A. #848-0210, Timbertree #1		
POND NUMBER	**DESIGN FLOW cfs**	**CODE**
1	169.63	1-U
2	143.91	1-U
3	105.83	1-U
4	95.71	1-U
5	92.63	1-U
6	82.81	1-U
7	73.54	1-U
8	387.33	1-U
9	127.57	1-U
10	91.33	1-U
11	125.61	1-U
12	11.34	1-U
13	35.40	1-U

NOTE: Sedimentation ponds are designed for the 25 year 24 hour precipitation event. Design flow in cfs is based on the Sedcad computer model.

Sediment Structure Inventory

ID Number	Upland/ In stream	Permanent/ Temporary	Drainage Area (acres)	Activities	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Receiving Water (name)
1	In Stream	Temporary	101.57	Surface Contour and Highwall Mining	36-58-51	82-57-46	Drift Branch
2	In Stream	Temporary	66.72	Surface Contour and Highwall Mining	36-58-58	82-57-29	Un-Named
3	On Bench	Temporary	64.08	Surface Contour and Highwall Mining	36-58-43	82-57-17	Beech Bottom Branch
4	On Bench	Temporary	64.73	Surface Contour and Highwall Mining	36-58-58	82-57-07	Un-Named
5	On Bench	Temporary	62.76	Surface Contour and Highwall Mining	36-58-59	82-56-56	Un-Named
6	In Stream	Temporary	55.00	Surface Contour and Highwall Mining	36-59-07	82-56-51	Un-Named
7	In Stream	Temporary	60.43	Surface Contour and Highwall Mining	36-59-10	82-56-46	Un-Named
8	In Stream	Temporary	195.94	Surface Contour and Highwall Mining	36-59-17	82-56-30	Charlie Blair Branch
9	In Stream	Temporary	60.43	Surface Contour and Highwall Mining	36-59-22	82-56-20	Orchard Branch
10	In Stream	Temporary	35.40	Surface Contour and Highwall Mining	36-58-51	82-57-56	Un-Named
11	In Stream	Temporary	56.08	Surface Contour and Highwall Mining	36-58-46	82-58-16	Un-Named
12	On Bench	Temporary	3.32	Surface Contour and Highwall Mining	36-58-33	82-58-16	Un-named
13	On Bench	Temporary	10.83	Surface Contour and Highwall Mining	36-58-23	82-57-58	Un-named

Instructions

ID Number:	Provide the structure's identification number.
Upland/In stream:	Indicate whether the structure is on the bench, in-stream or upland.
Permanent/Temporary:	Indicate whether the structure is permanent or temporary
Drainage Area:	Provide the contributing drainage area in acres.
Activities:	List the types of activities within the contributing drainage area, i.e; fills, haul roads, surface mines, underground mines, etc.
Latitude:	Provide the latitude of the structure.
Longitude:	Provide the longitude of the structure.
Receiving Stream:	Name of the water body, which receives the structure's discharges.

(Attach additional pages if necessary)

(Continued on Back Page)

TECHNICAL WATER LABORATORIES, INC.

P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Nally & Hamilton Enterprises, Inc.
Sample ID: 848-0210 SW 3
Lab# 16
Date Sampled: 05-23-2005
Date Analyzed: 05-24-2005
Sampled By: Technical Water Laboratories, Inc.

Parameter	Value	Units	Remarks
PH	7.10		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	109.45	Mg/L	
Total Iron	0.16	Mg/L	
Dissolved Iron	0.10	Mg/L	
Total Manganese	0.05	Mg/L	
Dissolved Manganese	0.01	Mg/L	
Total Suspended Solids	8	Mg/L	
Total Dissolved Solids	250	Mg/L	
Phenols	0.02	Mg/L	
Antimony	0.001	Mg/L	
Sulfates	75	Mg/L	
Arsenic	0.000	Mg/L	
Beryllium	0.002	Mg/L	
Cadmium	0.003	Mg/L	
Chromium	0.002	Mg/L	
Copper	0.02	Mg/L	
Cyanide	0.00	Mg/L	
Mercury	0.0001	Mg/L	
Temperature	55.3	degrees F	
Thallium	0.1	Mg/L	
Specific Conductance	410	Michromhos/CM	
Lead	0.001	Mg/L	
Hardness	210	Mg/L	
Flow Rate (Gpm)	15.6	GPM	
Nickel	0.01	Mg/L	
Selenium	0.003	Mg/L	
Silver	0.01	Mg/L	
Zinc	0.002	Mg/L	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.

Eddie Mahalkn
Signature of Laboratory Supervisor

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. (See instructions)

V. INTAKE AND EFFLUENT CHARACTERISTICS (Continued from page 3 of Form C) — **OUTFALL NO. SW-3**

Part A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT							3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No of Analyses
	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Biochemical Oxygen Demand (BOD)												
b. Chemical Oxygen Demand (COD)												
c. Total Organic Carbon (TOC)												
d. Total Suspended Solids (TSS)							1	8 Mg/L				
e. Ammonia (as N)												
f. Flow (in units of MGD)	VALUE		VALUE		VALUE		1	15.6 GPM MGD		VALUE		
g. Temperature (winter)	VALUE		VALUE		VALUE			°c		VALUE		
h. Temperature (summer)	VALUE		VALUE		VALUE			°c		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

Part B - In the MARK "X" column, place an "X" in the Believed Present column for each pollutant you know or have reason to believe is present. Place an "X" in the Believed Absent column for each pollutant you believe to be absent. If you mark the Believed Present column for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		6. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
a. Bromide (24959-67-9)														
b. Bromine Total Residual														
c. Chloride														
d. Chlorine, Total Residual														
e. Color														
f. Fecal Coliform														
g. Fluoride (16984-48-8)														
h. Hardness (as $CaCO_3$)									1	210 Mg/L				
i. Nitrate – Nitrite (as N)														
j. Nitrogen, Total Organic (as N)														
k. Oil and Grease														
l. Phosphorous (as P), Total 7723-14-0														
m. Radioactivity														
(1) Alpha, Total														
(2) Beta, Total														
(3) Radium Total														
(4) Radium, 226, Total														

Part B - Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg. Value		b. No. of Analyses
			(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
n. Sulfate (as SO_4) (14808-79-8)									1	75 Mg/L				
o. Sulfide (as S)														
p. Sulfite (as SO_4) (14286-46-3)														
q. Surfactants														
r. Aluminum, Total (7429-90)														
s. Barium, Total (7440-39-3)														
t. Boron, Total (7440-42-8)														
u. Cobalt, Total (7440-48-4)														
v. Iron, Total (7439-89-6)									1	0.16 Mg/L				
w. Magnesium Total (7439-96-4)														
x. Molybdenum Total (7439-98-7)														
y. Manganese, Total (7439-96-6)									1	0.05 Mg/L				
z. Tin, Total (7440-31-5)														
aa. Titanium, Total (7440-32-6)														

Part C – If you are a primary industry and this outfall contains process wastewater, refer to Table C-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in the **Testing Required** column for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark this column (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in the **Believed Present** column for each pollutant you know or have reason to believe is present. Mark "X: in the **Believed Absent** column for each pollutant you believe to be absent. If you mark either the **Testing Required** or **Believed Present** columns for any pollutant, you must provide the result of at least one analysis for that pollutant. Note that there are seven pages to this part; please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS															
1M. Antimony Total (7440-36-0)										1	0.001 Mg/L				
2M. Arsenic, Total (7440-38-2)										1	0.000 Mg/L				
3M. Beryllium Total (7440-41-7)										1	0.002 Mg/L				
4M. Cadmium Total (7440-43-9)										1	0.003 Mg/L				
5M. Chromium Total (7440-43-9)										1	0.002 Mg/L				
6M. Copper Total (7550-50-8)										1	0.02 Mg/L				
7M. Lead Total (7439-92-1)										1	0.001 Mg/L				
8M. Mercury Total (7439-97-6)										1	0.0001 Mg/L				
9M. Nickel, Total (7440-02-0)										1	0.01 Mg/L				
10M. Selenium, Total (7782-49-2)										1	0.003 Mg/L				
11M. Silver, Total (7440-28-0)										1	0.01 Mg/L				

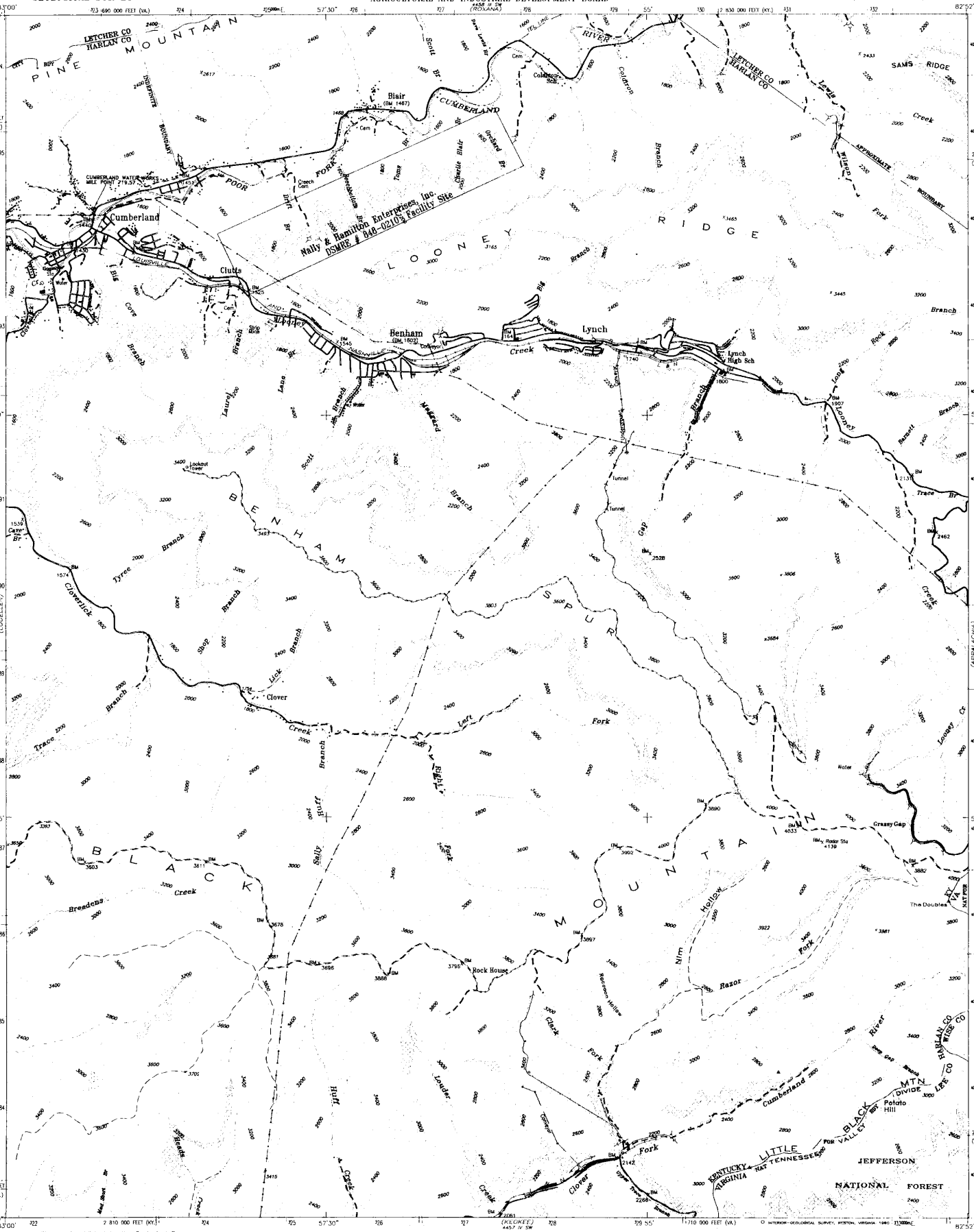
Part C – Continued

1. POLLUTANT And CAS NO. (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. Testing Required	a. Believed Present	b. Believed Absent	a. Maximum Daily Value		b. Maximum 30-Day Value (if available)		c. Long-Term Avg. Value (if available)		d. No. of Analyses	a. Concentration	b. Mass	a. Long-Term Avg Value		b. No. of Analyses
				(1) Concentration	(2) Mass	(1) Concentration	(2) Mass	(1) Concentration	(2) Mass				(1) Concentration	(2) Mass	
METALS, CYANIDE AND TOTAL PHENOLS (Continued)															
12M. Thallium, Total (7440-28-0)										1	0.1 Mg/L				
13M. Zinc, Total (7440-66-6)										1	0.002 Mg/L				
14M. Cyanide, Total (57-12-5)										1	0.00 Mg/L				
15M. Phenols, Total										1	0.02 Mg/L				
DIOXIN															
2,3,7,8 Tetra-chlorodibenzo, P, Dioxin (1784-01-6)				DESCRIBE RESULTS:											
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)															
2V. Acrylonitrile (107-13-1)															
3V. Benzene (71-43-2)															
5V. Bromoform (75-25-2)															
6V. Carbon Tetrachloride (56-23-5)															
7V. Chloro-benzene (108-90-7)															
8V. Chlorodibro-momethane (124-48-1)															

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF KENTUCKY
AGRICULTURAL AND INDUSTRIAL DEVELOPMENT BOARD

BENHAM QUADRANGLE
KENTUCKY–VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 BIG STONE GAP 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by stereophotogrammetric methods. Aerial photographs taken 1952. Field check 1954

Polyconic projection. 1927 North American datum
10,000-foot grids based on Kentucky coordinate system, south zone, and Virginia coordinate system, south zone

Red tint indicates areas in which only landmark buildings are shown

Contours in strip mine areas compiled from 1952 photography

Unchecked elevations are shown in brown

1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

There may be private inholdings within the boundaries of the National or State reservations shown on this map.

UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

To place on the predicted North American Datum 1983 move the projection lines 6 meters south and 10 meters west as shown by dashed corner ticks

SCALE 1:24000

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
KENTUCKY GEOLOGICAL SURVEY, LEXINGTON, KENTUCKY 40506
AND KENTUCKY DEPARTMENT OF COMMERCE, FRANKFORT, KENTUCKY 40601
AND VIRGINIA DIVISION OF MINERAL RESOURCES, CHARLOTTESVILLE, VIRGINIA 22903
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route — State Route

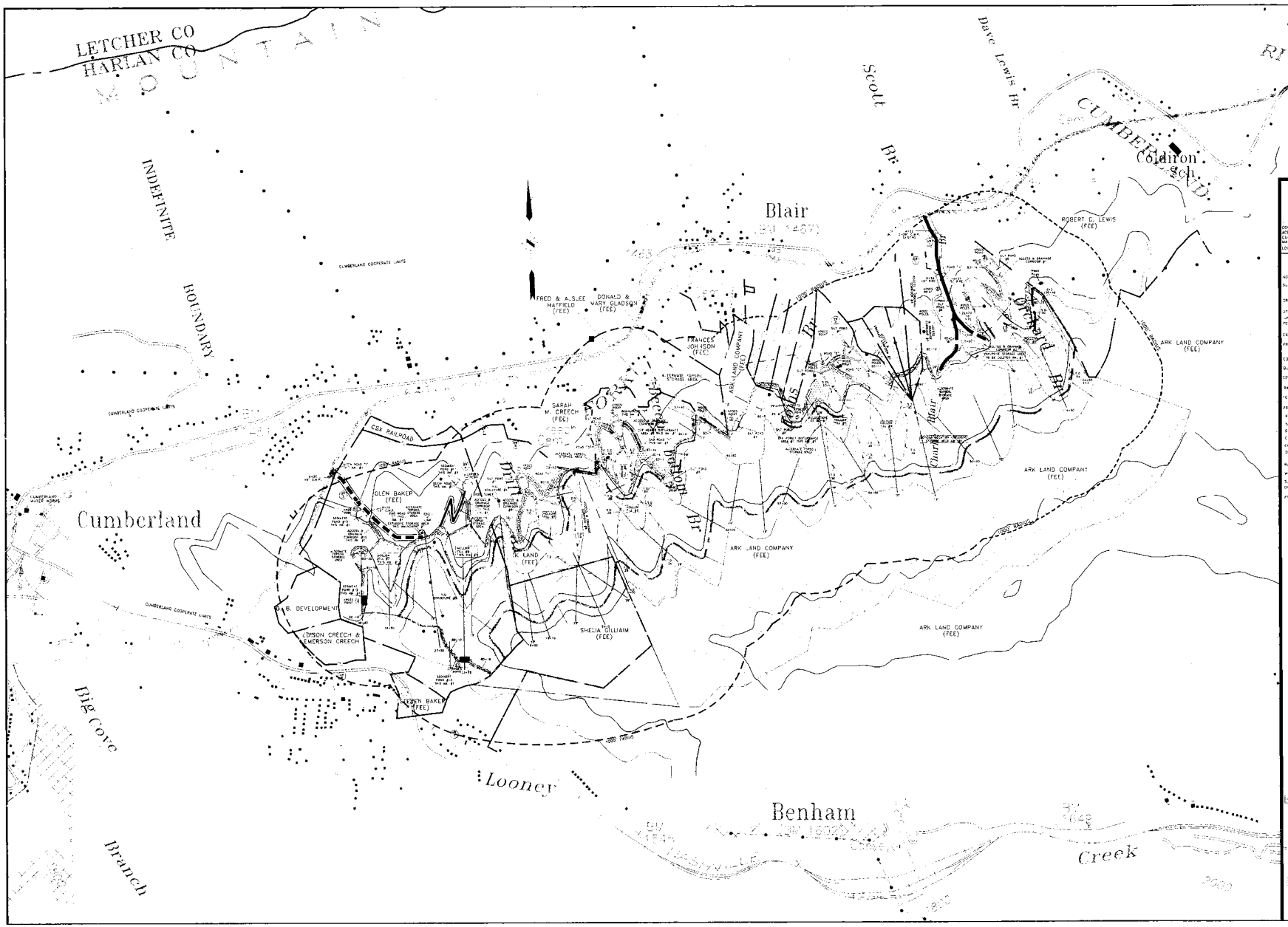
KENTUCKY
QUADRANGLE LOCATION

BENHAM, KY.–VA.
NW/4 BIG STONE GAP 15' QUADRANGLE
36082-H8-TF-024

1954

DMA 4457 IV NW–SERIES V853

© INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA 1980



Nally & Hamilton Enterprises, Inc.

Telephone (606) 878-1500 — P.O. Box 2323, London, Kentucky 40741 — Fax (606) 878-5886

MINING AND RECLAMATION PLAN MAP

COMPANY NAME: NALLY & HAMILTON ENTERPRISES, INC. — APPLICATION NUMBER: 848-0210, AMD #
ADDRESS: P.O. BOX 157, BARDSTOWN, KY 40004 — COUNTY: HARLAN
QUADRANGLE: BENHAM — LONGITUDE: 83° 34' 30" — LATITUDE: 36° 59' 00"
MAP SCALE: 1"=500' — CONTOUR INTERVAL: 40'
LOCATION IN DETAIL: NEAR JUNCTION US 119 & KY 160

LEGEND

NON-EXISTENT BUILDING
SURFACE WATER & NPDES MONITORING POINT
GROUND WATER MONITORING POINT
UTILITY LINE (TYPES)
UNDERGROUND MINE OPENING
POWER LINE
EXISTING PERMIT BOUNDARY
PREV. DISTURBED MINED AREAS
COAL CROP LINE
BUILDINGS
CEMETERY
RAILROAD
1000' RADIUS
PROPOSED PERMIT BOUNDARY
ROADS (DIRT)
TOPSOIL/ALTR.
BOULDER BERM
CULVERT
EXPOSED/VOID STORAGE AREA
DISABLE USAGE BOUNDARY
ROCK CHECK DAM
WELL (TYPE)
SLOPE
DIVERSION DITCH
PROPERTY LINE

NO HIGHWALL SHALL COME WITHIN 100' OF A KU TRANSMISSION STRUCTURE

NO SURFACE SHALL BE REMOVED WITHIN 75' OF ANY KU TOWER ON THE SUBJECT LINE

NO SURFACE SHALL BE REMOVED WITHIN 30' OF ANY KU TRANSMISSION ANCHOR

SEAMS TO BE HIGHWALL MINED
HARLAN
UPPER HARLAN
UPPER HARLAN RIDER
KELLOGG
LOWER DARBY
UPPER DARBY
OWL
F-SEAM
CREECH

SEAM	MINING METHOD	ELEVATION	ACRES
HARLAN	CONTOUR	700-1800	
UPPER HARLAN	CONTOUR	1730-1830	
UPPER HARLAN RIDER	CONTOUR	1750-1850	*338.28
KELLOGG	CONTOUR	1800-1930	
LOWER DARBY	CONTOUR	1820-1940	
UPPER DARBY	CONTOUR	1880-1980	
OWL	CONTOUR	1910-2010	
F-SEAM	CONTOUR	2010-2100	
CREECH	CONTOUR	2040-2130	

HOLLOW FILLS:

#1	8.51
#2	12.86
#3	10.70
#4	15.44
#5	2.13
#6	2.00

SEDIMENT STRUCTURES: #1, #2, & #6, #7, #8 & #9 - 5 @ 2.00 AC EA

SEDIMENT STRUCTURES: #3, #4 & #5 (LOCATED WITHIN PERMITTED AREA)

ACCESS ROADS:
SECTION "A" (2440' X 150') 8.40
SECTION "B" (1,210' X 150') 2.68

STRUCTURE ACCESS ROADS:
SECTION "C" (740' X 20') 0.40
SECTION "D" (550' X 20') 0.25
SECTION "E" (150' X 20') 0.07
SECTION "G" (800' X 20') 0.38
SECTION "F" (830' X 20') 0.37

ACCESS & DRAINAGE CORRIDORS #1, #2, #3, #4 & #5 (2,100' X 20') 1.16

MAINTENANCE AREA 1.23

TOTAL EXISTING PERMIT SURFACE AREA *435.32
DOUBLE USAGE - MINING AREA UNDERLYING HOLLOW FILLS 152.83
TOTAL EXISTING PERMIT BOUNDARY SURFACE AREA 377.69
HIGHWALL MINING (PENETRATED AREA) 1,500' PENETRATION **553.34
HIGHWALL MINING UNDERLYING CONTOUR MINING AREA - (DOUBLE USAGE) **228.93
TOTAL HIGHWALL MINING PERMIT BOUNDARY 234.47
TOTAL EXISTING PERMIT BOUNDARY SURFACE AREA 377.69
TOTAL EXISTING PERMIT BOUNDARY 697.11

AREA ADDED "THIS AMENDMENT #1"

SEAM	MINING METHOD	ELEVATION	ACRES
HARLAN	CONTOUR	1700-1800	
UPPER HARLAN	CONTOUR	1730-1830	
UPPER HARLAN RIDER	CONTOUR	1750-1850	
KELLOGG	CONTOUR	1800-1930	***100.79
LOWER DARBY	CONTOUR	1820-1940	
UPPER DARBY	CONTOUR	1880-1980	
OWL	CONTOUR	1910-2010	
F-SEAM	CONTOUR	2010-2100	
CREECH	CONTOUR	2040-2130	

HOLLOW FILLS:
#7 3.45
#8 4.95

SEDIMENT STRUCTURES: #10 & #11 @ 2.00 AC EA 4.00

SEDIMENT STRUCTURES: #12 AND #13 (LOCATED WITHIN PERMITTED AREA)

COAL HAUL ROADS:
SECTION "H" (1,800' X 150') 6.20

STRUCTURE ACCESS ROADS:
SECTION "J" (1,800' X 20') 0.60
SECTION "I" (470' X 20') 0.22

ACCESS & DRAINAGE CORRIDORS #10 & #11 (640' X 20') 0.44

CPP PERMIT DISTURBANCE AREA #1 .30
CPP PERMIT DISTURBANCE AREA #2 .60

TOTAL SURFACE AREA "THIS AMENDMENT #1" ***128.05
***DOUBLE USAGE - MINING AREA UNDERLYING HOLLOW FILLS ***43.52

TOTAL PERMIT BOUNDARY SURFACE AREA "THIS AM. #1" 124.55
HIGHWALL MINING (PENETRATED AREA) 1,500' PENETRATION ***100.79
HIGHWALL MINING UNDERLYING CONTOUR MINING AREA - (DOUBLE USAGE) **** 20.75
TOTAL HIGHWALL MINING PERMIT BOUNDARY "THIS AM.#1" 80.36
TOTAL PERMIT BOUNDARY SURFACE AREA "THIS AM.#1" 124.55
TOTA. AREA ADDED "THIS AMENDMENT #1" 205.11
TOTAL EXISTING PERMIT BOUNDARY 697.11
TOTAL PERMIT BOUNDARY 902.22

CERTIFICATION

STATE OF KENTUCKY — L. MILLER 8135 LICENSED PROFESSIONAL ENGINEER

SIGNED 12/27/92