

0010

Document Information Form

Mine Number: C/007/033

File Name: Incoming

To: DOGM

From:

Person N/A

Company State of Utah Department of Health

Date Sent: N/A

Explanation:

Annual Inspection Report

cc:

File in: C/007/033/Incoming

Refer to:

- Confidential
- Shelf
- Expandable

Date _____ For additional information



STATE OF UTAH DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
BUREAU OF AIR QUALITY
VISIBLE EMISSION OBSERVATION FORM

ART 10071033 #2
Page 1 of 2

Type of Inspection: Initial () Stack Test () CEM () Annual (✓) Followup () Surveillance () Complaint ()

Date 3/19/91 Time Arrived 1545 Time Departed _____

Memorandum To: File
Through: Jeff Dean Compliance Manager
Company: Airdelex Resources
Location & County: 5495 W. 3550 N. St. Carbon Co.
Phone: 637-5385
Mailing Address: P.O. Box 902
Price, Utah

Date County Contacted: 3/19/91
Observer's Signature: [Signature]
Certification Date: 10/50
Copy Of Report Given To: Mike Glasson
I Have Received A Copy Of These Observations
Signature: [Signature]

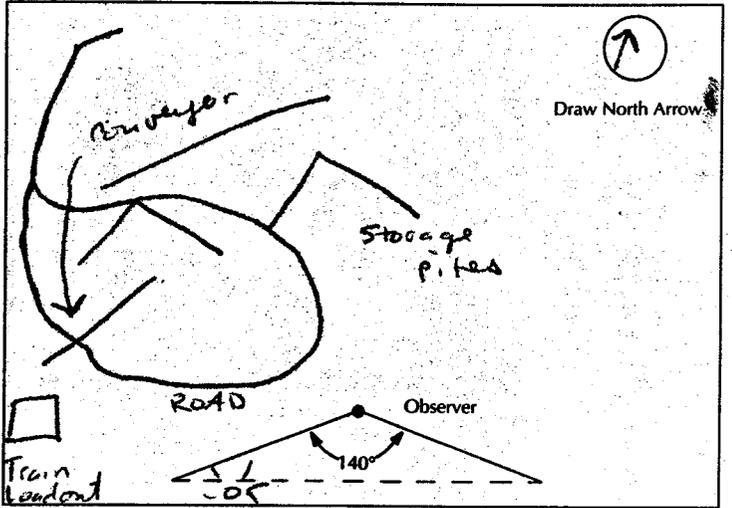
OBSERVATION AND WEATHER CONDITIONS

Source Class: A1 () A2 (✓) B () Unknown () State ID: _____
Government Code: FED () ST () CO () Municipal () District ()
Status: Under Construction () Temp. Shut Down ()

Distance To Source: Varies
Background Description: Various
Plume Color: None Length: _____
Steam Plume Y/N Attached Y/N Length of Steam Plume: NA
Wind Direction: _____ Speed: _____
Ambient Temp: 130°F Relative Humidity: 40%

Seasonal () Permanently Shut Down () Operating (✓)
Code: SIP () PSD () NESHAP () NSPS () CDS: 00015
Source: Under Load - Wildest
Height Of Discharge: _____ Dimensions: _____
Operating Parameters Of Source - Normal Yes (✓) No ()
Actual unknown Design unknown
Type Of Burner Fuel NA
Control Facility Coal Moisture / Water

Applicable Regulations/Approval Orders/Limitations	Compliance
Section 4.5 UACR - 20%	Y/N
Sec. 4.1 UACR - Minimal - Reads	Y/N
	Y/N



Stack Test Information

Maximum Allowable Emission Rate _____

Last Test Date _____ Test Due Date _____

Conveyor Drop Point

No.	Ht. Min	0	15	30	45	Avg.
1.	1500	45%				45%
2.						
3.						
4.						
5.						
6.		45%				45%

No	File in:	Avg.
1.	<input type="checkbox"/> Confidential	
2.	<input type="checkbox"/> Shelf	
3.	<input type="checkbox"/> Expandable	
4.	Refer to Record No <u>0010</u> Date _____	
5.	In C/ <u>007, 033</u> , <u>Incoming</u>	
6.	For additional information	

COMMENTS:

No trains loaded during inspection.
Material wet/snow covered.
Stoker operation no working at time of inspection - storage piles - no fugitive.

RECOMMENDATION: Incompliance at time of inspection.



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Date 3/19/91 Time Arrived 1545 Time Departed _____

Memorandum To: File
Through: Jeff Dean Compliance Manager
Company: Airdelex Resources
Location & County: 5495 W 3550 N Spring Carbon Co.
Phone: 637-5385
Mailing Address: P.O. Box 902
Price, Utah

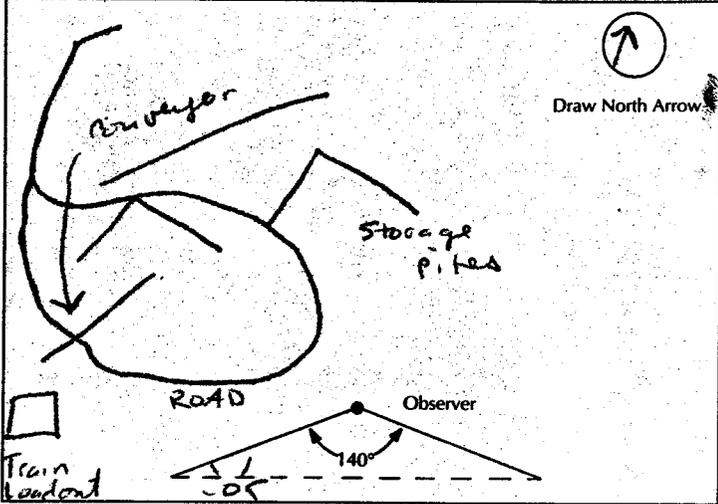
Date County Contacted: 3/19/91
Observer's Signature: [Signature]
Certification Date: 10/50
Copy Of Report Given To: Mike Glasson
I Have Received A Copy Of These Observations
Signature: [Signature]

OBSERVATION AND WEATHER CONDITIONS

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Government Code: FED () ST () CO () Municipal () District ()
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Seasonal () Permanently Shut Down () Operating (✓)
Code: SIP () PSD () NESHAP () NSPS () CDS: 00015
Source: Under Load - Wildest
Height Of Discharge: _____ Dimensions: _____
Operating Parameters Of Source - Normal Yes (✓) No ()
Actual unknown Design unknown
Type Of Burner Fuel NA
Control Facility Coal Moisture / Water

Distance To Source: Varies
Background Description: Various
Plume Color: None Length: _____
Steam Plume Y/N Attached Y/N Length of Steam Plume: NA
Wind Direction: _____ Speed: _____
Ambient Temp: 130°F Relative Humidity: 40%

Applicable Regulations/Approval Orders/Limitations	Compliance
Section 4.5 UACR - 20%	Q/N
Sec. 4.1 UACR - Minimal - Roads	Q/N
	Y/N



Stack Test Information

Maximum Allowable Emission Rate _____

Last Test Date _____ Test Due Date _____

Conveyor Drop Point

No.	Hr: Min	0	15	30	45	Avg.
1.	1500	45%				45%
2.						
3.						
4.						
5.						
6.		45%				45%

Roads / Yard

No.	Hr: Min	0	15	30	45	Avg.
1.						
2.		Minimal fugitive				
3.						
4.		Road Wet				
5.						
6.						

COMMENTS:

No trains loaded during inspection.
Material wet / snow covered.
Stoker operation no working at time of inspection - storage piles - no fugitive.

RECOMMENDATION: Incompliance at time of inspection.

UTAH BUREAU OF AIR QUALITY
NEW/MODIFIED SOURCE PLAN REVIEW FOR:

Mr. Michael Glasson
Andalex Resources, Inc.
P.O. Box 902
Price, Utah 84501

Re: Increase Coal Production
Carbon County, CDS B

Date: August 3, 1988

Notice of Intent Dated: June 2, 1988

Plant Contact: Michael Glasson

Phone Number: (801) 637-5385

Plant Location: Ten miles Northeast of Price, Utah

Filing Fee _____ = \$ 100.00

Review Engineer - total hours 25 (\$22.08/hr) = \$ 552.00

Modeler - total hours _____ (\$18.07/hr) = \$.

Computer time - total hours _____ = \$.

Notice To Paper _____ = \$ 24.00

Travel - total miles _____ (\$ 0.23/mile) = \$.

Total = \$ 676.00

Approved by Engineering Unit Manager _____

Approved by Technical Evaluation Section Manager M. Kellen 8/17/88

1536q

I. DESCRIPTION OF PROPOSAL

Andalex Resources, Inc. (formerly Tower Resources) has filed a notice of intent dated June 2, 1988 in which they have proposed to increase production at the Centennial Mine and to increase coal throughput at the Wildcat loadout facility. Both are currently permitted at 960,000 tons per year.

The mine and loadout operations were originally approved on June 13, 1980. There are three mines in this approval order which are part of the Centennial Mine. They are the Pinnacle Mine, the Apex Mine, and the Aberdeen Mine. The Pinnacle Mine and the Apex Mine are currently in production. The Aberdeen Mine will be developed in the next year or so. There is a storage pile and automated loadout at each of the two existing mines. The third mine will also have a similar loadout facility.

The owner/operator is proposing to increase production to 1,500,000 tons per year. Each of the three mines will produce 500,000 tons per year. The production level of 1,500,000 tons per year will be reached in 1989.

II. EMISSION SUMMARY

The following processes were included in the emission calculations:

- Conveyor drop to storage pile
- Underpile reclaim conveyor and drop to trucks
- Trucks to stockpile
- Drop to screens
- Screens
- Drop from screens to crusher
- Crusher
- Drop from crusher to stockpile
- Train loadout
- Coal storage piles

The emissions are as follows:

Particulate	50.313 tons/yr
PM ₁₀	16.856 tons/yr
SO ₂	0.4 tons/yr
NO _x	2.7 tons/yr
VOC	0.6 tons/yr
CO	3.6 tons/yr

This notice of intent represents a decrease in particulate emissions for this source.

III. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS

The following points will require application of best available control technology (BACT):

- Crushers
- Screens

- Conveyor transfer points
- Haul roads
- Storage piles
- Storage pile reclaim

Loadout
Operations areas

Crushers

BACT for the crushers has been determined to be a 15% opacity limitation. An enclosed crusher in a building which is evacuated to a baghouse will result in the lowest emission rate. An enclosed crusher with water sprays on the newly crushed surfaces has been shown to have no visual emissions as reported by inspectors and is the next best option. Water sprays on the crushed coal exiting an open crusher will allow the limitation to be met, provided adequate watering is done. Typically, the coal has a moisture content of 8 - 10 percent when it exits the mine. The second option will be used.

Screens

BACT for the screens has been determined to be a 10% opacity limitation. Enclosure of the screening unit in a building that is evacuated to a baghouse is the option with the lowest emission rate. An enclosed screen with water sprays has proven to have no visual emissions as reported by inspectors. The degree of screening required and the amount of potential emissions depend on the type of mining equipment used and the type of coal being produced. Open screens with only water sprays would require considerable justification to be considered BACT. The second option has been selected by the owner/operator.

Conveyor Transfer Points

BACT for the conveyor transfer points has been determined to be a 10% opacity limitation. Fully enclosed conveyors are the best option and result in the lowest emission rate. This option is also extremely expensive as the conveyor tunnel must be large enough to allow maintenance to be performed inside the enclosure. The cost of fully enclosing a conveyor is about three to four times the cost of a covered conveyor. The degree of control is not much less than for the enclosed conveyor. Covered conveyors have been proposed by the owner/operator.

Haul Roads

BACT for the haul roads is minimizing of emissions through operating practice. Paving of roads is the option which results in the lowest emission rate. This option has been used on the permanent roads at the mine site. When this is not a viable option for economic or other reasons, chemical treatment is the next best option. When chemicals are not allowed, graveling of the road surface with water sprinkling and frequent grading is the third best option. At present the roads are being treated with water and $MgCl_2$. This will continue to be the operating practice.

Storage Piles

BACT for the storage piles is minimizing of emissions through operating practice. Storage of materials at different points throughout the process is a common technique used to smooth out the operating conditions at different operations in the mining and distribution of coal. Storage is typically required at the mine mouth, processing plants, loadout facilities, and consumer facilities. The main methods of storage are bins, silos, and open stockpiles. Bins and silos are enclosed storage units that often use a bin vent fabric type filter for emission control depending on the surface moisture of the coal. This type of storage would have the least environmental impact. The silo is

expensive as a typical 10,000 ton capacity silo runs between two and three million dollars. It requires a production throughput of 2.5 to 3 million tons per year to justify a silo in most cases and then not for air pollution control. The coal also tends to freeze in silos and bins and "hang up" in cold weather unless insulation and heating elements are put in the silo. The amount of storage has a definite limit and is best suited for steady state operations with infrequent surges where rapid coal handling is a priority. An advantage of the units, besides pollution control, is the ability to automate and handle large quantities of coal. Large volume rail car loadouts are the most commonly used sites for silos and bins. These units are best suited for short-term, rapid turnover storage.

The open stockpile with an underpile reclaim is the next best storage option. This option has been selected. The typical stockpile is more flexible in its capacity and is used for short and long-term storage. The reclaim operation is commonly done by underpile feeders to a conveyor in a tunnel which is covered the rest of the way to a loadout surge bin or directly into trucks or rail cars. One stockpile is typically at the mine mouth of lower producing mines.

Long-term storage is almost exclusively done using the open storage pile. The pile is compacted to reduce water penetration and in some cases sprayed with a polymer to reduce dusting of the surface and reduce particulate emissions. Water addition is restricted as much as possible as the chemical reaction of adsorbing water releases heat and can cause spontaneous combustion and fires. Compacted coal piles sprayed with polymers to reduce wind blown emissions is the state of the art for long-term storage.

Storage Pile Reclaim

BACT for the storage pile reclaim is minimizing of emissions through operating practice. The best method of reclaiming coal is underpile reclaim to a belt conveyor in the tunnel under the storage pile. This method has been selected. The conveyor transfers the coal to either a surge hopper or a chute system that drops the coal into the trucks or railroad cars. This type of system often uses automated equipment such as electric eyes that will automatically load a set amount of coal into a truck that pulls under the chute or loadout hopper.

A less desirable method for small operations is by a front-end loader. When the volume of coal is large, the front-end loader is also a more expensive method as well as having higher particulate emissions. When the coal is fresh from the mine and still wet from sprays on the miners the emissions are not too excessive, but when the coal has been allowed to dry out through handling and processing, such as at the Levan loadout, the emissions can be excessive, and subsequent sprays or other control measures must be taken.

Open short-term storage in stockpiles which have a rapid turnover and high moisture content, such as at a mine portal where the coal is wet from the mine and is removed on a regular basis, results in small amounts of emissions and could be recommended as BACT. It is after crushing or long periods of standing that the emissions will increase from the stockpile. If the edges of a stockpile freeze, the lumps can be left or crushed with a dozer without disrupting the operation or causing emissions. If the coal has been treated with oil such as the stoker slack pile there would be little if any emissions generated from reclaim operations or by wind erosion.

Loadout

The underpile reclaim conveyor will feed a storage bin. The storage bin will drop the coal into railroad cars or trucks as they go under the bin. This is a batch operation. BACT for this operation is a 20% opacity limitation. The opacity limitation will be met by making the drop distance as small as practicable and maintaining a 6% moisture content in the coal. A telescoping chute will be used to make the drop distance as small as practicable. These measures represent the best option available.

Operations Areas

BACT for operations areas is minimizing of emissions through operating practices. These practices will include watering, covering with gravel, speed limits, and grading. If these practices are done adequately, the emissions will be kept to a minimum.

IV. APPLICABLE UTAH AIR CONSERVATION REGULATIONS (UACR)

This notice of intent is for a modification to an existing minor source. It is not a new major source or a major modification. The following federal and state regulations have been examined to determine their applicability to this notice of intent:

1. Section 3.1.1, UACR - Notice of intent required for a modified source. This regulation applies to all modifications.
2. Section 3.1.8, UACR - Application of best available control technology (BACT) required at all emission points. This regulation applies to every notice of intent.
3. Section 3.1.9, UACR - Rules for relocation of temporary sources. Andalex Resources is a permanent source. Therefore, this regulation does not apply to this notice of intent.
4. Section 3.2, UACR - Particulate emission limitations for existing sources which are located in a nonattainment area. Andalex Resources is not listed in this regulation. Therefore, this regulation will not apply to this notice of intent.
5. Section 3.3.2, UACR - Review requirements for new major sources or major modifications which are located in a nonattainment area or which impact a nonattainment area. This source is a minor source for all pollutants. Therefore, this regulation does not apply to this notice of intent.
6. Section 3.5, UACR - Emission inventory reporting requirements. This regulation requires any source which emits 25 tons or more per year of any pollutant to submit an emission inventory to the Bureau of Air Quality every year. Andalex Resources must comply with this regulation.
7. Section 3.6.5(b), UACR - Prevention of significant deterioration (PSD) review requirements for new major sources or major modifications. This notice of intent does not qualify as a new major source or a major modification under PSD rules. Therefore, this regulation does not apply.
8. Section 3.8, UACR - Stack height rule. This regulation limits the creditable height of stacks to that height determined to be good engineering practice. The formulas used to determine good engineering

practice are found in 40 CFR 51.1. A de minimus height of 65 meters (213.2\feet) is allowed. Andalex Resources has no stacks which exceed 65\meters in height. The source is in compliance with this regulation.

9. Section 3.11, UACR - Visibility screening analysis requirements. This regulation requires all new major sources or major modifications to undergo a visibility screening analysis to determine visibility impact on any mandatory Class I area. This notice of intent is not a new major source or a major modification under UACR rules. Therefore, this regulation does not apply.
10. Section 4.1.2, UACR - 20% opacity limitation at all emission points unless a more stringent limitation is required by New Source Performance Standards (NSPS) or BACT or National Emission Standards for Hazardous Air Pollutants (NESHAPS). In this case, some points will have to meet more stringent opacity limitations.
11. Section 4.1.9, UACR - EPA Method 9 to be used for visible emission observations. This regulation applies.
12. Section 4.2.1, UACR - Sulfur content limitations in oil and coal used for combustion. Andalex Resources burns oil. Therefore, this regulation will apply to this notice of intent. The limitation is 0.85 LB of sulfur per 10⁶ BTU heat input.
13. Section 4.7, UACR - Unavoidable breakdown reporting requirements. This regulation applies.
14. Section 4.9, UACR - Review requirements for volatile organic compound (VOC) sources located in a nonattainment area for ozone. This regulation applies only in Salt Lake and Davis Counties. Therefore, it does not apply to Andalex Resources.
15. Section 5, UACR - Emergency episode requirements. This regulation applies.
16. National Emission Standards for Hazardous Air Pollutants (NESHAPS)\- There is no NESHAPS for this industrial process.
17. 40 CFR 60.250 to 60.254, New Source Performance Standards (NSPS), Subpart Y, Standards of Performance for Coal Preparation Plants. This regulation will apply to this notice of intent. The affected facilities are as follows:
 - A. Coal processing and conveying equipment (including breakers and crushers)
 - B. Coal storage systems
 - C. Coal transfer and loading systems

The standard is as follows:

No owner/operator shall cause to be discharged into the atmosphere any gases which exhibit 20 percent opacity or greater.

18. National Ambient Air Quality Standards (NAAQS)\- This source is located in Carbon County which is an attainment area for all pollutants. The

Bureau of Air Quality guidelines do not call for this modification to be modeled for any pollutant. Therefore, it is very unlikely that any new violation of the NAAQS for any pollutant will occur.

V. RECOMMENDED APPROVAL ORDER CONDITIONS

1. Andalex Resources, Inc. (formerly Tower Resources) shall operate the Centennial Mine operation, consisting of the Pinnacle Mine, the Apex Mine, and the Aberdeen Mine according to the information submitted in the notices of intent dated February 15, 1980; April 22, 1980; August 3, 1981; April 16, 1982; January 28, 1985; and June 2, 1988.
2. This approval order shall replace and void the approval order dated May 14, 1985.
3. Visible emissions from the following emission points shall not exceed the following values:
 - A. Crushers - 15% opacity
 - B. Screens - 10% opacity
 - C. Conveyor transfer points - 10% opacity
 - D. Haul roads, operations areas, loadout, storage piles, - minimize emissions
 - E. Reclaim conveyor - 20% opacity
 - F. All other points - 20% opacity
4. Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9. Opacity observations of intermittent sources shall use procedures similar to Method 9, but the requirement for observations to be made at 15-second intervals over a 6-minute period shall not apply.
5. The following coal production parameters shall not be exceeded without prior approval in accordance with Section 3.1, UACR:
 - A. Pinnacle mine production - 500,000 tons per 12-month period
 - B. Apex mine production - 500,000 tons per 12-month period
 - C. Aberdeen mine production - 500,000 tons per 12-month period

Compliance with the limitations shall be determined on a rolling monthly total. On the first day of each month a new 12-month total shall be calculated using the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Records of production shall be made available to the Executive Secretary upon request, and shall include a period of two years ending with the date of the request. Production shall be determined by the use of weigh conveyors at each mine and the maintenance of an operations log at each mine. Mine production quantities shall be entered into the operations logs on a daily basis. The operations logs shall be verified accurate by comparing them with sales records.

6. All unpaved roads and other unpaved operational areas in use shall be water sprayed and/or chemically treated to reduce fugitive dust. The application rate of water shall be a minimum of 0.5\gallons per square yard. Application shall be made at least once every two hours during all times the installation is in use unless daily rainfall exceeds .10\of an inch or the road is in a muddy condition or if it is covered with snow. If chemical treatment is to be used, the plan must be approved by the Executive Secretary of the Utah Air Conservation Committee. 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
- B. Number of treatments made
- C. Rainfall received, if any, and approximate amount
- D. Time of day treatments were made

Records of treatment shall be made available to the Executive Secretary upon request and shall include a period of two years ending with the date of the request. Paved roads shall be swept as necessary to minimize fugitive dusts.

7. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:

- A. All crushers
- B. All screens
- C. All conveyor transfer points

The sprays shall operate whenever dry conditions warrant or as determined necessary by the Executive Secretary.

8. The sulfur content of any fuel oil burned shall not exceed 0.85\pounds of sulfur per million BTU heat input as determined by ASTM Method D-4239-83. The sulfur content shall be tested if directed by the Executive Secretary.

9. In addition to the requirements of this approval order, all provisions of 40 CFR 60, NSPS Subparts A and Y apply to this installation.

10. For sources which are subject to NSPS, visible emission observations which are performed during the initial compliance inspection shall consist of 30 observations of six minutes each in accordance with 40\CFR\60, Appendix A, Method 9. It is the responsibility of the owner/operator of the source(s) to supply these observations to the Executive Secretary. Emission points which are subject to NSPS shall include the following:

- A. Coal processing and conveying equipment (including breakers and crushers)
- B. Coal storage systems
- C. Coal transfer and loading systems

11. Fugitive dust from the coal storage piles shall be controlled through the use of watering as necessary and the use of underpile reclaim conveyors at the loadout piles.

12. Conveyor drop distances shall be as small as practicable and shall in no case exceed five feet, except during initial pile buildup.
13. The truck/railroad car loadouts shall consist of underpile reclaim conveyors feeding loadout bins, which shall drop the coal into the truck or railroad car. The loadout bins shall be equipped with telescoping chutes which shall minimize the open-air drop distance. In no case shall the distance exceed five feet.
14. The moisture content of all coal entering the crushers shall be no less than six percent by weight. The moisture content shall be tested if directed by the Executive Secretary. The test method shall be determined by the Executive Secretary.
15. All conveyors shall be covered.
16. All installations and facilities authorized by this approval order shall be adequately and properly maintained.
17. The Executive Secretary shall be notified in writing upon start-up of the installation, as an initial compliance inspection is required.

Any future modifications to the equipment approved by this order must also be approved in accordance with Section\3.1.1, UACR.

This approval order in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the Utah Air Conservation Regulations.

"Allowable emissions" as defined in Section 1.12, UACR, for this source (the entire plant) are currently calculated at 50.31 tons/yr for particulate and 16.86 tons/yr for PM_{10} . These calculations are for the purposes of determining the applicability of PSD and nonattainment area major source requirements of the UACR. They are not to be used for purposes of determining compliance.

DER/sh
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