

February 27, 1981

PROCEDURE FOR COAL SAMPLING AND ANALYSIS

Coal sampling and analysis is performed based on East Kentucky Power Cooperative, Inc.'s ("EKPC") Coal Sampling and Analysis Procedures on file at EKPC Headquarters, Winchester, Kentucky. Copies are available on request. When appropriate, EKPC may use origin samples and/or analysis by a third-party, commercial laboratory.

Amended: 02/19/01

Amended: 07/12/04

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BARGE DRAFTING PROCEDURE

1. The barge shall be attached to the shuttle barge by the tow boat (Contract Carrier).
2. Relax the cables between the shuttle and barges.
3. Draft the barge at ten points, five on each side. Drafting shall be measured by the specially developed drafting rods designed to be used in drafting barges.
4. The barge shall then be unloaded, and the same drafting procedure shall be repeated at the same ten points.
5. The before and after unloading barge draft readings are to be recorded on the Barge Draft Reading Sheet. (An example follows these procedures.) Complete all information on the sheet, and note any special circumstances observed during the unloading process.
6. The completed Barge Draft Reading Sheet shall be sent to the station office for determination of weight.
7. Total all ten points before readings and divide the total by ten. Enter this figure as the free board: Before; i.e., 28.30 inches.
8. Convert the free board: Before from inches to feet; i.e., $28.30 = 2' 4.30''$.
9. Then total all ten points after readings and divide the total by ten. Enter this figure as the free board: After; i.e., 107.90 inches.
10. Convert the free board: After from inches to feet; i.e., $107.90 = 8' 11.90''$.
11. Subtract the free board, before from 11 feet, and enter this as the draft: Before; i.e.; $8' 7.70''$.
12. Subtract the free board, after from 11 feet and enter this as the draft: After; i.e., $2' 0.10''$.
13. Using the Contract Carrier barge draft table (example follows these procedures) take the draft: Before figures; i.e., $8' 7.70''$, find $8' 7''$ on the table. Since the actual figure is $8' 7.70''$, subtract $8' 7''$ displacement tons from $8' 8''$ displacement tons; i.e., $1741-1724 = 17$. The difference is then multiplied by the decimal number above the lower figure; i.e., $17 \times .70 = 11.90$ (12). Add this result to the lower displacement tons; i.e., $1724 + 12 = 1736$.
14. Use the same calculation for the draft: After, as in 13.

15. Subtract the draft: After from the draft, before to arrive at the net tonnage removed from the barge.

Amended: 02/19/01

Amended: 07/12/04

Amended: 02/01/05

DATE _____

BARGE DRAFT READINGS

START _____

BARGE NO. _____

SCALE: _____

STOP _____

Water Conditions

- ___ CALM
- ___ RIPPLES
- ___ CHOPPY
- ___ VERY CHOPPY

AFTER _____

BEFORE _____

WEIGHT _____

Coal Appearance

- ___ DRY
- ___ WET
- ___ VERY WET
- ___ SNOW OR ICE

Measurements Flush With Deck

Bow Conditions

FREE BOARD

<u>BEFORE</u>	<u>AFTER</u>
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<u>107</u>	<u>24</u>
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<u>106</u>	<u>24</u>
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<u>106</u>	<u>24</u>
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<u>106</u>	<u>25</u>
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<u>105</u>	<u>26</u>
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Stern Conditions

Free Board: Before 28.30 (2' 4.30"

After 107.90 (8' 11.90"

Draft: Before 8' 7.70"

After 2' 0.10"

Tons: Before 1736

After 384

Net Tonnage: 1252

Scale Tonnage: _____

Draft Factor: _____

Bow Conditions

FREE BOARD

<u>AFTER</u>	<u>BEFORE</u>
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<u>107</u>	<u>34</u>
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<u>109</u>	<u>32</u>
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<u>110</u>	<u>32</u>
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<u>111</u>	<u>33</u>
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<u>112</u>	<u>30</u>
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Stern Conditions

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HOW TO CALCULATE TONNAGES FROM DRAFT READINGS

1. Take draft readings when barges is empty. Look up tonnage in table.
2. Take draft readings after barge is loaded. Look up tonnage in table.
3. Subtract empty tonnage figure from loaded tonnage figure. The resulting figure is the tonnage loaded into the barge.
4. To calculate the tonnage unloaded out of a barge, take the draft readings before you begin unloading. Look up the corresponding tonnage in the table. After the barge is unloaded take draft readings again. Subtract the empty tonnage from the original loaded tonnage to calculate how much coal was unloaded.

CROUNSE CORPORATION HOPPER BARGES
195' X 35' X 11' - 0"

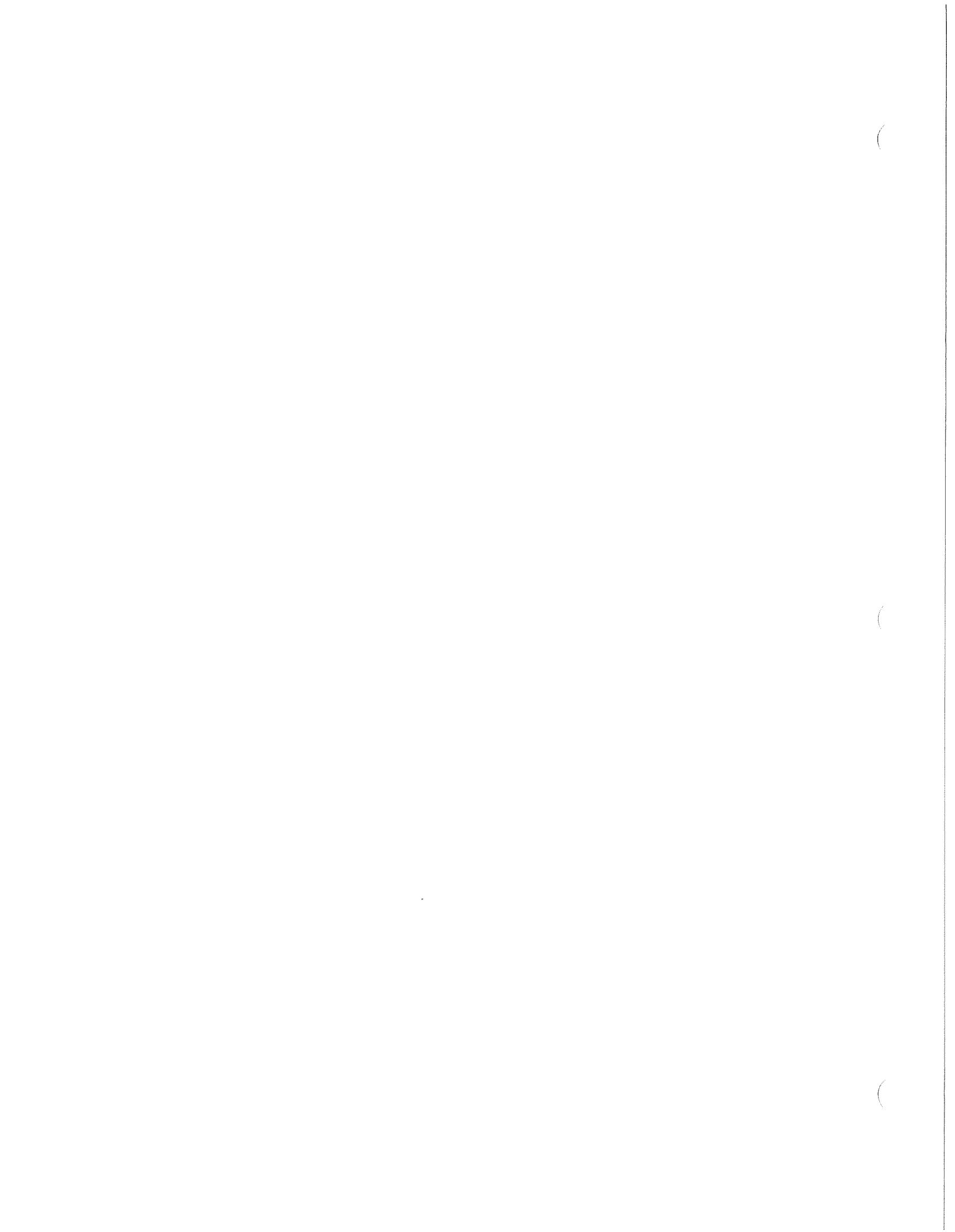
Draft Ft. - Inches	Displacement Tons	Draft Ft. - Inches	Displacement Tons	Draft Ft. - Inches	Displacement Tons
1-1	204	4-1	797	7-1	1411
1-2	220	4-2	814	7-2	1428
1-3	236	4-3	830	7-3	1446
1-4	253	4-4	847	7-4	1463
1-5	269	4-5	864	7-5	1480
1-6	285	4-6	881	7-6	1498
1-7	301	4-7	898	7-7	1515
1-8	317	4-8	915	7-8	1532
1-9	333	4-9	932	7-9	1550
1-10	350 ¹⁷	4-10	949	7-10	1567
1-11	366 ^{x 1.70}	4-11	966	7-11	1584
→ 2-0	382 ⁼¹⁷	5-0	983	8-0	1602
2-1	399	5-1	1000	8-1	1619
2-2	415	5-2	1017	8-2	1637
2-3	431 ³⁸²	5-3	1034	8-3	1654
2-4	447 ^{+ 2}	5-4	1051	8-4	1671 ^{8' 7.70" 18}
2-5	464	5-5	1068	8-5	1689
2-6	481	5-6	1085	8-6	1706
2-7	497	5-7	1102	→ 8-7	1724 ¹⁷
2-8	514	5-8	1119	8-8	1741 ^{=17 x .70}
2-9	530	5-9	1136	8-9	1759
2-10	547	5-10	1153	8-10	1776
2-11	563	5-11	1170	8-11	1794
3-0	580	6-0	1187	9-0	1811
3-1	596	6-1	1204	9-1	1829
3-2	613	6-2	1222	9-2	1846
3-3	630	6-3	1239	9-3	1864
3-4	646	6-4	1256	9-4	1882
3-5	663	6-5	1273	9-5	1899
3-6	680	6-6	1290	9-6	1917
3-7	696	6-7	1307	9-7	1934
3-8	713	6-8	1325	9-8	1952
3-9	730	6-9	1342	9-9	1970
3-10	746	6-10	1359	9-10	1987
3-11	763	6-11	1376	9-11	2005
4-0	780	7-0	1394	10-0	2022

1724
+ 12
1736

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TO: Roy Palk

FROM: Randy Dials *RW*

DATE: May 27, 2005

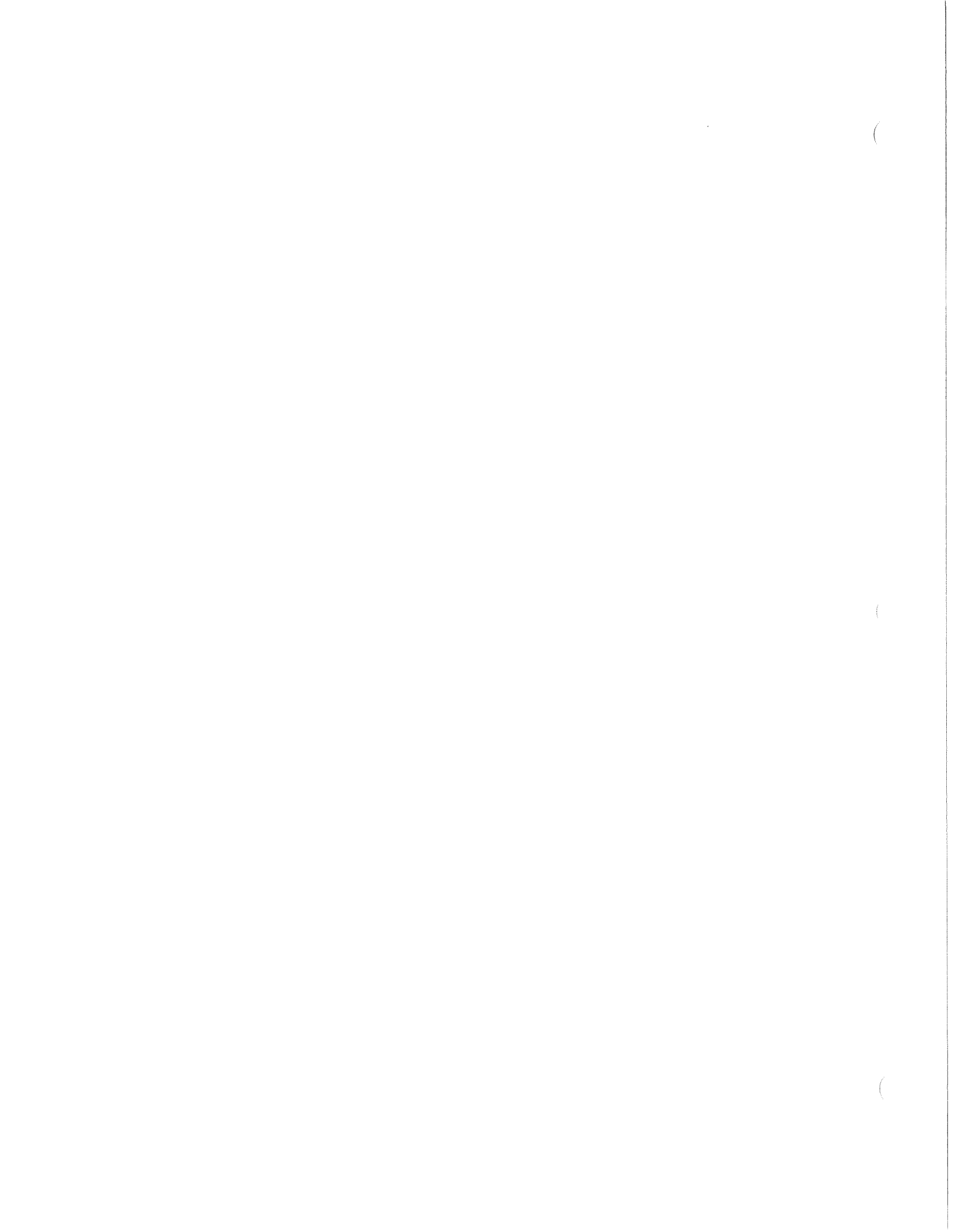
SUBJECT: Authorization to Execute Fuel and Lime-Related Purchase Orders

Approval is requested for the positions of Fuel Buyer, Senior Fuel Buyer, Power Production Services Manager, and Power Production Business Unit Leader to be authorized to execute properly approved fuel and lime-related purchase orders, including run-or-mine processing and transportation agreements.

gv

Approved by: *Roy M. Palk*

Date: *6/3/05*



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PROCEDURE FOR THE PROCUREMENT OF LIME AND LIMESTONE

I. Objective

To outline the proper procedure for the procurement of lime and limestone to be used in the scrubbers, SCRs, and circulating fluidized bed units for East Kentucky Power Cooperative, Inc.'s ("EKPC") generating stations.

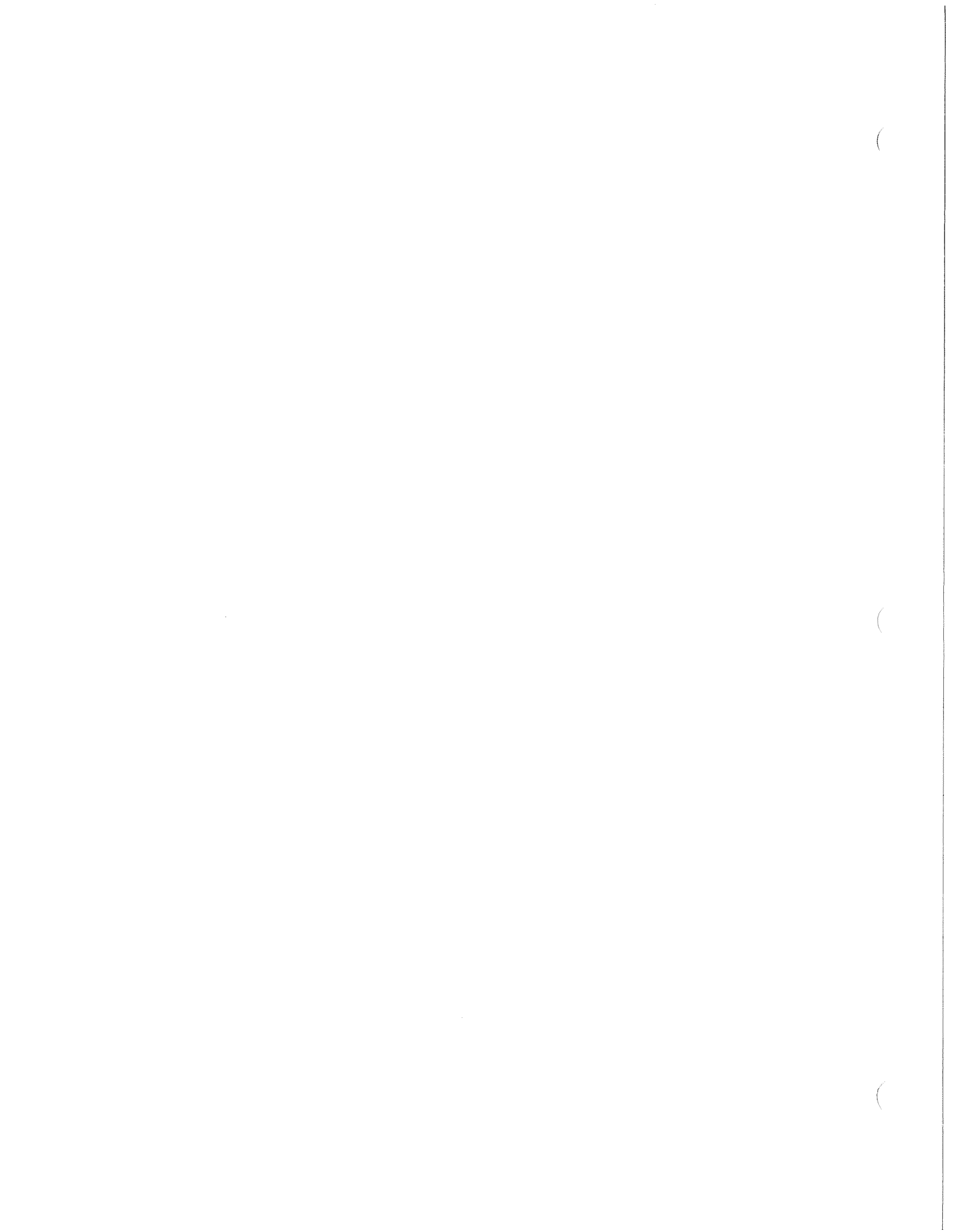
II. Procedure

- A. Based on when the scrubber, SCR, or circulating fluidized bed unit is to be operated and quality and quantity of coal to be used, a projected lime or limestone requirement and the time period desired will be determined. A decision will be made whether to purchase the lime or limestone by contract or purchase order, and terms desired will be determined.
- B. Requests for proposals (*Exhibit 30*) shall be sent in writing to each supplier on the appropriate bidders' list (*Exhibit 31*). Emergency lime or limestone proposals may be made verbally.
- C. A list of all proposals received shall be included in the fuel files.
- D. Proposals shall be evaluated by the Production Engineering, Construction Process and Fuel Process to determine the best evaluated proposal by a delivered cost and quality of lime or limestone.
- E. Field visits should be made, if time permits, to evaluate the facilities, reserves, quality, production capability, etc., of the suppliers with competitive bids. A field evaluation report will be prepared.
- F. Purchase terms and conditions shall be negotiated with competitive suppliers.
- G. Final negotiated proposals are then re-evaluated.
- H. A recommendation shall be prepared consisting of a purchase recommendation (*Exhibit 32*), which includes the proposal evaluation and a field evaluation report, if available.
- I. The recommendation shall be presented to the Power Production Business Unit Leader.

- J. Purchase approval shall be obtained within the authority levels of the Power Production Business Unit Leader and President and Chief Executive Officer. Purchases approved by the President and Chief Executive Officer shall be presented to the Fuel and Power Supply Committee and Board of Directors (“Board”) for their information and review. Approval for purchases in excess of the President and Chief Executive Officer’s authority level shall be presented to the Fuel and Power Supply Committee and the Board for their approval.
- K. The purchase agreement (*Exhibit 33*) shall be executed after all approvals are obtained.
- L. Copies of the executed purchase agreement shall be sent to the appropriate persons on the Lime or Limestone Purchase Distribution List.
- M. Purchase agreement documentation shall be prepared for the Fuel Procurement Process’ files that includes an executed purchase agreement, purchase recommendation (*Exhibit 32*), field evaluation report, if available, Fuel and Power Supply Committee minutes, and Board minutes and/or resolution.
- N. Lime or limestone deliveries may begin on the date specified and under the terms of the executed purchase agreement.

Amended: 02/19/01

Amended: 07/12/04



PROCEDURE FOR THE PROCUREMENT OF FUEL OIL

I. Objective

To outline the proper procedure for the procurement of fuel oil for use at Dale, Cooper, Spurlock, and J. K. Smith Power Stations.

II. Procedure

- A. Power plant personnel will monitor No. 2 fuel oil inventory level at Dale, Cooper, and Spurlock Power Stations and contact the Fuel Procurement Process upon need for replenishing. Replenish levels are approximately 8-12,000 gallons at Dale Power Station; 15-20,000 gallons at Cooper Power Station; and 100-130,000 gallons at Spurlock Power Station. Dale and Cooper Power Stations both have underground tanks with 20,000 gallon and 30,000 gallon capacities, respectively. They are maintained at near capacity levels. Spurlock Power Station has two 300,000 gallon capacity above-ground tanks, one of which will be maintained at approximately a 300,000-gallon level of inventory. All inventory levels are based in part on the plants ability to deplete the fuel oil in large amounts from start-ups and multiple trips of units and may be adjusted accordingly. The verbal request to replenish the No. 2 fuel oil level will be followed up by a written requisition (*Exhibit 34*).

The Fuel Procurement Process will monitor the J. K. Smith Power Station's fuel oil inventory and make the decision on when to replenish based on market, delivery, and power plant conditions. The fuel oil level at J. K. Smith Power Station will vary based on market conditions, oil turnover, etc., but will typically be held at 3,750,000-4,250,000 gallons as backup to natural gas.

- B. The Fuel Procurement Process will contact, by telephone, bidders from East Kentucky Power Cooperative, Inc.'s ("EKPC") Fuel Oil Bidders List (*Exhibit 35*). The prospective supplier will be given the amount of oil required (number of loads), power plant destination, date and/or time of delivery, and a time deadline for bids to be received by fax at EKPC Headquarters, approximately 1-2 hours after the initial call (*Exhibit 36*). (Circumstances may arise that prevent the use of replies by fax.) When appropriate, written solicitations will be used for the replenishment of the J. K. Smith Power Station fuel oil. Faxed responses will still be required due to time constraints.
- C. After the predetermined fax deadline has expired, the lowest proposal is determined, and a fuel approval memorandum is drafted (*Exhibit 37*). If the

purchase order is under \$250,000 the memorandum is approved by the Production Division Business Unit Leader. If the approval is for a purchase over \$250,000, it must be approved by the President and Chief Executive Officer of EKPC and reviewed by the Fuel and Power Supply Committee and Board of Directors.

- D.** The approved supplier is then contacted and given a purchase order number from the Fuel Procurement Process' Oil Purchase Order Log Book.
- E.** The appropriate power station is then called to inform them of the supplier and approximate time of delivery.
- F.** A No. 2 fuel oil purchase order is completed with various information including quantity, destination, price, and acceptance parameters (*Exhibit 38*). The purchase order is executed after approval has been obtained. An acceptance page is signed and returned to EKPC and then filed in the Fuel Procurement Process' files (*Exhibit 39*).
- G.** Potential oil suppliers are required to complete and return a disclosure form pertaining to relationships with EKPC directors, managers, or employees (*Exhibit 40*).
- H.** Oil deliveries are sampled at the time of delivery and tested for water and sediment content based on Central Lab's fuel oil testing procedures. Based on these results, the fuel oil is then either accepted or rejected. Sulfur content will be analyzed on oil deliveries as appropriate to the J. K. Smith Power Station.

Amended: 02/19/01

Amended: 07/12/04

Amended: 02/01/05

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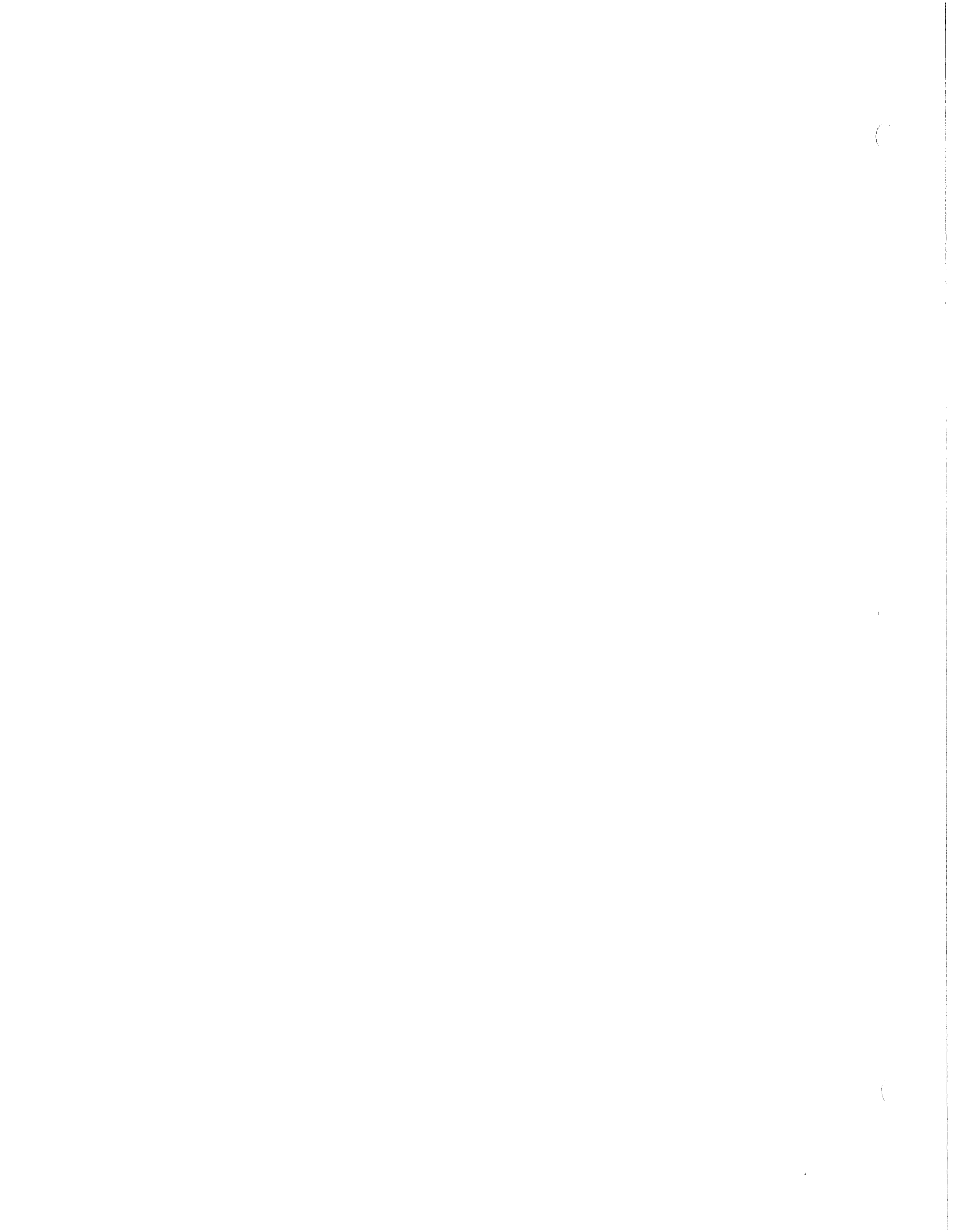
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February 19, 2001

PROCEDURE FOR FUEL PROCUREMENT RECORDS

East Kentucky Power Cooperative, Inc.'s Fuel Procurement records will contain all necessary documentation to back up the purchase of fuel. This documentation shall also include any notes on phone calls and/or meetings.



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FUEL AUDIT ACTION PLAN

Purpose: To ensure Fuel Audit Recommendations are properly implemented or properly addressed and closed.

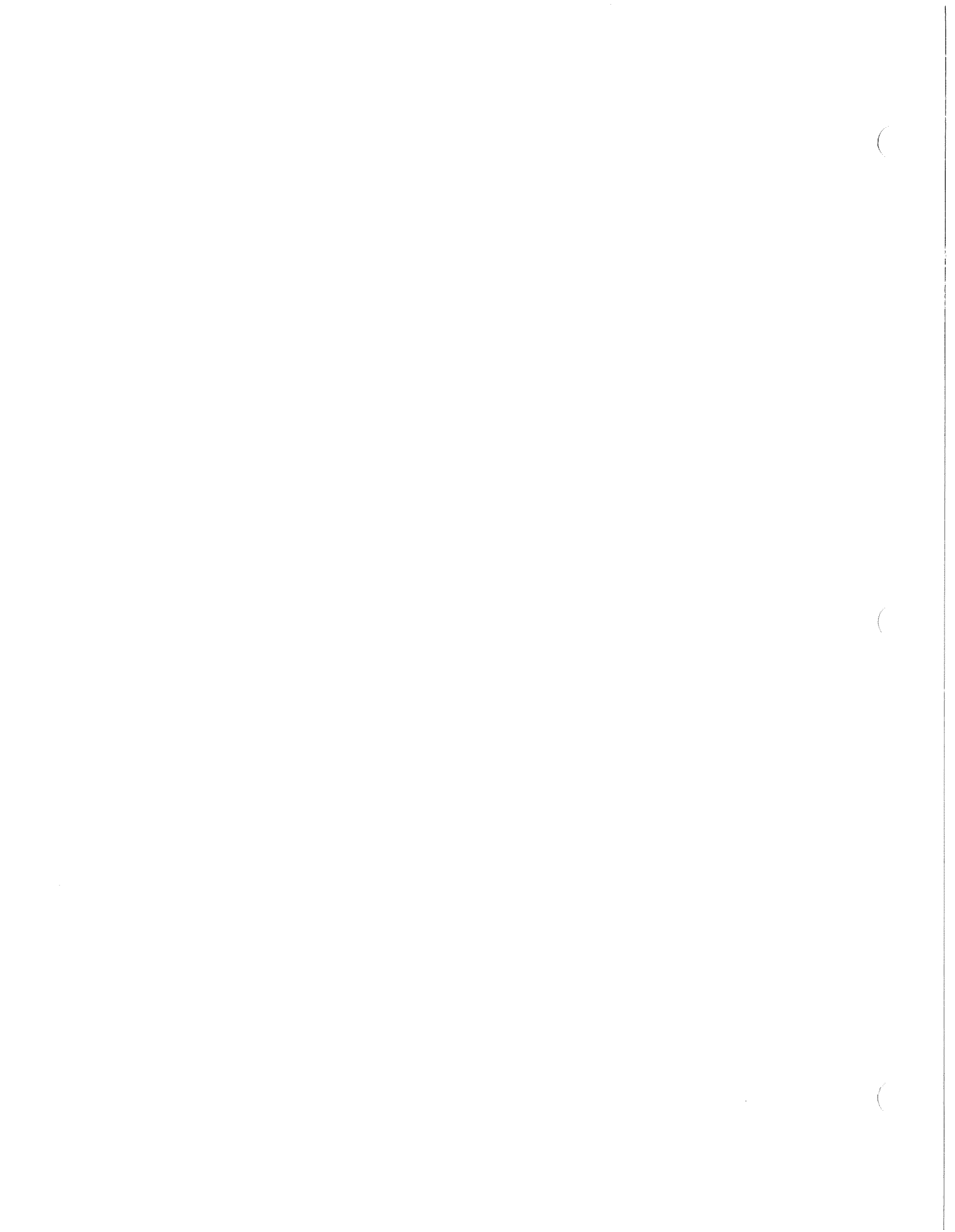
1. Upon receiving Fuel Audit Recommendations, management will develop a response to each recommendation.
2. Each response shall include (a) the recommendation, (b) a brief explanation of the recommendation including agreement or disagreement with the recommendation, (c) a description of any improvement proposed by East Kentucky Power Cooperative, Inc., (d) a discussion of any applicable costs or benefits, and (e) a completion date or schedule of implementation.
3. The Fuel and Power Supply Committee will be updated as to each of these responses.
4. Every six months, or earlier if required, the Fuel and Power Supply Committee shall be updated as to the status of each proposed improvement that is still open at the time.
5. The implementation schedule may be revised as required.

Amended: 07/12/04

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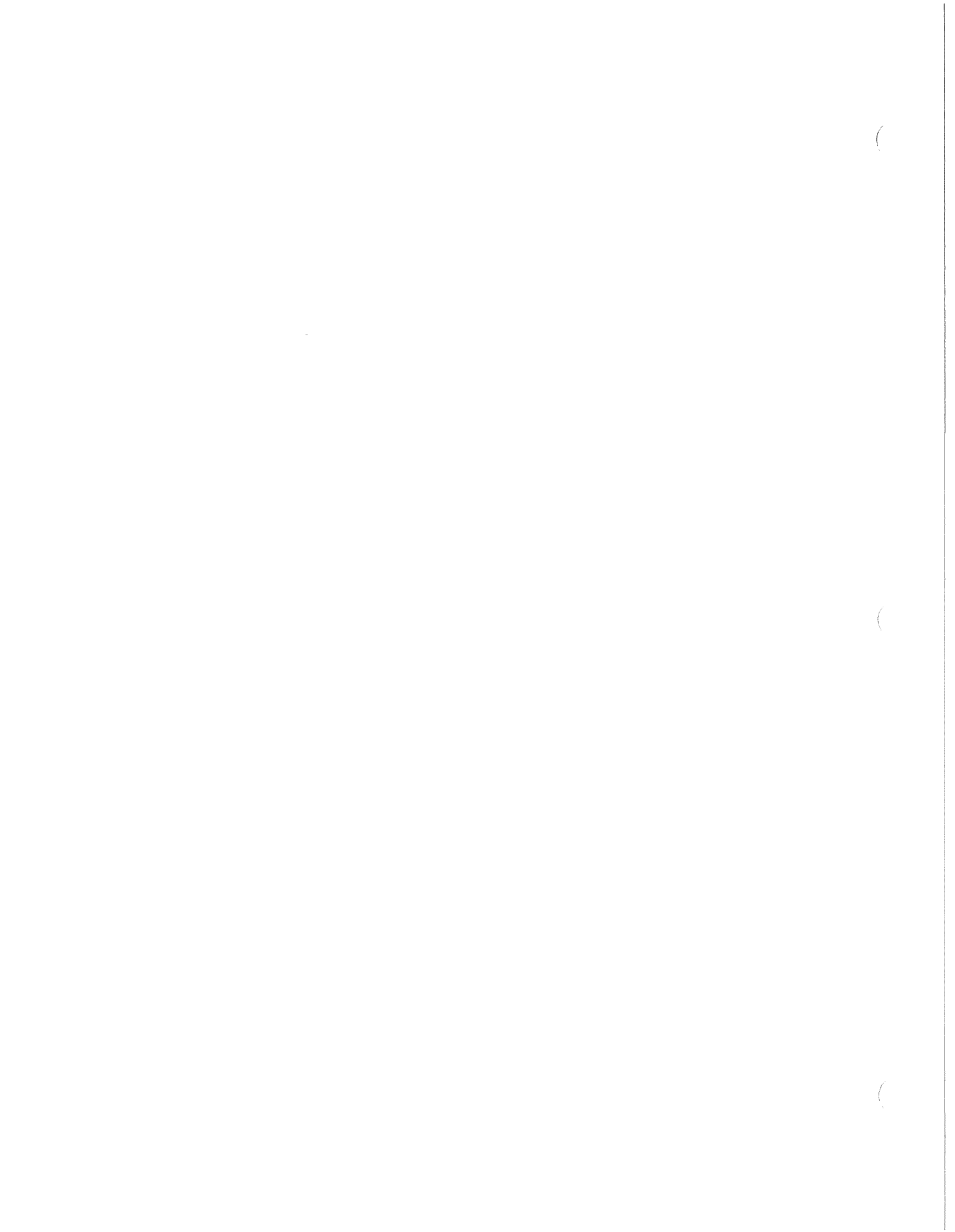
PROCEDURE FOR ENVIRONMENTAL COORDINATION

Due to changing environmental regulations, the Fuel Procurement Process will maintain dialogue with the Environmental Affairs Process to ensure that appropriate fuel quality is purchased, both short-term and long-term. The Fuel Procurement Process will meet with the Environmental Affairs Process to discuss any changes in plan of action before soliciting long-term supplies to ensure that any changes in laws or regulations are accounted for.

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PROCEDURE FOR EMISSION ALLOWANCE MANAGEMENT

Emission allowance management is currently conducted through the Finance, Planning, and Risk Management Process ("FP&RM). The Fuel Procurement Process will evaluate coal proposals using the most current SO₂ allowance price supplied by the FP&RM process for short-term supplies. For long-term contracts, an adjustment to the current SO₂ price may need to be used depending on the length of the solicitation and the projected SO₂ allowance market over the given time period. The FP&RM process will supply the price for SO₂ allowances.

On an ongoing basis, the Fuel Procurement Process will supply the FP&RM process the amount of SO₂ allowances that it projects to use based on actual and projected purchases. The FP&RM process will use these estimates and actual data from emission monitors to formulate and execute a plan of SO₂ allowance purchases. The FP&RM process will coordinate the purchases of allowances and the assigning of allowances to individual power stations with the Environmental Affairs Process.



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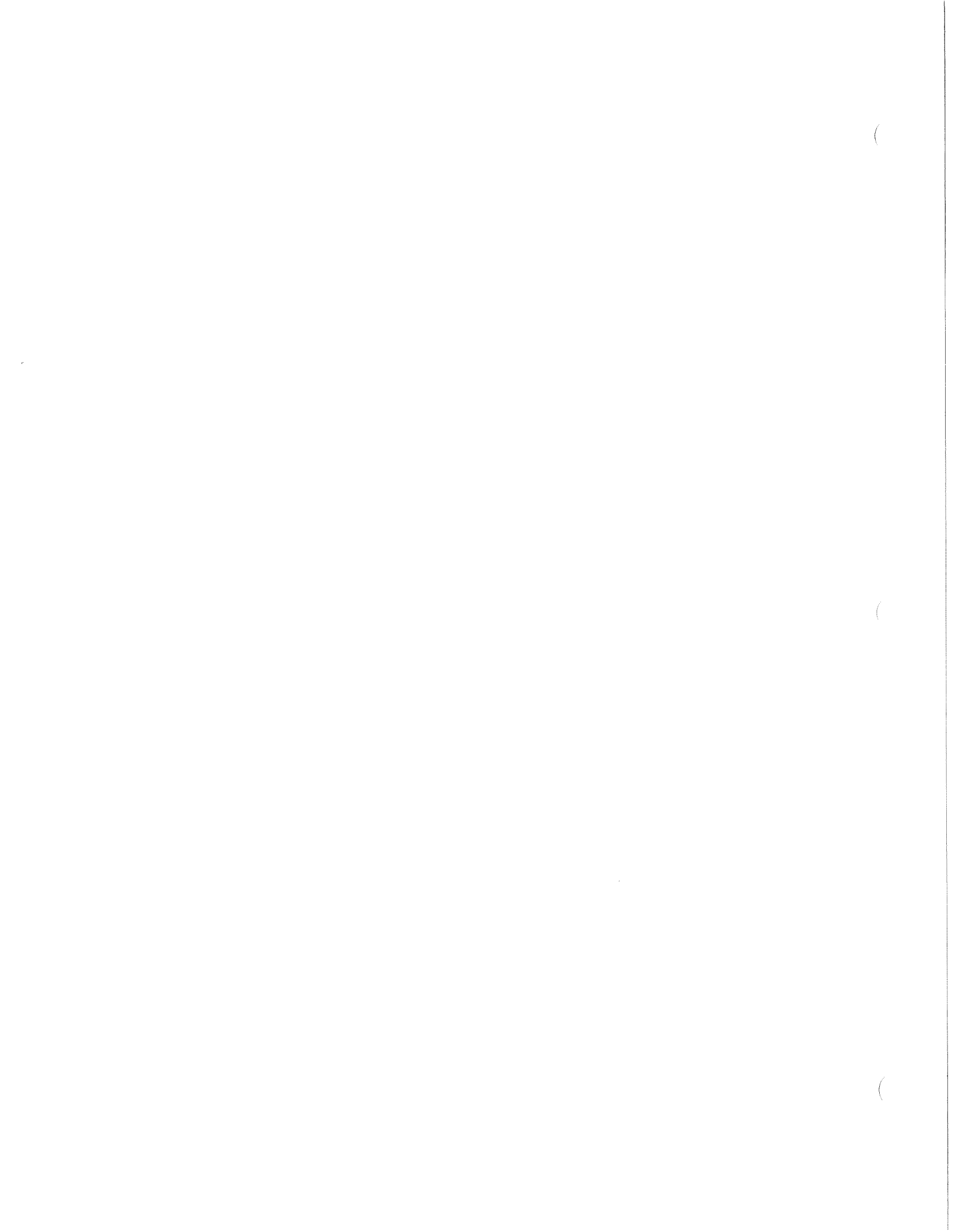
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**PROCEDURE FOR PROPOSAL HANDLING AND FUEL COST
EVALUATION COMPUTER PROGRAM**

Proposals received in response to a written solicitation will be held unopened by the Fuel Process through the designated deadline. For spot solicitations, at any point in time after this deadline, the proposals will be opened with the Fuel Administrative Assistant and one or more Fuel Buyers in attendance. The proposals will be entered into the Fuel Cost Evaluation Computer Program at this time. To aid in the security of proposal price and bid information, responses to proposal solicitations will not be accepted by Fax or e-mail. Proposals that are received after the deadline will be handled on a case-by-case basis to determine their eligibility for evaluation. If legitimate information can be obtained to determine that the proposal was sent to be received before the deadline, a proposal that is received after the deadline may be considered; otherwise, proposals received after the deadline will not be considered.

The Fuel Cost Evaluation Computer Program was designed by East Kentucky Power Cooperative, Inc., ("EKPC") to aid in evaluating coal proposals for the varying power stations. Parameters, including but not limited to, boiler maintenance, ash landfill cost, SO₂ allowance cost, lime cost, and cost of money for payment methods, etc., are used to arrive at a total cost of burning a specific quality of coal. *Exhibit 41* is a list of the variables that are reviewed annually, or sooner if needed, and *Exhibit 42* is a manual that describes the program more fully. Also, *Exhibit 43* is a copy of the Proposal Opening form that will be included with every coal evaluation that is performed. The Proposal Opening sheet shows the EKPC personnel involved in opening the proposals and provides additional measures to aid in the accuracy of the data input.



**PROCEDURE FOR THE PROCUREMENT OF NATURAL GAS
FOR COMBUSTION TURBINES**

I. Objective

To outline the proper procedure for the procurement of natural gas peak power requirements of East Kentucky Power Cooperative, Inc.'s ("EKPC") produced by combustion turbine generation.

II. Procedure

- A. Generation Dispatch will prepare a short-range, one- to five-day forecast based on weather data, projected load requirements, available internal generation, committed power purchases, transmission availability, and any other pertinent information.
- B. Generation Dispatch will evaluate the cost of internal combustion turbine generation versus hourly and day ahead power purchases using estimated power purchase prices and EKPC combustion turbine cost calculated using daily projected prices for natural gas provided by the Fuel Process.
- C. If EKPC combustion turbine generation is justified, Generation Dispatch will contact the Combustion Turbine Superintendent to verify unit availability, natural gas price, and any transportation restrictions. The Fuel Process shall relay any information regarding natural gas pricing or transportation concerns/restrictions to the Combustion Turbine Superintendent and Generation Dispatch. During times of normal natural gas pipeline operation when balancing can be achieved the following day, Generation Dispatch will provide the Combustion Turbine Superintendent the number of combustion turbine units needed, projected run time on each unit, and approximate load factor. The projected quantity of natural gas required will be calculated using this information. Under high load conditions for EKPC's system and/or the natural gas pipeline system, the Fuel Process and Generation Dispatch Supervisor will discuss the available information to plan the best course of action regarding hourly power purchases, operation of combustion turbine units on natural gas versus fuel oil, and locking in purchases of natural gas.
- D. The Combustion Turbine Superintendent will notify the Fuel Process or EKPC's natural gas marketer, if one is being used, of the natural gas requirement.

- E.** The Fuel Process or EKPC's natural gas marketer, if one is being used, will verbally contact multiple natural gas suppliers to obtain prices for the quantity required. These suppliers will have already been approached and either signed contract terms and conditions or agreed to the NAESB standard contract agreement. The natural gas will be purchased from the supplier or suppliers with the lowest evaluated price considering quantity, transportation, storage, supplier financial strength, etc.
- F.** Purchase approval shall be as described in the Gas Matrix schedule (*Exhibit 1*).
- G.** A confirmation schedule will be executed to document the quantities and prices (*Exhibit 44*).
- H.** Purchases shall be ratified monthly by the President and Chief Executive Officer and reviewed monthly by the Fuel and Power Supply Committee and Board of Directors ("Board") (*Exhibit 45*).
- I.** Contract documentation shall be prepared for the Fuel Procurement Process' files, which includes an executed copy of the fuel contract, if applicable, confirmation schedule (*Exhibit 44*), Smith Station fuel log (*Exhibit 46*), and monthly report that is ratified by the President and Chief Executive Officer and reviewed by the Fuel and Power Supply Committee and Board (*Exhibit 45*).
- J.** Natural gas deliveries may begin on the date specified and under the terms of the executed confirmations.
- K.** The Planning Process will project natural gas usage requirements as part of EKPC's budgeting process.
- L.** The Fuel Process in conjunction with finance, to the extent possible, will hedge the future price on a portion of its projected natural gas purchases taking into account future power prices, volume certainty, transmission constraints for power delivery, future gas price projections, etc., to achieve the most desirable risk management scenario for EPKC and its members.
- M.** The Fuel Process will perform a comparison of actual gas cost compared to the current market for natural gas.

**EAST KENTUCKY POWER COOPERATIVE, INC.
FUEL AND LIME PROCUREMENT MANUAL
LIST OF EXHIBITS**

	<u>Exhibit Number</u>
Natural Gas Authority Matrix	1
Request for Contract Coal Proposals	2
Coal Bidders' List	3
Coal Sales Proposal	4
Proposal Log	5
Coal Contract Fuel Evaluation Report (sorted by evaluated price)	6
Coal Mine Evaluation Sheet	7
Coal Contract Recommendation	8
Fuel and Power Supply Committee Coal Contract Approval	9
Board of Directors Coal Contract Approval	10
Certification Regarding Debarment	11
Certification Regarding Lobbying	12
Executed Coal Contract	13
Projected Fuel Usage	14
Monthly Production Requirements (MWh and Tons)	15
Request for Spot Coal Proposals	16
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Spot Coal Purchase Order Recommendation (greater than three months)	18
Fuel and Power Supply Committee Spot Coal Purchase Order Approval	19
Board of Directors Spot Coal Purchase Order Review	20
Spot Coal Purchase Order	21
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Test Coal Purchase Recommendation and Approval	24
Price Adjustment Schedule	25
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