APPENDIX 4-2

NOTICE OF INTENT- ALTON COAL LLC, COAL MINE & WASTE COALSIZING/STOCKPILING FACILITY-COAL HOLLOW MINE

By: JBR Environmental Consultants, Inc.

Alton Coal Development, LLC

Notice of Intent to Process Coal from Surface Mining
Coal Hollow Mine – Coal Sizing & Stockpiling Facility
Kane County, UT

Submitted on
May 8, 2007

to

Utah Division of Air Quality
150 North 1950 West
Salt Lake City, UT 84114

Prepared by:

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Sandy, UT
(801) 943-4144

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1.0 INTRODUCTION AND OVERVIEW

Alton Coal Development, LLC (Alton) is filing this Notice of Intent (NOI) as an initial application for an Approval Order (AO) to operate a sizing and stockpile facility for a surface coal mine at a location in Kane County, Utah. The Coal Hollow Mine will be located in Sections 19, 20, 29, and 30 of Township 39 S, Range 95 W; south-southeast of Alton, Utah.

With respect to calculated emissions, Alton has included spreadsheets based on processing activities rather than individual pieces of equipment. Process-based emission calculations present the most accurate assessment of overall emissions at the location. Any ambient air quality impacts from emissions generated by the equipment at the processing plant are discussed in Section 6.0 – Ambient Air Quality Impact Analysis.

2.0 GENERAL FACILITY INFORMATION

Alton's Coal Hollow Mine - Coal Sizing & Stockpile Facility will be located in Sections 19, 20, 29, and 30 of Township 39 S, Range 95 W, Kane County, Utah. The corresponding Universal Transverse Mercator (UTM) Datum NAD27, Zone 12 coordinates are:

Northing: 4140699 meters
Easting: 371534 meters

A location map of the site, as well as a proposed facility layout, is given in Appendix A.

2.1 UDAQ General Information

The required UDAQ General Information Form is given in Appendix B. The requested Appendix designations have been changed to Section or Subsection designations to be consistent with the format of this NOI.

3.0 PROCESS INFORMATION

The Coal Hollow Mine will be a typical surface coal mining operation. The coal sizing plant will be similar to a sand and gravel operation, with crushing/sizing, screening, and stockpiling. At the mine, the coal will be excavated and placed into haul trucks. Haul trucks will transport the coal to the on-site processing plant, where it will be dumped into a hopper/crusher system to feed a stacker belt. The stacker will feed a coal stockpile to a maximum of 150,000 tons. The stockpile will have chutes beneath it that will feed coal via a beltline to a truck load-out facility. The requested equipment includes one feeder breaker, one roll crusher, one stacker belt, and miscellaneous mobile equipment. Sources of emissions from the site include emissions from the coal sizing/crushing process, haul traffic, wind erosion and fuel combustion.

The primary operation at this site will be coal processing for sizing. The operation involves crushing, screening, and storage of coal. A process flow diagram is included in Appendix C. A brief description of the processes at the processing plant is listed below.

3.1 Sizing Operations

Sizing/Sorting Process – This operation involves crushing/breaking, screening, conveying, and stockpiling. Material is extracted at the mine using hydraulic excavators and delivered to the processing plant by haul trucks. The material is sized by a feeder breaker which is a round shaft with bits attached that spins across the coal to break the coal. One or more conveyors transfer the broken up coal to the roll crusher and from the roll crusher to the stacker belt and into the stockpile.

Hauling – The material is transported to the processing plant via end dump and belly dump haul trucks. Highway approved haulage trucks take the finished product 113 miles off site for transport by rail.

3.2 Process Equipment and UDAQ Equipment Forms

With the submittal of this NOI, Alton proposes to permanently operate the equipment shown in Table 3.2-1.

Table 3.2-1 – Coal Hollow Mine Processing Plant Equipment and Production

Equipment Type	Number at Location	Production	
		Hourly	Annual**
Secondary Crusher (Feeder Breaker)	1	1200*	2,000,000
Secondary Crusher (Roll Crusher)	1	1200*	2,000,000
Conveyors	6	1200*	2,000,000
Emergency Diesel Generator	1	Capacity 500kW	>250
Fuel Tanks		**Capacity**	**Total Capacity**
Diesel Storage Tanks	2	12,000 gallons	24,000 gallons
Gasoline Storage Tank	1	4000 gallons	4000 gallons

* tph, tons per hour
** tpy, tons per year

With this installation, Alton anticipates a maximum of 10 drop points to accommodate the crushing system. Alton requests flexibility in hourly operation limitations to 24 hours per day and with that flexibility will not exceed the annual production limits given in Table 3.2-1. This approach is necessary as maximum hourly production is not always possible.

The required UDAQ forms for rock crushing equipment and internal combustion engines are given in Appendix D.

4.0 EMISSIONS RELATED INFORMATION

Emissions from the coal mining, sizing, and stockpiling operation are calculated on the basis of activities and throughput rather than the size or capacity of equipment. Emission factors for processing and loading/unloading are expressed in terms of pound of pollutant per ton of material processed[1]. Emission factors for stockpile wind erosion are expressed in terms of pound of pollutant per acre. Emission factors for combustion devices are expressed in terms of pound of pollutant per horsepower capacity per hour of operation.

Short-term emission rates are expressed in terms of pound of pollutant per hour and long-term emission rates are expressed in terms of ton of pollutant per year. The short-term rates are based on maximum hourly production, while long-term rates are based on maximum annual production, as given in Table 3.2-1.

The only point source emissions at the facility will be from the internal combustion engine; all other particulate emissions are considered fugitive emissions.

The spreadsheets in Appendix E give calculated emissions for each of the following activities:

- Product sizing, including controlled[2] crushing, screening, and conveyor transfers or drop points,
- Material removal (coal, topsoil and overburden),
- Stockpile loading/unloading,
- Dozing and dumping of material (coal),
- Stockpile and disturbed area wind erosion,
- Combustion devices,
- Fugitive emissions from haul road traffic.

The subsequent uncontrolled and controlled Potential To Emit (PTE) emissions from all processes are given in Tables 4.0-1 and 4.0-2. The emissions shown are based on mining over a rolling 12-month period and on operating the combustion devices over a rolling 12-month period.

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[1] Process-specific emission factors are referenced on the individual emission calculation spreadsheets in Appendix E.
[2] Control means that the moisture content of the material being processed is greater than that specified in AP-42 for use of controlled emission factors; i.e., 2.88%.

Table 4.0-1 – Total Controlled PTE Emissions

Pollutant	Hourly Emission Rate (lb/hr)	Annual Emission Rate (tpy)
PM	67.66	132.33
PM_{10}	21.20	41.01
$PM_{2.5}$	0.68	1.46
NO_x	7.59	0.95
SO_2	0.95	0.12
CO	2.37	0.3
VOC	0.33	0.04
HAPs	insig	insig

Both uncontrolled and controlled emissions were evaluated to determine the status of the source. The uncontrolled emissions from each criteria pollutant are less than 100 tons per year (tpy), and thus the controlled emissions from each criteria pollutant are less than 100 tpy, classifying the source as minor. Uncontrolled annual emissions are based mainly on a throughput limitations as opposed to an hours per year. The uncontrolled emissions from each hazardous air pollutant (HAP) are less than 10 tpy, and the combination of all HAPs is less than 25 tpy, classifying the source as minor for HAPs.

5.0 AIR POLLUTION CONTROL EQUIPMENT INFORMATION

This section contains the required information for pollution control measures used on the types of equipment proposed for permanent installation in this NOI. In most cases, the analysis of Best Available Control Technology (BACT) is a summary of previously completed top-down analyses and/or the result of applying common industrial process knowledge for the type of control technology normally used on a particular piece of equipment.

5.1 Best Available Control Technology Analysis

BACT is typically identified by a "top-down" analysis in which engineering feasibility, economic impact(s), environmental impact(s), energy consumption, and cost considerations are applied to each potential technology category. BACT is the technology that emerges from the analysis as the best choice based on all considerations. For purposes of this NOI, a detailed and comprehensive "top-down" presentation is not necessary for the equipment proposed at the Coal Hollow Mine for two reasons:

1. The equipment is relatively simple and control technology options are limited.
2. Prior analyses and process knowledge have defined BACT categorically and reiteration of the analyses is not necessary.

Consequently, for each type of equipment covered in this NOI, BACT is identified, and the basis for the choice is discussed. These controls will be implemented at the facility for the existing equipment.

Sizing (Primary and Secondary)
Emissions from breaking/sizing operations are normally controlled by inherent moisture content and/or added moisture from water sprays. In the case of the processing plant, water sprays will not be in use as the moisture content of the material is 7-10%. This type of control constitutes BACT for sizing. The moisture inherent in the material adequately controls fugitive emissions generated by the sizing of materials. Baghouse technology can be applied; however, typically when baghouses are used on crushers they control emissions from numerous additional emission points (additional crushers, drop points, conveyor transfers, or screens). The economic and cost considerations would demonstrate that the application of baghouse technology to a single crushing circuit is cost prohibitive.

Conveying Operations (Feeder, Stacker, Conveyor Belt, etc.)
BACT for these process steps or operations is applied or inherent moisture. Feeders serve to channel the material from a bulk area to a smaller point. Emissions are minimal and the use of any other technology (dust collector, etc.) is impractical and ineffective because the pickup area is too great.

A stacker is an elevated conveying device that allows material to be stacked at different positions on a stockpile. The only emission points are transfer points onto the elevating belt and from the elevating belt onto the stockpile. In both cases, the fall distance is minimized, and the material transferred to the elevating conveyor is already moist. Additional water may be applied on an as-needed basis. For the drop from the stacker to the stockpile, moisture and drop distance minimization provide the best control.

Conveyor transfer points are locations at which processed material moves from one conveyor belt to another. Typically the transfers involve the drop of material a relatively small distance. Since the material on the conveyors is already moist from inherent and/or added moisture, fugitive emissions are already controlled, and additional controls are not necessary. Also, the conveyors that transport material from the stockpile to the trucks are located underground, beneath the stockpile.

For all sources of fugitive emissions in this category and covered in this NOI, inherent moisture is BACT. For reasons already discussed, baghouse technology is not appropriate. Additionally, when the incremental cost is considered, i.e., the differential cost per ton of pollutant removed between water application and baghouse technology, the cost is unreasonable.

Diesel-fired Emergency Generator
BACT for the combustion device is the use of low-sulfur diesel and proper operation and maintenance. This engine also meets EPA Tier II emission levels for diesel engines, which is considered BACT. The application of any add-on technology to control gaseous emissions is cost prohibitive.

6.0 AMBIENT AIR QUALITY IMPACT ANALYSIS

The NOI Guidance provided by UDAQ requires that NOIs for new facilities with emissions above pollutant-specific thresholds in NAAQS attainment areas be accompanied by air quality impact analyses.

6.1 Criteria Air Pollutants

This facility is located in an area of attainment for all criteria pollutants, so applicability of air dispersion modeling of primary pollutants is required for this installation. Table 6.1-1 identifies those primary pollutants, the PTE emissions for the facility, and the modeling thresholds. As indicated in the table, air dispersion modeling of PM_{10} is required. Since this new source is still in the initial phase, modeling was not completed at this time. As soon as site drawings, equipment configurations, and other site related procedures are finalized, modeling will occur. A modeling protocol will be developed and submitted to UDAQ.

Table 6.1-1– Modeling Thresholds

Pollutant	Facility Emissions PTE (TPY)	Modeling Threshold (TPY)
Point PM_{10}	0.12	15
Non-point PM_{10}	40.89	5

6.2 Hazardous Air Pollutants

The UAC R307-410-4 requires sources to compare proposed HAP emissions to the emissions threshold value (ETV). If the maximum hourly HAP emissions exceed the ETV, the HAP emissions must be modeled. The UDAQ Form 11 for combustion equipment reiterates the requirement for modeling of formaldehyde emissions.

The hourly emission rates of all HAPs are below the modeling threshold. Additional detail on this conclusion is given in the emission calculation spreadsheets in Appendix E.

7.0 REQUESTED CHANGES TO APPROVAL ORDER CONDITIONS

This section contains proposed language for the Approval Order (AO). The format of the proposed AO is the standard format used by UDAQ for other AOs. Alton anticipates that submitting draft AO language will assist UDAQ and allow for the expeditious issuance of the final AO.

General Conditions:

1. This AO applies to the following company:

   Site Office
   Directions to the Coal Hollow Mine: From Alton, UT, travel south on County Road 136 approximately 3 miles. Mine is located east of the County Road.

Corporate Office
Alton Coal Development, LLC
PO Box 1230
615 North, 400 East
Huntington, Utah 84258

Phone Number (435) 687-5310
Fax Number (435) 687-5311

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307), and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.

3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emission covered by this AO must be approved in accordance with R307-401-1.

5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:

   A. Emission inventories — Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
   B. All other records — Two years.

6. Alton shall install and operate the aggregate processing equipment and shall conduct its operation of the Coal Hollow Mine in accordance with the terms and conditions of this AO, which as written pursuant to Alton's Notice of Intent submitted to the Division of Air Quality (DAQ) on April 26, 2007.

7. The approved installations shall consist of the following equipment:

Aggregate Plant

A. One (1) 270 ton per hour (tph) feeder breaker
B. Two (2) 270 ton per hour (tph) roll crusher(s)
C. Two (2) 270 tph stacker belt
D. One (1) Tier II diesel powered emergency generator, 500 kW capacity
E. Associated conveyors, stackers, etc.
F. Associated loaders, dozers, drills, etc.

8. Alton shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been installed and is operational, as an initial compliance inspection is required. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, Attention: Compliance Section.

   If installation has not been competed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the installation. At that time, the Executive Secretary shall require documentation on the continuous installation of the operation and may revoke the AO in accordance with R307-401-11.

Limitations and Test Procedures

9. Visible emissions from the following emission points shall not exceed the following values:

   A. All crushers – 15%
   B. All screens – 10%
   C. All conveyor transfer points – 10%
   D. All diesel engines – 20%
   E. Conveyor drop points – 20%
   F. All other points – 20%

10. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emissions determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made one-half the vehicle length or greater behind the vehicle and at approximately one-half the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.

11. The following production limits shall not be exceeded:

    A. 2,000,000 tons of processed coal material per rolling 12-month period.
    B. 250 operating hours for the 500 kW diesel generator, per rolling 12-month period.
    C. 7,488 operating hours for the mine, per rolling 12-month period.
    D. To determine compliance with a rolling 12-month total, the owner/operating shall calculate a new 12-month total by the twenty-fifth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. The records of production shall be kept on a daily basis. Hour of operation and production shall be determined by supervisor monitoring and maintaining of an operations log.

12. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and / or chemically treated to control fugitive dust. The application of water or chemical treatment shall be used except when the ambient temperature is below freezing (32°). If chemical treatment is used, it shall take place two (2) times a year and watering shall be initiated daily dependant upon observed dust generation. The opacity shall not exceed 20% during all times the areas are in use or unless it is below freezing. Records of water treatment shall be kept for all periods when the plant is in operation. The records shall include the following items:

    A. Date of application
    B. Number of treatments made
    C. Rainfall received, if any
    D. Time of day treatments were made

    Records of treatment shall be made available to the Executive Secretary or Executive Secretary's representative upon request and the records shall include the two-year period prior to the date of the request.

13. The haul roads shall not exceed 7900 feet combined, and the vehicle speed along the haul roads shall not exceed 15 miles per hour. The vehicle speed on the haul roads shall be posted, at minimum, on site at the beginning of each haul road so that it is clearly visible from the haul road.

14. The open or disturbed area shall not exceed limits set forth by the Division of Oil, Gas, and Mining without written consent from the Executive Secretary.

15. The storage piles and unpaved operational areas shall be watered to minimize generation of fugitive dusts as dry conditions warrant or as determined necessary by the Executive Secretary. The total area of coal storage piles shall not exceed 3.35 acres and overburden storage piles shall not exceed 60 acres.

Fuels

16. The sulfur content of any diesel fuel burned shall not exceed 0.5 percent by weight. Sulfur content shall be decided by ASTM Method D-4294-89 or approved equivalent. The sulfur content shall be tested if directed by the Executive Secretary.

Federal Limitations and Requirements

17. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of

operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.

18. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.

19. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name. Under R307-150-1, the Executive Secretary may require a source to submit an emission inventory for any full or partial year on reasonable notice.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the Division of Air Quality (DAQ). The Utah Administrative Code R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site: http://www.airquality.utah.gov

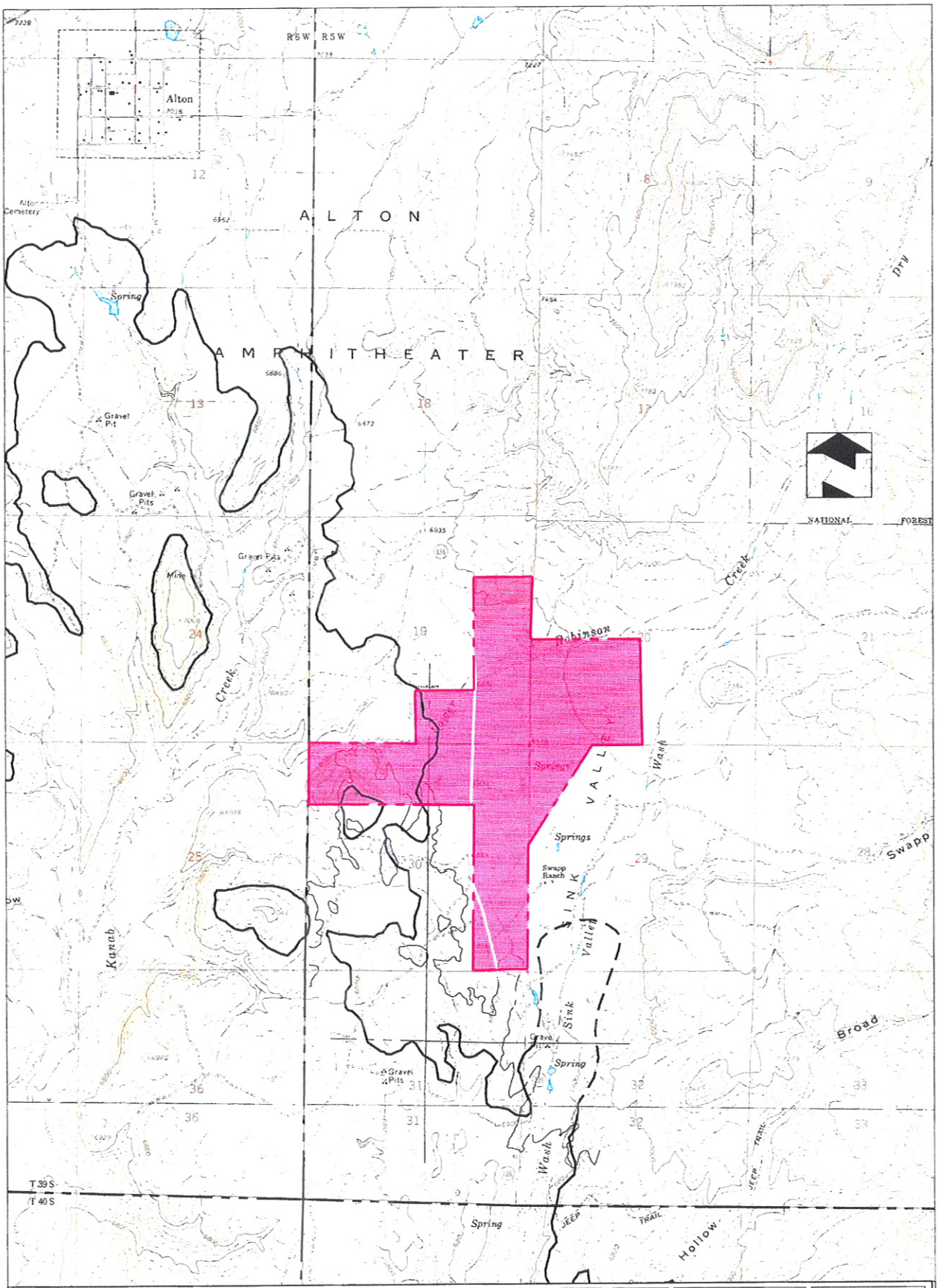
The annual emissions estimations below include point source, fugitive emissions, fugitive dust, road dust, etc. and do not include tail pipe emissions, grandfathered emissions, etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The controlled PTE emissions for this source, Alton's Coal Hollow Mine, are currently calculated at the following values:

	Pollutant	Tons/yr
A.	PM_{10}	41.01
B.	SO_2	0.12
C.	NO_x	0.95
D.	CO	0.3
E.	VOC	0.04
F.	HAPs	insig

APPENDIX A

Location Maps
Proposed Facility Layout



LEGEND:	DRAWN BY:	CHECKED BY:
PROJECT AREA	N. BUTKOVICH	APC
COAL LINE BOUNDARY	DRAWING: 1 – 1	DATE: 8/16/04
COUNTY ROAD		SCALE: 1" = 1000'
	JOB NUMBER: 1400	SHEET

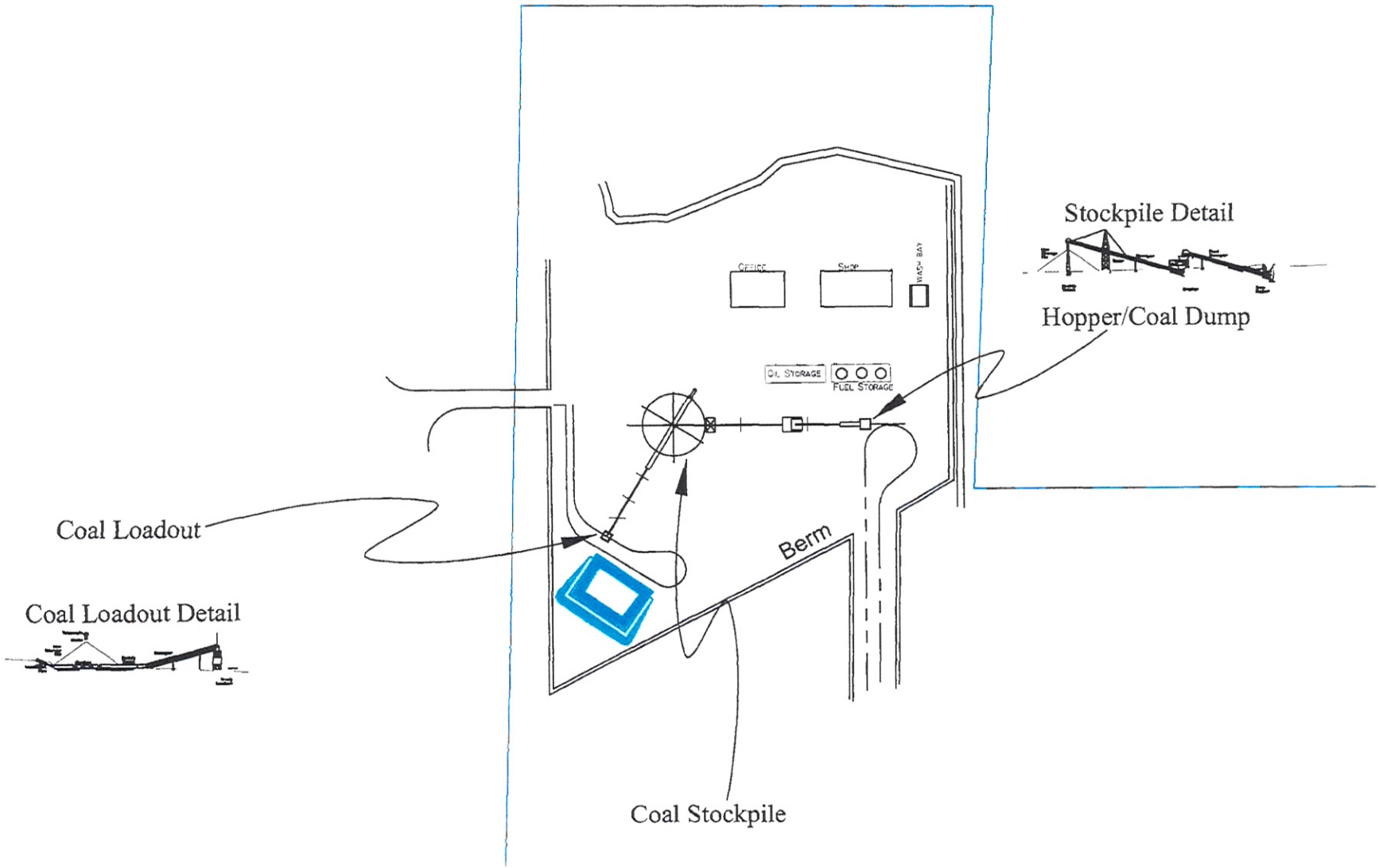
REVISIONS	
DATE:	BY:
9/13/04	NLB
3/6/06	NLB
4/27/06	NLB
5/18/06	NLB
6/6/06	NLB
2/21/07	NLB

PROJECT AREA

COAL HOLLOW PROJECT
ALTON, UTAH

DRAWING: 1-1

615 North, 400 East
P.O. Box 1230
Huntington, Utah 84528
Phone (435)687-5310
Fax (435)687-5311


Stockpile Detail
Hopper/Coal Dump
OFFICE
SHOP
WASH BAY
OIL STORAGE
FUEL STORAGE
Coal Loadout
Berm
Coal Loadout Detail
Coal Stockpile

APPENDIX B

UDAQ Form 1 – General Information

Utah Division of Air Quality
New Source Review Section

Date: **May 8, 2007**

Form 1
General Information

Application for: ✗ Initial Approval Order ☐ Approval Order Modification

AN APPROVAL ORDER MUST BE ISSUED BEFORE ANY CONSTRUCTION OR INSTALLATION CAN BEGIN. This is not a stand alone document. Please refer to the Permit Application Instructions for specific details required to complete the application. Please print or type all information requested. All information requested must be completed and submitted before an engineering review can be initiated. If you have any questions, contact the Division of Air Quality at (801) 536-4000 and ask to speak with a New Source Review Engineer. Written inquiries may be addressed to: Division of Air Quality, New Source Review Section, P.O. Box 144820, Salt Lake City, Utah 84114-4820.

Applicable base fee for engineering review and filing fee must be submitted with the application.

General Owner and Facility Information

1. Company name and address:
Alton Coal Development, LLC
PO Box 1230
615 North 400 East
Huntington, Utah 84528

Phone No.: **(435) 687-5310**
Fax No.: **(435) 687-5311**

2. Company contact for environmental matters:
Chris McCourt
PO Box 1230
615 North 400 East
Huntington, Utah 84528

Phone No.: **(435) 687-5310**
Fax No.: **(435) 687-5311**

3. Facility name and address (if different from above):
Sections 19, 20, 29, and 30 of Township 39 S, Range 95 W; south-southeast of Alton

Phone no.: **NONE**
Fax no.: **NONE**

4. Owners name and address:

Same as 1.

Phone no.:
Fax no.:

5. County where the facility is located in:
Kane County

6. Latitude & longitude, and/or UTM coordinates of plant:
Northing: 4140699 meters
Easting: 371534 meters

7. Directions to plant or Installation (street address and/or directions to site) (include U.S. Coast and Geodetic Survey map if necessary): Drive south on US-89 for 32.2 miles turn left onto Alton Rd and proceed 3.6 miles to town of Alton, turn left onto Kane County Rd #136 and travel 4 miles. Continue on CR #136 for an additional to miles to the facility.

8. Identify any current Approval Order(s): **NONE**
AO#_____Date_____ AO#_____Date_____
AO#_____Date_____ AO#_____Date_____

9. If request for modification, permit # to be modified: **NA** Date **NA**

10. Type of business at this facility: **Coal Mine**

11. Total company employees greater than 100?
☐ Yes ✗ No

12. Standard Industrial Classification Code
1221 Bituminous Coal and Lignite Surface Mining

Approval Order Application
Form 1 (Continued)

13. Application for:
- ✗ New construction
- ☐ Existing equipment operating without permit
- ☐ Change of permit condition
- ☐ Modification
- ☐ Permanent site for Portable Approval Order
- ☐ Change of location

14. For new construction or modification, enter estimated start date: May 2008, Estimated completion date: January 2009

15. For change of permittee, location or condition, enter date of occurrence: **N/A**

16. For existing equipment in operation without prior permit, enter initial operation date: **N/A**

17. Has facility been modified or the capacity increased since November 29, 1969: Yes ☐ No **N/A**

Process Information

18. Site plan of facility **(See Section 3.0)**

19. Flow diagram of entire process to include flow rates and other applicable information **(See Section 3.0)**

20. Detailed written process and equipment description. **(See Section 3.0)**
Description must include:
Process/Equip specific form(s) identified in the instructions
Fuels and their use
Raw materials used
Production rates
Equipment used in process
Operation schedules
(including daily/seasonal variances)
Description of product(s)
Description of changes to process (if applicable)

21. Does this application contain justifiable confidential data? ☐ Yes ✗ No

Emissions Information

22. Complete and attach Form 1d, Emissions Information **(See Section 4.0)**
Include Material Safety Data Sheets for all chemicals or compounds that may be emitted to the atmosphere.

23. Identify on the site plan **(see Section 3.0)** all emissions points, building dimensions, stack parameters, etc.

Air Pollution Control Equipment Information

24. List all air pollution control equipment and include equipment specific forms identified in the instructions. **(See Section 5.0)**

25. List and describe all compliance monitoring devices and/or activities (such as CEM, pressure gages).
N/A

26. Submit modeling for the project if required. **(See Section 6.0)**

27. Attach your proposal of what air pollution control devices, if any, or operating practices represents Best Available Control Technology. Discuss and evaluate all air pollution control technologies relevant to your situation or process. **(See Section 5.0)**

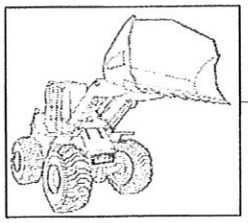
28. I hereby certify that the information and data submitted in and with this application is completely true, accurate and complete, based on reasonable inquiry made by me and to the best of my knowledge and belief.

Signature: Title: **Engineer**

29. **Chris McCourt**	30. Telephone Number: **(435) 687-5311**	30. Date: **May 8, 2007**

APPENDIX C

Process Flow Diagrams



End Dump Haul Trucks

Feeder Breaker

CONVEYORS

SECONDARY CRUSHER

Stacker

STOCK PILE

APPENDIX D

UDAQ Form 11 – Internal Combustion Engines

UDAQ Form 15 – Rock Crushing and Screening

Utah Division of Air Quality
New Source Review Section

Date: **May 8, 2007**
Company: **Alton Coal Development , LLC.**
Site/Source: **Coal Hollow Mine**

Form 11
Internal Combustion Engines

Equipment Information

1. Manufacturer: **"TBD"**
   Model no.: **"TBD"**

2. Operating time of Emission Source:

average	maximum
0.5 Hours/day	**1** Hours/day
0 Days/week	**7** Days/week
0Weeks/year	**52** Weeks/year

3. Manufacturer's rated output at baseload, ISO ____ hp or **500** Kw
   Proposed site operating range ____ hp or **500** Kw

Gas Firing – Not Applicable

4. Are you operating site equipment on pipeline quality natural gas: □ Yes □ No

5. Are you on an interruptible gas supply:
   □ Yes □ No
   If "yes", specify alternate fuel:
   _____

6. Annual consumption of fuel:
   _____ MMSCF/Year

7. Maximum firing rate:
   _____ BTU/hr

8. Average firing rate:
   _____ BTU/hr

Oil Firing

9. Type of oil:
   Grade number □ 1 ✗ 2 □ 4 □ 5 □ 6 Other specify _____

10. Annual consumption: **"TBD"** gallons

11. Heat content: **"TBD"** BTU/gal

12. Sulfur content: **<0.5%** by weight

13. Ash content: **Trace** % by weight

14. Average firing rate: **"TBD"** gal/hr

15. Maximum firing rate: **"TBD"** gal/hr

16. Direction of firing: ✗ horizontal □ tangential □ other: (specify)

Operation

17. Application:
- ✗ Electric generation
  _____ Base load _____ Peaking
- □ Emergency Generator
- □ Driving pump/compressor
- □ Exhaust heat recovery
- □ Other (specify) _____

18. Cycle
- ✗ Simple cycle
- □ Regenerative cycle
- □ Cogeneration
- □ Combined cycle

Emissions Data

19. Manufacturer's Emissions in grams per hour (lbs/hp-hr): **0.016** NO_X **0.005** CO **0.001** VOC **Unavailable** Formaldehyde. **Note: (AP-42 Factors)**

20. Attach manufacturer's information showing emissions of NO_x, CO, VOC, SO_x, CH_2O and PM_{10} for each proposed fuel at engine loads and site ambient temperatures representative of the range of proposed operation. The information must be sufficient to determine maximum hourly and annual emission rates. Annual emissions may be based on a conservatively low approximation of site annual average temperature. Provide emissions in pounds per hour and except for PM_{10}, parts per million by volume (ppmv) at actual conditions and corrected to dry, 15% oxygen conditions.

Method of Emission Control: NO ADDITIONAL CONTROL

□ Lean premix combustors □ Oxidation catalyst □ Water injection □ Other (specify)_____

□ Other low-NO_x combustor □ SCR catalyst □ Steam injection

Additional Information

21. On separate sheets provide the following:

A. Details regarding principle of operation of emission controls. If add-on equipment is used, provide make and model and manufacturer's information. Example details include: controller input variables and operational algorithms for water or ammonia injection systems, combustion mode versus engine load for variable mode combustors, etc. **NOT APPLICABLE**

B. Exhaust parameter information on attached form. **ATTACHED**

C. All calculations used for the annual emission estimates must be submitted with this form to be deemed complete. **SECTION 4.0**

D. All formaldehyde emissions must be modeled as per Utah Administrative Code R307-410-4 using SCREEN 3. **SECTION 6.0**

E. If this form is filled out for a new source, forms 1 and 2 must be submitted also.

INTERNAL C MBUSTION ENGINE
FORM 11 (continued)
EMISSION SOURCES

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this form.

AIR CONTAMINANT DATA							EMISSION POINT DISCHARGE PARAMETERS							
EMISSION POINT (1)		CHEMICAL COMPOSITION OF TOTAL STREAM			AIR CONTAMINANT EMISSION RATE		UTM COORDINATES OF EMISSION PT. (6)			STACK SOURCES (7)				
										HEIGHT ABOVE GROUND (FT)	HEIGHT ABOVE STRUCT. (FT)	EXIT DATA		
NUMBER	NAME	COMPONENT OR AIR CONTAMINANT NAME (2)		CONC. (%V) (3)	LB/HR (4)	TONS/YR (5)	ZONE	EAST (METERS)	NORTH (METERS)			DIA. (FT)	VELO. (FPS)	TEMP. (^{O}F)
1	GENSET1	PM_{10}			0.949	0.12	12							
		NO_X			7.592	0.95	12							
		SO_2			0.949	0.12	12							
		CO			2.373	0.3	12							
		VOC			0.332	0.04	12							

GROUND ELEVATION OF FACILITY ABOVE MEAN SEA LEVEL is approximately 5,000 feet.
UTAH AIR CONSERVATION BOARD STANDARD CONDITIONS ARE 68^{O} F AND 14.7 PSIA.

General Instructions for this form.

1. Identify each emission; point with a unique number for this plant site on plot plan, previous permits and emission inventory questionnaire. Limit emission point number to 8 character spaces. For each emission point use as many lines as necessary to list air contaminant data. Typical emission point names are: heater, vent, boiler, tank, reactor, separator, baghouse, fugitive, etc. Abbreviations are OK.
2. Typical component names are: air, H_2O, nitrogen, oxygen, CO_2, CO, NO_x, SO_x, hexane, particulate matter (PM_{10}), etc. Abbreviations are OK.
3. Concentration data is required for all gaseous components. Show concentration in volume percent of total gas stream.
4. Pounds per hour. (#/hr) is maximum emission rate expected by applicant.
5. Tons per year (T/Y) is annual maximum emission rate expected by applicant, which takes into account process operating schedule.
6. As a minimum applicant must furnish a facility plot plan drawn to scale showing a plant benchmark, latitude and longitude correct to the nearest second for the benchmark, and all emission points dimensioned with respect to the benchmark. Please show emission point UTM coordinates if known.
7. Supply additional information as follows if appropriate:
   (a) Stack exit configuration other than a round vertical stack. Show length and width for a rectangular stack. Indicate if horizontal discharge with a note.
   (b) Stack's height above supporting or adjacent structures if structure is within three "stack heights above ground" of stack.

Utah Division of Air Quality
New Source Review Section

Date May 8, 2007
Company: Alton Coal Development, LLC
Site: Coal Hollow Mine

Form 15
Rock Crushing and Screening

Equipment Information

1. Check the appropriate crushing operations used in your process:

Type of Unit **Feeder Breaker/Roll Crusher**
Manufacturer **"TBD"**
Model **"TBD"**
Date Manufactured **"TBD"**
□ Primary Crushing type □ Cone □ Jaw □ Ball
✗ Secondary Crushing type □ Cone □ Jaw □ Ball
□ Tertiary Crushing type □ Cone □ Jaw □ Ball
Screen Manufacturer
Model and Date Manufactured
Screen type and size (triple, double, or single deck)

2. Dust sources will be controlled as follows:

	No Control	Pre Soaked	Water Spray	Bag house	Other (explain)
□ Feed hopper	□	□	□	□	✗
□ All belt transfer points	□	□	□	□	✗
□ Inlet to all crushers	□	□	□	□	✗
□ Exit of all crushers	□	□	□	□	✗
□ All shaker screens	□	□	□	□	✗

OTHER – Inherent moisture with added moisture by water sprays as needed.

3. Water Sprays

Total Water Rate to nozzles (gal/min):	Nozzle pressure (psi):	Quantity of nozzles at each spray bar location:
NA	**NA**	**NA**

4. Maximum Plant Production Rate and Operating Hours:

2,000,000 tons/yr **270** tons/hr
7488 hrs/yr **24** hrs/day

5. Water sprays used on stockpiles?
□ Yes □ No

Stockpile size: **3.35 acres - coal**

6. Number of conveyor belt transfer and drop points:
Approximately 15 or less

APPENDIX E

Emission Calculation Spreadsheets

EMISSIONS SUMMARY

1st Year of Operation

Source		PM		PM_{10}		$PM_{2.5}$		NO_x		SO_2		CO		VOC		Total HAPs	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Secondary Crushing - Controlled	Fugitive	2.88	2.40	1.30	1.08	0.24	0.20										
Conveyor Transfers - Controlled	Fugitive	1.68	1.40	0.55	0.46	0.16	0.13										
Material Removal - Controlled	Fugitive	16.95	26.43	5.09	7.93												
Topsoil Removal	Fugitive	20.80	0.67	6.24	0.20												
Product Dumping - Controlled	Fugitive	1.40	5.24	0.00	1.57												
Product Stockpile Wind Erosion	Fugitive	10.55	46.22	3.17	13.87												
Active Disturbed Area Wind Erosion - Controlled	Fugitive	0.60	2.63	0.18	0.79												
Inactive Disturbed Area Wind Erosion - Controlled	Fugitive	1.75	7.67	0.85	3.72												
Haul Roads - Controlled	Fugitive	10.09	39.57	2.88	11.28	0.29	1.13										
Generator Emissions	Non-Fugitive	0.95	0.12	0.95	0.12			7.59	0.95	0.95	0.12	2.37	0.30	0.33	0.04		
Totals	**Fugitive**	**66.71**	**132.21**	**20.25**	**40.89**	**0.68**	**1.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Non-Fugitive	**0.95**	**0.12**	**0.95**	**0.12**	**0.00**	**0.00**	**7.59**	**0.95**	**0.95**	**0.12**	**2.37**	**0.30**	**0.33**	**0.04**	**0.00**	**0.00**
Total		**67.66**	**132.33**	**21.20**	**41.01**	**0.68**	**1.46**	**7.59**	**0.95**	**0.95**	**0.12**	**2.37**	**0.30**	**0.33**	**0.04**	**0.00**	**0.00**

EMISSIONS SUMMARY

Subsequent Years of Operation

Source		PM		PM_{10}		$PM_{2.5}$		NO_x		SO_2		CO		VOC		Total HAPs	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Secondary Crushing - Controlled	Fugitive	2.88	2.40	1.30	1.08	0.24	0.20										
Conveyor Transfers - Controlled	Fugitive	1.68	1.40	0.55	0.46	0.16	0.13										
Material Removed - Controlled	Fugitive	16.95	26.43	5.09	7.93												
Product Dumping - Controlled	Fugitive	1.40	5.24	0.00	1.57												
Product Stockpile Wind Erosion	Fugitive	10.55	46.22	3.17	13.87												
Active Disturbed Area Wind Erosion - Controlled	Fugitive	0.60	2.63	0.18	0.79												
Inactive Disturbed Area Wind Erosion - Controlled	Fugitive	1.75	7.67	0.85	3.72												
Haul Roads - Controlled	Fugitive	10.09	39.57	2.88	11.28	0.29	1.13										
Generator Emissions	Non-Fugitive	0.95	0.12	0.95	0.12	0.00	0.00	7.59	0.95	0.95	0.12	2.37	0.30	0.33	0.04	0.00	0.00
Totals	**Fugitive**	**46.85**	**131.54**	**14.01**	**40.70**	**0.68**	**1.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Non-Fugitive	**0.95**	**0.12**	**0.95**	**0.12**	**0.00**	**0.00**	**7.59**	**0.95**	**0.95**	**0.12**	**2.37**	**0.30**	**0.33**	**0.04**	**0.00**	**0.00**
Total		**47.80**	**131.66**	**14.95**	**40.81**	**0.68**	**1.46**	**7.59**	**0.95**	**0.95**	**0.12**	**2.37**	**0.30**	**0.33**	**0.04**	**0.00**	**0.00**

PRODUCT SIZING EMISSIONS

Sizing - Uncontrolled	Throughput		PM Emission Factor[1]	PM_{10} Emission Factor[1]	PM Emissions		PM_{10} Emissions	
	tph	tpy			lb/hr	tpy	lb/hr	tpy
Secondary Crushing (1-Breaker)	1200	2,000,000	0.0054 lb/ton	0.0024 lb/ton	6.48	5.40	2.88	2.40
Secondary Crushing (1-Roll Crusher)	1200	2,000,000	0.0054 lb/ton	0.0024 lb/ton	6.48	5.40	2.88	2.40
Conveyor Transfers[3]	1200	2,000,000	0.003 lb/ton/point	0.0011 lb/ton/point	36.00	30.00	13.20	11.00

Sizing - Controlled[4]	Throughput		PM Emission Factor[1]	PM_{10} Emission Factor[1]	$PM_{2.5}$ Emission Factor[1]	PM Emissions		PM_{10} Emissions		$PM_{2.5}$ Emissions	
	tph	tpy				lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Secondary Crushing (1-Breaker)	1200	2,000,000	0.0012 lb/ton	0.00054 lb/ton	0.00010 lb/ton	1.44	1.20	0.65	0.54	0.12	0.10
Secondary Crushing (1-Roll Crusher)	1200	2,000,000	0.0012 lb/ton	0.00054 lb/ton	0.00010 lb/ton	1.44	1.20	0.65	0.54	0.12	0.10
Conveyor Transfers[3]	1200	2,000,000	0.00014 lb/ton/point	0.000046 lb/ton/point	0.000013 lb/ton/point	1.68	1.40	0.55	0.46	0.16	0.13

[1] AP-42, 5th Edition, Table 11.19.2-2

[2] AP-42 footnotes indicate no data available for primary/secondary crushing, but emission factors for PM_{10} for tertiary crushers can be used as an upper limit for primary/secondary crushing.

[3] Assumption is that a maximum of 10 drop points are in use.

[4] Moisture content is 7-10%; above the moisture content for controlled crushing in the Emission Factor Reference provided.

Alton Coal Cow Hollow Mine **NOI**

Overburden Removal

	Controlled Emissions			Uncontrolled Emissions		
Pollutant	Gram/sec	Lbs/hr	Tons/yr	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	2.08	16.49	24.70	4.16	32.99	123.50
PM10	0.62	4.95	7.41	1.25	9.90	37.05

Throughput Rates		
Hourly	2675.48	tons
Annual	20,034,000	tons

NOTE: 80% control

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining

TSP=((0.02 lb/ton*Tons/yr((365-P)/365))*0.75)/2000 WYO
PM10= TSP *0.3 WYO

Where

M=	Material moisture content	18	Natural moisture percent
S=	Material silt content	6.9	Silt Content (AP-42 Table 11.9-6)
P=	number of days in a year with at least 0.01 inches of precip	65	Days
A=	annual hours of operations	7488	hours

Alton Coal Cow Hollow Mine

Coal Removal

NOI

	Emissions		
Pollutant	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	0.06	0.46	1.73
PM10	0.02	0.14	0.52

Throughput Rates		
Hourly	270	tons
Annual	2,000,000	tons

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining

TSP=((0.003 lb/ton*Tons/yr((365-P)/365))*0.70)/2000 WYO
PM10= TSP *0.3 WYO

Where

M=	Material moisture content	8.5 Natural moisture percent
S=	Material silt content	8.6 Silt Content (AP-42 Table 11.9-6)
P=	number of days in a year with at least 0.01 inches of precip	65 Days
A=	annual hours of operations	7488 hours

Total Emissions From Material Removal

	Emissions		
Pollutant	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	2.14	16.95	26.43
PM10	0.64	5.09	7.93

Alton Coal Cow Hollow Mine **NOI**

Top Soil Removal

	Controlled Emissions			Uncontrolled Emissions		
Pollutant	Gram/sec	Lbs/hr	Tons/yr	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	2.62	20.80	0.67	5.24	41.61	3.33
PM10	0.79	6.24	0.20	1.57	12.48	1.00

Throughput Rates		
Hourly	3375.00	tons
Annual	540,000	tons

NOTE: 80% control

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining

TSP=((0.02 lb/ton*Tons/yr((365-P)/365))*0.75)/2000 WYO
PM10= TSP *0.3 WYO

Where

M=	Material moisture content	18	Natural moisture percent
S=	Material silt content	6.9	Silt Content (AP-42 Table 11.9-6)
P=	number of days in a year with at least 0.01 inches of precip	65	Days
A=	annual hours of operations	160	hours

Topsoil removal will take place during the fisrt month of operation and will be a one-time occurance as such the emission from the topsoil removal are only being accounted for in the first year of operation.

Product Dumping Emissions

Product Dumping Emissions	Controlled Emissions			Uncontrolled Emissions		
Pollutant	Gram/sec	Lbs/hr	Tons/yr	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	0.18	1.40	5.24	0.35	2.80	10.48
PM10	0.00	0.00	1.57	0.00	0.00	3.14

Throughput Rates		
Hourly	270	tons
Annual	2,000,000	tons

NOTE: 50% control

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining

TSP=((0.017 lb/ton*Tons/yr((365-P)/365))*0.75)/2000 WYO
PM10= TSP *0.3 WYO

Where

M=	Material moisture content	8.5	Natural moisture percent
S=	Material silt content	6.9	Silt Content (AP-42 Table 11.9-6)
P=	number of days in a year with at least 0.01 inches of precip	65	Days
A=	annual hours of operations	7488	hours

COAL STOCKPILE WIND EROSION EMISSIONS

Active Pile Emissions	Uncontrolled		
Pollutant	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	1.33	10.55	46.22
PM10	0.40	3.17	13.8660

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining
Where:

U= Wind Speed — 8 DAQ Default wind speed
OR
3.5 meters/sec

TSP= 1.2* (u) * 0.75
PM10 0.3 * TSP

Pile Size 3.35 Acre Assumes all piles active all the time
Usage 365 Days/year
8760 hrs/yr

TSP= 3.15 lb/acre-hr
PM10= 0.945

Active Disturbed Area Wind Erosion

Area: 70 acres

State of Wyoming Approved Emission factors
for fugitive dust emission sources from surface mining

TSP=0.25 Ton/acre/yr * acres * 0.75
PM10= 0.3 * TSP

Usage 365 Days/yr

Pollutant	Uncontrolled emissions		
	Grams/sec	Lbs/hr	Tons/yr
Total Particulate	0.378	2.997	13.13
PM10	0.113	0.899	3.94

Pollutant	Controlled emissions		
	Grams/sec	Lbs/hr	Tons/yr
Total Particulate	0.076	0.599	2.63
PM10	0.023	0.180	0.79

NOTE: 80% control

Inactive Storage Piles and other open areas

Area: 60 acres

AP-42 Sept 85
This section was not included in the Fifth Edition
Section 8 Mineral Products Industry
8.19 Construction Aggregate processing
8.19.1 Sand and gravel processing
Inactive storage piles

TSP=	3.5 lb/acre/day	Table 8.19.1-1
PM10=	1.7 lb/acre/day	Table 8.19.1-1
	80% Control Efficiency	

Usage 365 Days/yr

Pollutant	Uncontrolled emissions		
	Gr/sec	Lbs/hr	Tons/yr
Total Particulate	1.103	8.750	38.33
PM10	0.536	4.250	18.62

Pollutant	Controlled emissions		
	Gr/sec	Lbs/hr	Tons/yr
Total Particulate	0.221	1.750	7.67
PM10	0.107	0.850	3.72

UNPAVED HAUL ROADS

Unpaved Haul Roads	80% Controlled			Uncontrolled		
Pollutant	Gram/sec	Lbs/hr	Tons/yr	Gram/sec	Lbs/hr	Tons/yr
Total Particulate	1.27	10.09	39.57	6.36	50.45	197.85
PM_{10}	0.36	2.88	11.28	1.81	14.38	56.40
$PM_{2.5}$	0.04	0.29	1.13	0.18	1.44	5.64

PM=	(k((s/12)^0.7)((W/3)^0.45)*((365-P)/365)	Pounds per VMT
PM_{10}=	(k'((s/12)^0.9)((W/3)^0.45)*((365-P)/365)	Pounds per VMT
$PM_{2.5}$=	(k2((s/12)^0.9)((W/3)^0.45)*((365-P)/365)	Pounds per VMT

	WHERE	
k=	particle size factor 30 um from Table 13.2.2-2	4.9
k'=	particle size factor <10 um from Table 13.2.2-2	1.5
k2=	particle size factor <2.5 um from Table 13.2.2-2	0.15
s=	silt content default mean value page 13.2.2-2	8.4
W=	Mean vehicle weight (tons)	110
P=	number of days in a year with at least 0.01 inches of precip	65

PM=	15.867746 Lbs/VMT	(lbs per vehicle mile traveled)
PM_{10}=	4.5230358 Lbs/VMT	(lbs per vehicle mile traveled)
$PM_{2.5}$=	0.4523036 Lbs/VMT	(lbs per vehicle mile traveled)

VMT/YEAR= 24937

Length of road (ft) 7900
Miles/Trip 1.5 Miles
Trips/year 16667

HOURS OF OPERATION
Hours per day 24
Days per week Varied
Weeks per year Varied
Hours per year 7844

Materials and Trucks

Coal	
Material (tons/year)	2,000,000
Empty Weight (tons)	50
Loaded Weight (tons)	170
Mean Vehicle Weight	110
Trips/year	16667
% of Total Trucks	100%

AP-42 Fifth Edition Volume 1, Supplement E December 2003
Section 13 Miscellaneous Sources, 11/2006 Revision
13.2 Fugitive Dust Sources
13.2.2 Unpaved Roads

DIESEL COMBUSTION EMISSIONS

Combustion Source	kW	hp	Hours of Operation[2]	Emission Factors (lb/hp-hr)				
				PM_{10}[1]	NO_{x1}	SO_2[1]	CO[1]	VOC[1]
Generator Set[1]	500	474.50	250	0.002	0.016	0.002	0.005	0.001

Emissions

Combustion Source	kW	hp	Hours of Operation[2]	PM10		NOx		SO_2		CO		VOC	
				Lb/hr	TPY	Lb/hr	TPY	Lb/hr	TPY	Lb/hr	TPY	Lb/hr	TPY
Generator Set[1]	500	474.50	250	0.949	0.12	7.592	0.95	0.949	0.12	2.373	0.30	0.332	0.04

[1] Emission Factor Reference: AP-42, 5th Edition, Table 3.3-1

[2] Emergency use only

MODELING REQUIREMENT CHECK

Criteria Modeling Check	PM_{10} Fugitive**	PM_{10} Nonfugitive**	NO_X	SO_2	CO	Lead
Controlled Emission Rates (tons per year)	40.89	0.12	0.95	0.12	0.30	NA
Modeling Threshold (tons per year)[1]	5	15	40	40	100	0.60
Modeling Required:	YES	NO	NO	NO	NO	

HAP Modeling Check	Benzene	E-Benzene	Hexane	Isooctane	Methyl Chloroform	Toluene	Xylene	Formaldehyde
TVL (mg/m^3)[2]	1.6 Chronic	85.2 Chronic	176 Chronic	266 Chronic	1911 Acute	188 Chronic	435 Chronic	0.37 Acute
ETF (lb-m3/mg-hr)[3]	0.051	0.051	0.051	0.051	0.038	0.051	0.051	0.038
Modeling Threshold (lb/hr)	8.16E-02	4.35E+00	8.98E+00	1.36E+01	7.26E+01	9.59E+00	2.22E+01	1.41E-02
Controlled Hourly Emission Rate (lb/hr)[4]								
Modeling Required:	NO	NO	NO	NO	NO	NO	NO	NO

[1] R307-405-6

[2] From the NIOSH Pocket Guide

[3] Table 2 in R307-410-5(1)(c)(u)(i)(C).

[4] If the controlled hourly emission rate is greater than or equal to the modeling threshold, then modeling of that pollutant is required.

** Typically if either the fugitive or nonfugitive PM_{10} modeling thresholds are exceeded, UDAQ will require modeling for all PM_{10}.

APPENDIX F

Air Dispersion Modeling Protocol

Air Dispersion Modeling Documentation

(To be submitted at a later date)

APPENDIX G

Alton Precipitation Data

ALTON, UTAH

Period of Record General Climate Summary - Precipitation

Station:(420086) ALTON

From Year=1928 To Year=2006

	Precipitation											Total Snowfall		
	Mean	High	Year	Low	Year	1 Day Max.		>= 0.01 in.	>= 0.10 in.	>= 0.50 in.	>= 1.00 in.	Mean	High	Year
	in.	in.	-	in.	-	in.	dd/yyyy or yyyymmdd	# Days	# Days	# Days	# Days	in.	in.	-
January	1.79	9.15	1969	0	1948	2.28	25/1969	6	4	1	0	21.1	80.6	1993
February	1.79	7.95	1932	0	1961	1.96	Sep-76	6	4	1	0	19.2	75	1969
March	1.57	6.17	1938	0	1955	3.55	Mar-38	6	4	1	0	14.5	56.7	1991
April	1.05	3.9	1988	0	1962	2	27/1952	5	3	0	0	4.4	23	1965
May	0.84	2.96	1992	0.02	1972	1.85	28/1934	4	2	0	0	0.6	8	1965
June	0.56	2.67	1952	0	1939	1.72	26/1952	3	2	0	0	0.1	6.5	1993
July	1.42	3.78	1968	0	1944	1.85	13/1946	7	4	1	0	0	0	1928
August	1.74	4.81	1963	0	1944	2.05	29/1951	8	5	1	0	0	0	1928
September	1.49	7.97	1939	0	1953	2.4	19/1972	5	3	1	0	0	0	1928
October	1.43	7.48	2004	0	1944	2.9	21/2004	5	3	1	0	1.3	18.5	2004
November	1.23	5.72	1978	0	1929	3.32	Feb-87	4	3	1	0	6.6	41.7	1982
December	1.52	6.24	1966	0	1930	3.35	31/1951	5	4	1	0	15.4	58	1936
Annual	16.43	25.82	1969	5.48	1956	3.55	19380303	65	41	9	2	83.3	178	1993
Winter	5.1	17.65	1969	1	1981	3.35	19511231	17	12	3	1	55.7	179	1993
Spring	3.45	8.28	1938	0.55	1955	3.55	19380303	16	10	2	0	19.5	60.5	1952
Summer	3.73	7.04	1999	0.78	1962	2.05	19510829	18	10	2	0	0.1	6.5	1993
Fall	4.15	11.35	2004	0.36	1956	3.32	19871102	14	9	3	1	7.8	41.7	1982

Table updated on Feb 6, 2007

For monthly and annual means, thresholds, and sums:
Months with 5 or more missing days are not considered
Years with 1 or more missing months are not considered
Seasons are climatological not calendar seasons

Winter = Dec., Jan., and Feb.

Spring = Mar., Apr., and May

Summer = Jun., Jul., and Aug.

Fall = Sep., Oct., and Nov.

APPENDIX 4-3

Management Plan with Burton Pugh Signature and Comments

By: Alton Coal Development, LLC

MANAGEMENT PLAN FOR
BURTON PUGH PROPERTY

The land in the permit area owned by Mr. Pugh provides forage for domestic livestock and wildlife habitat. This land is comprised of unirrigated pasture land, meadows, sagebrush/grass, pinyon-juniper, and oak brush communities (see Vegetation Map 3-1b). The livestock currently sustained on Mr. Pughes pasture land property are mostly cattle, but sometimes horses are kept on the property. The animals are supported in the pastures from April through November of the year. A management plan to support a similar postmining land use has been designed so that the property will not be over-grazed, yet support the animals desired by the landowner.

Following mining and reclamation activities, Mr. Pugh has expressed the desire for his land to be returned to its current or better condition for livestock and wildlife habitat. In accomplishing this, the pasture lands will be revegetated to focus on domestic livestock, but the seed mixtures will also include some plant species used by the resident wildlife species. Because it has been postulated that encroachment of juniper trees into the valley in recent years has had a negative effect on the local sage grouse populations, the revegetation plan for these areas will also focus on other plant species, or species that could have a positive effect on the birds as well as provide good forage for domestic livestock. The revegetation seed mixes for the Pugh property are shown in Chapter 3 including: the sagebrush/grass (Table 3-17), meadows (Table 3-18), pasture lands (Table 3-19), oakbrush (Table 3-21), and pinyon-juniper communities (Table 3-23).

The management plan for Mr. Pugh suggests that **1.125 animals/month/acre** could reasonable be sustained on the property. This figure was derived from the *Average Animal Weight Method* (Pratt and Rasmussen 2001) and is based on raising 1 cow weighing 1,000 lbs and her calf on pastures that have an annual biomass productivity of 1,800 lbs/acre. It conservatively estimates that one-half of the production will be consumed ("take half, leave half" rationale). Therefore, the total number of animals allowed on the property in the postmining land use management plan can be calculated by multiplying the number of animals/month/acre *by* the estimated number of pasture land acres available *by* the number of months the animals are maintained on a given pasture.

There is, however, one area within Mr. Pughes' property that currently supports pasture land, but once it is reclaimed, it will be seeded to a mixture that would be conducive to sage grouse enhancement. This field can easily located on Drawing 3-1b because it is the only pasture land located west of the county road. This land will be seeded with the sagebrush/grass mixture (Chapter 3, Table 3-17).

Mr. Pugh has reviewed the postmining contour proposed for his property as shown on Drawing 5-35. This drawing shows an excess spoil structure and a variance from original approximate contour. Mr. Pugh is in agreement that the variances from the original contour are suitable for his intended postmining land use for the property.

Burton Pugh

May 25, 2007
Date

APPENDIX 4-4

Management Plan with Richard Dame Signature and Comments

By: Alton Coal Development, LLC

MANAGEMENT PLAN FOR
RICHARD DAMES PROPERTY

The portion of land in the permit area owned by Mr. Richard Dame currently provides forage for domestic livestock and some wildlife species. This land is comprised mostly of unirrigated pasture land but also supports some native stands of pinyon-juniper and sagebrush communities (see Vegetation Map 3-1b).

Mr. Dame has expressed the desire to return his property to pasture land that focuses on domestic livestock, but also included some plant species for wildlife habitat. In doing so, the revegetation seed mix is composed primarily of native and introduced grasses and forbs, with no woody species to be planted (for the seed mixture refer to Chapter 3, Table 3-19).

The livestock currently sustained on Mr. Dame property are mostly cattle, with some horses. The animals are kept in the pastures from April through November of each year. A management plan to support this same postmining land use has been designed so that the property will adequately support the animals desired by the landowner and will not be over-grazed.

The management plan suggests that **1.125 animals/month/acre** could reasonably be sustained on the property. This figure was derived from the *Average Animal Weight Method* (Pratt and Rasmussen) and is based on raising 1 cow weighing 1,000 lbs and her calf on pastures that have an annual biomass productivity of 1,800 lbs/acre. It conservatively estimates that one-half of the production will be consumed ("take half, leave half" rationale). Therefore, the total number of animals allowed on the property in the postmining land use management plan can be calculated by multiplying the estimated number of animals/month/acre *by* the number of pasture land acres available *by* the number of months the animals are maintained on a given pasture.

[redacted]

R L Dame

Richard Dame

5-18-07

Date

COMMENTS (IF ANY) BY RICHARD DAMES

We would rather put grasses more suitable for cattle grazing - intermediate Brom - and wheat Crass.

talk to David Johnson
H 365 Box 49
Moccasin AZ 86022
928- 643-7297

We don't want Native Grasses.