

Memorandum To : Director, Division of Compliance  
From : Director, Region VI  
Subject : Application for a Permit to Construct and Operate a Coal Terminal by:

Massey Coal Terminal Corporation  
P.O. Box 26765  
Richmond, Va. 23261

Enclosure : (1) The Subject Permit Application  
(2) EPA - 600/2-78-050  
(3) Additional Calculations  
(4) Draft Approval Letter  
(5) Draft Letter on Public Viewing File

Date : September 19, 1980

Serial : 0828-80

INTRODUCTION & BACKGROUND: Massey Coal Terminal Corporation proposes to construct and operate a coal terminal on the Virginia Port Authority property adjacent to the C & O Railroad Company and Pier No. 9 in Newport News, Virginia. The property is zoned M-2, heavy industrial. The subject permit is forwarded as enclosure (1). It is noted that State Air Pollution Control Board Form 7 is included as Section 6 of enclosure (1) and the PSD submittal to EPA as Section 5.

PERMIT APPLICATION: The proposed coal terminal will consist of a rotary car dump system which will feed coal via enclosed conveyor belts to either an open storage system or directly to a ship. The open storage system will be fed by four overhead conveyors with travelling trippers and telescopic chutes. Retrieval of coal from storage will be from the bottom of the pile into underground hoppers and underground conveyors. A system of enclosed conveyor belts will transfer the coal from either the storage pile or the car dump out to the pier where two shiploaders will load the coal aboard ship. Coal can also be taken from storage and loaded aboard rail cars. The rotary car dump and the conveyor system to storage have a maximum capacity of 5000 tons/hour. The combined capacity of the 2 shiploaders is 12,000 tons/hour, and the railcar loader is 6000 TPH. The open storage pile will have a capacity of approximately  $2.5 \times 10^6$  tons, and the terminal is projected to have an annual throughput of  $15 \times 10^6$  tons/year. A more complete description of the facility, including diagrams and photographs, is available in sections 3, 7, 8 and 9 of enclosure (1).

The dust control system will consist of enclosed conveyor belts and enclosed transfer points with the transfer points equipped with a dust suppression spray system. The spray system will utilize water treated with a wetting agent. In those areas where coal is to be stacked or loaded, telescoping chutes are utilized to minimize dust generation by keeping the end of the chute close to the top of the pile and reducing the free fall of coal. For railroad loading the facility is enclosed. The underground retrieval system minimizes dust when reclaiming coal from storage, by a combination of wet spray and enclosed conveyors. Section 4.4, together with the flow diagram in section 9, contains additional information on the various control measures. As noted in section 4.2.2 of enclosure (1) the control efficiency for



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enclosed transfers using a wet spray suppression system is 90% and 75% for open transfers using telescopic chutes or wet suppression. Should it become necessary, fugitive dust emissions from the open storage coal piles can be controlled by spraying the piles with water. A control efficiency of 90% is claimed for this system.

The flow diagram in section 9 of enclosure (1) is a good descriptive schematic of the entire operation including the various emission controls. The "car thaw shed" depicted on the diagram uses infra red heat and has no emissions.

The Massey Coal Terminal Company plans to start construction on December 5, 1980 and to continue construction until completed. However, the Company plans to start operating the terminal on September 15, 1982 at a reduced capacity. At that time it is anticipated that one storage pile and one shiploader will be available.

DISCUSSION: Mr. L. W. Hay inspected the proposed site in mid-August and considers it satisfactory from the viewpoint of air pollution considerations. It is noted that pier no. 9 used to be a coal loading pier for the Chessie system and that the proposed site for the storage piles used to be a marshalling yard for coal cars.

The consulting engineers for this proposal (Dravo Company) have designed and constructed similar projects in the past and are in the process of constructing two coal terminals at this time. The current projects have been the subject of EPA review and the factors used in this application have been accepted by Region III of EPA in the past. (Note page 6 of Section 10.3). These factors, as well as other considerations, were discussed in detail with the project engineer (Mr. Rupik) during his two visits to this office and during several telephone conversations subsequent to these visits. Certain errors and omissions in the original submission were noted and have been corrected. As forwarded herewith, Region VI concurs with the emissions as calculated in enclosure (1).

ENGINEERING EVALUATION: The proposed facility has no stacks or vents, nor does it have any of the conventional sources of air pollution. The only pollutants emitted are fugitive particulate emissions from coal handling and storage. The emission estimates forwarded by enclosure (1) and used in this evaluation are based on formulae from a Report (EPA-600/2-78-050) developed for EPA by Midwest Research Institute. A copy of this report was requested by Region VI and provided by the Dravo Company. Due to its length (261 pages), only selected portions of the report applicable to this permit are reproduced and forwarded as enclosure (2). The emission calculations, as well as the formulae and assumptions upon which they are based, can be found in Section 4 of enclosure (1). Additional calculations by Region VI are forwarded as enclosure (3). Control efficiencies are addressed in Section 4.2.2 of enclosure (1) and they too are based on EPA-600/2-78-050.

As noted in Section 4.3.2 the proposed terminal has five operating modes:

1. Dumper to Ship & Storage to Ship
2. Dumper to Storage & Storage to Ship
3. Dumper to Storage
4. Storage to Ship



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## 5. Storage to Railcar

Mode #2, as indicated in Tables 1 & 2, Section 4, has the highest potential and actual emission rate of the five operating modes. Consequently, the estimated emissions listed below reflect Mode #2 operations for all except the "actual" annual emissions where the estimated emissions for the year are based on the anticipated utilization of each mode throughout the year. In calculating the "potential" annual emissions, enclosure (3), mode #2 has been utilized, but the throughput has been limited to  $30 \times 10^6$  tons per year. The theoretical potential throughput is a function of the maximum coal dumping rate (5000 tons/hour) times 8760 hours/year, or  $43.8 \times 10^6$  tons/year. However, since it would be impossible to maintain a continuous dumping rate of 5000 tons/hour, a limitation of  $30 \times 10^6$  tons/year was established which equates to 3425 TPH and is twice the  $15 \times 10^6$  tons/year projected. This limitation affords future flexibility to the terminal, avoids unnecessarily high potential annual emissions leading to excessive use of "increment", and it is acceptable to the Company.

### POTENTIAL PARTICULATE EMISSIONS:

Max Rated Capacity	Car Dumpers 5000 TPH Storage Conveyors 5000 TPH Reclaiming Conveyors 4000 TPH Loadout Conveyors 6000 TPH Shiploaders 6000 TPH Sampling Conveyors 100 TPH
Emission Factors (uncontrolled)	Car Dumpers 0.000188 lbs/ton Transfer Points 0.003852 lbs/ton Storage Pile 0.1894 lbs/ton/yr.
Reference	EPA -600/2-78-050
Operating Schedule	Mode #1 320 hours/year Mode #2 1368 hours/year Mode #3 2335 hours/year Mode #4 150 hours/year Mode #5 120 hours/year Coal Storage 8760 hours/year
Estimated Annual Throughput	$15 \times 10^6$ tons/year

### Total Potential Particulate Emissions:

	<u>lbs/hour</u>	<u>lbs/day</u>	<u>ton/year</u>
TSP	55.84	1340.16	122.26



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ACTUAL PARTICULATE EMISSIONS:

Normal Feed Rate	Car Dumper 3730 TPH Storage Conveyors 3730 TPH Reclaiming Conveyors 2000 TPH Loadout Conveyors 4000 TPH Shiploaders 4000 TPH Sampling Conveyors 100 TPH
Emission Factors & Reference	Same as Potential
Overall Control Eff's	Enclosed transfers with wet suppression = 90% Open transfers with wet suppression = 75% Telescopic chutes = 75% Wet suppression of stockpile = 90%

Total Actual Particulate Emissions:

	<u>lbs/hour</u>	<u>lbs/day</u>	<u>tons/year</u>
TSP	40.66	975.84	71.85

Note: Mode #2 used for hourly and daily rates. Annual rate based on projected utilization of each mode throughout the year.

ALLOWABLE PARTICULATE EMISSIONS: NSPS for coal terminals are not available; however, the proposal is considered to meet BACT criteria.

The ambient air quality for particulate in the area is considered satisfactory. Up until July 1979 Region VI had a HiVol monitor at the Marine Resources Bldg, a short distance away from the proposed terminal, and the last annual geometric mean observed there was  $63 \text{ ug/m}^3$ . During the last 12 months that the Marine Resources HiVol was in operation the highest recorded 24 hour concentration was  $124 \text{ ug/m}^3$ . The closest monitor is now located at the Virginia Schools, approximately 5 miles to the northeast. By correlating the observed readings at both stations it appears that the ambient levels haven't changed appreciably since the Marine Resource Station was terminated. Therefore, it is estimated that the annual geometric mean for particulate in the area is approximately  $60\text{-}65 \text{ ug/m}^3$  and the highest 24 hour concentration approximately  $120 \text{ ug/m}^3$  -  $130 \text{ ug/m}^3$ .

With regard to the effect of the terminal on this air quality, mode #2 operations were evaluated inasmuch as mode #2 causes the highest emission rate of any of the 5 modes. Such evaluation of necessity must be a value judgement since all the emissions are fugitive emissions with no definitive point of origin. In reality, fugitive emission originate from multiple sources in an area approximately 1200 ft long and 300 ft wide. Some of the sources are in underground tunnels while others are as much as 143 ft above the ground. Depending on the wind direction much of the particulate will probably fall on company property or in the water. Unlike the usual point source where one can estimate the impact of the emissions at a given



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point down wind, emissions from the subject terminal are not concentrated at the source and consequently are widely dispersed down wind. For this reason, and because the total worse case emissions are comparatively small, the impact of the proposed terminal on the ambient air is not considered to be significant.

The subject proposal has been submitted to EPA for a PSD nonapplicability determination and it appears that PSD permit will not be required. Neither NESHAPS nor Emission Offset are applicable, but this application will require a public hearing.

In summary, it appears that the standard for granting a permit, as defined in Section 2.33 (d) of the Regulations, can be met in that:

- (1) The proposed terminal will not cause a violation of the applicable provisions of the Regulations.
- (2) The proposed terminal will represent "Best Available Control Technology"
- (3) The proposed source will not emit hazardous air pollutants.
- (4) The proposed source will not prevent or interfere with the attainment or maintenance of any applicable ambient air quality standard.

RECOMMENDATION:

It is recommended that:

- (1) The subject permit be tentatively approved pending any possible developments during the period of public comment or at the Public Hearing.
- (2) Region VI be authorized to advertise for a public hearing.
- (3) If approved, the permit includes the provisions contained in enclosure (4).

Prepared By: \_\_\_\_\_  
L. W. Hay  
Regional Engineer

Reviewed By: \_\_\_\_\_  
J. W. Crawford, Jr.  
Assistant Regional Director-  
Engineering

L. B. McDonald  
Director, Region VI

LBM/JWC/LWH/lg  
cc: Executive Director  
Enclosures

# POTENTIAL EMISSIONS

Hourly: 20.317 lbs/hr (MODE<sup>#</sup>2) - TABLE 1

DAILY: 1340.21 lbs/day (MODE<sup>#</sup>2 / 24 HRS)

## ANNUAL:

BASED ON: (1) Annual throughput limited to  $30 \times 10^6$  Tons/YR

(2) Max dumping & transfer rate = 5000 TPH

(3) Max reclaiming, transfer and shiploading rate = 12,000 Tons/H

$$30 \times 10^6 \text{ T/Y} \div 5,000 \text{ T/H} = 6,000 \text{ Hours/YEAR (dumping)}$$

$$30 \times 10^6 \text{ T/Y} \div 12,000 \text{ T/H} = 2,500 \text{ Hours/YEAR (shiploading)}$$

FROM TABLE<sup>#</sup>1, SECTION 4, MODE<sup>#</sup>2:

1/ Dumper to Stockpile (storage) = 20.317 lbs/Hr

$$6000 \text{ Hr/YR} \times 20.317 \text{ lbs/Hr} \times \frac{1 \text{ TON}}{2000 \text{ lbs}} = 60.951 \text{ Tons/YR}$$

2/ Stockpile to ship = 30.125 lbs/Hr

$$2,500 \text{ Hr/YR} \times 30.125 \text{ lbs/Hr} \times \frac{1 \text{ TON}}{2000 \text{ lbs}} = 37.656 \text{ Tons/YR}$$

3/ Emissions from Stockpile = 5.4 lbs/Hr

$$8760 \text{ Hr/YR} \times 5.4 \text{ lbs/Hr} \times \frac{1 \text{ TON}}{2000 \text{ lbs}} = 23.652 \text{ Tons/YR}$$

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TOTAL 122.259 Tons/YR



ASK: 15  
Draft

INSTRUCTIONS TO TYPIST

1. Permit approval letter should be typed with 6 copies:  
original on letterhead  
3 white  
1 yellow  
1 green
2. Type envelope for the addressee.
3. Underling in this draft is not to be repeated in the final letter.
4. If you have any questions contact \_\_\_\_\_.

\*\*\*\*\*

\*\*(Current date unless otherwise specified)

MR. J. M. BAYLOR  
MASSEY COAL TERMINAL CORP.  
P.O. Box 26755  
Richmond, VA.  
23261

Location: NEWPORT NEWS

Registration Number: \_\_\_\_\_

Dear MR. BAYLOR:

The Staff of the State Air Pollution Control Board has analyzed your permit application to install, construct, modify, relocate and operate

A. COAL TERMINAL

\_\_\_\_\_ . The permit application was deemed complete on SEPT. 17, 1980 after receipt of submittals dated SEPT 3, 1980 & SEPT 15, 1980

ENCLOSURE (4)

The permit is approved under the authorities delegated to the Executive Director by the Board subject to the following conditions:

1. 1. ~~Relocation, Installation, Construction, Modification~~ and operation shall be conducted as proposed in the SEPT 3RD & 15TH submittals.
2. 2. The yearly <sup>Through put</sup> ~~production~~ of COAL shall not exceed 30 x 10<sup>6</sup> tons.
3. X The plant shall not operate more than \_\_\_\_\_ hours per day.
4. 3. The particulate emissions from the TERMINAL shall not exceed 55.84 pounds per hour or 122.26 tons per year.  
X The sulfur dioxide emissions from the \_\_\_\_\_ shall not exceed \_\_\_\_\_ pounds per hour or \_\_\_\_\_ tons per year.  
X The volatile emissions from the \_\_\_\_\_ shall not exceed \_\_\_\_\_ pounds per hour or \_\_\_\_\_ tons per year.  
X The nitrogen oxide emissions from the \_\_\_\_\_ shall not exceed \_\_\_\_\_ pounds per hour or \_\_\_\_\_ tons per year.
5. 4 Quarterly progress reports shall be submitted to the Board (Attention: Director, Division of Compliance) and the Region VI Director, address below, beginning 1 JAN '81.
6. 5 A final completion report shall be submitted to the Board (Attention: Director, Division of Compliance) and Region VI Director, address below, within 5 days after the TERMINAL is, ~~are~~ put into operation.
7. 6 Compliance with Part V, Section 5.03 - Performance Testing - of the Regulations for the Control and Abatement of Air Pollution requires a visible emission evaluation of the

### TERMINAL

by a qualified staff member. The details of the visible emission evaluation are to be arranged with the Region VI Director. ~~The waiver~~

~~of emission testing of the \_\_\_\_\_ is approved because of the submittance of acceptable test performed by~~

EMISSIONS FROM THE VARIOUS FACILITIES SHALL NOT EXCEED THE FOLLOWING LIMITS:

CAR DUMPERS - 5% opacity  
CONVEYOR & TRIPPERS - 5% opacity  
SHIP LOADING - 20% opacity  
RAILCAR LOADING - 5% opacity



7. Compliance with Part V Section 5.13, - Standards for Fugitive Dust Emissions - requires owners to take reasonable precautions to prevent fugitive dust emissions. In this regard, Massey Coal Terminal Corporation is directed to institute coal pile spraying operations as soon as any of the 4 coal piles start to become a source of fugitive dust.

9. 8. Part V Section 5.05 - Notification, Records and Reporting - of the Regulations for the Control and Abatement of Air Pollution requires that the Board (Attention: Director, Division of Compliance) and Region \_\_\_\_\_ Director be furnished written notification of:
- a. The date of commencement of construction, reconstruction, modification postmarked no later than 30 days after such date.
  - b. The anticipated date of the initial start-up of the TERMINAL \_\_\_\_\_ postmarked not more than 60 days nor less than 30 days prior to such date.
  - c. The actual date of initial start-up of the TERMINAL \_\_\_\_\_ postmarked within 15 days after such date.
  - d. ~~The anticipated date of the performance tests of the \_\_\_\_\_ and of the continuous monitoring systems performance evaluation postmarked at least 30 days prior to such date.~~
10. X The Board (Attention: Director, Division of Compliance) and Region \_\_\_\_\_ Director each must be furnished within 60 days, a copy of the results of the emission tests \_\_\_\_\_ required in condition \_\_\_\_\_ above.
11. X The approved fuel for this unit is \_\_\_\_\_. Any change from this, these fuels requires a permit to modify and operate under Section 2.33 of the Regulations for the Control and Abatement of Air Pollution.
12. X The \_\_\_\_\_ shall comply with all provisions of 40 CFR 60, Subpart \_\_\_\_\_ (attached), Standards of Performance for New Stationary Sources, \_\_\_\_\_.
13. 9. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive change to the design capacity or the fundamental nature of the process or control equipment such that the potential to emit of any facility is increased.
14. 10. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive change in any of the data upon which the decision to approve this permit was based.



Part II, Section 2.11 - Conditions on Approvals - of the Regulations for the Control and Abatement of Air Pollution provides for the automatic revocation of this permit if the owner or other person fails to adhere to these conditions.

Part II, Section 2.33(h), Permits - New and Modified Sources - Revocation of Permits, of the Regulations for the Control and Abatement of Air Pollution provides that this permit becomes invalid if a program of continuous construction, reconstruction or modification is not commenced within 18 months from the date the permit is granted, if a program of construction, reconstruction or modification is discontinued for a period of 18 months or more, or if program of construction, reconstruction or modification is not completed within a reasonable time. The regulations provide that the above time periods may be extended if there are delays in getting approval from other governmental entities or if there is litigation involved; also, the Board may extend the above time periods upon a satisfactory showing that an extension is justified.

You are cautioned that approval of this permit should not be construed to mean your operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. Regional personnel will be constantly evaluating all sources for compliance with Part V, Section 5.12 - Emission Standards for Visible Emissions and Section 5.13 - Fugitive Dust.

In addition, yearly updating of emissions from sources will require visits from staff personnel. Compliance with all air pollution regulations must be a continuing, full time effort.

This permit approval is only applicable to the permit requirements of the Air Pollution Control Board and does not alter permit requirements by any other local, state or federal government agency.

Sincerely,

W. R. Meyer  
Executive Director

WRM/ /  
cc: Assistant Executive Director-Enforcement  
Director, Engineering

Mr. **McDONALD**  
Region VI Director  
\*\*(Type full address)\*\*



DOCUMENTS  
CONCERNING PUBLIC COMMENT  
PERIOD  
FOR

DATE \_\_\_\_\_

In accordance with the requirements of the Regulations for the Control and Abatement of Air Pollution, Part II, Section 2.33(a)(5), A public comment period of 30 days has been announced and a public hearing will be held on \_\_\_\_\_ to accept comments concerning the permit to construct ~~and/or modify~~ and operate for:

*MASSEY COAL TERMINAL CORP*

to be located in *NEWPORT NEWS*, Virginia.

The attached material constitutes the information available for public inspection as required by Section 2.33(e)(3)(i) of the Regulations and consists of:

1. A permit application dated
2. A staff engineering analysis dated
3. Additional supporting documents dated

*SEPT 3, 1980 & SEPT 15, 1980*

*SEPT 19, 1980*

4. Proposed conditions on approval

Item 4 lists all conditions and requirements which will be placed upon the operation of the source should the proposed project be approved.

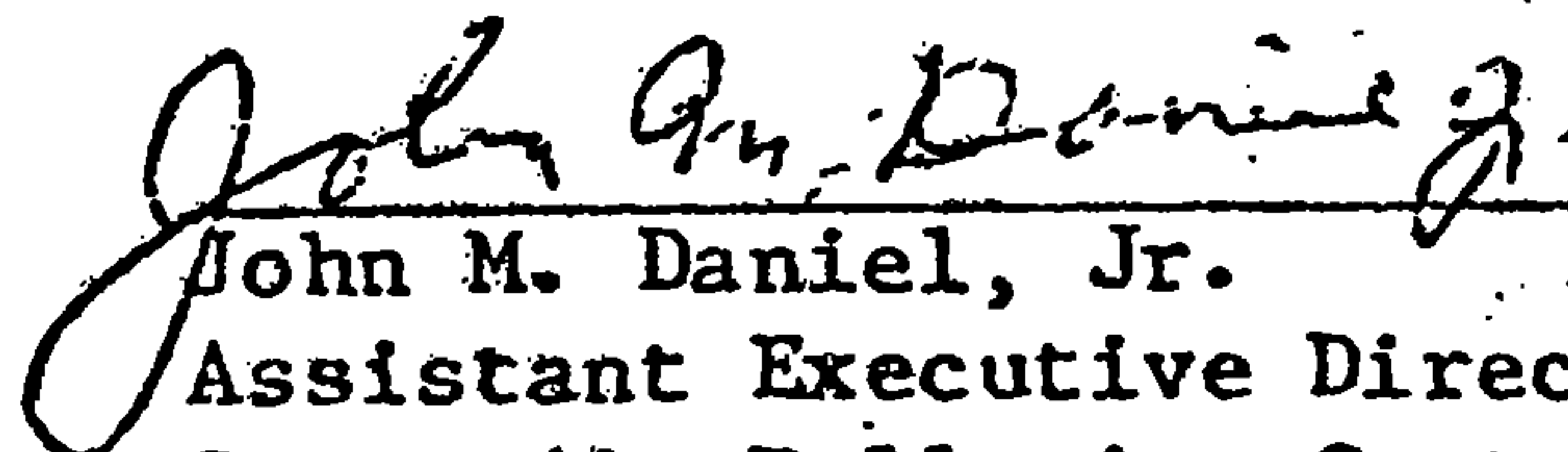
The Staff of the State Air Pollution Control Board in both the Regional Office and the Richmond Office have reviewed these materials and have determined that:

*ENCLOSURE (5)*



1. The proposed project will be designed, built and equipped and will be able to operate in compliance with applicable provisions of the Regulations for the Control and Abatement of Air Pollution.
2. The proposed project will be able to operate without causing or exacerbating a violation of the National Ambient Air Quality Standards, and will not prevent the attainment or maintenance of those standards if constructed.
3. The source will be designed, built and equipped to comply with the standards of performance prescribed under Part V 5.42(b).
4. The source will not emit hazardous pollutants in excess of the standards prescribed in Part VI 6.22(b).

In view of the above facts and pending the results of the public comment period and hearing, the proposed project is deemed approvable by the State Air Pollution Control Board staff. The final approval or disapproval of this application will be based on the attached information plus the information presented during the public comment period and public hearing.

  
John M. Daniel, Jr.  
Assistant Executive Director - Enforcement  
State Air Pollution Control Board



# TABLE I NOMENCLATURE

COLUMN 1:	Date	Day being analyzed.
COLUMN 2:	EKt	As previously annotated.
COLUMN 3:	EKc	As previously annotated.
COLUMN 4:	IN. Rain	The total inches of rainfall.
COLUMN 5:	HRS.	The total number of hours from the end of the rainfall to 0001 (12:01 AM) of the day being analyzed (% decrease eq.) <u>Or</u> The total number of hours from the end of the last cycle to the commencement of the next cycle. (% increase eq.)

$$\% \text{ dec. of CEunc} = -3979.93(\text{IN. Rain/Hrs/EKt}) + 1$$

$$\% \text{ inc. in CEunc} = 0.63991 \times 10^{0.02077(\text{hrs})}$$

COLUMN 6:	#C	Number of cycles credited in Appendix I computations.
COLUMN 7:	#C corr.	Number of cycles actually performed when the CEunc was adjusted for prior rainfall <u>or</u> cycle delay with the equations above.

Re. Cycles in Appendix with values other than 1 revert to 1 except on days when the 12,000 gal/cycle reached useful limits.

COLUMN 8:	IITRI	As previously annotated.
COLUMN 9:	$\text{CEunc/t} \geq 288 = 0.2555668\text{EKt} + 56.216517$ $< 288 = 0.460679\text{EKt} - 2.8759842$	
COLUMN 10:	$\text{CEunc/c} = \text{CEunc/t}(\text{EKc/EKt})$	
COLUMN 11:	$\text{CEunc/ca} = \text{CEunc/c}(\% \text{ dec.}) \text{ or } (\% \text{ inc.})$	
COLUMN 12:	$\% \text{R/C (coal)} \geq 288 = -0.0146913\text{EKt} + 14.65059$ $< 288 = 36.657299 \times 10^{-0.00189215(\text{EKt})}$	
COLUMN 13:	CE <sub>hv</sub>	Computed value of coal on the high volume sampler <u>from</u> the coal terminals.
COLUMN 14:	DIFF	The mathematical difference of COLUMN 13 - COLUMN 8.



CODES: RE - RE-ENTRAINMENT  
R - RAIN DURING EVALUATION DAY  
H - HAZE DURING EVALUATION DAY  
K - SMOKE DURING EVALUATION DAY  
FRZ- FREEZING TEMPERATURE DURING EVALUATION DAY  
F - FOG DURING EVALUATION DAY  
TE - TERMINALS ERROR IN THE CONTROL OF EMISSIONS  
EITHER THROUGH BREAKDOWN OF EQUIPMENT OR  
PERSONNEL ERROR.  
NO. EVAL. - SAMPLE NOT SENT TO ITTRI FOR COAL EVALUATION



\*\*\*OCR\*\*\*

The following pages contain the Optical Character Recognition text of the preceding scanned images.



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4. Storage to Ship



#### 5. Storage to Railcar

Mode #2, as indicated in Tables 1 & 2, Section 4, has the highest potential and actual emission rate of the five operating modes. Consequently, the estimated emissions listed below reflect Mode #2 operations for all except the "actual" annual emissions where the estimated emissions for the year are based on the anticipated utilization of each mode throughout the year. In calculating the potential annual emissions, enclosure (3), mode #2 has been utilized, but the throughput has been limited to 30 x 10 tons per year. The theoretical potential throughput is a function of the maximum coal dumping rate (5000 tons/hour) times 8760 hours/year, or 43.8 x 10 tons/year. However, since it would be impossible to maintain a continuous dumping rate of 5000 tons/hour, a limitation of 30 x 10 tons/year was established which equates to 3425 TPH and is twice the 15 x 10 tons/year projected. This limitation affords future flexibility to the terminal, avoids unnecessarily high potential annual emissions leading to excessive use of "increments", and it is acceptable to the Company.

#### POTENTIAL PARTICULATE EMISSIONS:

Max Rated Capacity Car Dumpers 5000 TPH  
Storage Conveyors 5000 TPH  
Reclaiming Conveyors 4000 TPH  
Loadout Conveyors 6000 TPH  
Shiploaders 6000 TPH  
Sampling Conveyors 100 TPH

Emission Factors (uncontrolled) Car Dumpers 0.900188 lbs/ton  
Transfer Points, @ 0.003852 lbs/ton  
Storage Pile 0.1894 lbs/ton/v

Reference EPA -600/2-78-050

Operating Schedule Mode #1 320 hours/year  
Mode #2 136 hours/year  
Mode #3 2335 hours/year  
Mode 150 hours/year  
-Mode #5- 120 hours/year  
Coal Storage 8760 hours/year

Estimated Annual Throughput. 15 x 10<sup>6</sup> tons/year

#### Total Potential Particulate Emissions:

lbs/hour lbs/day tons/year

TSP 55.84 1340.16 122.26

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ACTUAL PARTICULATE EMISSIONS:

Normal Feed Rate Car Dumper 3730 TPH  
Storage Conveyors 3730 TPH  
Reclaiming Conveyors 2000 TPH  
Loadout Conveyors 4000 TPH  
Shiploaders 4000 TPH  
Sampling Conveyors 100 TPH

Emission Factors & Reference Same as Potential

Overall Control Eff's Enclosed transfers with wet suppression 90%  
Open transfers with wet suppression = 75%  
Telescopic chutes = 75%  
Wet suppression of stockpile = 9(f/.

Total Actual Particulate Emissions:

lb lbs/day tons/year

TSP 40.66 975.84 71.85

Note: Mode #2 used for hourly and daily rates. Annual rate based on projected utilization of each mode throughout the year.

ALLOWABLE PARTICULATE EMISSIONS: NSPS for coal terminals are not available; however, the proposal is considered to meet BACT criteria.

The ambient air quality for particulate in the area is considered satisfactory. Up until July 1979 Region VI had a HiVol monitor at the Marine Resources Bldg, a short distance away from the proposed terminal, and the last annual geometric mean observed there was 63 ug/m<sup>3</sup>. During the last 12 months that the Marine Resources HiVol was in operation the highest recorded 24 hour concentration was 124 ug/m<sup>3</sup>. The closest monitor is now located at the Virginia Schools, approximately 5 miles to the northeast. By correlating the observed readings at both stations it appears that the ambient levels haven't changed appreciably since the Marine Resource Station was terminated. Therefore, it is estimated that the annual geometric mean for particulate in the area is approximately 60-65 ug/m<sup>3</sup> and the highest 24 hour concentration approximately 120 ug/m<sup>3</sup> - 130 ug/m<sup>3</sup>.

With regard to the effect of the terminal on this air quality, mode #2 operations were evaluated inasmuch as mode #2 causes the highest emission rate of any of the 5 mode's. Such evaluation of necessity must be a value judgement since all these emissions are fugitive emissions with no definitive point of origin. In reality, fugitive emissions originate from multiple sources in an area approximately 1200 ft



long and 300 ft wide. Some of the sources are in underground tunnels while others are as much as 143 ft above the ground. Depending on the wind direction much of the particulate will probably fall on company property or in the water. Unlike the usual point source where one can estimate the impact of the emissions at a given

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point down wind, emissions from the subject terminal are not concentrated at the source and consequently are widely dispersed down wind. For this reason, and because the total worst case emissions are comparatively small, the impact of the proposed terminal on the ambient air is not considered to be significant.

The subject proposal has been submitted to EPA for a PSD nonapplicability determination and it appears that PSD permit will not be required. Neither NESHAPS nor Emission Offset are applicable, but this application will require a public hearing.

In summary, it appears that the standard for granting a permit, as defined in Section 2.33 (d) of the Regulations, can be met in that:

- (1) The proposed terminal will not cause a violation of the applicable provisions of the Regulations.
- (2) The proposed terminal will represent "Best Available Control Technology."
- (3) The proposed source will not emit hazardous air pollutants.
- (4) The proposed source will not prevent or interfere with the attainment or maintenance of any applicable ambient air quality standard.

RECOMMENDATION':

It is recommended that:

- (1) The subject permit be tentatively approved pending any possible developments during the period of public comment or at the Public Hearing.
- (2) Region VI be authorized to advertise for a public hearing.
- (3) If approved, the permit includes the provisions contained in enclosure (4).

Prepared By: Reviewed By:  
L. W. Hay J. W. Crawford, Jr.  
Regional Engineer Assistant Regional Director-  
Engineering

L. B. McDonald  
Director,, Region VI

LBM/JWC/LWH/lg  
cc: Executive Director  
Enclosures



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INSTRUCTIONS TO TYPIST

1. Permit approval letter should be typed with 6 copies:  
original on letterhead  
3 white  
1 yellow  
green
2. Type envelope for the addressee.
3. Underling in this draft is not to be repeated in the final letter.
4. If you have any questions contact  
-----

\*\*(Current date unless otherwise specifed)

Lo P,  
Ay

H0qSS-Cq co\*L \_rWHIJ44 C0,1P.

C M 0 VA

Location:

Registration Number:

Dear

The Staff of the State Air Pollution Control Board has analyzed your permit application-to instaJJ construct, viodigy, r\_-A\_3\_e\_e\_\_At6e-and operate

&  
WA-L

The permit

application was deemed complete on 14f wafter receipt of  
submittals dated 30 /5j10



The permit is approved under the authorities delegated to the Executive Director by the Board subject to the following conditions:

1. Aelleetir(@ Installation, Geastr"etien, Medifieetion-and operation shall be conducted as proposed in the r submittals

2 - 7. The yearly of Ca\* shall not exceed 30 je tons.

3. The plant shall not operate more than hours per day.

4 - 3, The particulate' emissions from the ZM I AJ A-L 71

shall not exceed pounds per hour or G tons per year

The sulfur dioxide emissions from the

shall not exceed pound.s per hour or tons per year.

The volatile emissions from the

shall not exceed pounds per hour or tons per year.

"'X The nitrogen oxide emissions from the

shall not exceed pounds per hour or tons per year.

5. Quarterly progress reports shall be submitted to the Board (Attention: Director, Division of Compliance) and the Region VI Director, address below, beginning

6. A final completion report shall be submitted to the Board (Attention: Director, Division of Compliance) and Region VI Director, address

below, within 5 days after the \_17"0"I 1?t4d'AIA is, O\*e-put into operation.

7. Compliance with Part V, Section 5.03 - Performance Testing - of the Regulations for the Control and Abatement of Air Pollution requires a visible emission evaluation of the

by a qualified staff member. The details of the visible emission evaluation are to be arranged with the Region Director. The waiye-r

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7. Compliance with Part Section 5.13, - Standards for Fugitive Dust Emissions -

requires owners to take reasonable precautions to prevent fugitive dust emissions.

In this regard, Massey Coal Terminal Corporation is directed to institute coal pile

spraying operations as soon as any of the 4 coal piles start to become a source

of fugitive dust.

9. Part V Section 5.05 - Notification, Records and Reporting - of the Regulations for the Control and Abatement of Air Pollution requires that the Board (Attention: Director, Division of Compliance) and Region Director be furnished written notification of:

a. The date of commencement of construction, \*at least, - 4 - 4 - 4 - 4' - postmarked no later than 30 days after such date.

b. The anticipated date of the initial start-up of the

postmarked not more than 60 days nor less than 30 days prior to such date.

c. The actual date of initial start-up of the 4Fe Hf AJ AL

postmarked within 15 days after such date.

d. The anticipated date of the initial start-up of the 4Fe Hf AJ AL

of the 4Fe Hf AJ AL, Systelft&-pp-rfor-ance Qualuati?a -i 0-d- -At least 20- d&YB prior L-V SuCh

10. X The Board (Attention: Director, Division of Compliance) and Region' Director each must be furnished within 60 days, a copy of the results of the emission tests required in condition above.

11. X The approved fuel for this unit is . Any change from this, these fuels requires a permit to modify and operate under Section Y -f.33 of the Regulations for the Control and Abatement of Air Pollution.

12.. The shall comply with all provisions of 40 CFR 60, Subpart (attached), Standards of Performance for New Stationary Sources,

13. The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation there is a substantive change to the design capacity or the fundamental nature of the process or control equipment such that the potential to emit of any facility is increased.

14. 10 The Board reserves the right to modify and, if appropriate, to reissue or to rescind this permit if prior to operation)there is a substantive change in any of the data upon which the decision to approve this permit was based.

Part 11, Section 2.11 - Conditions on Approvals - of the Regulations for the Control and Abatement of Air Pollution provides for the automatic revocation of this permit if the owner or other person fails to adhere to these conditions.

Part II, Section 2.33(h), Permits - New and Modified Sources - Revocation of Permits, of the Regulations for the Control and Abatement of Air Pollution provides that this permit becomes invalid if a program of continuous construction, reconstruction or modification is not commenced within 18 months from the date the permit is granted, if a program of construction, reconstruction or modification is discontinued for a period of 18 months or more, or if program of construction, reconstruction or modification is not completed within a reasonable time. The regulations provide that the above time periods may be extended if there are delays in getting approval from other governmental entities or if there is litigation involved; also, the Board may extend the above time period upon a satisfactory showing that an extension is justified.

You are cautioned that approval of this permit should not be construed to mean your operation is automatically in compliance with all aspects of the Regulations for the Control and Abatement of Air Pollution. Regional personnel will be constantly evaluating all sources for compliance with Part V, Section 5.12 - Emission Standards for Visible Emissions and Section 5.13 - Fugitive Dust.

In addition, yearly updating of emissions from sources will require visits from staff personnel. Compliance with all air pollution regulations must be a continuing, full time effort.

This permit approval is only applicable to the permit requirements of the Air Pollution Control Board and does not alter permit requirements by any other local, state or federal government agency.

Sincerely,

W. R. Meyer  
Executive Director

WRW I  
cc: Assistant Executive Director-Enforcement  
Director, Engineering

Mr.  
Regional Director  
(Type  
with full address)\*\*



DOCUMENTS DATE  
C  
CONCERNING PUBLIC COMMENT, Tr  
PERIOD  
FOR

X

In accordance with the requirements of the Regulations for the Control and Abatement of Air Pollution Part-II Section 2.13(a)(5), A public comment period

of 30 days has been announced and a public hearing will be held on

to accept comments concerning the permit to construct -asd@sa wedigy and operate

for:  
A14.4

to be located in Virginia.

-ic

The attached material constitutes the information available for public

inspection as required by Section 2.33(e)(3)(i) of the Regulations and consists

of:

1. A permit application dated

d

2. A staff engineering analysis date

3. Additional supporting documents dated

4. Proposed conditions on approval

Item 4 lists All conditions and requirements which will be placed upon the operation of the source should the proposed project be approved.

The Staff of the State Air Pollution Control Board in both the Regional

Office and the Richmond Office have reviewed these materials and have determined

that:

1. 'The proposed project will be designed, built and equipped and will be able to operate in compliance with applicable provisions of the Regulations for the Control and Abatement of Air Pollution.

2. The proposed project will be able to operate without causing or exacerbating a violation of the National Ambient Air Quality Standards, and will not prevent the attainment or maintenance of those standards if constructed.

3. The source will be designed, built and equipped to comply with the C. standard prescribed under Part V 5.42(b). standards of. perform un

4. The source will not emit hazardous pollutants in excess of the standards prescribed in, Part VI

6.22(b).  
'3  
'b

In view of the above facts and pending the results of the public comment

period, and hearing, the proposed project is deemed approvable by the State Air

Pollution Control Board staff. The final approval or disapproval of this application

will be based on the attached information plus the information presented

during the public comment period and public hearing.

John M. Daniel Jr.  
Assistant Executive Director - Enforcement  
State Air Pollution Control Board

# TABLE I NOMENCLATURE

COLUMN 1: Date Day being analyzed.

COLUMN 2: EKt As previously annotated.

COLUMN 3: EKc As previously annotated.

COLUMN 4: IN. Rain The total Inches of rainfall.

COLUMN 5: HRS. The total number of hours from the end of the rainfall to 0001 (12:01 AM) of the day being analyzed (% decrease eq.)  
Or The total number of hours from the end of the last cycle to the commencement of the next cycle. (% increase eq.)

• dec. of CEunc =  $-3979.93 \text{CIN. Rain/Hrs/EKt} + 1$

• inc. in CEunc =  $0.63991 \times 10^{-0.02077(\text{hrs})}$

COLUMN 6: \*C Number of cycles credited in Appendix I computations.

COLUMN 7: \*C corr. Number of cycles actually performed when the CEunc was adjusted for prior rainfall--- or cycle delay with the equations above.

Re. Cycles in Appendix with values other than I revert to I except on days when the 12,000 gal/cycle reached useful limits.

COLUMN 8: IITRI As previously annotated.

COLUMN 9:  $\text{CEunc/t} \text{ } 1288 = 0.2555668 \text{EKt} + 56.216517$   
 $<288 = 0.460679 \text{EKt} - 2.8759842$

COLUMN 10:  $\text{CEunc/c} \text{ } \text{CEunc/t}(\text{EKc/EKt})$

COLUMN 11:  $\text{CEunc/ca} \text{ } \text{CEunc/c}(\% \text{ dec.}) \text{ or } (\% \text{ inc.})$

COLUMN 12:  $\% \text{R/C (coal) } )288 = -0.0146913 \text{EKt} + 14.65069$   
 $<288 = 36.657299 \times 10^{-0.00189215(\text{EKt})}$

COLUMN 13: CE Computed value of coal on the high volume hv sampler from the coal terminals.

COLUMN 14: DIFF The mathematical difference of COLUMN 13 - COLUMN 8.



CODES: RE - RE-ENTRAINMENT  
R - RAIN DURING EVALUATION DAY  
H - HAZE DURING EVALUATION DAY  
K - SMOKE DURING EVALUATION DAY  
FRZ- FREEZING TEMPERATURE DURING EVALUATION DAY  
F - FOG DURING EVALUATION DAY  
TE - TERMINALS ERROR IN THE CONTROL OF EMISSIONS  
EITHER THROUGH BREAKDOWN OF EQUIPMENT OR  
PERSONNEL ERROR.  
NO. EVAL. - SAMPLE NOT SENT TO ITTRI FOR COAL EVALUATION