

ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED  
(A Government of Andhra Pradesh Undertaking)



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Lr.No.CE/C/Hydel/GS/C&I/SE/Hydel/C&I/EE/C/Env/D.No. 48/15,dt. 02-04-2015

To  
The Director,  
Ministry of Environment & Forests & Climate Change, GOI  
Indira Paryavaran Bhavan,  
Jor Bagh Road, New Delhi – 110 003

Sir,

Sub: APGENCO – Dr. Narla Tata Rao Thermal Power Station Stage-V (1x800 MW) Ibrahimpatnam, Krishna District – 521 456, Andhra Pradesh: – Additional information - Submitted –Reg.

Ref: 1. Proposal No. IA/AP/THE/10488/2012.  
2. Minutes of 26<sup>th</sup> EAC meeting for thermal power projects held on 27<sup>th</sup> & 28<sup>th</sup> November, 2014.

\* \* \*

APGENCO proposed to set up 800 MW Supercritical unit under Stage-V in the Dr. NTTPS complex, Ibrahimpatnam, Krishna District, Andhra Pradesh using 100% Domestic Coal sourced from Suliyari Belwar Coal Block, Madhya Pradesh. EIA report was prepared as per TOR issued by MOEF & CC, GOI. APPCB conducted Public Hearing on 10.01.2014. The project was discussed in the 26<sup>th</sup> Expert Appraisal Committee meeting held on 27.11.2014. The MOEF & CC sought additional information in the minutes of the 26<sup>th</sup> EAC meeting held on 27<sup>th</sup> & 28<sup>th</sup> November, 2014. The additional information is herewith submitted.

During the EAC meeting, APGENCO appraised that imported coal will be used in case Suliyari Belwar Coal Block (which is under the cancelled coal block list as per directions of Hon'ble Supreme Court) was not re-allotted to APGENCO. The EAC suggested APGENCO to carry out environmental impacts for 100% imported coal and notify the change of fuel in the news paper for the public comments.

As suggested by EAC, environmental impacts have been carried out for 100% imported coal and the supplementary report was prepared. The Supplementary report was sent to Regional Office, MOEF & CC, Chennai and AP Pollution Control Board. This report was also placed in the APGENCO website for one month requesting suggestions, comments from public. Change of coal was also notified in "Eenadu" and "The Hindu" local additions on 14-02-2015 and 15-02-2015 respectively. Three representations were received and replies are prepared and given in the replies to the additional information.

(Contd...P2)

Following documents are herewith submitted.

1. The replies to the additional information sought by MOEF & CC.
2. Supplementary EIA report for 100% imported coal.
3. MOU for 100% imported coal (Annexure-1)
4. Public notification on use of 100% imported coal (Annexure-2)
5. MOU for 100% dry fly ash utilization (Annexure-10)
6. Consent from M/s Krishnapatnam Port Company Ltd to handle imported coal (Annexure-11).
7. Permission accorded by M/s South Central Railway, Secundrabad to transport coal from port to project site (Annexure-12).

It is requested to expedite Environmental Clearance for the proposed Dr. NTPS Stage-V (1x800 MW) expansion unit.

Encl: a/a

Yours faithfully

  
Chief Engineer/Civil/Hydel,GS, C&I

***Proposed 1×800 MW Supercritical Coal Based  
Dr. Narla Tata Rao Thermal Power Station (Stage- V)  
at  
Ibrahimpattanam, Krishna (District),  
Andhra Pradesh***

***Additional information sought by Expert Appraisal  
Committee in the 26<sup>th</sup> meeting held on 27<sup>th</sup> & 28<sup>th</sup>  
November 2014***



*Submitted By*

**Andhra Pradesh Power Generation Corporation Ltd**

**Room No. 158, 'A' Block, Vidyut Soudha,  
Hyderabad-500 082**

**April 2015**

## **Additional information sought by Expert Appraisal Committee in the 26<sup>th</sup> meeting held on 27<sup>th</sup> & 28<sup>th</sup> November, 2014**

APGENCO proposed to set up 800 MW Supercritical unit under Stage-V in the Dr. NTTPS complex, Ibrahimpatnam, Krishna District, Andhra Pradesh using 100% Domestic Coal sourced from Suliyari Belwar Coal Block, Madhya Pradesh. EIA report has been prepared as per TOR issued by MOEF & CC, GOI. APCCB conducted Public Hearing on 10.01.2014. The project was discussed in the MOEF & CC Expert Appraisal Committee meeting held on 27.11.2014. During the EAC meeting, APGENCO appraised that imported coal will be used in case Suliyari Belwar Coal Block (which is under the cancelled coal block list as per directions of Hon'ble Supreme Court) is not re-allotted to APGENCO.

The EAC suggested to carry out environmental impacts for 100% imported coal and MOU for 100% imported coal need to be submitted to MoEF&CC. The EAC also suggested to notify the change of fuel in the news paper for the public comments. The EAC sought additional information on the following points:

- i) Detailed reply on compliance to the issues raised in the monitoring report of the R.O for the existing units.
- ii) Compliance to the Ministry's notification dated 02-01-2014 as applicable, for the existing units and proposed regarding maximum 34% ash in the coal.
- iii) Action plan for Phase out of units 1 & 2 as they were commissioned in 1979-80.
- iv) Fresh approval of the competent authority for water drawl for the proposed expansion project.
- v) Existing fly ash utilization and proposed in compliance to the fly ash utilization Notification. Accordingly, proposed ash pond area shall be minimised.

APGENCO proposed to use 100% imported coal as optional to 100% domestic coal. MOU for 100% imported coal is obtained from the supplier (Copy enclosed as Annexure-1). As suggested by EAC, environmental impacts have been carried out for 100% imported coal and the supplementary report was placed in the APGENCO website for one month requesting suggestions, comments from public. Change of coal was also notified in "Eenadu" and "The Hindu" local additions on 14-02-2015 and 15-02-2015 respectively (Copies enclosed as Annexure-2). Three representations are received and replies are prepared and enclosed as annexure- 3.

Point wise additional information as sought by EAC is submitted as follows:

**Point No. 1: Detailed reply on compliance to the issues raised in the monitoring report of the R.O for the existing units.**

Dr. Kaliaperumal, Director (S), MoEF & CC, Chennai visited Dr. NTTPS on 24.09.2014 & 25.09.2014 and reviewed compliance of the environmental conditions and furnished certified compliance report vide letter No.EP-12.8/Misc-I/ROCHN/201,dt 10.11.2014. The detailed replies on the issues raised by Regional office MOEF &CC are submitted as follows

a) Environment clearance has been not changed in the Name of Dr.NTTPS

APGENCO have been operating 7 units with total installed capacity 1760 MW (6x210 MW + 1x500 MW) under four stages in the name of Dr. Narla Tata Rao Thermal Power Station (formerly Vijayawada Thermal Power Station) at Ibrahimpatnam (V&M), Krishna District, Andhra Pradesh. Environmental Clearances were obtained in the name of Vijayawada Thermal Power Station (VTPS). The name was changed vide GO Ms. No. 129, dated 12-12-2007 to recognize the exemplary contribution to the power sector by Late Dr. Narla Tata Rao, Former Chairman, AP State Electricity Board.

The MoEF& CC, GOI was requested vide letter no Lr. No.CE/ C /Hydel /GS /C&I /SE /Hydel-I /EE /ED / D.No.84 /14,dt. 10-12-2014 to change the name of Vijayawada Thermal Power Station (VTPS) as Dr.Narla Tata Rao Thermal Power in the Environmental Clearances granted for Stages II, III & IV units. Approval from MOEF& CC is awaited.

b) Independent Stack of 220 m height has not been provided in Stage-III

During 1988, 180 m height chimney with three flues was constructed to connect one flue for unit-4 of Stage-II and remaining two flues for unit- 5 & 6 of Stage-III units as per the earlier norms. MOE&F, GOI accorded Environmental Clearance for Stage-III units vide MoE&F Lr.No.13011/45/86-IA.II (T), dated 12.01.1990 directing to construct two independent stacks of 220m each. As 180m chimneys ( with two flues for stage-III) was constructed for stage-III as part of stage-II works, MoE&F was requested to grant permission to use 180m chimney and exempt for construction of 220m chimneys. MoE&F, GOI vide their letter No. MoE&F Lr.No.13011/45/86-IA.II(T), dated 25-05-2001 (Copy enclosed as annexure-4) directed to explore the following:

- i) Feasibility of operating both the units (210 MW each) of stage-III at a derated capacity of about 190-195 MW.
- ii) In the expansion proposal (Stage-IV), the possibility of erecting 220 m high stack and till such time stage-III may be operated at 190 -195 MW.

During stage-IV construction, the feasibility was examined and found that the space available for construction of new 220m chimneys is not sufficient. The construction of new Chimney will interfere foundations of existing structures of units 4, 5 & 6, foundations of existing chimneys, ID fans, the supports of flue gas ducts and pipe trenches. In view of this, stage -III units are being operated between 190 -195 MW as permitted by MoE&F, GOI.

- c) Water temperature at the confluence point is ranging from 5°C to 7°C especially in summer

As per APGENCO data (enclosed as Annexure – 5), the temperature difference is varying from 4.7°C to 5.2°C which are within the limit of 10<sup>0</sup>C as per CPCB notification No. GSR7 dated 22-12-1998 (copy of notification enclosed as Annexure-6).

- d) Frequency of monitoring of AAQ and Sewage Effluent is inadequate

The frequency of monitoring of sewage effluent and Ambient Air Quality (AAQ) is increased as suggested by Director, MOEF & CC, Chennai from the month of February 2015. Continuous AAQ equipment was installed and data is uploaded to APPCB website. All parameters are within the limits.

- e) Stack emissions from Stage-I,II & III are more than the prescribed standard.

All units are meeting the stack emission limits except unit 2 and unit 5 on rare occasions. Following measures as suggested by M/s. BHEL were taken to bring down SPM values within the prescribed limits.

- i. Ensured proper setting of ESP controllers for maintaining required current & Voltage levels which improved ESPs efficiency.
- ii. Ensured proper evacuation of ESP hoppers by maintaining ash levels in the hoppers.
- iii. Arrested Air ingress in the ducts by closing the gaps and holes.
- iv. Ensured proper rapping of electrodes in the ESPs.

With the above measures, SPM levels are brought down within the prescribed limits as seen from the results of test conducted in stack emissions during the period from 11/2014 to 02/2015, which are shown in the Annexure-7 enclosed.

- f) 100%, fly ash utilization is not achieved

The ash utilization during the year 2013-14 is 71.83%. Main bottleneck for achieving 100% ash utilization is lack of sufficient demand for Bottom ash. Market studies are being carried out to identify the potential areas and improve the ash utilisation. All efforts are being made to improve ash utilization.

Following measures were taken by Dr. NTTPS to promote the Ash Utilization.

- i) 100% Dry fly ash collection, and delivery facilities are provided.
- ii) Agreements were concluded with 20 Nos. Cement and Asbestos manufacturing Industries for supply of 4924 MT/day of fly ash from Dr.NTTPS regularly. About 5800 tonnes/day of dry fly ash is issued to several cement Companies (36 No's.), Asbestos Companies (5 Nos.), RMC (25 Nos.) and brick units (590 Nos.) from the silo systems. Bottom ash and pond ash is also made available to all industries and other users to increase ash utilization. M/s. National Highways Authority of India is utilizing pond ash for widening of NH - 5 road embankments. Poclains were also engaged by Dr. NTTPS at Ash Pond for free loading of pond ash to users as a promotional measure.
- iii) About 8.55 Lakh Tonnes of ash was utilised from the Ash Pond during the period from 04/2013 to 03/2014 for the expansion of National Highways Authority of India and filling by various agencies/individuals.
- iv) 3 Nos. fly ash brick plants (30,000-bricks/day of total installed capacity) setup at Dr.NTTPS produced 11.42 lakh bricks from 04/2013 to 03/2014. The bricks are used to meet the in house requirement. The bricks are made with very high ash content of (65%) to demonstrate optimum utilization of fly ash.
- vi) High volume fly ash concrete roads of about 3 KM stretch containing 50% of fly ash in binder content is laid in plant and colony area.
- vii) Interaction is being done continuously with private builders and with A.P. State Govt. departments, other private and public works departments on utilization of fly ash.
- viii) 100% ash utilization could not be achieved as per fly ash notification 2009 as there is no demand for bottom ash which constitutes 20% of the total ash.
- ix) Sustained efforts will be made to achieve 100% fly ash utilization.

APGENCO will explore all the potential areas to achieve 100% fly ash utilization.

- g) 155.06 Ha of forest land has been diverted for Ash Pond without approval under F C Act

The requirement of 155.06 Ha forest land for Construction of Guest House, Hospital, Hostel, tunnel and ash pipe lines was initiated during late 1970s and prior to Forest Conservation Act 1980. The proposals for diversion of 155.06 Ha had been taken up as per the Forest Conservation Act 1980 in the later stages as insisted by Forest Department. The above proposals are in process since 1985. APGENCO furnished the information sought by Forest Department from time to time. The equivalent compensatory land of 155.06 Ha of land in RS.No.1 of Maredupudi Village ,V.R.Puram Mandal of Khammam District was also handed over to Forest Department by Mandal Revenue Officer (MRO), V.R.Puram on 11-06-2003 vide R.C.No.B/974/2002, Dt:11.06.2003 (Copy enclosed as annexure-8).

The approval is awaited.

h) Still, Lot of vacant area is available with out Plantation

Greenbelt in the main plant area is 27.9% of total plant area and greenbelt in the Colonies is 44% of area of total colony area. The vacant areas are identified in the Power House and Abandoned Ash Pond. The proposals for development of Greenbelt in the area of about 10 Hectares is being taken up at a cost of Rs. 51.4 lakhs.

i) Noise levels are more than Standards:

The Noise levels are marginally exceeding the standard limit. Following measures were already taken to mitigate the impact of Noise.

- i) Silencers were provided to the Noise producing equipments
  - ii) Separate Cabins were provided to the O&M Staff and Officials working in the nearby areas of equipments producing Noise.
  - iii) Ear Plugs were provided to the O&M Staff and Officers working in the nearby areas of equipments producing Noise.
- j) A case has been filed in Hon'ble Lokayukta on the issues related to Pollution from Dr.NTTPS

A complaint was lodged in the Institution of Hon'ble Lokayukta, Hyderabad by Rythu Samakhya, Vijayawada alleging that damage was caused to human health, crops and cattle in the surroundings of Dr. NTTPS.

Hon'ble Lokayukta issued an order on 23-07-2014 constituting an expert committee to study the complaint. In the same order, Hon'ble Lokayukta mentioned as follows.

"With regard to installation of 800 MW Supercritical Thermal Power Station at NTTPS, Ibrahimpatnam, Vijayawada, the complainant has got no objection and as such the NTTPS shall go ahead with the steps for installation of the aforesaid 800 MW Supercritical Thermal Station".

The committee submitted the report to Hon'ble Court. Observations and recommendations of the Expert Committee on the specific issues raised in the complaint regarding impact on human health, damage to crops and cattle are as follows:

- 1) There is no evidence in support of the complaint or even necessary data / information related to the extent / place of loss due to pollution impacts from NTTPS is also not available either with complainant or from the records at government offices as indicated in different study reports.
- 2) The complainant may be directed to restrain on lodging any complaints without evidence/ supportive data for the respective complaint.
- 3) Health Expert opined that as per her findings, there are no adverse impacts due to Dr. NTTPS operations.
- 4) Agriculture Expert confirmed that soils in the surrounding area are slightly alkaline and sufficient fertile for agriculture crops with no adverse impact on crop productivity.
- 5) The total/ overall environmental aspects within the industrial premises as well as outside the industrial premises, i.e ambient environmental quality, fall under the purview of Environmental Protection Act 1986.
- 6) The committee suggested to improve the environmental performance of Dr. NTTPS.

**Point No. 2: Compliance to the Ministry's notification dated 02-01-2014 as applicable, for the existing units and proposed regarding maximum 34% ash in the coal:**

Annual coal requirement for Dr. NTPPS is about 9.3 million tonnes which is sourced from MCL and SCCL which are located at a distance of 945 km and 350 km respectively from the project. As per MOEF notification dated 02-01-2014, Dr. NTPPS shall use coal containing ash content less than 34% from 01-01-2015 for the coal being received from MCL. APGENCO entered into agreement with M/s Spectrum Coal & Power Limited for setting up of 11 MTPA capacity washery unit to supply washed coal with ash content less than 34%. M/s Spectrum Coal & Power Limited established washeries which will be commenced shortly. Supply of washed coal from M/s Spectrum Coal & Power Limited will commence from May 2015.

At present Dr. NTPPS has been importing about 10% of coal and blended with the domestic coal. In the month of January and February 2015, about 9,19,911 MT of coal has been received from MCL and about 64,323 MT of imported coal with average ash content of 7.81%. The weighted average ash content in the blended coal is 40%. Once the washery is commenced, the ash content will be less than 34%.

The provisions of the notification will be complied with from May, 2015 as commencement of supply of washed coal will start from May, 2015.

**Point No. 3: Action plan for Phase out of units 1 & 2 as they were commissioned in 1979-80.**

Units 1 & 2 of Dr. NTPPS were commissioned on 01.11.1979 and 10.10.1980 respectively. The units are performing satisfactorily. The Heat rate, Specific Coal consumption (in Kg/kWh), Specific oil consumption (in ML/kWh), PLF (%) and Auxiliary power consumption (%) of units 1 & 2 of Dr. NTPPS are on par with the latest 210MW units of Dr. NTPPS commissioned in 1995. The performance of the units are compared with the CERC norms for the unit size of 210 MW and found that the units are performing well. The heat rates of the units are varying from 2348 kcal/kWh to 2418 kcal/kWh against CERC norm of 2500 kcal/kWh.

**R&M works carried out so far:** Some of major R&M works taken up so far for both the units comprise Erection of parallel ESPs, Replacement of complete Economiser Assembly, Replacement of complete LTSH, CRH & HRH, water wall bend assemblies, Modification of air preheater, total burner and wind box assembly in new C&I system etc.

Investment made on the R&M works so far was Rs. 198.33 crores. Further, proposals for certain R&M works amounting to Rs. 95.79 crores were already under progress.

Present SPM levels: An amount of Rs. 23 crores was incurred and upgraded the ESPs for stage-I units. Due to R&M works taken up so far, both the units are complying with environmental norms and SPM levels for last five months are given below:

Figures - Max/min in mg/Nm<sup>3</sup>

Unit	October, 2014	November, 2014	December, 2014	January, 2015	February, 2015	MoE&F limit
Unit # 1	108/107	112/106	123/104	129/105	119/110	150
Unit # 2	110/93	96/102	112/87	94/82	108/105	150

The RLA studies were conducted through M/s IRC Engineering Services Pvt Ltd, New Delhi in 2007 (unit II) and during 2012 (unit I).

Keeping in view of the above R&M works taken up so far, under progress/proposed and present performance of units, the expected life of units 1 & 2 of Dr. NTPS is about 15 years from now.

Hence, phase out programme of Stage-I units (2 X 210 MW) of Dr. NTPS is prepared as follows:

#### **Phase out Programme**

Unit No.	Date of Commission	Phasing out plan	Remarks
Unit # 1	01.11.1979	2030	The two units will be phased out by October 2030.
Unit # 2	10.10.1980	2030	

#### **Point No. 4: Fresh approval of the competent authority for water drawl for the proposed expansion project:**

Fresh approval of the Irrigation Department for allocation of the water for the project vide GO Rt. No. 127, dated 05-03-2015 is herewith enclosed as annexure-9.

#### **Point No. 5: Existing fly ash utilization and proposed in compliance to the fly ash utilization Notification. Accordingly, proposed ash pond area shall be minimised.**

The ash utilization for the existing units during the year 2013-14 is 71.83%. Main bottleneck for achieving 100% ash utilization as per MoEF&CC notification is lack of sufficient demand for Bottom ash. Market studies are being carried out to identify the potential areas and improve the ash utilisation.

MOEF & CC vide fly ash notification dated 03-11-2009 permitted to use 50 ha area for ash pond for a 500 MW unit based on 45% ash content coal, or in the same proportion for units in other capacities taking into account the ash content in coal to be used. Accordingly, 230 acres (92 ha) of land is proposed for the 800 MW unit of Dr. NTTPS Stage-V using domestic coal sourced from Suliary Belwar block, Madhya Pradesh.

APGENCO proposed to use imported coal as an optional to domestic coal. Ash pond area requirement based on imported coal would be 70 acres (28 ha).

If 100% imported coal is used for the project, the ash pond area will be limited to 70 Acres.

MOU has been entered with M/s Vertex Cements (P) Ltd, Hyderabad for lifting of 1035 TPD of fly ash from the proposed Dr. NTTPS Stage-V (1x800 MW) unit (Annexure-10).

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Hydel/GS/C&I  
A.P.Genco, Vidyut Soudha  
HYDERABAD-500082

# Supplementary to the Final EIA report

*for*  
**Proposed 1×800 MW Supercritical Coal Based  
Dr. Narla Tata Rao Thermal Power Station (Stage- V) at  
Ibrahimpattanam, Krishna (District),  
Andhra Pradesh**



*Submitted By*

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Hyderabad-500 082,  
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*Prepared By*



**Ramky Enviro Engineers Ltd**

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(QCI/NABET Approved - Certificate No. NABET/EIA/1013/016)

**February 2015**

## Supplementary Report

### 12.1 Necessity of the Supplementary to final EIA report

APGENCO initially proposed to use 100% domestic coal sourced from the Suliary Belwar coal block in Madhya Pradesh. The Environmental impact assessment studies have been carried out and EIA report was submitted to APPCB. APPCB conducted the public hearing on 10.01.2014. APGENCO approached MOEF & CC for getting Environmental Clearance for the project. The project was discussed in the Expert Appraisal Committee (EAC) meeting held on 27.11.2014. APGENCO appraised that imported coal will be used as optional in case Suliary Belwar coal block is not re-allotted. Then EAC suggested that Environmental impacts are to be assessed and submitted to MOEF & CC. Accordingly, Environmental impacts have been assessed for the 100% imported coal and details are given below.

### 12.2 Source of Fuel and fuel requirement

Daily coal requirement using 100% imported coal is 8088 TPD. Annual Coal requirement for the project is 2.65 MTPA based on GCV of 5500 kcal/kg and 90% PLF. Ash content is 16% and sulphur content is 0.8%. The Coal Analysis for the proposed power project is given in **Table A1**.

Table A1  
Coal Analysis (Imported Coal)

S.No	Characteristics	Range
1.	Carbon content	68-75%
2.	Hydrogen content	3.8-4.7%
3.	Nitrogen content	1.45-1.8%
4.	Oxygen content	5.5-7.5%
5.	Moisture content	8.0-25%
6.	Ash content	12-16%
7.	Sulphur content	0.45-0.8%
8.	Gross calorific value	5500-6200 kcal/kg

### 12.3 Ash Generation: Quantities of fly ash and bottom ash generation from the proposed unit using imported coal are given in the following table.

TableA2

Coal consumption	8088 TPD
Ash content	16%
Total ash generation	1294 TPD
Bottom Ash (20%)	259TPD
Fly Ash (80%)	1035 TPD

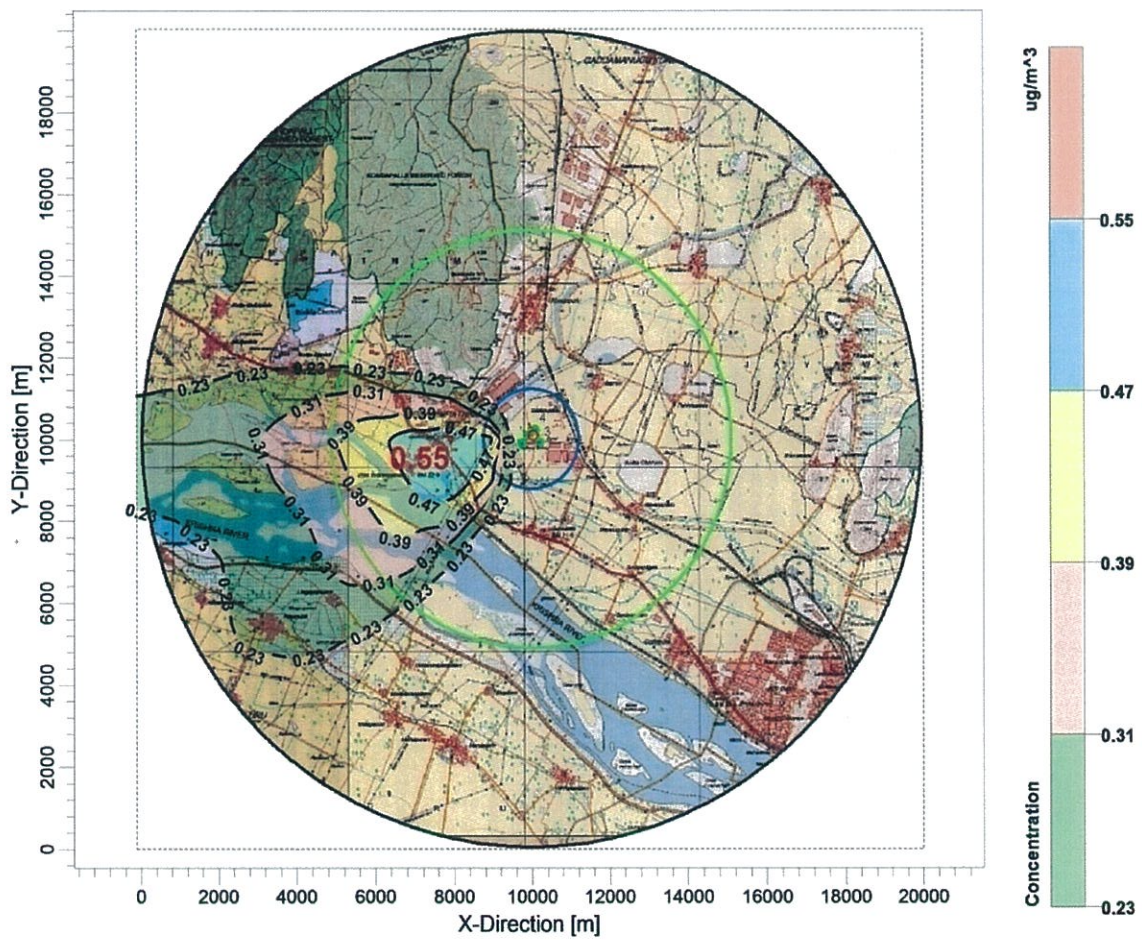
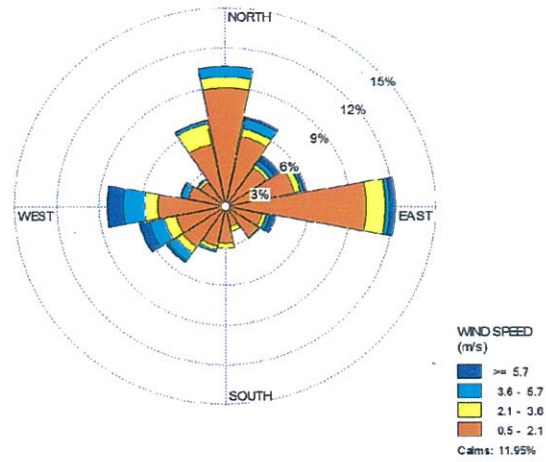
**12.4 Emission Details:** Emissions from the proposed 800 MW with 100% imported coal are given in the following table:

**Table A3  
Stack and Emission Details**

<b>Details</b>	<b>Units</b>	<b>Proposed Plant</b>
Plant Capacity	MW	800
Boiler Capacity	TPH	2600
Type of Fuel	-	Coal
Height of the Stack	M	275
Velocity of Flue Gas	m/s	22
Flow	Nm <sup>3</sup> /s	668.9
Fuel Consumption	TPH	337
Ash Content (in coal used)	%	16 (Max)
Sulphur Content	%	0.8( Max)
PM Emissions	g/s	33.4
SO <sub>2</sub> Emissions	g/s	1497
NO <sub>x</sub> Emissions	g/s	430

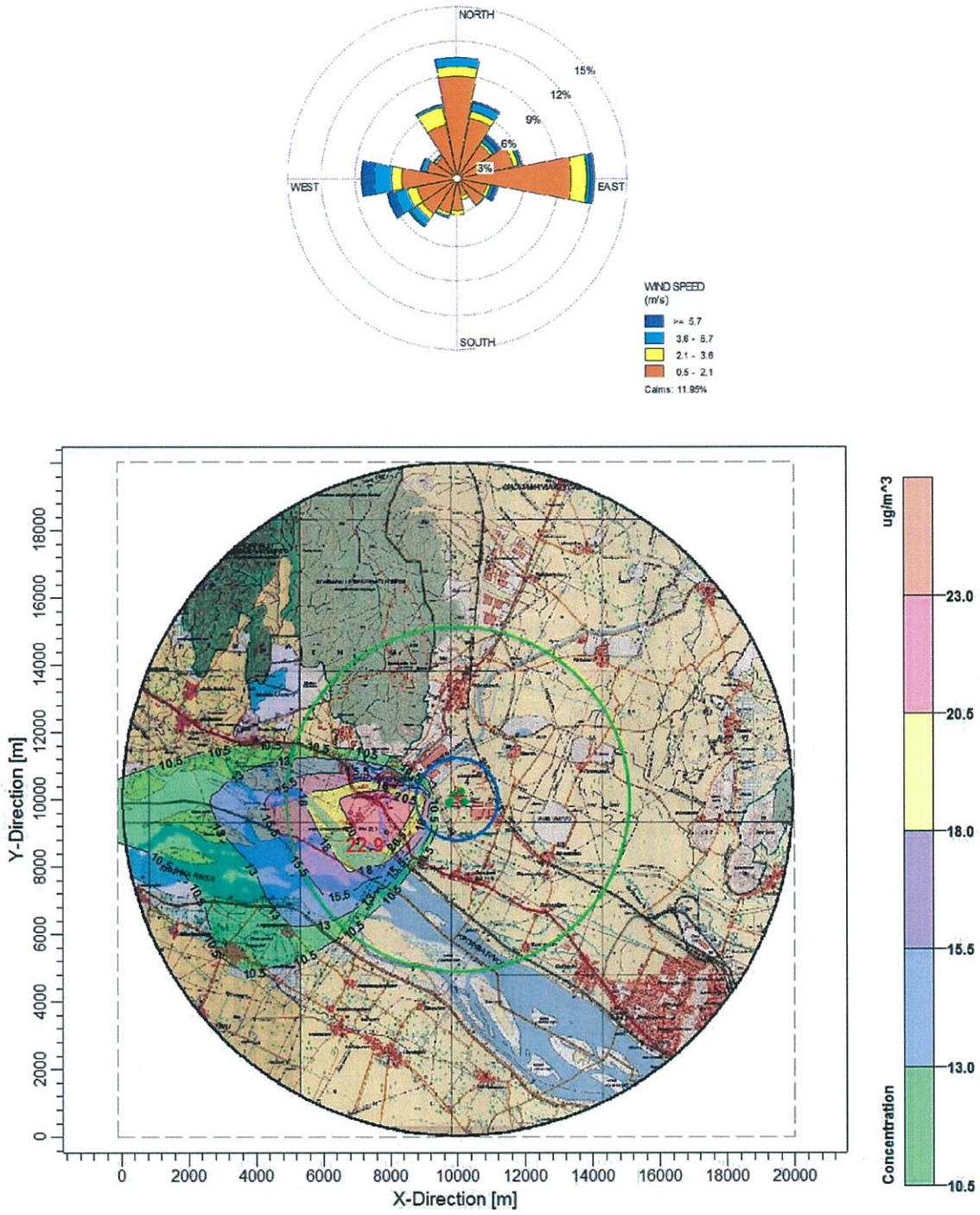
**12.5 Estimation of the incremental GLCs due to the proposed project**

Incremental Ground Level concentrations (GLCs) due to the emission from the proposed 800 MW unit using 100% imported coal have been estimated using the emission data, meteorological data and EPA approved AERMOD Air dispersion model and given in the Table A4. Isopleths for PM, SO<sub>2</sub> and NO<sub>x</sub> are presented below.



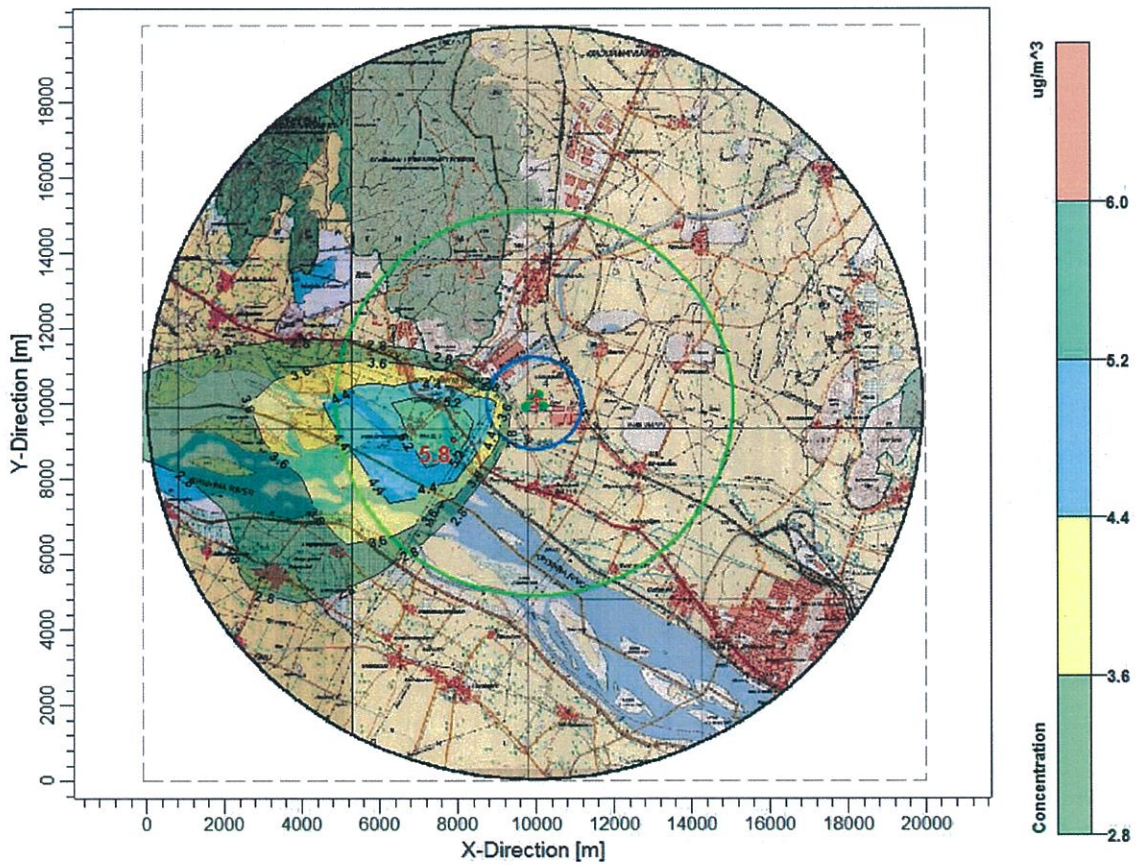
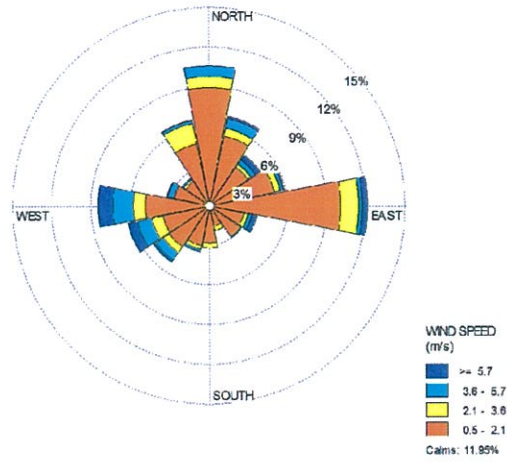
**Figure A1**  
**Isopleths for Particulate Matter**

- Note: 1) All figures are predicted 24-Hourly average GLCs of PM ( $\mu\text{g}/\text{m}^3$ )  
 2) Contour interval is  $0.8 \mu\text{g}/\text{m}^3$   
 3) Maximum concentration:  $0.55 \mu\text{g}/\text{m}^3$  in SW direction.



**Figure A2**  
**Isopleths for Sulphur dioxide**

- Note: 1) All figures are predicted 24-Hourly average GLCs of SO<sub>2</sub> (µg/m<sup>3</sup>)  
 2) Contour interval is 2.5 µg/m<sup>3</sup>  
 3) Maximum concentration: 22.9 µg/m<sup>3</sup> in SW direction.



**Figure A3**  
**Isopleths for Nitrogen Oxides**

- Note: 1) All figures are predicted 24-Hourly average GLCs of NO<sub>x</sub> (μg/m<sup>3</sup>)  
 2) Contour interval is 0.8 μg/m<sup>3</sup>  
 3) Maximum concentration: 5.8 μg/m<sup>3</sup> in SW direction.

12.6 Post project Scenario has been given in the following table:

**Table A4**  
Post Project Scenario-Units:  $\mu\text{g}/\text{m}^3$

Particulars	Particulate Matter	Sulfur Dioxide (SO <sub>2</sub> )	Oxides of Nitrogen (NO <sub>x</sub> )
Baseline Scenario (Max)	91.2	45.4	42.8
Predicted GLC (Max)	0.55	22.9	5.8
Overall Scenario (Worst Case)	91.75	68.3	48.6
NAAQ Standards '**'	100	80	80

Source: '\*\*' MoEF, Notification, New Delhi 16<sup>th</sup> November 2009, Schedule VII

The baseline air quality levels are superimposed with the estimated incremental GLCs due to the proposed unit. The post project air quality levels are found to be within the National Ambient Air Quality limits.

12.7 Comparison of Environmental impact scenarios for 100% Indigenous and 100% Imported coal

Description of the parameter	Unit	100% Indigenous coal	100% Imported coal
<b>Coal quality</b>			
Fuel Consumption	TPD	12023	8088
Ash Content	%	38	16
Sulphur Content	%	0.62	0.8
<b>Emission rates</b>			
PM Emissions	g/s	42.3	33.4
SO <sub>2</sub> Emissions	g/s	1726	1497
NO <sub>x</sub> Emissions	g/s	430	430
<b>Incremental GLCs (Max)</b>			
Particulate Matter	$\mu\text{g}/\text{m}^3$	0.61	0.55
Sulphur Dioxide (SO <sub>2</sub> )	$\mu\text{g}/\text{m}^3$	25	22.9
Oxides of Nitrogen (NO <sub>x</sub> )	$\mu\text{g}/\text{m}^3$	5.9	5.8
<b>Post project GLCs</b>			
Particulate Matter	$\mu\text{g}/\text{m}^3$	91.81	91.75
Sulphur Dioxide (SO <sub>2</sub> )	$\mu\text{g}/\text{m}^3$	70.4	68.3
Oxides of Nitrogen (NO <sub>x</sub> )	$\mu\text{g}/\text{m}^3$	48.7	48.6
<b>Ash generation</b>			
Total ash generation	TPD	4560	1294
Bottom ash (20%)	TPD	912	259
Fly ash (80%)	TPD	3648	1035

**Overall findings:**

Post project Ambient Air Quality levels after commissioning of the proposed 800 MW unit with 100% imported coal would be within NAAQ standards.

Annexure

Tel : (022) 2559 5373  
 : (022) 2559 2665 (office)  
 : (022) 2559 8278 (Lab)  
 Gram:BARC-Chembur-Mumbai  
 Fax : 91-22-2550 5313/5151  
 E-mail: rmt@barc.gov.in



Trombay  
 Mumbai-400 085

Government of India  
 Bhabha Atomic Research Centre  
 Health Physics Division

RADIOACTIVITY TEST CERTIFICATE

Dr. R. M. Tripathi  
 Head,  
 Health Physics Division

Ref.: BARC: HPD: LLCL: D: 62: MISC: 62:2013

October 08, 2013

This is regarding the sample of 'COAL' sent for Radioactivity analysis vide your letter ref. No.Lr.No.APPDCL/SDSTPS/Stage-II/F.EIA/D.No.673/13 dated 24.07.2013.

The sample is analysed for U-238, Ra-226, Th-232 & K-40 activities. The result of the analysis is given below :

S.No.	Sample Id.	Sample Identity	Activity (Bq/Kg)			
			<sup>238</sup> U	<sup>226</sup> Ra	<sup>232</sup> Th	<sup>40</sup> K
01	D-62	Coal	≤ 5.0	≤ 5.0	≤ 5.0	≤ 20

*R.M. Tripathi*  
 8/10/2013  
 (R. M. TRIPATHI)

ANDHRA PRADESH POWER DEVELOPMENT COMPANY LIMITED  
 Room No. 106, APGENCO Building, GTS Colony,  
 Erragadda,  
 Hyderabad – 500 045.

PROJECT MANAGER  
 APPDCL, HYD-45.  
 Inward No. 3676.....  
 17 OCT 2013  
 DE-I  
 DE-II  
 DE-III ✓  
 DE-IV  
 W-110  
 PM

Annexure

Form A - TRP1  
01/2004

**TEST REPORT**

**ISSUED TO:**

APPDCL, ROOM NO. 106,  
APGENCO BUILDING  
GTS COLONY, ERRAGADDA  
HYDERABAD - 500045  
ANDHRA PRADESH

Report Number : 00329/13-14/VLL/000/01

Issue Date : 2013-08-18

Your Ref : TRF

Date : 2013-08-07

SAMPLES: Coal Sample

Page 1 of 1

Sample Registration Date : 2013-08-07

Analysis starting Date : 2013-08-07

Analysis Completion : Date: 2013-08-16

Tests required: As, Cd, Cu, Cr, Pb, Hg, Sn, Mn, Zn, Ni, Co, Sb, V, Ti, Tl and Fe

Samples Coded as: Coal sample

SAMPLE NOT COLLECTED BY VIMTA LABS LTD

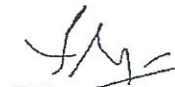
LAB REF.: EC

**TEST RESULTS**

SI No.	PARAMETER	UOM	Coal Sample
1	Cadmium as Cd	mg/kg	0.82
2	Chromium as Cr	mg/kg	2.06
3	Copper as Cu	mg/kg	3.80
4	Iron as Fe	%	0.152
5	Cobalt as Co	mg/kg	<0.1
6	Manganese as Mn	mg/kg	59.42
7	Nickel as Ni	mg/kg	5.64
8	Lead as Pb	mg/kg	2.10
9	Zinc as Zn	mg/kg	9.62
10	Arsenic as As	mg/kg	<0.1
11	Mercury as Hg	mg/kg	<0.1
12	Titanium as Ti	mg/kg	<0.1
13	Antimony as Sb	mg/kg	<0.1
14	Vanadium as V	mg/kg	2.12
15	Thallium as Tl	mg/kg	1.90
16	Tin as Sn	mg/kg	2.12

Method of Testing: As per USEPA 3050B

Instrument Used: ICP - MS (Agilent -7500), Detection Limit - 0.1 mg/kg



E. Shyam Sundar  
Vice President - Environment

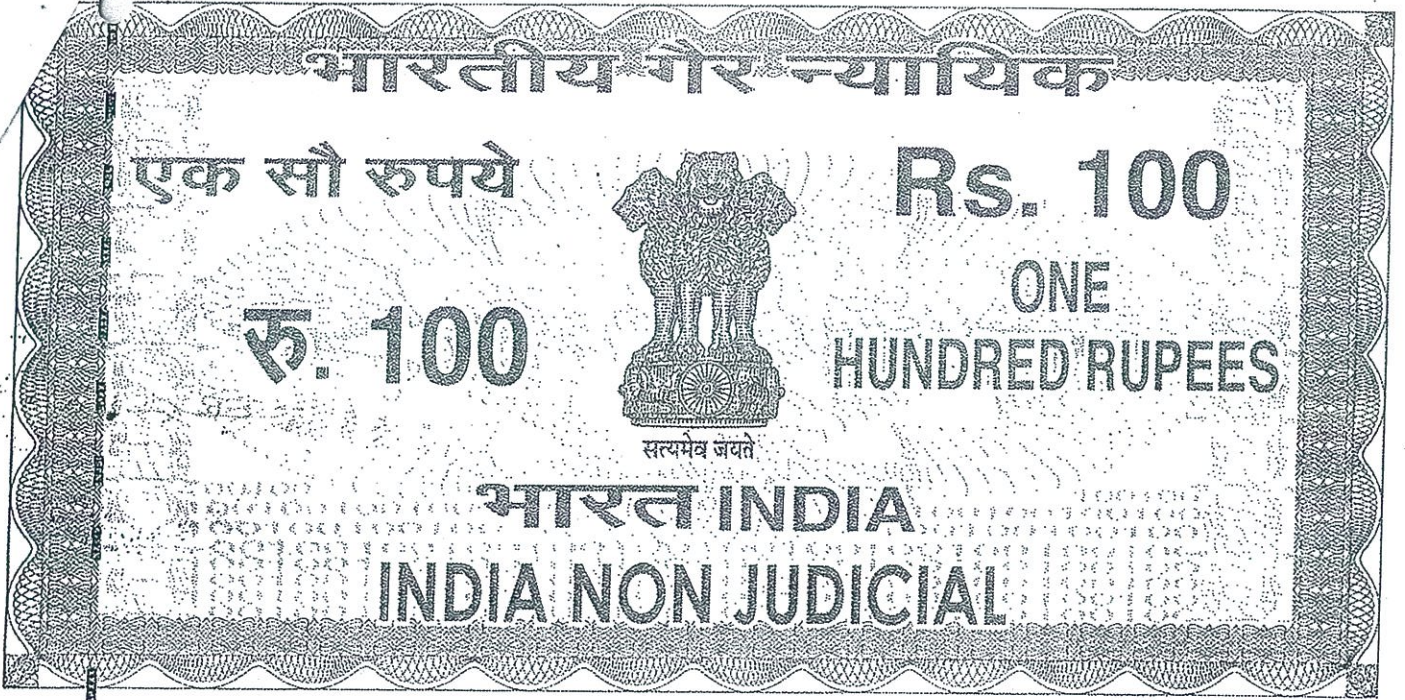
B174453

Note : This report is valid only for the terms and conditions mentioned on sheet

AUTHORISED SIGNATORY

# Annexures

Annexure-1



తెలంగాణ తెలంగాణ TELANGANA  
S.No....2651...Date.25.03.2015 Rs....100/-  
Purchaser..... M.V. SURESH .....  
S/W/D/..... M.V. S. P. RAO .....  
For Whom..... APGENCO .....

plotted

*K. Nagarajamani*  
A 880137  
K. NAGARAJAMANI  
LICENCED STAMP VENDOR  
UO:16-11-46/99, Ren.No.16-11-43/2011  
# 59/A, Kushal Towers, Khairatabad  
Hyderabad (South) District  
Ph.No.9349838068

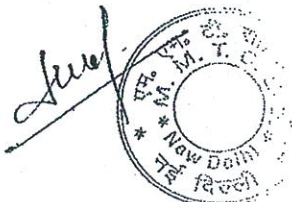
MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter referred to as "MOU") entered into on this 26<sup>th</sup> Day of March, 2015 by and between.

A. M/s MMTC Limited, a Government of India Enterprise having its Registered office at Core 1, Scope complex, 7, Institutional area, Lodhi Road, New Delhi - 110 003, (hereinafter referred to as "MMTC" which expression shall unless the context requires otherwise, include its successors and permitted assigns) of the **First Part**.

And

B. The Andhra Pradesh Power Generation Corporation Limited, a Company incorporated under the Companies Act, 1956, having its Registered Office at Vidyut Soudha, Khairatabad, Hyderabad -500082 (hereinafter called as "APGENCO" which expression shall unless the context requires otherwise, include its successors and permitted assigns) of the **Second Part**.



*[Signature]*  
CHIEF ENGINEER  
Thermal Projects Construction  
APGENCO, Vidyut Soudha,  
HYDERABAD - 500 082.

WHEREAS:

- a) APGENCO proposed to establish 1 x 800 MW Coal based Super critical thermal Power Project named Dr. Narla Tata Rao Thermal Power Station, Stage-V( 1 x 800 MW) (hereinafter referred to as "Project") at Ibrahimpatnam Village, Krishna district, Andhra Pradesh to meet the power demand in A.P.
- b) APGENCO proposed to operate the plant with imported coal in view of the shortage of indigenous coal prevailing in India.
- c) MMTC is having vast experience in supplying imported coal for various thermal plants of APGENCO.
- d) MMTC has agreed to supply imported coal of about 2.65 Million MT per Annum (2.65 MTPA) for the above mentioned project at the request of APGENCO.
- e) For the aforesaid purpose, the parties hereby agree to sign these presents on mutually agreed terms and conditions mentioned hereunder:

NOW THEREFORE THIS MEMORANDUM OF UNDERSTANDING (MOU) WITNESSTH AS FOLLOWS:

I. INTENT:

- a) MMTC shall import coal for long term supply for operation of Dr. Narla Tata Rao Thermal Power Station, Stage-V (1 x 800 MW). The imported coal shall be non-coking coal (Steaming) as per the following parameters.

- i) GCV : 5500 to 6200 Kcal/Kg
- ii) Total Moisture (ARB) : 8-25%
- iii) Ash Content (ADB) : 12-16%
- iv) Sulphur : 0.45 - 0.8%

- b) The characteristics of imported coal shall be

(A) THE CHARACTERISTICS OF IMPORTED COAL


Sl.No	Description	Unit	Typical
1	Total Moisture (As received Basis)	%	8-25
2	Ash Content (air dried basis)	%	12-16
3	Total sulphur (air dried basis)	%	0.45-0.8
4	Gross calorific value (air dried basis)	Kcal/Kg	5500-6200

- c) Quantity:

The quantity of imported coal shall be 2.65 MTPA if the power plant is operated with 100% imported coal at 90% PLF

- d) MMTC shall source the coal of the above specification as per clause 1 (b) above.
- e) The Unit of Dr.NTTPS Stage-V is expected to be commissioned by April 2019. The supply of imported coal shall commence from March 2019 tentatively.
- f) APGENCO shall intimate exact date of commissioning of the project to MMTC in advance (i.e., three months) so that MMTC shall arrange necessary logistics.
- g) APGENCO shall furnish month-wise requirement of coal to MMTC sufficiently in advance for supply of coal.
- h) The imported coal is to be unloaded in Krishnapatnam Port/Kakinada port and MMTC shall arrange suitable vessels for transporting the coal.
- i) MMTC shall follow CVC guidelines and other Govt. notifications issued from time to time for procurement of imported coal.



  
CHIEF ENGINEER  
Thermal Projects Construction  
APGENCO, Vidyan Es. chn,  
HYDERABAD - 500 022

- j) MMTC shall furnish the split up details of imported coal including taxes, duties, insurance charges, load transportation, port charges and all other incidental expenses such as pilotage and berth hire charges, light dues, harbour dues, clearing and forwarding, assessment and other charges with respect to the vessels at port of discharge. The rates shall also include overhead charges of MMTC.
- k) MMTC and APGENCO shall decide detailed specification of coal or any other details mutually acceptable at the time of entering FSA for the purpose of fixing of price for supply of coal.
- l) MMTC and APGENCO shall mutually discuss and agree on the price of coal every year for the supply of imported coal.
- m) MMTC shall supply imported coal on FOR destination basis i.e., Dr.NTTPS Stage-V (1x800MW). However, MMTC shall furnish the certificate of origin as per standard formats prescribed by Ministry of Finance/Dept. of Revenue/Govt. of India.
- n) Payment for imported coal shall be against submission of Invoice by MMTC.
- o) The quantity of imported coal to be supplied will vary depending on the Plant load factor of the Power Plant as well as the supply of indigenous coal based on Long term coal linkage, if any granted by Ministry of coal. APGENCO shall not responsible for any variation in the quantity of imported coal that may be imported.

**(B) Specification of vessels to be used/salient details of Krishnapatnam Port.**

Coal shall be delivered on FOR destination i.e., Dr.NTTPS Stage-V (1x800MW) basis through Krishna Patnam / Kakinada Ports. Detailed logistics may be worked out at the time of entering FSA.

**2. Representation and warranties:**

Neither party shall have the right of power to bind the other party to any agreement without the prior written consent of the other party. Unless specifically agreed in writing, no party is authorized to make commitments, representations, warranties to agreements on behalf of the other party and each party agrees that it will not hold itself out as having such authority. If any party acts in violation of the foregoing, the said party agrees to indemnify, defend and hold the other parties damages, liabilities, law suits and other proceedings, judgments and awards, the reasonable cost and expenses, (including but not limited to reasonable attorneys fee) arising directly or indirectly in whole or in part, out of the breach of this article by such party whether committed by the indemnifying party, its employees, agents, successors or assigns.

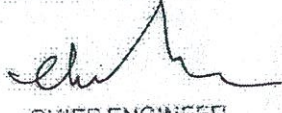
**3. LIMITATION OF LIABILITY:**

Neither party shall be liable to each other for any financial liability or any consequential loss incurred by the party individually in respect of the MoU.

**4. ASSIGNMENT:**

The assignment by any party of all its rights and obligations under this MOU to a third party shall be subject to the written consent of the other party provided that such assignee shall also specifically agrees in writing to be bound by the terms of this MOU.



  
CHIEF ENGINEER  
Thermal Projects Construction  
APGENCO, Vidyut Soudha,  
HYDERABAD - 500 082.

5. SETTLEMENT OF DISPUTES AND ARBITRATION:

In the event of any difference/dispute arising between the parties hereof under these present, such disputes/differences shall in the first instance be resolved amicably by mutual consultations within 45 days of the reference of dispute by either party.

If amicable settlement is not reached between the parties in any dispute or difference, whatsoever arising between the parties out of or relating to the construction, meaning, scope operation or effect of this MOU or the validity or the breach thereof shall be settled by arbitration in accordance with the Rule of Arbitration of the Indian Council of Arbitration and the award made in pursuance thereof shall be binding on the parties. The provisions of Arbitration and Conciliation Act, 1996 shall apply to such Arbitration proceedings. The seat of the Arbitration shall be at New Delhi.

6. GOVERNING LAWS & JURISDICTION:

This MoU shall be governed by the laws of India and the rules framed thereunder. The courts of New Delhi shall have exclusive jurisdiction in all matters relating to or arising out of this MOU.

7. NOTICE:

Any notice to be given under this MOU shall be in writing and shall be deemed to have been duly and properly served upon the parties hereto if delivered against acknowledgement or by registered mail with acknowledgement or by registered mail with acknowledgement due, addressed to the parties herein at the following addresses or such changed addresses as will be duly notified by the parties from time to time.

8. This MoU is only an intent on behalf of MMTC to supply the coal and intent of M/s APGENCO to buy the coal. However, once the power plant is commissioned, sale-purchase shall take place after detailed agreement with mutually acceptable terms & conditions and approval by respective management of both the companies.

Address

Attention:

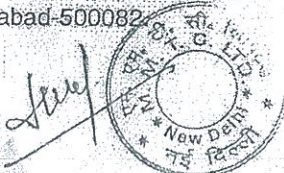
MMTC Limited, Represented by Hemant Bist , Chief Manager

Core 1, Scope Complex,  
7, Institutional area,  
Lodhi Road,  
New Delhi -110 003.  
Tel NO:

Attention:

Andhra Pradesh Power Generation Corporation Limited, Represented by Ch.Nageswar Rao, Chief Engineer/TPC

APGENCO,  
Vidyut Soudha, Khairatabad  
Hyderabad-500082



A handwritten signature of Ch. Nageswar Rao.

CHIEF ENGINEER  
Thermal Projects Construction  
APGENCO, Vidyut Soudha,  
HYDERABAD - 500 082.

**9. CONFIDENTIALITY:**

- a. The parties, to the extent of their respective rights to do so, shall exchange such technical information and data as is reasonably required of each party to perform its responsibilities under this MOU. Each party agrees to keep in confidence and to use the same degree of care as it uses with respect to its own proprietary data to prevent the disclosure to third parties of all technical information, data and confidential business information (hereinafter referred to as "data").
- b. Exchange, use and maintenance of confidential data shall be mutually discussed and agreed to by the parties.
- c. The preceding provisions of confidentiality and restriction on use of data shall not apply to by the parties.
  - Information in the public domain of information, which subsequently enter into public domain without committing breach of this clause.
  - Information in possession of the party at the time of disclosure and was not acquired, directly or indirectly, from the other party.
  - Information which a party is required to disclose under law, rules of regulation to any judicial or other authorities.
  - Consultants/advisors provided they, in turn, sign undertaking of confidentiality.

**10. TERMINATION OF MOU:**

The MOU shall stand terminated without any liability on either party,

- i) If the parties hereto by mutual consent agree that the MOU could not be continued for any reason what so ever, or
- ii) On expiry of the notice period if either party gives a written notice of not less than three months expressing inability to continue with the MOU.

**11. EFFECTIVE DATE:** This MOU shall come into force as soon as it is signed for all purposes and intents.

IN WITNESS WHEREOF, the parties hereto have signed this Memorandum of Understanding at Hyderabad on the date first mentioned above in the presence of witnesses as mentioned hereunder.

For and behalf of MMTC



Witness  
①

Anchal Meena  
26/3/15  
Manager, Coal  
MMTC Limited, Delhi

For and behalf of APGENCO


*(Ch. Nageswara Rao)* 26/03/2015  
CHIEF ENGINEER  
Thermal Projects Construction  
APGENCO, Vidyut Soudha,  
HYDERABAD - 500 082.

Witness

1. *(J. Raghavendra Rao)*  
26/3/15  
Project Manager  
A.P. Power Development Corp. Ltd.

"The Hindu"

15-02-2015

 **ANDHRA PRADESH POWER  
GENERATION CORPORATION LIMITED**

**Notification on use of Imported coal for Dr.NTTPS stage-V (1X800MW) unit**

This is to inform that initially APGENCO proposed to set up 800MW Supercritical unit under Stage-V in the Dr.NTTPS complex, Ibrahimpatnam, Krishna District using 100% Domestic Coal sourced from Suliyari Belwar Coal Block, Madhya Pradesh. EIA report has been prepared as per TOR issued by MOEF & CC, GOI. APPCB conducted public hearing on 10.01.2014. The project was discussed in the MOEF & CC Expert Appraisal Committee meeting held on 27.11.2014.

Due to unavoidable circumstances and keeping in view coal scenario in India, APGENCO proposes to use 100% imported coal as optional for the project and approach MOEF & CC for Environmental Clearance. Environmental impacts have been assessed for 100% Imported coal also and reports have been sent to APPCB Head Quarters & Regional Office and Regional Office of MOE&F&CC, GOI, Chennai. Supplementary report is made available in APGENCO website [www.apgenco.gov.in](http://www.apgenco.gov.in). The Public are hereby requested to submit suggestions, comments, if any within one month from the date of this Notification to the undersigned. This notification is issued as per the directions of Expert Appraisal Committee in the meeting held on 27.11.2014.

Date: 12.02.2015  
Place: Hyderabad

V. Surya Lakshmi  
Chief Engineer/civil/Hydel,  
GS,C&I, APGENCO, Room.No.158,  
"A" Block, Vidyut Soudha,  
Hyderabad - 500 082.

for more details visit our website : [WWW.APGENCO.GOV.IN](http://WWW.APGENCO.GOV.IN)

కౌ నా డు వేదీ 14-02-2015

Fenadu, Date 14-2-2015



ఆంధ్రప్రదేశ్ సచివాలయం, ఆంధ్రప్రదేశ్ ప్రభుత్వం (ఆంధ్రప్రదేశ్)  
డా॥ ఎన్.టి.టి.సి.ఎస్. స్టేజ్-V (14360 మె. బాండ్)

**100% విదేశీ బొగ్గు వినియోగం ప్రకటన**

డా॥ ఎన్.టి.టి.సి.ఎస్. ప్రాంగణములో 800 మె. బాండ్ బొగ్గు ఆధారిత సూపర్ క్రిటికల్ యూనిట్ (స్టేజ్-V)ను నిర్మించుటకు ప్రతిపాదించడమై నది. ఈ యూనిట్ కొరకు 100% విదేశీ బొగ్గు "సులియారీ బెల్జియం కోల్ ట్రాక్" మధ్యప్రదేశ్ నుండి వినియోగించుటకు ప్రతిపాదన చేయడమైనది. కేంద్ర పర్యావరణ మంత్రిత్వ శాఖ నిర్దేశించిన టి.ఓ.ఆర్. ప్రకారము పర్యావరణము మీద ప్రభావముపై పరిశోధనలు చేసి నివేదిక తయారుచేయబడినది. ఆంధ్రప్రదేశ్ కాలవ్యవస్థ నియంత్రణ మండలి వారిచే 10-01-2014 తేదీన ప్రజాతిప్రాయ సేకరణ జరిగినది. ఈ ప్రాజెక్టును కేంద్ర పర్యావరణ మంత్రిత్వ శాఖ నిపుణుల కమిటీ 27-11-2014 తేదీన జరిగిన సమావేశములో చర్చించడము జరిగినది.

కొన్ని అనుకోని పరిస్థితులు మరియు విదేశీ బొగ్గు పరిస్థితుల ధృష్ట్యా ఈ ప్రాజెక్టు కొరకు 100% విదేశీ బొగ్గును బచ్చికముగా వినియోగించుటకు ఎపిజెన్ కో నిర్ణయించినది. 100% విదేశీ బొగ్గును వినియోగించడము ద్వారా పర్యావరణ ప్రభావ అంచనా వేసి నివేదికను ఆంధ్రప్రదేశ్ కాలవ్యవస్థ నియంత్రణ మండలి ప్రధాన కార్యాలయము, ప్రాంతీయ కార్యాలయము మరియు కేంద్ర పర్యావరణ మంత్రిత్వ శాఖ ప్రాంతీయ కార్యాలయము, చెన్నైకు పంపబడినవి. ఈ నివేదికను ఎపిజెన్ కో వెబ్ సైట్ ([www.aprgencg.gov.in](http://www.aprgencg.gov.in))లో ఉంచడమైనది. ప్రజలు తమ అభిప్రాయాలు మరియు సలహాలను ఈ ప్రకటన వెబ్సైటున తేదీ నుండి నెల రోజులలోపు క్రింది అధికారికి లిఖితపూర్వకంగా తెలియచేయమని కోరడమైనది. కేంద్ర పర్యావరణ మంత్రిత్వ శాఖ నిపుణుల కమిటీ 27-11-2014 తేదీన జరిగిన సమావేశంలో సూచించిన ఆదేశాల ప్రకారము ఈ ప్రకటన ఇవ్వబడుచున్నది.

**మినూర్వలక్ష్మి దీప్ ఇంజనీర్**  
 హైదరాబాద్, జిఎస్, సికిబి, ఎపి జెన్ కో,  
 యామ్ నెం. 158, 'ఎ' బ్లాక్, విద్యుత్ సౌధ,  
 హైదరాబాద్-500 082

తేదీ: 12-2-2015  
 ప్రదేశము: హైదరాబాద్

Replies to the representations received on the "public notification on change of fuel":

S. No.	Representati on received from	Issues raised	Reply
1.	Combined representation of 25 people from Ibrahimpatna m Village	There is no objection to establish the project with 100% imported coal. The commitments made in the Public Hearing shall be fulfilled.	<p>In order to fulfill the commitments made in the public hearing, written confirmation was furnished to District Collector vide letter dated 15-02-2014 as follows:</p> <p>An amount of Rs. 15 crores @ Rs. 3.00 Crore per year will be spent on welfare measures in the next 5 years as suggested by the District Collector, in addition to the Rs. 21 crore as per the CSR plan prepared based on need based study conducted in the nearby villages of Dr. NTPS. A committee to oversee the implementation of CSR works has been constituted by the District Collector Proceedings No. 694//APGENCO/Dr. NTPS / CSR / 2014, dated 16-08-2014. A GOO was issued by APGENCO on 28-01-2015 to release the funds. A list of works at an estimated cost of Rs. 3.0 Crore have been finalized by the District Collector for implementation during financial year 2015-16. After approval by the CSR committee, works will be taken up.</p>
2	Federation of Farmers Association, Andhra Pradesh	<p>1. Firm linkage to coal with any particular mine or source country is not mentioned.</p> <p>2. Mechanism to check the quality of coal and action taken to ensure compliance.</p>	<p>MOU has been concluded with M/s MMTC Limited, a Govt. of India Enterprises for supply of 100% imported coal for the coal parameters considered for Environmental Impact Analysis. Irrespective of the mine or source country, the coal will be supplied by supplier for the agreed parameters as the supplier will have option to import from any source. Presently, APGENCO stations are importing the coal for the coal parameters mentioned in the purchase orders placed on suppliers.</p> <p>The imported coal received at the stations will be tested through Independent Inspection Agency recognized by NABL and APGENCO laboratory and ensure compliance of the parameters mentioned in the agreement.</p>

		3. Sulphur composition of the imported coal is shown very low and unrealistic.	Presntly imported coal with sulphur content not exceeding 0.8% is being used for the existing stations. Based on this sulphur content in the imported coal is finalized for the proposed station.
3	Combined representation of 5 people from Jupudi Village	There is no objection to establish the project with 100% imported coal. However, they have requested for 24 hour power supply to their village.	This demand was raised in the public hearing held on 10-01-2014. Uninterrupted power supply to the affected villages will be taken up with DISCOM & GOAP as distribution of power is not in the jurisdiction of APGENCO.

*V. Sanyal Lakshmi*  
 Chief Engineer/civil  
 Hydrel/GS/C&L/LL  
 A.P.Genco, Vidyut Soudha  
 HYDERABAD-500082



No. J3011/45/86-IA (NY)  
Government of India/Bharat Sarkar  
Ministry of Environment and Forests  
(Paryavaran Aur Van Mantralaya)

Annexure - 4

190

Paryavaran Bhavan,  
C.G.O. Complex, Lodi Road,  
New Delhi-110003.

May 25, 2001.

To

Shri J. Parthasarathy,  
Chairman & Managing Director,  
Andhra Pradesh Power Generation  
Corporation Limited,  
Vidut Soudha, Khairatabad,  
Hyderabad-500 082.



**Subject: Vijayawada Thermal Power Station Stage-III - Show Cause Notice under Section 5 of Environment (Protection) Act, 1986.**

Sir,

This has reference to your letter No. LE/E/TPC/F.2/D.No.203/2K1 dated 17<sup>th</sup> May, 2001 regarding supplementary clarifications sought vide our letter of even number dated 30<sup>th</sup> April, 2001.

We have noted the chronology of events which led to commissioning of Stage-III (2x210 MW Units) during March, 1994 and February, 1995 using 180 m spare flues available in the already constructed stacks for Stage-I and Stage-II. APSEB was aware of the requirement of 220 m stack and the need for adherence to this stipulation. Keeping in view the present status at Vijayawada Thermal Power Station and future plans for undertaking Stage-IV activities, you are requested to consider the following options.

- (a) APGENCO may explore the feasibility of operating both the units (210 MW each) of Stage-III at a de-rated capacity of about 190-195 MW.
- (b) In the expansion proposal (Stage-IV), the possibility of erecting 220 m high stack and till such time Stage-III may be operated at 190-195 MW.
- (c) Construction of Central Monitoring Basin for ensuring adherence to waste water quality standards before its discharge outside plant premises.

You are, therefore, requested to submit response to the above options at the earliest.

Yours faithfully,

*NBhat*

(Nalini Bhat)  
Director



*TPC*  
*CE (Env)*  
*Ad draft*  
*as discussed*  
*22/5/2001*  
*5/6/2001*  
*APGENCO*  
*22/3/15*

## ANNEXURE -5

Dr.NTTPS - Water temperatures recorded during the period  
from January 2012 to September, 2014

All values in °C

Date	Temperature of Inlet Raw water drawn from CW canal (at Stage.I intake)	Temperature of Outlet Condenser Cooling discharge Water at confluence of River Krishna	Difference
24-01-2012	29.8	34.8	5.0
27-02-2012	31	36.1	5.1
26-03-2012	34.8	40	5.2
26-04-2012	34.7	39.5	4.8
24-05-2012	38.3	43.1	4.8
27-06-2012	32.3	37.2	4.9
25-07-2012	31.7	36.5	4.8
17-08-2012	32.7	37	4.3
14-09-2012	29.8	35	5.2
30-10-2012	32.8	37.6	4.8
22-11-2012	30.7	35.5	4.8
14-12-2012	30.2	35.1	4.9
22-01-2012	33.4	38.6	5.2
22-01-2013	33.4	38.6	5.2
22-02-2013	30.2	35	4.8
12/3/2013	34	39.1	5.1
24-04-2013	33.4	38.5	5.1
21-05-2013	34.8	40	5.2
26-06-2013	32	37	5.0
25-07-2013	31	35.9	4.9
28-08-2013	30	35.1	5.1
26-09-2013	29.2	34.4	5.2
29-10-2013	30	35.1	5.1
17-11-2013	29.8	35	5.2
12/12/2013	28.4	33.5	5.1
6/1/2014	30.8	35.7	4.9
12/2/2014	32	37.2	5.2
13-03-2014	30.6	35.3	4.7
25-04-2014	37	42	5.0
23-05-2014	37.5	42.4	4.9
25-06-2014	30.4	35.6	5.2
23-07-2014	32	36.9	4.9
22-08-2014	35.1	40.1	5.0
24-09-2014	29.4	34.3	4.9

09/10  
CHIEF ENGINEER/O&M  
Dr.NTTPS/IBRAHIMPATNAM

MINISTRY OF ENVIRONMENT AND FORESTS

NOTIFICATION

New Delhi, the 22<sup>nd</sup> December, 1998

**G.S.R.7.** — In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1985 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:-

1. (1) These rules may be called the Environment (Protection) (Second Amendment) Rules, 1998.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986 —

(a) in rule 3, for sub-rule (3B), the following sub-rule shall be substituted, namely:-  
“3B) The combined effect of emission or discharge of environmental pollutants in an area, from industries, operations, processes, automobiles and domestic sources, shall not be permitted to exceed the relevant concentration in ambient air as specified against each pollutant in columns (3) to (5) of Schedule VII”;

(b) in Schedule 1, —

(i) against serial number 74 relating to emission standards for brick kilns, for the existing Para III, the following shall be substituted, namely :-  
“III Existing moving chimney bull's trench kilns shall be dispensed with by June 30, 1999 and no new moving chimney kilns shall be allowed to come up”;

(ii) after serial number 80 and the entries thereto, the following serial numbers and entries shall be inserted, namely :-

02 The user should make efforts to bring down the noise levels due to the DG set, outside his premises, within the ambient noise requirements by proper siting and control measures.

03 The manufacturer should furnish noise power levels of the unsilenced DG sets as per standards prescribed under (A).

04 The total sound power level of a DG set, at the user's end, shall be within 2 dB(A) of the total sound power level of the DG set, at the manufacturing stage as prescribed under (A).

05 Installation of a DG set must be strictly in compliance with the recommendations of the DG set manufacturer.

06 A proper routine and preventive maintenance procedure for the DG set should be set and followed in consultation with the DG set manufacturer which would help prevent noise levels of the DG set from deteriorating with use.

84. Temperature Limit for Discharge of Condenser Cooling Water from Thermal Power Plant.

A: New thermal power plants, which will be using water from rivers/lakes/reservoirs, shall install cooling towers irrespective of location and capacity. Thermal power plants which will use sea water for cooling purposes, the condition below will apply.

B: New projects in coastal areas using sea water.

The thermal power plants using sea water should adopt suitable system to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not exceed 7°C over and above the ambient temperature of the receiving water bodies.

C: Existing thermal power plants.

Rise in temperature of condenser cooling water from inlet to the outlet of condenser shall not be more than 10°C.

D: Guidelines for discharge point:

The discharge point shall preferably be located at the bottom of the water body at mid-term for proper dispersion of thermal discharge.

In case of discharge of cooling water into sea, proper marine outfall shall be designed to achieve the prescribed standards. The point of discharge may be selected in consultation with concerned State Authorities/NIO.

No cooling water discharge shall be permitted in estuaries or near ecologically sensitive areas such as mangroves, coral reefs/spawning and breeding grounds of aquatic flora and fauna.

#### 85. Environmental Standards for Coal Washeries :

##### A. Fugitive emission standards

The difference in the value of suspended particulate matter, delta ( $\Delta$ ), measured between 25 to 30 metre from the enclosure of coal crushing plant in the downward and leeward wind direction shall not exceed 150 micogram per cubic meter. Method of measurement shall be High Volume Sampling and Average flow rate, not less than 1.1 m<sup>3</sup> per minute, using upwind downwind method of measurement.

##### B. Effluent discharge standards

The coal washeries shall maintain the close circuit operation with zero effluent discharge.

If in case due to some genuine problems like periodic cleaning of the system, heavy rainfall etc. it become necessary to discharge the effluent to sewer/land/stream then the effluent shall conform to the following standards at the final outlet of the coal washery.

Sr. No.	Parameter	Limits
1	pH	5.5-9.0
2	Total suspended solids	100 mg/l
3	Oil & Grease	10 mg/l
4	B.O.D. (3 days 27 deg C)	30 mg/l
5	COD	250 mg/l
6	Phenolics	1.0 mg/l

##### C. Noise level standards

Operational/Working zone — not to exceed 85 dB (A) Leq for 8 hours exposure.

The ambient air quality standards in respect of noise as notified under Environmental (Protection) Rules, 1986 shall be followed at the boundary line of the coal washery.

Code of practice for Coal Washery.

Water or Water mixed chemical shall be sprayed at all strategic coal transfer points such as conveyors, loading/unloading points etc. As far as practically possible conveyors, transfer points etc. shall be provided with enclosures.

- The crushers/pulverisers for the coal washeries shall be provided with enclosures, fitted with suitable air pollution control measures and finally emitted through a stack of minimum height of 30 m, conforming particulate matter emission standard of 150 mg/Nm<sup>3</sup> or provided with adequate water sprinkling arrangement.

Annexure - 7

SPM Values of Units I to VII of Dr. NTTPS for the months  
from 11/2014 to 02/2015

All Figures are in mg/Nm<sup>3</sup>

Month	UNIT - I	UNIT - II	UNIT - III	UNIT - IV	UNIT - V	UNIT - VI	UNIT - VII
Nov- 2014	112	102	123	105	101	84	76
	106	96	111	86	89	107	96
Dec -2014	123	112	117	102	112	101	---
	104	87	113	96	97	93	87
Jan-2015	129	94	107	91	108	102	63
	105	82	102	77	80	98	57
Feb -2015	119	108	114	90	107	100	65
	110	105	103	82	95	98	60

V.V. Sathy 25/3/15  
Executive Engineer

Civil/Quality Control

Dr.NTTPS/Ibrahimpattam

No. No. 5 / 974 / 2002

Mandal Revenue Office,  
VR Puram Dt. 11.06.2003

DELIVERY OF POSSESSION CERTIFICATE

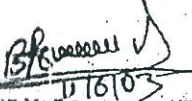
In accordance with the Orders contained in the proceedings Rc.No.E1/8897/01, dated 05.10.2002 of the District Collector, Khammam, an extent of Hec.155.06 Aires computed in Ac.387.55 cents of the Government Land in Ssurvey No.1 of Maredupudi Village of Vararamachandrapuram Mandal in Khammam District towards compensatory afforestation in lieu of the Forest Land required by the VTPS(APEGENCO) for Stage-III Ash Pond have been delivered the possession of the Government Land today

on " <sup>June</sup> July, 2002 to the Forest Department  
13/07/02

Station: Maredupudi

Date 11.06.2003

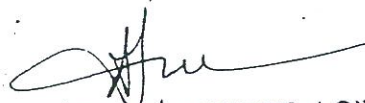
Handedover by

  
11/06/03  
**MANDAL REVENUE OFFICER**  
Vararamachandrapuram

Takenover by

  
11/06/03  
**Forest Range Officer**  
V.R. Puram

**// TRUE COPY //**

  
**EXECUTIVE ENGINEER / CIVIL**  
C&M DIVISION - IV, Dr. NTTPS  
IBRAHIMPATNAM - 521 456

- Annexure - 9  
GOVERNMENT OF ANDHRA PRADESH  
ABSTRACT

Water Resources Deptt. - APGENCO - Dr.NTTPS, Stage-V(1x800MW) - Permission for utilization of 25 Cusecs water from Krishna River upstream of Prakasam Barrage, Vijayawada to the proposed Power Plant of Dr.NTTPS, Stage-V (1x800MW) unit - Accorded - Orders - Issued.

-----  
WATER RESOURCES (REFORMS) DEPARTMENT

G.O.Rt.No.127.

Dated:05-03-2015.

Read the following:-

- 1) G.O.Ms.No.601, Irrigation and Power(IRR.II)Dept., dt:31.10.1979,
- 2) From the M.D., APGENCO., D.O.Lr.No.CCL 431/Dr.NTTPS-V/F. DPR/ D.No.146/12, Dt:17-05-2012.
- 3) Govt.Memo.No.12944/Reforms/A2/2012, dt:2.6.2012 and 22.06.2013.
- 4) From the E.N.C.(Irr.), Hyd., Lr.No.ENC(I)/DCEIV/OTM5/S2/NTTSP Stage V/2012, dated:01.06.2013 and 07.07.2013.
- 5) From the M.D., APGENCO., D.O.Lr.No.CCL 431/Dr.NTTPS/F.Stage-V/ D.No.228/13, dated:10.5.2013, 22.02.2014, 04.9.2014, 12.01.2015 and 16.02.2015.

>><<

ORDER:

In the reference 1<sup>st</sup> read above, approval was accorded to erstwhile Andhra Pradesh State Electricity Board to utilize about 6.00 TMCft i.e., 190 Cusecs of water from Krishna River at upstream of Prakasam Barrage, Vijayawada for Dr.NTTPS (formerly Vijayawada Thermal Power Station) subject to condition to pay water royalty charges as per the orders of Revenue Department for four stages for consumptive use of 60 Cusecs.

2. In the references 2<sup>nd</sup> and 5<sup>th</sup> read above, the Managing Director, APGENCO has informed that the Government have accorded approval for establishing of Stage-V (1x800 MW) unit at Dr. Narla Tata Rao Thermal Power Station (Dr.NTTPS) on fast track basis and requested the I&CAD Department to communicate the concurrence of utilization of 25 cusecs of water from the overall allocation of 6.00 TMC (190 Cusecs) water from Krishna River, immediately to meet the power demand of A.P., as the Government of India has directed the APGENCO to get a fresh approval for water drawl from Krishna River for proposed Stage-V unit at Dr.NTTPS to give environmental clearance. The Managing Director, APGENCO has further requested to convene a meeting with concerned officials for settlement of pending royalty charges for 60 Cusecs taking into consideration the omissions pointed out by the APGENCO.

3. In the reference 3<sup>rd</sup> read above, the Engineer-in-Chief(Irrigation), Hyderabad has reported that, an amount of Rs.41.00 Crores(approximately) is outstanding as on 07/2013 in addition to the maintenance charges of gates and taxes applicable and also stated that to convene a meeting with Managing Director, APGENCO and Irrigation authorities for settlement of Royalty Charges and submit a compliance report to Vigilance & Enforcement Department, so that the future monitoring would be clear.

P.T.O.,

TEE.  
16/03/2015  
EETED

AE  
B  
S

4. Government after careful examination of the proposal of the Managing Director, APGENCO., hereby accord permission for utilization of 25 Cusecs water from Krishna River upstream of Prakasam Barrage, Vijayawada to the proposed Power Plant of Dr. Narla Tata Rao Thermal Power Station (Dr.NTTPS), Stage-V (1x800MW) unit to meet the power demand of Andhra Pradesh, as against already allocated water of 6.00 TMC i.e., 190 Cusecs vide G.O.Ms.No.601, Irrigation and Power(IRR.II) Department, dt:31.10.1979. Thus, the total consumptive use of water shall be 85 cusecs including the above said proposal, which is well within the allocated quantity of 190 Cusecs.

5. The Engineer-in-Chief(Irrigation) is informed that the above said permission is made temporarily subject to condition to collect the royalty charges pending with APGENCO (erstwhile APSEB) amounting to Rs.41.00 Crores approximately and take necessary steps for convening a meeting with the concerned officials, taking into consideration the omissions made by the APGENCO if necessary.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH):

ADITYA NATH DAS,  
PRINCIPAL SECRETARY TO GOVERNMENT.

To  
The Engineer-in-Chief (Irrigation), Jalasoudha Buildings,  
Errum Munzil, A.P., Hyderabad.  
The Managing Director, APGENCO., Vidyut Soudha,  
Khairatabad, Hyderabad - 500 082.

Copy to:

The Energy, Investment & Infrastructure(Power-I)Department.  
The General Administration(V&E) Department, BRKR Building, Hyd.  
The P.S. to Minister(WRD).  
The P.S. to Principal Secretary to Govt.(AD), Water Resources Department.  
SF/SC.

//FORWARDED :: BY ORDER//

*I. Salymanaya*  
SECTION OFFICER.

Annexure - 10

ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED  
&&&

From  
The Chief Engineer,  
Operation and Maintenance,  
Dr.NTTPS / VTPS,  
Ibrahimpattanam - 521 456  
Krishna District (AP).

To  
M/s. Vertex Cements (P) Ltd.,  
H.No.1-89/2/244, plot No.244,  
Kavuri Hills - II, Madhapur,  
Hyderabad -500 081, India.

Lr.No.CE/O&M/EE/C/QC/ENVT/Dr.NTTPS/F.17/D.No. 233/2015.Dt. 20 03 - 2015.

Sir,

Sub:-APGENCO - Dr.NTTPS - Sale of fly ash - Agreement between APGENCO and M/s.Vertex Cements (P) Ltd, for supply of Fly ash from Dr.NTTPS - Copy communicated -Regarding.

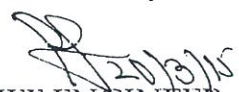
Ref:-Lr.No.CE/C/Hydel,GS and C&I/EE/MDn/F-Flyash/D.No.92/15, dt.28-02-2015.

@@@

The copy of the Agreement concluded with you on 20-03-2015 for supply of 1035 TPD of fly ash from Stage-V unit of Dr.NTTPS is herewith communicated for necessary action.

Encl: 1) Copy of Agreement

Yours faithfully,

  
CHIEF ENGINEER  
OPERATION AND MAINTENANCE  
Dr.NTTPS/IBRAHIMPATNAM

- Copy to the Chief Engineer/Civil, Hydrel, General Services, C&I/ APGENCO/Vidyut Soudha/ A-Block, Room No.158/ Hyderabad - 500 082. Encl: Copy of agreement.  
Copy to the Chief Engineer/Generation - I/ APGENCO/ Vidyut Soudha/Hyderabad - 500 082. Encl: Copy of agreement.  
Copy to the Superintending Engineer/O&M-I,II, III, IV and Environment,/Dr.NTTPS for information and necessary action. Encl: Copy of agreement.  
Copy to the Dy.CCA/Dr.NTTPS for information and necessary action. Encl: Copy of agreement.  
Copy to the Security Officer/Dr.NTTPS for information. Encl: Copy of agreement.  
Copy to the Divisional Engineer/SII.O/Dr.NTTPS for taking further necessary action.

Stamp: SE/C&I/VS APGENCO/HYD No: 1661/27/15 AET1 AET2 AO AM EE/EE/EE/EE/C Maint Div

Stamp: Chief Engineer (Civil) Hydrel, APGENCO, Inward No. 26 MAR 2015 SE/C/Genl. SE/CD



తెలంగాణ TELANGANA

*V. Srikanth* 01AA 216726  
**V. SRIKANTH**

S.No. 5773 Date: 16/03/2015  
Sold to P. Subba Rayudu  
S/o : Late. P. Rama Rao R/o Hyd.  
For Whom M/s. Vertex Cements (P) Ltd., Hyd.

LICENCED STAMP VENDOR  
LIC. No. 15-10-018/2000, REN No. 15-10-023/2015  
P.No: 49, Sy. No. 10, Beside Swathi School,  
Madhapur, Serilingampally, R.R. Dist.

**MOU BETWEEN APGENCO AND M/s. VERTEX CEMENTS (P) LIMITED, FOR SUPPLY**  
**OF FLY ASH FROM Dr. NTPPS STAGE - V**

This MOU for supply of about 1035TPD of Fly Ash from Dr. NTPPS STAGE-V is made and entered on this the 20<sup>th</sup> March, 2015 between the APGENCO Limited a company incorporated under the Indian Companies Act, 1956 and having its Registered Office at APGENCO Headquarters, Vidyut Soudha, Khairatabad, Hyderabad-500 082 represented by its Chief Engineer (O&M) / Dr.NTPPS (hereinafter referred to as the "First Party (F.P)" which expression shall unless repugnant to the context or meaning, thereof include its successors and permitted assignees) on one part;

AND

For VERTEX CEMENTS (P) LIMITED

*P. Subba Rayudu*  
P SUBBA RAYUDU 20/3/2015  
Admin

*Dr. N. T. T. P. S.*  
Chief Engineer, (O&M)  
Dr. N T. T. P. S.  
IBRAHIMPETNAM + 521456

M/s. VERTEX CEMENTS (P) LIMITED a company incorporated under the Indian Companies Act, 1956 having its Registered Office at Kavuri Hills, Madhapur, Hyderanad-500 081 (Hereinafter referred to as the "Second Party (S.P)", which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assignees) on the other part;

WHEREAS: the F.P contemplates to install one unit of 800MW at its Dr. Narla Tata Rao Thermal Power Station at Ibrahimpatnam, Krishna District, Andhra Pradesh which in the process of generation of Power will generate dry Fly Ash as a byproduct and which is of value to the S.P as a raw material in the manufacturing of Cement in their Cement Plant (Hereinafter referred to as Cement Plant);


AND WHEREAS; both the parties are desirous of recording the terms and conditions which have been agreed to, as follows.

1. Period of MOA<sup>U</sup> is for 10years from COD of the unit.
2. Operation and Maintenance of dry Fly Ash system will be done by the F.P.
3. The S.P shall not supply the dry fly ash to any other party and shall use the dry fly ash for the specified purpose only.
4. F.P does not accept any liability in case of non-availability / non-materialization of 800 MW unit under Stage-V of Dr. NTTPS.
5. The Commercial terms and conditions for supply of dry fly ash will be mutually agreed 6 months before commission of the unit and new Agreement will be entered with CE/O&M/Dr. NTTPS/Ibrahimpatnam.
6. The S.P should not cause any damage to the equipment and structures of F.P and has to make good the same in case of such happening;
7. All the labor laws and other statutory laws shall be observed, followed and implemented by the S.P as an independent entity;

Cont.....P-2

For VERTEX CEMENTS (P) LIMITED

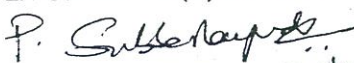
  
P. SUBBARAYUDU 20/3/2015  
Consultant - Admin


  
Chief Engineer, (Civil)  
Dr. N T. T. P. S.  
IBRAHIMPATNAM - 521456

8. Trading in Fly Ash by the S.P in any manner is not allowed;
9. All the personnel deployed by the S.P shall be treated as the personnel of S.P or their sub-contractors only; and not of F.P. All the labor laws and the rules made there under as applicable shall be followed. The S.P or their sub-contractors shall maintain necessary records to this effect. EPF registration, insurance, labor license and other statutory requirements towards those personnel shall be borne by the S.P only. All the taxes applicable shall have to be paid by the S.P only at their cost;
10. The F.P will allow playing of fly ash transport vehicles round the clock into and out of the plant premises. The security requirements of F.P shall be adhered to by the S.P. The relevant dispatch documents (Gate Passes) also shall be issued round the clock by the F.P;
11. The entire area of operation shall be kept in neat and tidy condition by the S.P. If failed to do so, it will be carried out by F.P and the expenditure thereof will be recovered with penalties as deemed fit.
12. In the event of S.P not able to lift the available dry fly ash, the same shall become surplus and only such surplus quantity which was not lifted till as on the date, shall rest with the F.P and issue the same surplus quantity to other parties/ consumer or dispose off to the ash pond so as not to hamper the normal operations of the unit. However, the S.P shall have no right to ask to compensate quantity in the future.
13. In the event of S.P not satisfying any of the above terms and conditions, the F.P shall issue a notice for compliance / rectification of the same. In spite of this, if the S.P do not comply with the above terms and conditions within the reasonable time, the F.P shall terminate this MOA.

Cont.....P-3

For VERTEX CEMENTS (P) LIMITED

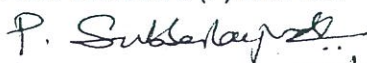
  
P. SUBBA RAYUDU  
Consultant - Admin  
20/3/2015


  
Chief Engineer, (O&M)  
Dr. N. T. T. P. S.  
IBRAHIMPATNAM - 521456

14. VAT and Other Taxes: All the taxes and duties applicable on fly ash, which are prevailing and may be imposed by State/Central Governments in future, shall have to be paid by the S.P at their cost.
15. If at any time, hereafter any disputes or differences arise between the parties hereto and / or their respective successors and assignees with regard to the operation or interpretation of any of the terms and conditions or provision hereof or regarding any rights and liabilities of the respective parties relating or touching, these presents, the same shall be resolved amicably. In the event of non-agreement between both the parties, the same shall be referred to a third party or an arbitrator mutually acceptable to both the parties. However, if any of the party is not satisfied with the verdict, the same shall be referred to the court having jurisdiction and the decision shall be final and binding on both the parties.
16. FORCE MAJEURE: Neither party shall be liable for non-performance either in full or in part of this agreement due to reasons unforeseen, and beyond its reasonable control such as strikes, lock-outs, equipment / auxiliary breakdown, acts of unforeseen natural calamities, etc., in the work premises of F.P/S.P. However, either party shall keep the other informed of any such event;

Cont.....P-4

For VERTEX CEMENTS (P) LIMITED

  
P. SUBBARAYUDU 20/3/2015  
Consultant - Admin

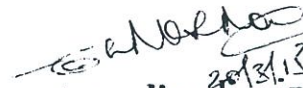
  
Chief Engineer, (O&M)  
Dr. N. T. T. P. S.  
IRRAHIMPATTNAM - 521456

IN WITNESS WHEREOF, both the parties hereto without any coercion or duress have signed out of their volition and sealed this the day, month and the year as here in above written at Dr. NTPS, Ibrahimpatnam, Krishna District, Andhra Pradesh.

WITNESSES

Dr. NARLATATARAO THERMAL  
POWER STATION


1.

  
20/3/15  
**Superintending Engineer/Civil**  
**Environment / Dr. N. T. T. P. S.**  
**IBRAHIMPATNAM-521458**

  
(First Party) 20/3/15

**R.PRABHAKARA RAO**  
**CHIEF ENGINEER / O&M**  
**Dr. NTPS/IBRAHIMPATNAM**

For M/s. Vertex Cements (P) Ltd

  
20/03/2015  
**2. Mr. Ch. V Nagesh**  
**Manager (Projects)**

**M/s. Vertex Cements (P) Ltd**

(Second Party)

For VERTEX CEMENTS (P) LIMITED

  
20/3/2015  
**P. SUBBA RAYUDU**  
Consultant - Admin

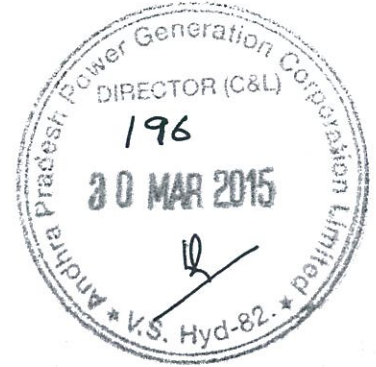
Anneexure - 11

# KRISHNAPATNAM PORT COMPANY LTD.



Ref No: KPCL/APGENCO/ March 2015\_1

To  
Sri. T. Prabhakar Rao, IRTS.,  
Director (Coal & Logistics)  
APGENCO,  
Vidyut Soudha, Khairtabad,  
Hyderabad-500082



Sir,

Sub: Transportation of imported coal from Krishnapatnam port to Dr.NTTPS Vijayawada-reg.

Greetings from Krishnapatnam port. In response to your Lr No. Dir(C&L) Imp Coal/353/2015, dated 17.03.2015, We would like thank you, for your interest to import coal through Krishnapatnam port for onward transportation to Dr. NTTPS, Vijayawada.

We would like to inform you that the present infrastructure facilities at port, can handle **85 million tonne** per annum approximately. Present financial year 2014-15, total volumes handled are **41 million tonne** out of which coal volumes are **25 million tonne**.

Please find brief about the infrastructure facilities at Krishnapatnam port.

### Present Infrastructure for coal handling at Krishnapatnam Port

- ❖ 10 operational berths. More berths under construction
- ❖ Deep draft of **18.5 mtrs** alongside the berth, which will be increased to 20 mtrs
- ❖ Handling cape vessels of 1.9 Lakh metric tonne DWT
- ❖ No beam & LOA restriction for vessels
- ❖ Huge transit storage area of **6,500 acres**
- ❖ Dedicated storage yards for coal & clean cargos respectively
- ❖ All weather port operating **365 days** a year
- ❖ Single window clearance
- ❖ End-to-end Port services
- ❖ Excellent Customer Service **24x7**, throughout the year

SE/C&L/VS  
APGENCO/HYD  
1689/30/15  
I No: .....  
AET1 AET2 AO  
AM EE/Eny EE/  
AEE/T 3.13

AEE

21/03/2015  
EE/ED

P.O.Bag No.1, Mutthukur Mandal, SPSR Nellore District, Andhra Pradesh - 524 344. India.

Tel : +91-861-2377999 Fax : +91-861-2377046 Email : customerservice@krishnapatnamport.com URL : www.krishnapatnamport.com

Regd. Office : 48-9-17, Dwarakanagar, Visakhapatnam - 530016 A.P., India.

CIN : U45203AP1996PLC023529, Tel : +91-891-2754602, Fax : +91-891-2747362

AE  
Bn  
AEE/C

# KRISHNAPATNAM PORT COMPANY LTD.

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The port has easy access to the hinterland by road, rail and air. It is strategically located in close proximity to the primary hinterland of four south Indian States covering Telangana, Andhra Pradesh, Karnataka and north Tamil Nadu.

**Railway sidings inside the port:** Cargo-wise dedicated rail sidings fully operational inside the port. Presently there are **14** railways sidings operational with more than **30 KM** of railway line inside the port premises, boosting the turnaround time of rakes. Krishnapatnam port is handling more than **20** rakes per day on an average and we have infrastructure to handle more than **50** rakes per day.

Kindly consider Krishnapatnam port as your preferred port for all your shipments. We would be pleased and ready in all aspect to handle your good cargo.

Look forward to a beneficial relationship. We assure our best services always.

Yours truly:-

  
Mahesh P

Head - Marketing

P.O.Bag No.1, Mutthukur Mandal, SPSR Nellore District, Andhra Pradesh - 524 344. India.

**Tel :** +91-861-2377999 **Fax :** +91-861-2377046 **Email :** customerservice@krishnapatnamport.com **URL :** www.krishnapatnamport.com

**Regd. Office :** 48-9-17, Dwarakanagar, Visakhapatnam - 530016 A.P., India.

**CIN :** U45203AP1996PLC023529, **Tel :** +91-891-2754602, **Fax :** +91-891-2747362

Annexure - 12



South Central Railway

Headquarters Office,  
Transportation Branch,  
Secunderabad,  
Dt. 20-03-2015



No.T.80/KSPL-I

Director (Coal & Logistics),  
M/s APGENCO  
Vidyut Soudha,  
Khairatabad,  
Hyderabad 500 082.

Sub: Transportation of Imported coal from  
Krishnapatnam/Kakinada ports to  
Dr.NTTPS, Vijayawada by rail route - Reg.  
Ref: (i) Director (Coal & Logistics) Lr.No.DIR(C&L)  
F.Imp.Coal/162/2015 dt.12-03-2015.  
(ii) Director (Coal & Logistics) Lr.No.DIR(C&L)  
F.Imp.Coal/D.No.351/2015 dt.16-03-2015.

Please refer your letter cited on the subject matter. Permission is accorded for transportation of Imported Coal from Krishnapatnam/Kakinada ports to Dr.NTTPs Vijayawada subject to obtaining the Railway Board's NOC at the time of commissioning.

(P.L.Haranadh)  
Dy. COM/Freight  
for Chief Operations Manager

*Handwritten notes:*  
E/C  
27/3/15

*Handwritten notes:*  
E/C  
27/3/15

*Handwritten notes:*  
E/C/Env.Dvn  
27/3/15  
S2/C-2

*Handwritten notes:*  
AEE  
16  
31/03/2015  
EE/ED

*Handwritten notes:*  
AE  
B  
S2/C-2