



Environmental Impact Assessment of proposed 2 x 660 MW Extension
Units at Obra Thermal Power Station of M/s UPRVUNL.

Supplementary Information
On
Environmental Impact Assessment Study
For
Proposed Expansion 2x660 MW
Obra Coal Fired Thermal Power Project
District : Sonebhadra (U.P.)



Project Proponent
Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd.

Consultant



Pollution Control Research Institute,
BHEL, Ranipur, Haridwar – 249 403

Uttarakhand



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Supplementary Information

The **presentation on EIA Report** was made before Expert Appraisal Committee on 28.01.2016, the committee has desired following additional information:

- (i) NBWL clearance
- (ii) Detailed compliance report to the latest Consent to Operate (CTO) accorded by SPCB for the existing units.
- (iii) Action plan for phasing out the older Units to be submitted within six months to the MoEF& CC.
- (iv) Imported coal proposed to be used shall have lower sulphur & ash content and higher GCV so that the coal quantity to be imported, and its ash generation can be reduced. The imported coal may also be blended with the domestic coal presently being used for the existing units which will also ensure boiler efficiency to the designed parameters. In any case, the Ministry's O.Ms dated 05.02.2013 and 02.11.2015 on imported coal quality shall be complied with. Accordingly, the MoU/FSA for imported coal shall be revised.
- (v) Revised AAQ factoring the R&M and closing down option of the existing Units to be assessed/predicted and submitted.
- (vi) Justification/explanation for the high concentration of toxic trace metals in the soil.
- (vii) Details of existing fly ash utilization and detailed Action Plan for the same.
- (viii) An integrated water balance factoring effluent treatment plan of desired degree to fulfill Zero Liquid Discharge along with water quality profile at various important locations has to be provided.
- (ix) Revised Budgeted Action Plan for addressing the issues arising out of the Public Hearing and accordingly, CSR Budgeted Action Plan also to be submitted.

A copy of **MINUTES of the 50th meeting of the re-constituted Expert Appraisal Committee (EAC) on Environmental Impact Assessment (EIA) Of Thermal Power & Coal Mining Projects**, indicating to provide these supplementary information's as mentioned above, is enclosed at **Annexure-1**.



The point-wise supplementary information for consideration of proposed project for Environmental Clearance as follows:

Point No. 1: NBWL clearance

1. The application for obtaining clearance from National Board of Wildlife was submitted to DFO, Kaimur Wildlife Division, Mirzapur on 15.12.2012. **(Annexure-2)**
2. Divisional forest officer, Kaimur Wildlife Division, Mirzapur confirmed that the proposed project is located at a distance of about 7.7 Km from proposed project and **there will be no impact on the wildlife of the sanctuary due to proposed project** vide letter no. 3949/33-1 dated 02.05.2013. **(Annexure-3)**
3. The application has been recommended and forwarded to Govt. of India for approval from standing committee National Board of wild life by UP Govt. vide letter no. 1328/14-04-2013 dated 24.12.2013 . **(Annexure-4)**
4. MoEF&CC Wild life Division desired some additional information vide their letter no-F. No. 06-06-2014WL dated 22/06/2015 and no-F. No-06-06/2014WL dated 14/07/2015 addressed to Chief Forest Conservator, Lucknow.
5. Chief Forest Conservator, Lucknow has sent the desired information to the Ministry Vide his Letter no- 1880 dated 11/02/2016. **(Annexure-5)**
6. MoEF CC vide their Draft Notification Number S.O2601E dated 22/9/2015 have reduced the extent of eco-sensitive zone as 01 Km all around the boundary of Kaimur Wildlife Sanctuary. **(Annexure-6)**
7. The proposed plant site is 7.7 km away from the nearest boundary of Kaimur Wildlife Sanctuary , which is well beyond the eco-sensitive zone (01 km around the sanctuary) as per the Draft Notification of MoEF&CC.

Point No. 2: Detailed compliance report to the latest Consent to Operate (CTO) accorded by SPCB for the existing units.

- ❖ To obtain air and water consent to operate Obra A&BTTPS the requisite fee have been paid to SPCB.



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- ❖ SPCB instructed Obra TPS to take necessary action on few points vide their letter no. F59663 dated 28.04.2015.
- ❖ Latest compliance report has been submitted to SPCB vide letter No. 4827 /CGM/W-I/83B-16 dated 14.01.2016. (**Annexure-7**)
- ❖ Online application has been submitted to obtain Consent to operate Obra TPS. Consent to operate is awaited.
- ❖ To control air pollution , ESP in Unit # 1, 2 (each of 50MW) have already been installed during their R&M work. These units shall be phased out after commercial operation of unit no- 6 & 7 each of 500 MW of Anpara 'D' Thermal Power Station as approved by BOD, UPRVUNL on dated 22/09/2015 (**Annexure-8**). Anpara D units are scheduled to start commercial operation on dated 01/03/2016 and 15/03/2016 respectively.
- ❖ Unit # 3, 4 & 5 (each of 50 MW) have already been deleted by CEA.
- ❖ Unit # 6 (100MW) has also been deleted by CEA.
- ❖ Unit # 7 (94 MW) is under shut-down for R&M works. ESP in Unit # 7 is also proposed to be installed for which consultants have been appointed and who have submitted DPR for the same. Further action is in process
- ❖ Unit # 8 (100MW) is under process of deletion by CEA.
- ❖ Unit no. 9 has been renovated with installation of ESP of capacity 100 mg/Nm³ which is working satisfactorily (refer to Stack emission report for the month of Jan 2016 is annexed as **Annexure-9**). Unit no. 10 & 11 are under R&M and ESP of capacity 100 mg/Nm³ shall be installed during R&M. R&M of these units is likely to be completed by Feb. 2016 and June 2016 respectively.
- ❖ Thereafter unit no.12 &13 shall be shut down sequentially for R&M. ESP of capacity 100 mg/Nm³ in Unit 12 & 13 (each of 200MW) is also proposed to be installed during R&M.
- ❖ Thus by phasing out of unit no 1 & 2 and shutting down of unit no 12 & 13 for R&M by the month of June 2016, stack emission from Obra TPS shall be effectively controlled and brought within the permissible limits of environmental norms applicable to these units.



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- ❖ To control water pollution Effluent Treatment Plant has been constructed and the same is functional since 17-09-2014.
- ❖ 11 nos. oil trap pits have also been constructed to arrest the spillage of oil.
- ❖ Construction work of Ash Water Recirculation System has been completed, and the same is functional since 07 Dec, 2015.
- ❖ To control fugitive emissions in coal handling area sprinklers have been installed from where regular sprinkling of water is being done.
- ❖ Dry fly ash is transported in closed container.



Point No. 3: Action plan for phasing out the older Units to be submitted within six months to the MoEF& CC.

❖ **Unit no. 1 & 2 each of 50MW of Obra 'A' Thermal Power Station**

These units shall be phased out after starting of commercial operation of Unit no- 6

& 7 each of 500 MW of Anpara 'D' Thermal Power Station as approved in Board of Directors, UPRVUNL, meeting dated 22/09/2015 (**Annexure-10**). These units are scheduled to start commercial operation on dated 01/03/2016 and 15/03/2016 respectively .

❖ **Unit no. 10 to 13 each of 200MW of Obra 'B' Thermal Power Station**

❖ Unit no.10 & 11 are presently under R&M and are scheduled to start commercial operation by March 2016 & July 2016 after retrofitting with new ESPs complying prevalent environmental norm of 100 mg/Nm³ respectively. Thereafter unit no.12 &13 shall be shut down sequentially for R&M and targeted to be completed by Dec 2017.

❖ Letter no. 226/TPI/ CEA/2015/48 dated 07.01.2016 of CEA for Phasing out of the Units is annexed as (**Annexure-11**).

Point No. 4:Imported coal proposed to be used shall have lower sulphur & ash content and higher GCV so that the coal quantity to be imported, and its ash generation can be reduced. The imported coal may also be blended with the domestic coal presently being used for the existing units which will also ensure boiler efficiency to the designed parameters. In any case, the Ministry's O.Ms dated 05.02.2013 and 02.11.2015 on imported coal quality shall be complied with. Accordingly, the MoU/FSA for imported coal shall be revised.

❖ The coal requirement for 2x660 MW for proposed TPP is 5.528 MTPA.

❖ Saharpur-Jamarpani Sector, Brahmani Basin, Rajmahal group of Coalfields, Jharkhand coal blocks have been allotted by Ministry of Coal, GOI to UPRVUNL for Obra-'C' extension project. (**Annexure-12**)



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- ❖ As per Schedule-E of allotment order, application for Environmental Clearance & Forest Clearance is to be submitted after 11 months from the submission of Geological Report (GR) i.e. by 12.05.2018.
- ❖ As the development of the coal block and supply of coal from this linked coal block is likely to go beyond the commissioning of the project. hence UPRVUNL has entered into a MOU **(Annexure-13)** with MMTC, New Delhi on 14.09.2015 for supply of Imported Coal for the project till the time domestic coal supply from linked Coal block is available. To comply with instructions issued by EAC, MoEF&CC on 28.01.2016, an amendment has been made and the revised MOU has been entered into with MMTC on dated 24.2.2016 for the desired Coal characteristics and quantity. **(Annexure-14)**
- ❖ As per revised MOU with MMTC the Coal characteristics of imported coal is as follows :

Parameters	Unit	Proposed Range	
Total Moisture (ARB)	%	-	Sum of Ash and Total Moisture should not be more than 40%
Ash (ARB)	%	As per prevailing MoEF&CC guidelines at the time of procurement : Presently 12% Maximum	
Gross Calorific Value (ARB)	Kcal/Kg	5000-5500	
Sulphur (ARB)	%	0.60%	
SIZE	MM	Upto 50mm However, size of coal less than 2.36mm shall not be more than 25% of quantity received at discharge point	
Fixed Carbon (ARB)	%	35-44	
Volatile Meter (ARB)	%	25-45	
HGI	-	45-60	
IDT under reducing atmosphere	Deg Centigrade	>=1100	



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- ❖ The quantity of 5.54 MTPA wherever appearing is amended to 3.4 MTPA.
- ❖ Consent for transportation of imported coal from Port to project location has been accorded by Railways vide their letter No. 2014/TT/V/58/UP dated 16.10.2015. **(Annexure-15)**

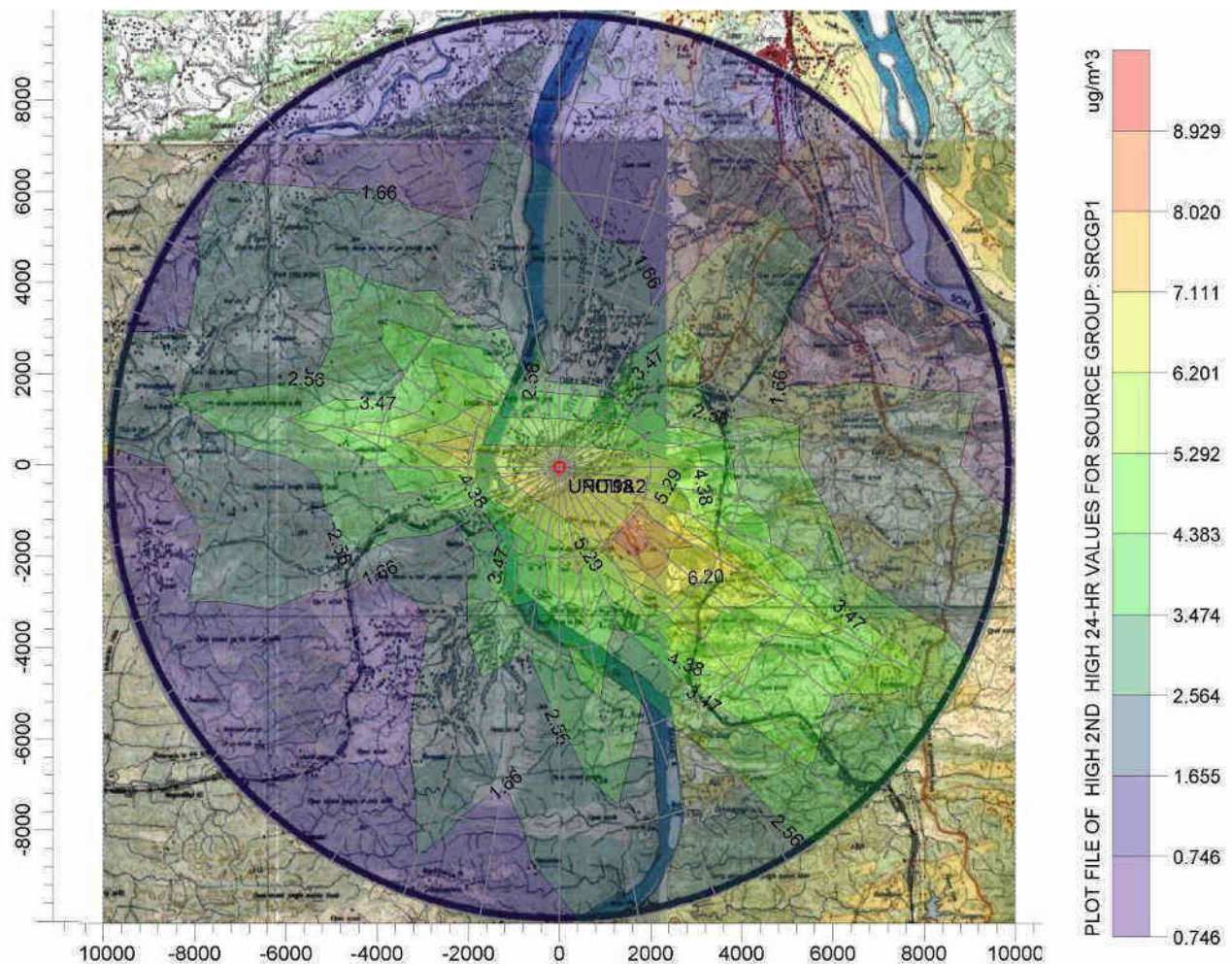


Point No. 5: Revised AAQ factoring the R&M and closing down option of the existing Units to be assessed/predicted and submitted.

- Revised AAQ factoring the R&M and closing down option of the existing units is done and emission Inventory and modeling outputs are given below:

Scenario 1 : Units 1, 2, 9, 12 & 13 (Present Running units)

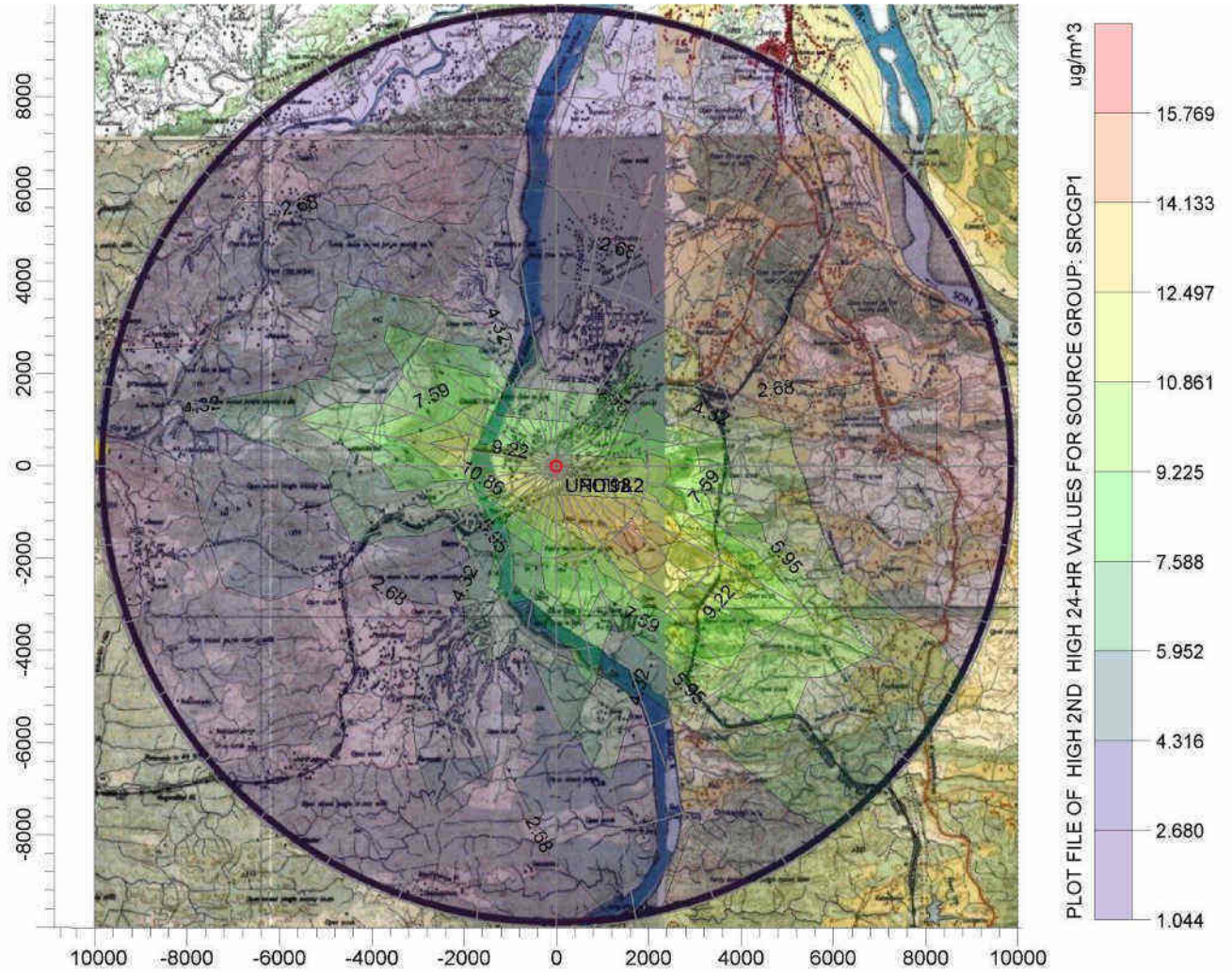
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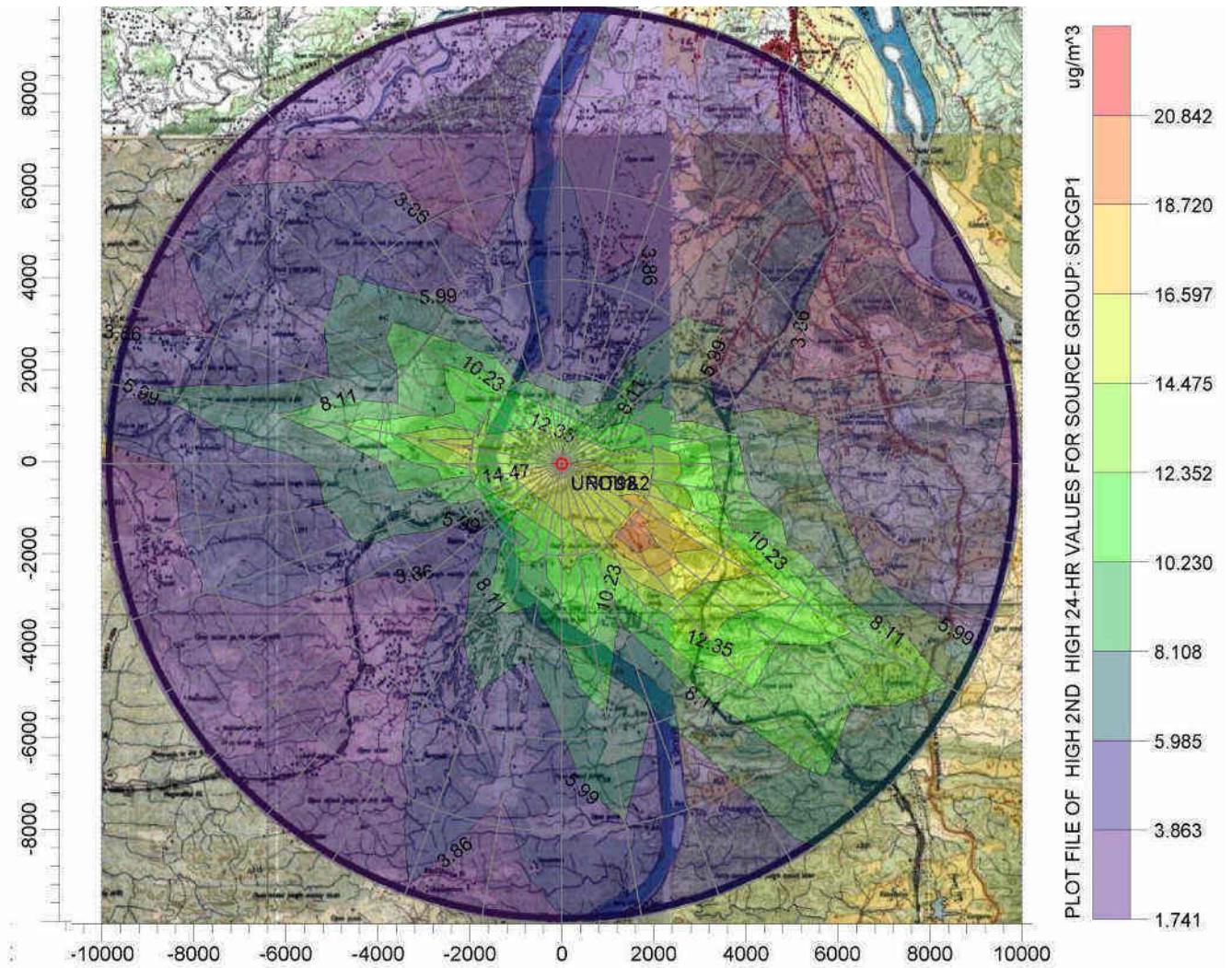
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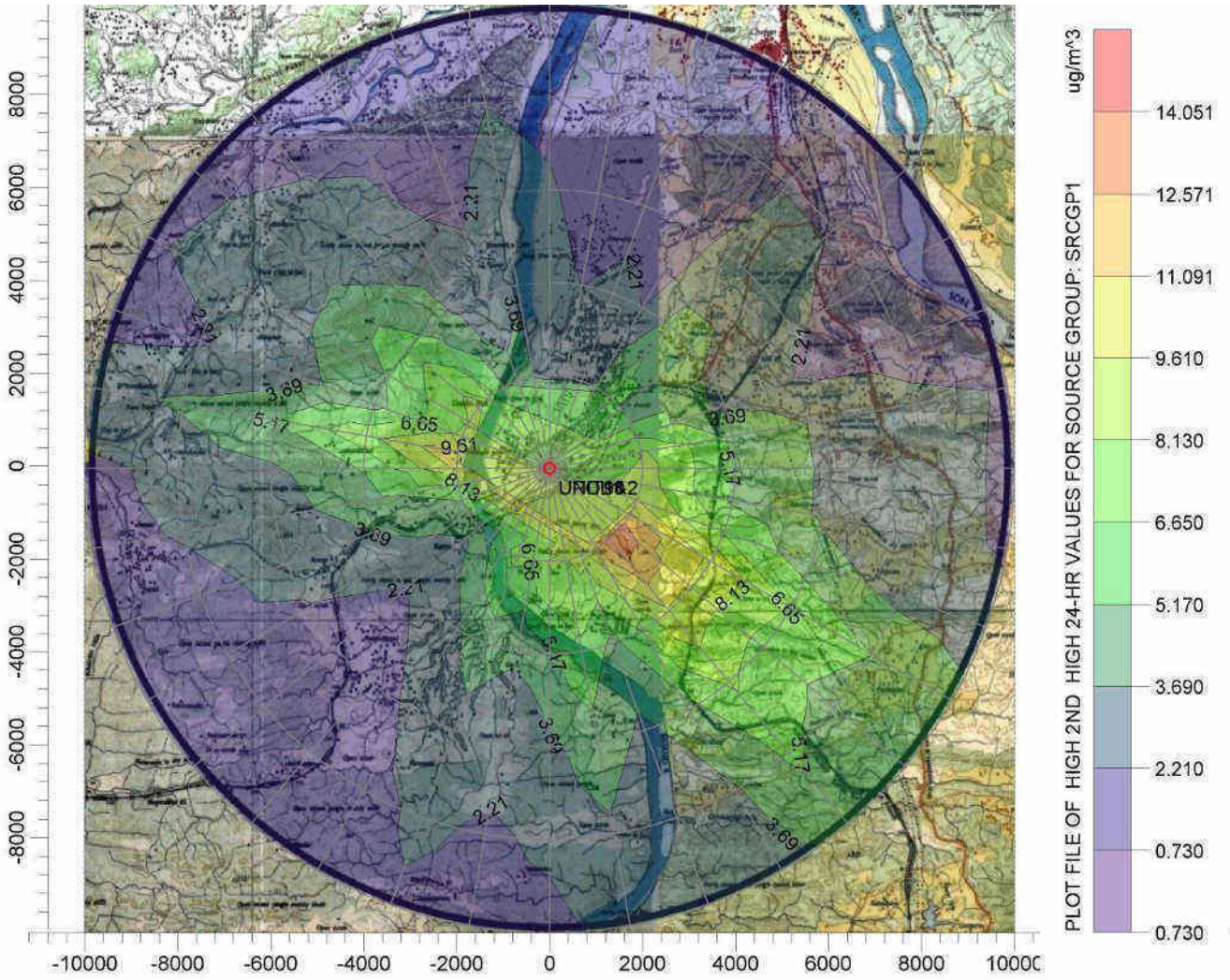
SPM





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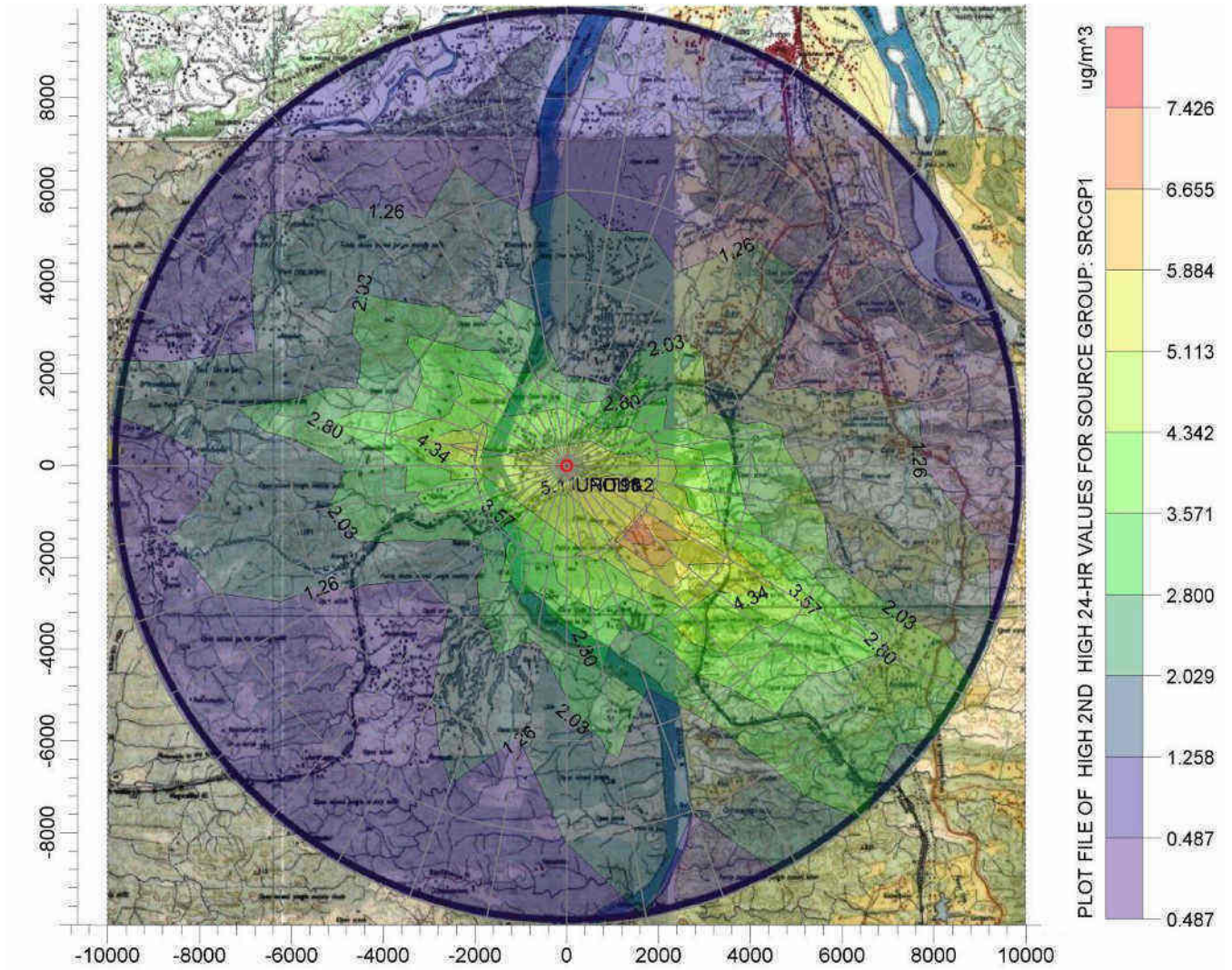
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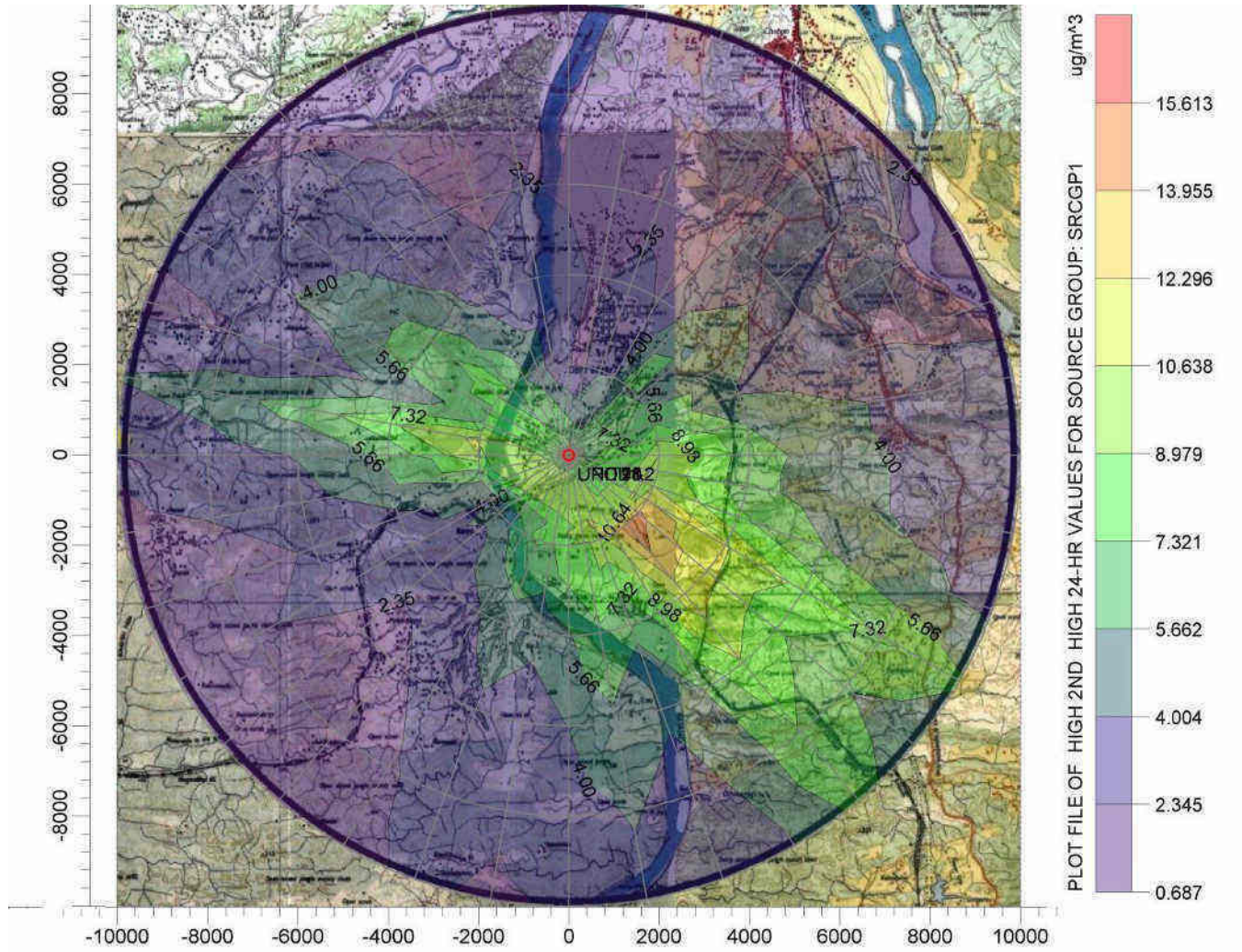
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Scenario 3: Units 1,2,9,10,11, 7

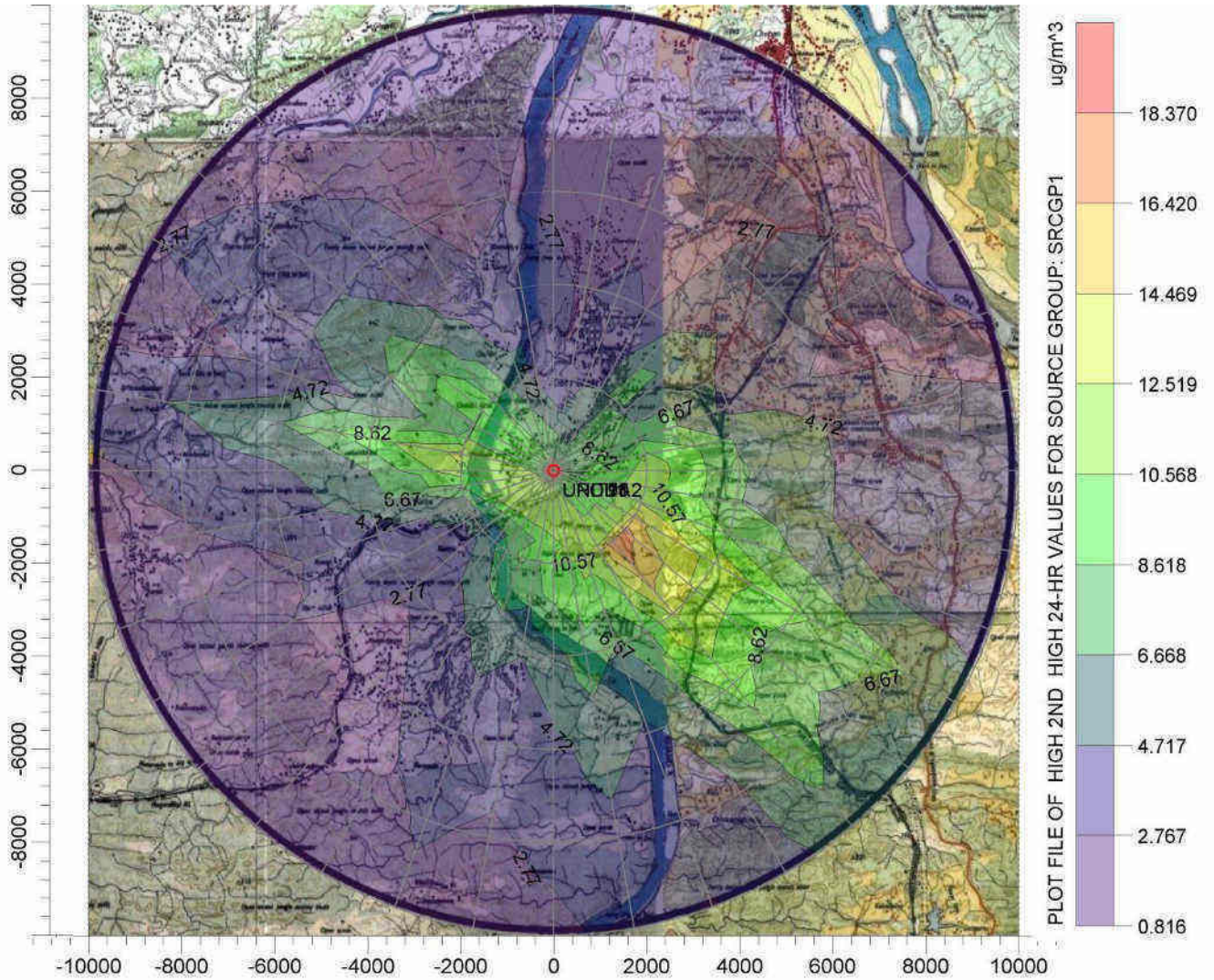
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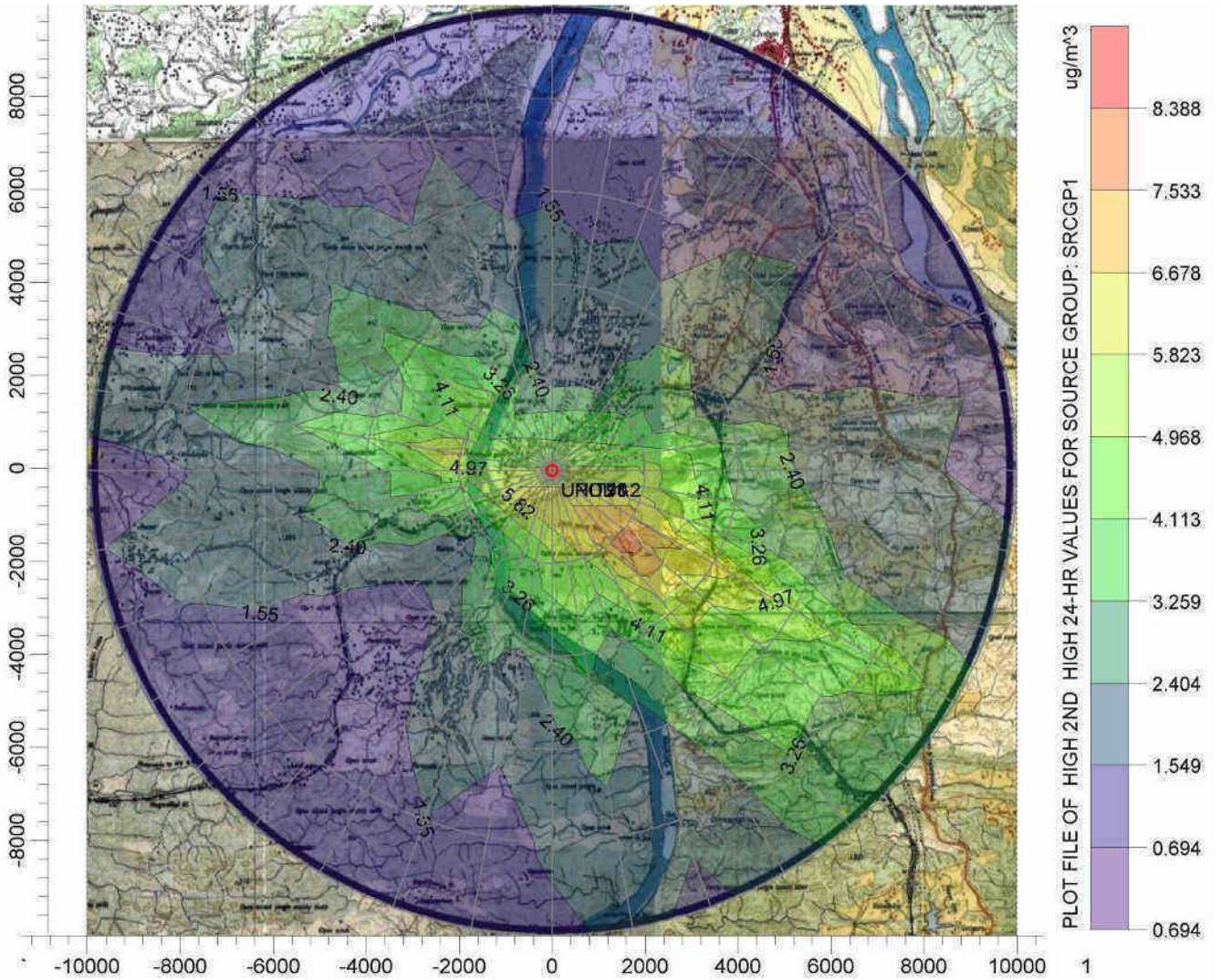
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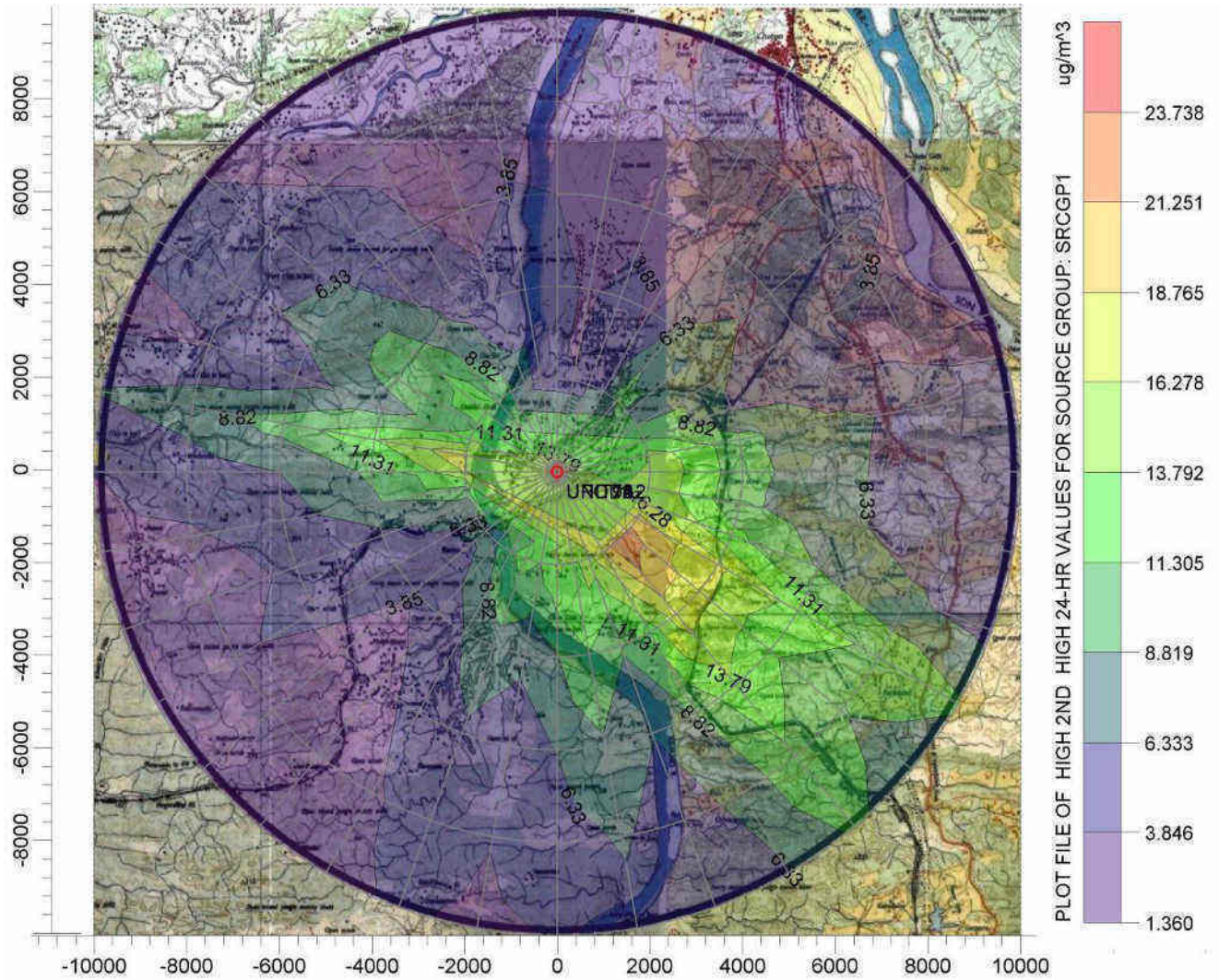
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Scenario 4: Units 1,2,7,9,10,11,12 & 13

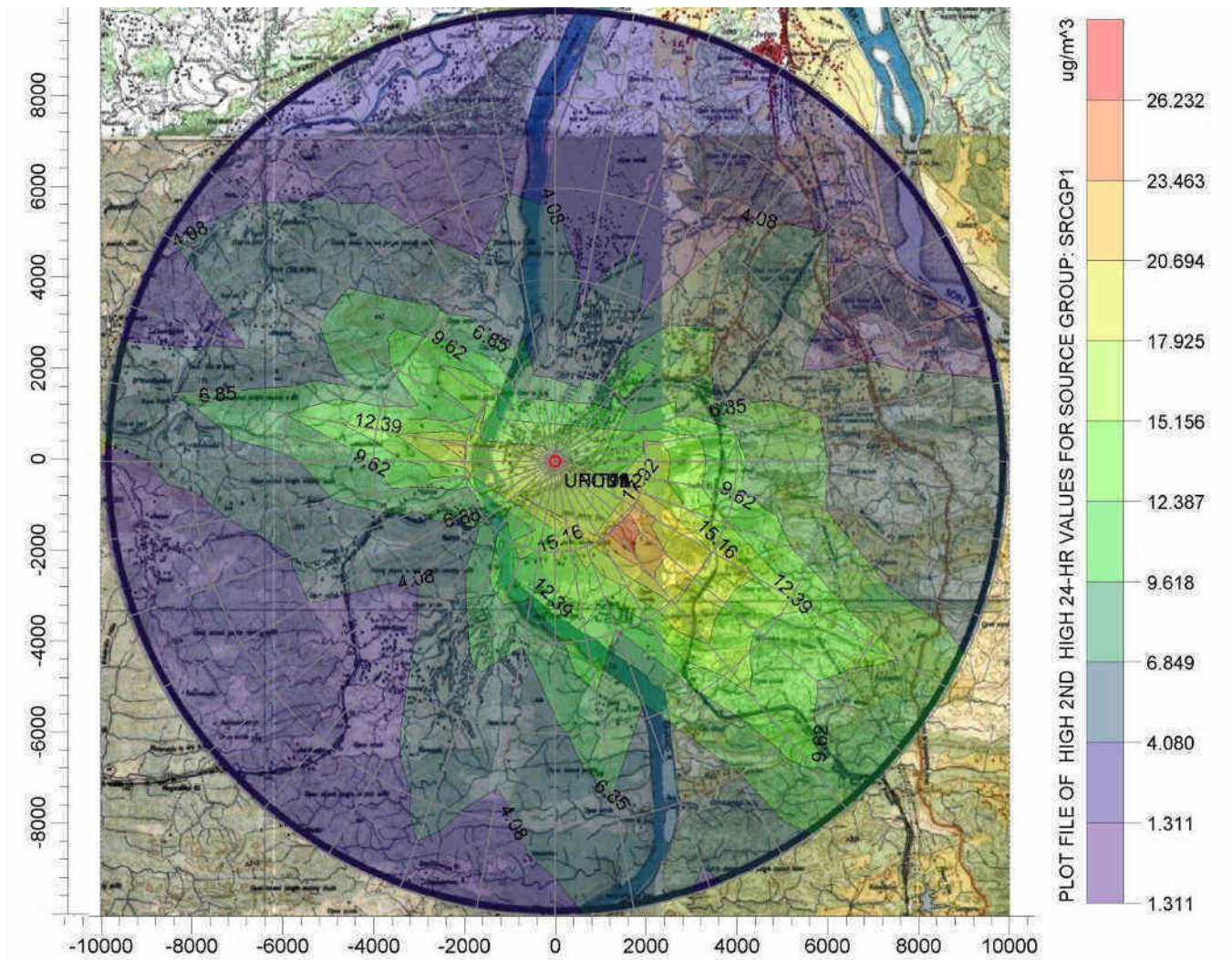
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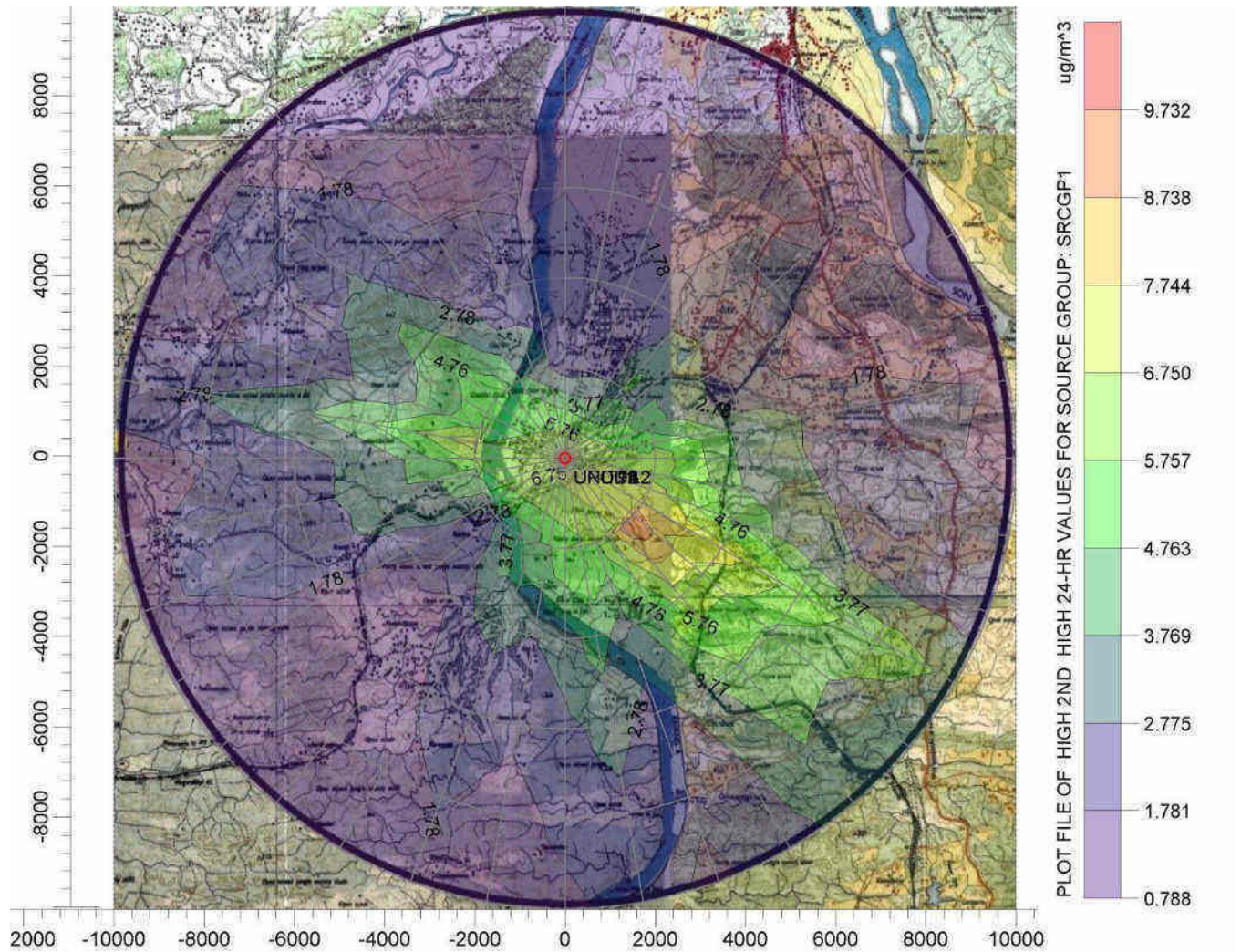
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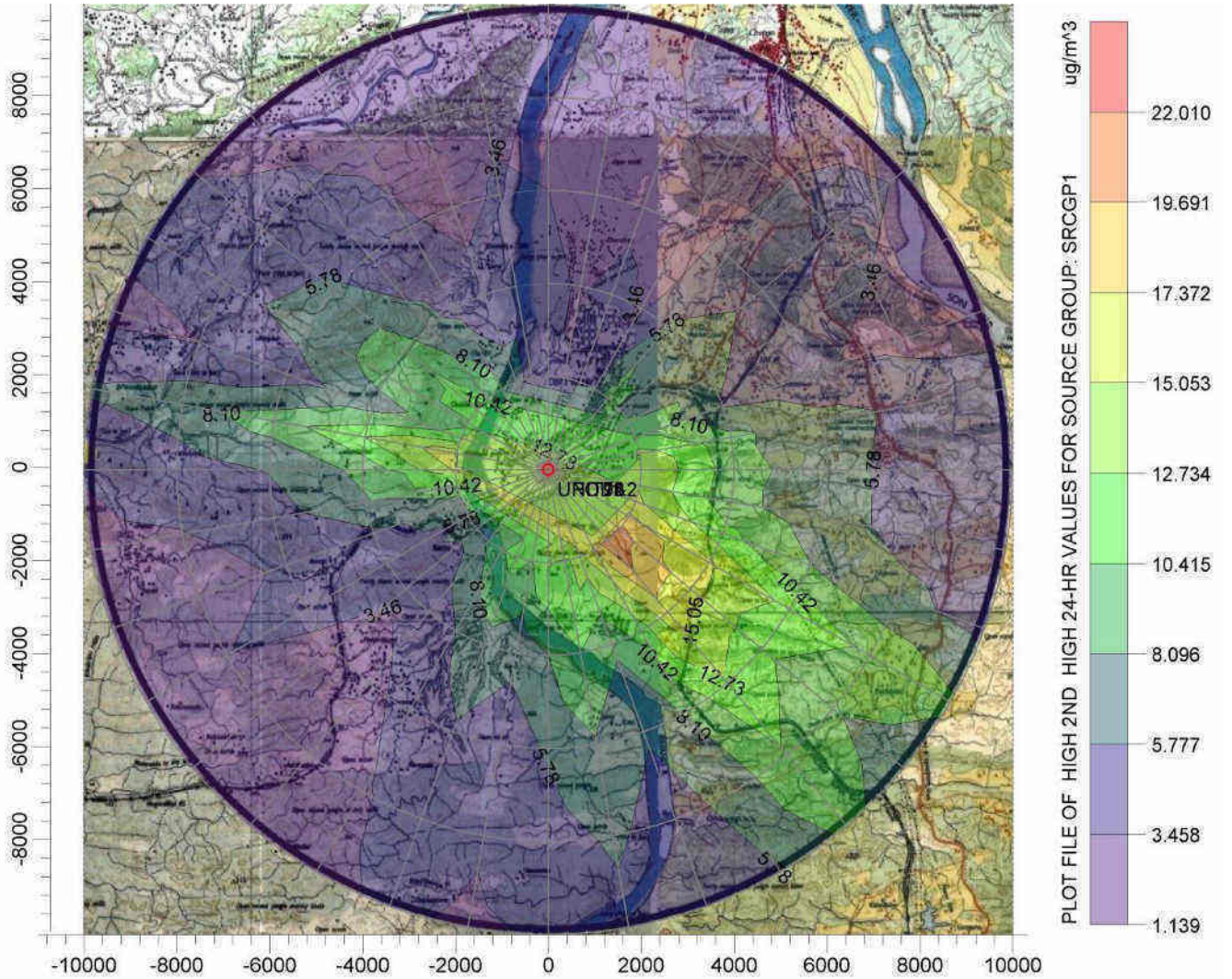
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Scenario 5: Units 7,9,10,11,12 & 13 (after deletion / phasing out 1&2)

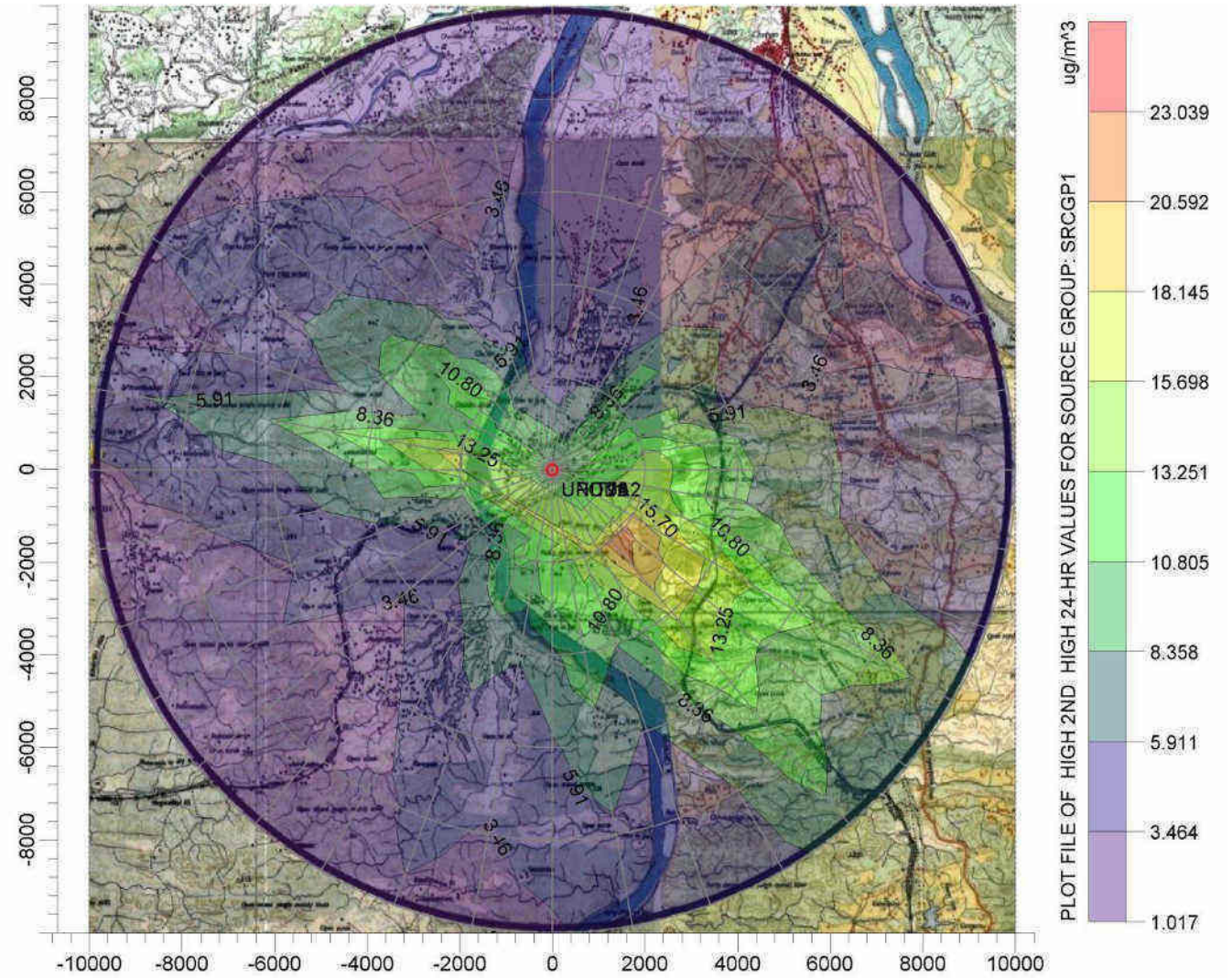
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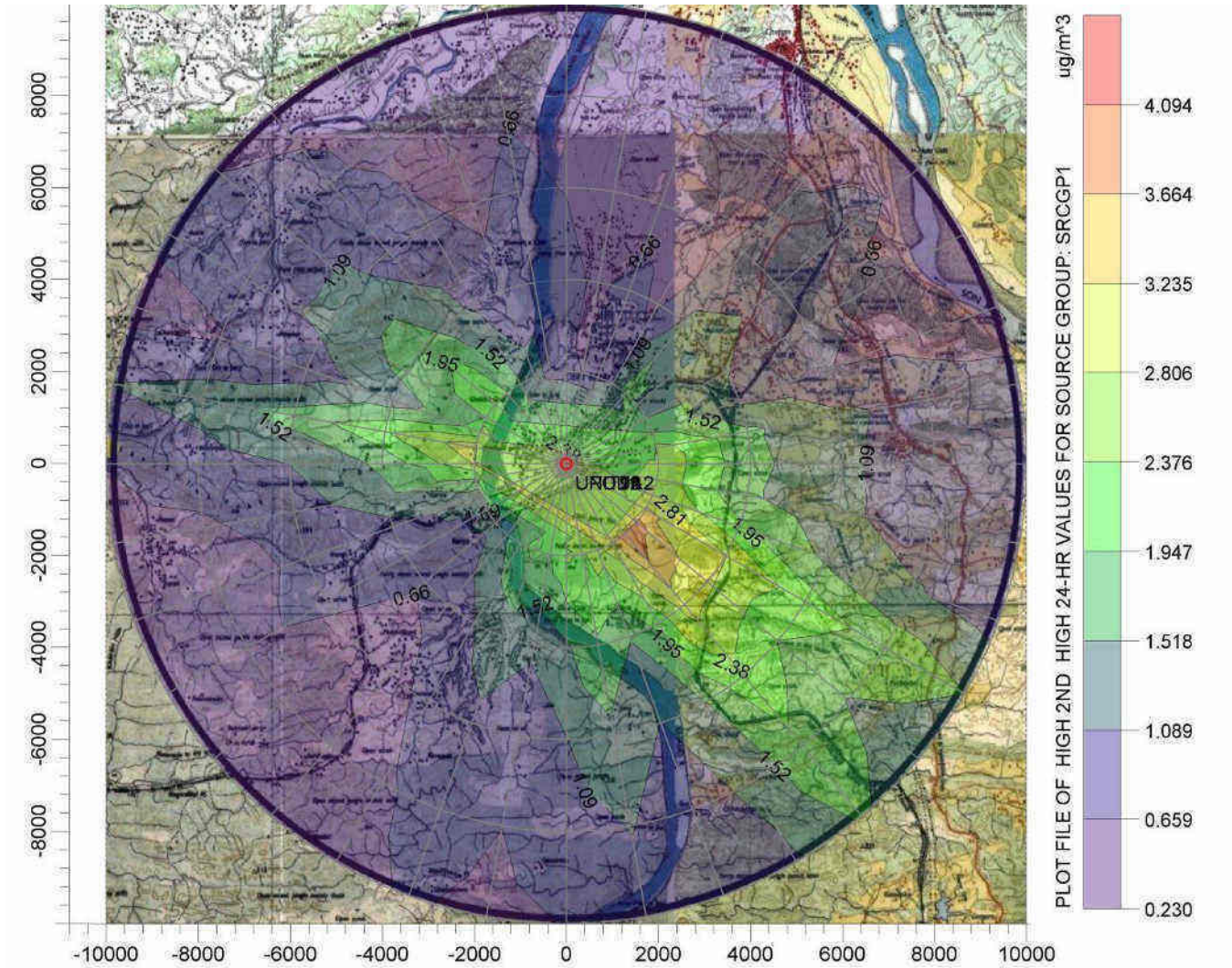
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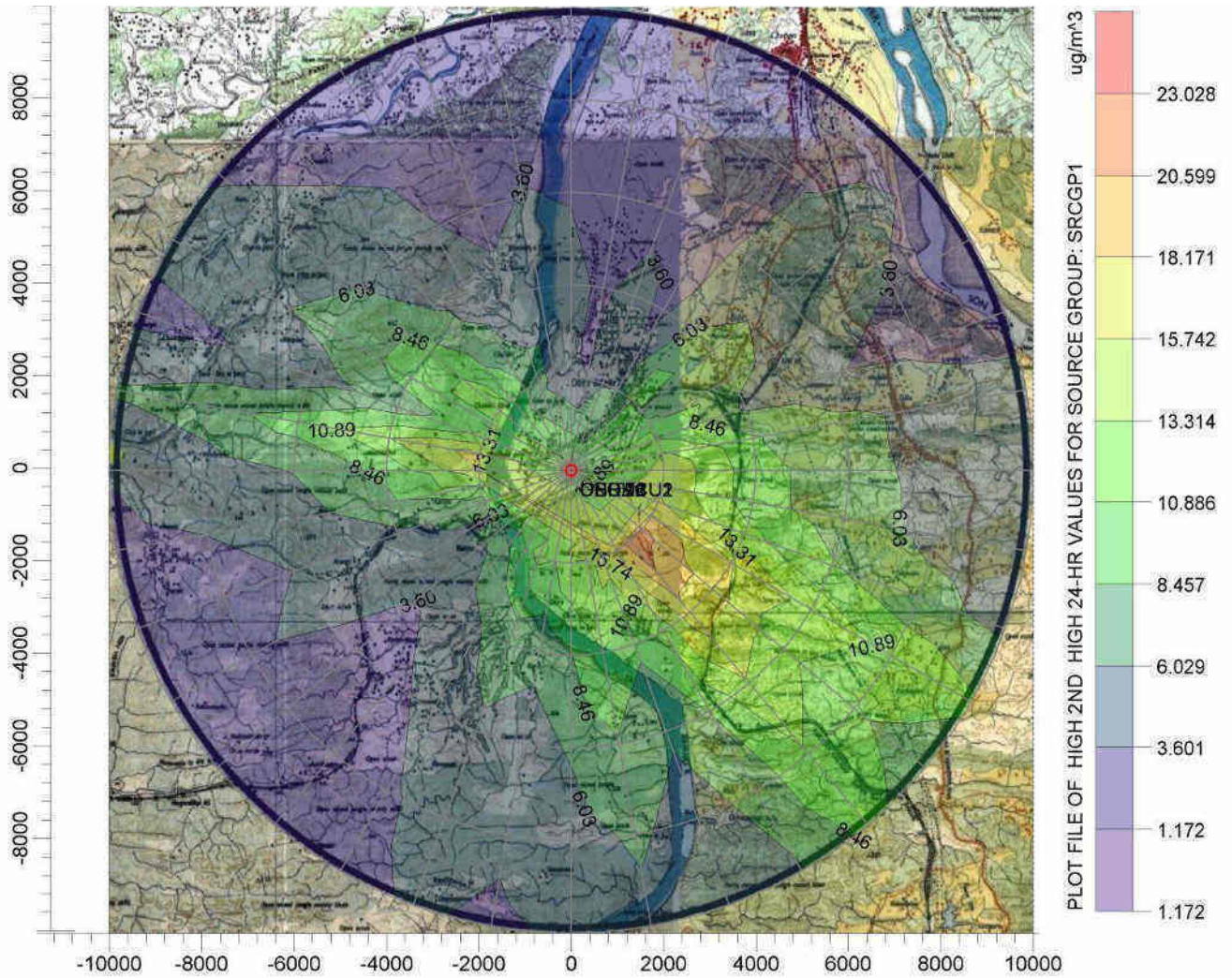
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Scenario 6: Units 9,10,11,12,13 & Obra C (with blended coal)

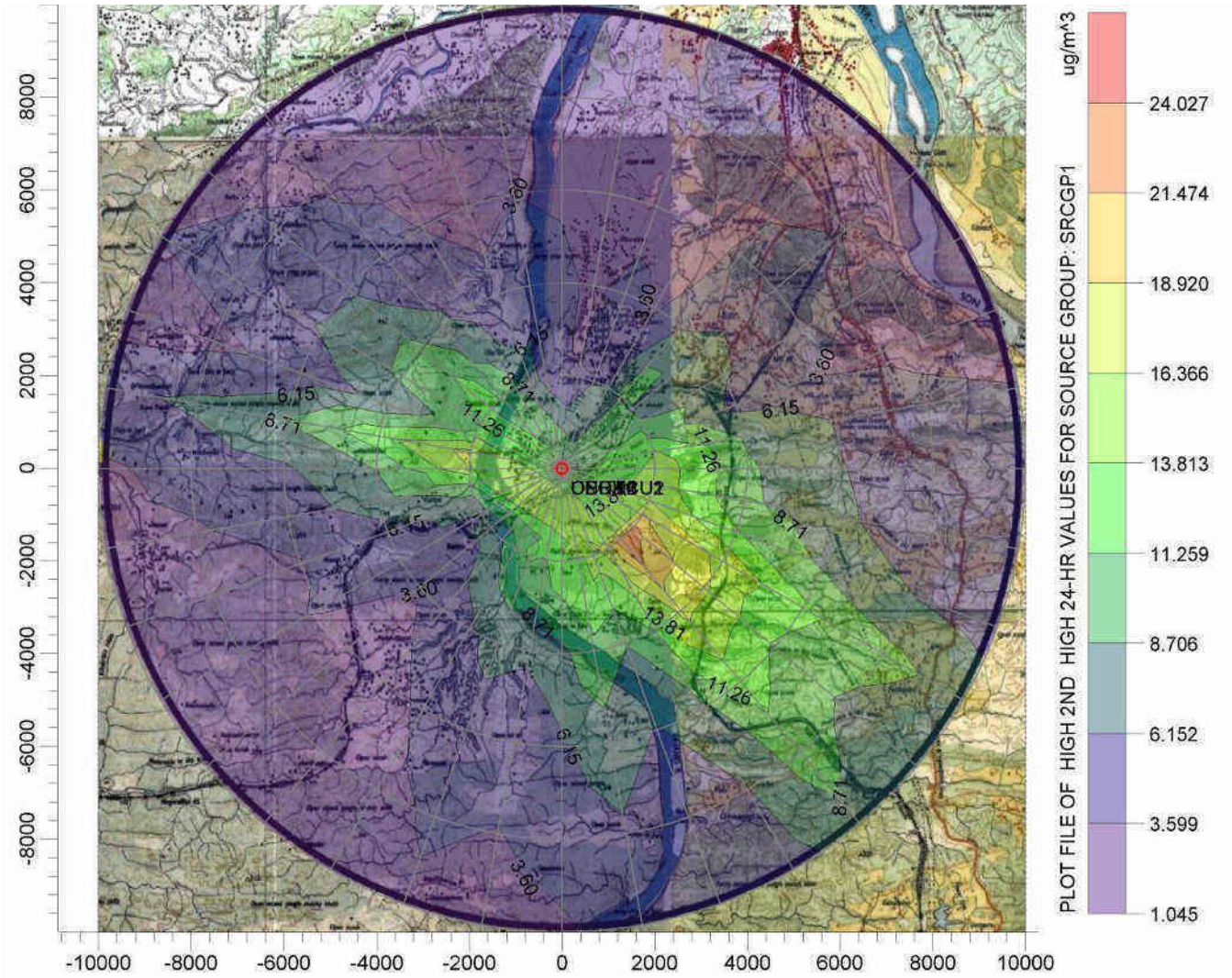
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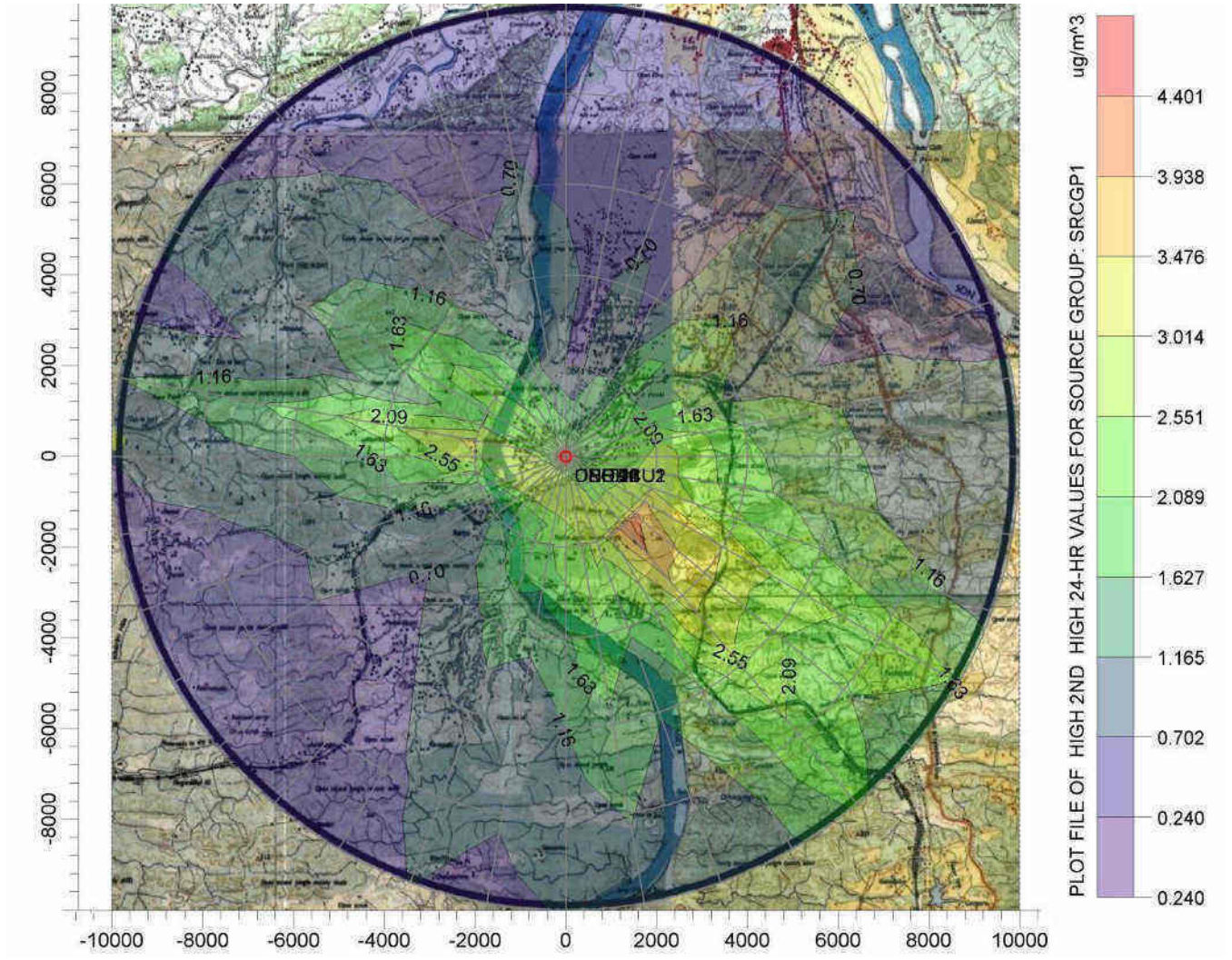
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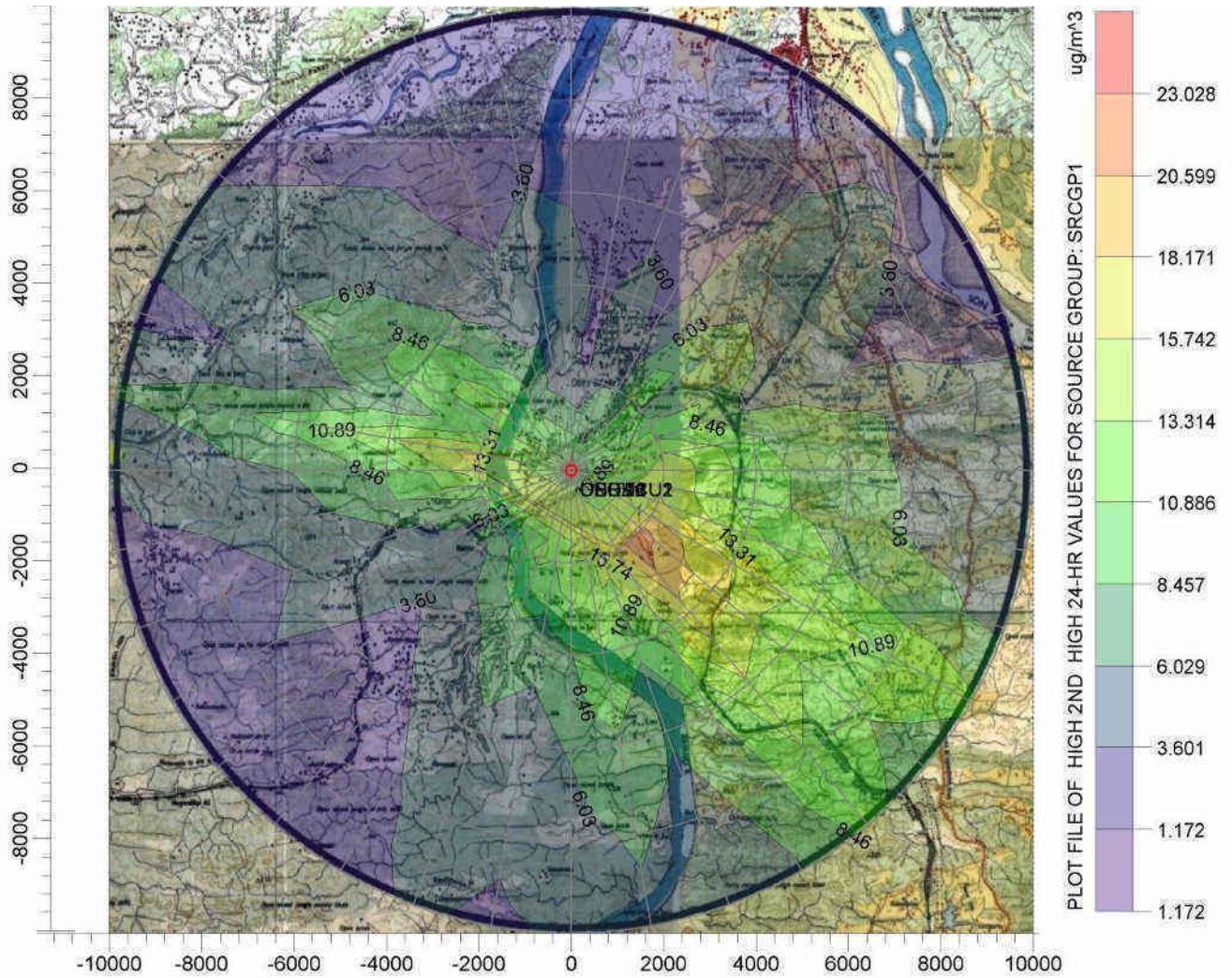
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Scenario 7: Units 9,10,11,12,13 & Obra C (Indigenous coal)

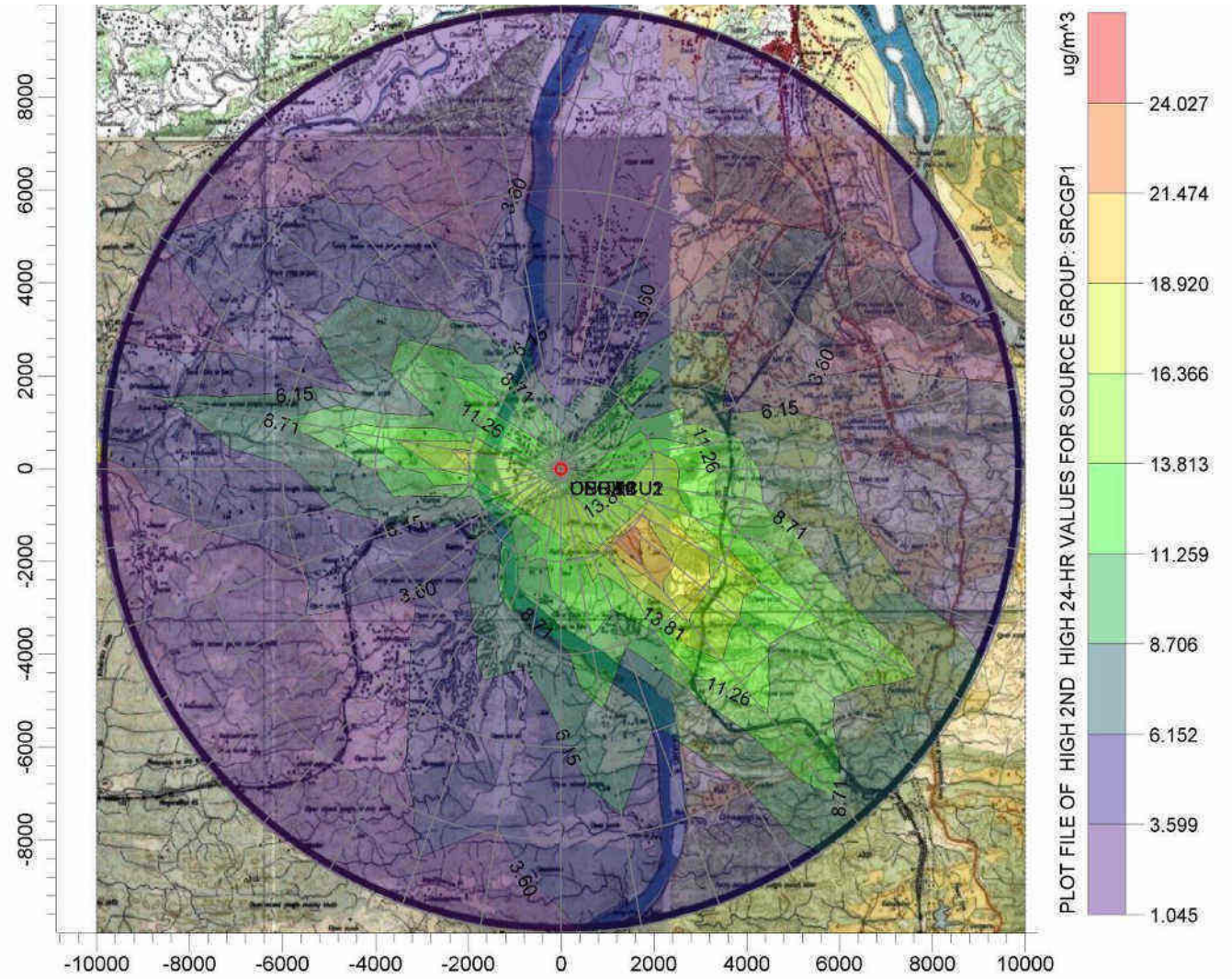
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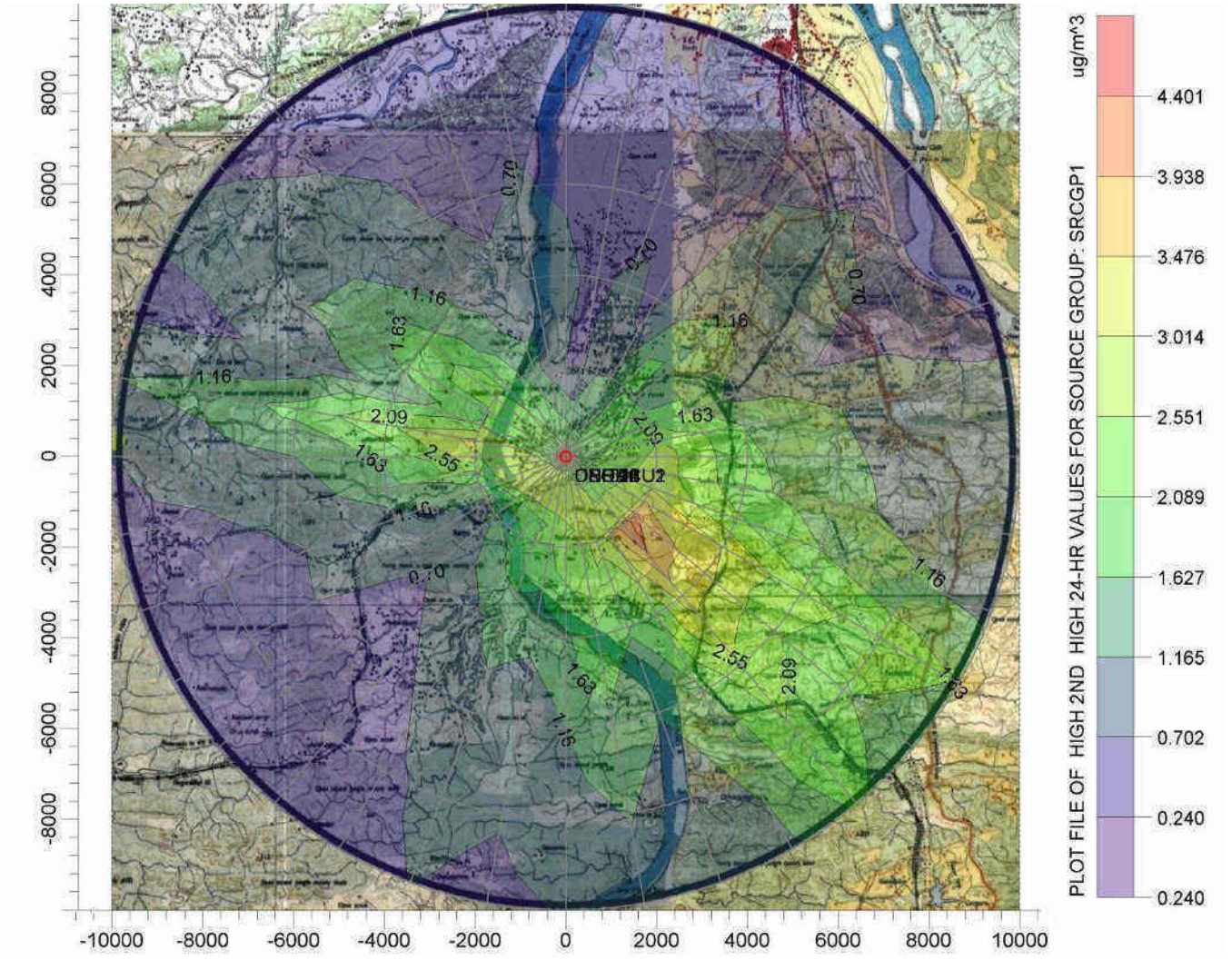
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Environmental Impact Assessment of proposed 2 x 660 MW Extension
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Environmental Details of Unit-1, 2, 9, 12 & 13 (Running Units), Obra Thermal Power Station, Obra

		Obra 'A'			Obra 'B'					Obra 'C'		Obra 'C'	
		Unit No.1	Unit No.2	Unit No. 7	Unit No.9	Unit No.10	Unit No.11	Unit No.12	Unit No.13				
	Measurement Unit	Actual Data	Actual Data	Design Data	Actual Data	Design Data	Design Data	Data for units for which R&M is proposed		Blended Coal Data	Blended	Indeg Coal	Indeg Coal
Coal Consumption	Tons per annum	173068	215757	629931	1155411	1116900	1116900	804607	1022227	2500000	2500000	2764000	2764000
Av. Ash Content	%	41.872	41.778	41.8	42.651	41.8	41.8	38.616	42.651	21.5	21.5	32	32
Av. Sulphur Content	%	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.57	0.57	0.5	0.5
Flue Gas Exit Velocity	m/s	13.47	13.5	17	16.9	17	17	14.85	16.8	18	18	18	18
Flue Exit Dia	m	6	6	6.8	4.5	6.25	6.25	6.25	6.25	7	7	7	7
Flue Gas Exit Temp.	°C	139.3	136.9	413	140.6	413	413	125.3	141.4	146.8	146.8	146.8	146.8
SO ₂ emission Rate	mg/Nm ³	555.9	553.2	600	727.7	600	600	654.9	735.7	100	100	100	100
Nox emission Rate	mg/Nm ³	289.7	298.5	600	386.2	600	600	370.7	413.9	100	100	100	100
ESP Efficiency													
Particulate Matter Emission Rate	mg/Nm ³	866.9	1029	100	145.9	100	100	1075.8	1164.2	30	30	30	30
Stack Height	m	120	120	120	170	170	170	160	160	275	275	275	275



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Scenerio 1	Scenerio 2	Scenerio 3	Scenerio 4	Scenerio 5	Scenerio 6	Scenerio 7
Values	Values	Values	Values	Values	Values	Values
Nox= 8.929	Nox= 11.146	Nox=15.613	Nox= 23.738	Nox= 22.010	Nox= 23.027	Nox= 23.0
Sox= 15.769	Sox= 14.051	Sox= 18.37	Sox= 26.232	Sox= 23.039	Sox= 24.027	Sox= 24.02
SPM= 20.842	SPM= 7.426	SPM= 8.386	SPM= 9.732	SPM= 4.094	SPM= 4.401	SPM= 4.4

All values are in microgram/cubic meter

- Scenario 1: Units 1,2,9,12,13 (present)**
- Scenario 2: Units 1,2,9,10&11 (12 & 13 from July' 16 under R&M)**
- Scenario 3: Units 1,2,9,10,11, 7**
- Scenario 4: Units 1,2,7,9,10,11,12 & 13**
- Scenario 5: Units 7,9,10,11,12 & 13 (after deletion / phasing out 1&2)**
- Scenario 6: Units 9,10,11,12,13 & Obra C (with blended coal)**
- Scenario 7: Units 9,10,11,12,13 & Obra C (Indigenous coal)**



Point No. 6: Justification/explanation for the high concentration of toxic trace metals in the soil.

The concentration of trace metals in the soil samples collected during the EIA study are in microgram per gram, which are very low.

All values are in microgram/gram

PARAMETER	Bari	Dalla	Karamsar	Arangi	VIP GH	Kariya	Billi
Cadmium (as Cd)	ND	ND	ND	ND	ND	ND	ND
Calcium as (Ca)	16452	18231	12653	16784	17623	14863	14562
Chromium Total (as Cr)	48.79	154.78	56.87	126.78	23.85	121.76	123.64
Conductivity	199.8	798	419.0	214	115.3	183.2	138.7
Lead (as Pb)	7.24	7.34	7.34	6.94	2.86	7.46	5.84
Magnesium (as Mg)	9234	8974	7864	7982	7684	6984	7685
Nickel (as Ni)	41.38	56.92	57.34	89.45	31.42	78.58	78.67
pH	7.8	8.1	7.6	7.9	7.6	8.0	7.8
Phosphorus (as P)	185	186	158	206	186	247	186
Potassium (as K)	2364.60	2546.57	2876.42	2347.96	1468.94	2146.79	2145.98
Total Kjeldahl Nitrogen (as N)	0.06	0.08	0.12	0.11	0.09	ND	0.09
Zinc (as Zn)	53.81	64.61	74.65	67.84	74.68	56.42	62.35

However, mitigation measures for trace metals contamination is given below:

Mitigation Measures for Trace Metals Contamination in Ambient Air & Soil Identification and Evaluation of Air-pollution-tolerant plants around Obra Thermal Power Station for greenbelt Development



Contamination of surrounding soil due to the deposition of air-borne ash plume from the disposal pond has been a matter of great concern. Continuous input of ash into the soil has the potential to affect the physicochemical characteristics of the soil. Most trace elements act as micro-nutrients to certain plants. Coal ash contains high concentration of trace elements, which affect the soil properties and vegetation grown around the ash disposal site. Thermal power plants emit various gaseous and particulate pollutants into the atmosphere. It is well known that trees help to reduce air pollution. Development of a greenbelt with suitable plant species around the source of emission will mitigate the air pollution and soil contamination. Selection of suitable plant species for a greenbelt is very important.

PCRI have carried out a R & D project for Central Pollution Control Board which have been published vide Program Objective Series (PROBES/119/2007-08). Under this study, the plant species were identified around Thermal Power Stations and a list of plants is prepared.

The following are the plant species which will be use for green belt development around Obra TPP to control Trace Metals Contamination in Air and Soil:

Three Tier Development of Green Belt

List of Plant Species for Low, Moderate & Highly Dust Capturing Herbs, Shrubs & Trees

Dust Capture Level	Plant Species of		
	Herbs	Shrubs	Trees
Low <10%	<ol style="list-style-type: none"> 1. <i>Amaranthushypochondriceus</i> (Chaulai) 2. <i>Gardenia jasminoides</i> (Crape Jasmine) 3. <i>Cestrumnocturnum</i> (Rat Ki Rani) 4. <i>Chrysanthamum species</i> (Crown Daisy) 	<ol style="list-style-type: none"> 1. <i>Thuja species</i> (MoyurPankhi) 2. <i>Ravuvoifiaserpentine</i> (Serpandha) 3. <i>Withaniasomnifera</i> (Ashawagandha) 4. <i>Acanthus species</i> (Acanthus) 	<ol style="list-style-type: none"> 1. <i>Nyctanthese arbortritis</i> (Harsingar) 2. <i>Abispindrow</i> (Silver fire) 3. <i>Accacianelotica</i> (Babool) 4. <i>Holarrhenaantidyentrica</i> (Kurchi) 5. <i>Clerodenrumnerme</i> (Glorry bower) 6. <i>Ficusbenqalensis</i> (Banyan) 7. <i>Miliusatomentosa</i> (Kari Leaves) 8. <i>Thespesiapopulania</i> (Ran Bhandi)
Medium 11 to 20%	<ol style="list-style-type: none"> 1. <i>Lilium species</i> (Lily) 2. <i>Draceana species</i> 3. <i>Halianthusannuus</i> (Sunflower) 4. <i>Tegetespatula</i> (Genda) 5. <i>Pothus aureus</i> (Money Plant) 	<ol style="list-style-type: none"> 1. <i>Bambusa species</i> (Bamboo) 2. <i>Lagerstomiaindica</i> (Crape Myrtle) 3. <i>Neriumindicum</i> (Kaner Pink) 4. <i>Codiumvariqatus</i> (Croton) 5. <i>Thevetiaperuviana</i> (Kaner Yellow) 6. <i>Wrightiaarborea</i> (Dudhi) 7. <i>Rosaindica</i> (Rose) 8. <i>Ipomeanil</i> (Beshrum) 9. <i>Tabermaemontanadivaricata</i> (Chandani) 10. <i>Acalyphahispida</i> (Copper leaf) 11. <i>Plumeriaacuminata</i> (Temple Tree) 	<ol style="list-style-type: none"> 1. <i>Luecenaleucophloea</i> (Shoe Babool) 2. <i>Pinus gerardiana</i> (Chilgoja) 3. <i>Ficuselastica</i> (Indian Rubber) 4. <i>Annonasquamosa</i> (Suger Apple) 5. <i>Mangiferaindica</i> (Mango) 6. <i>Argyreiaroxburghira</i> (Wooly Morning Glory) 7. <i>Ficusreligiosa</i> (Peepal) 8. <i>Acaciafamesiana</i> (VilayatiKikkar) 9. <i>Psidiumguyava</i> (Amrood) 10. <i>Prunuscomminis</i> (Plums) 11. <i>Syzygiumcumini</i> (Jamun) 12. <i>Tectonagrandis</i> (Teak) 13. <i>Citruslamina</i> (Lamon) 14. <i>Morusalba</i> (Mulberry)



Environmental Impact Assessment of proposed 2 x 660 MW Extension
Units at Obra Thermal Power Station of M/s UPRVUNL.

			<p>15. <u>Archissapota</u> (Chikoo) 16. <u>Anthosephaluscadamba</u> (Kadam) 17. <u>Shorearobusta</u> (Sal) 18. <u>Delbergiasisso</u> (Sheasm) 19. <u>Delonixregiosa</u> (Gulmohar) 20. <u>Albizzialebbek</u> (Siris) 21. <u>Artocarpusintegrifolia</u> (Jack Fruit) 22. <u>Ixoraparviflora</u> (Torch Tree) 23. <u>Bauhiniavariegata</u> (Kanchnar) 24. <u>Moringaolifeifera</u> (Drum Stick) 25. <u>Aeglefamesiana</u> (Beal) 26. <u>Pithocolobium dule</u> (Jangaljalabi)</p>
High >21%	<p>1. <u>Colocasiaantiquorum</u> (Elephants Ear) 2. <u>Celosiaargentea</u> (Cock'scomb)</p>	<p>1. <u>Hibiscusrosasinensis</u> (Gurhal) 2. <u>Bougainvilleaglavra</u> (Bougainvillea)</p>	<p>1. <u>Cassiafistula</u> (Amaltas) 2. <u>Pinus contora</u> (Pine) 3. <u>Bombaxceiba</u> (Samal) 4. <u>Buteamonosperma</u> (Palas) 5. <u>Alstoniascholaris</u> (Satani) 6. <u>Azardirachta indica</u> (Neem) 7. <u>Polvalthialongifolia</u> (Ashoka) 8. <u>Callistemon citrinus</u> (Bottle Brush) 9. <u>Termaniliacatappa</u> (JangalBadam) 10. <u>Terminaliaarjuna</u> (Arjun) 11. <u>Meliaazedarch</u> (Melia) 12. <u>Phoenixdactylifera</u> (Khjoor) 13. <u>Ficusinfectorja</u> (Pilkani) 14. <u>Holipteliaintegrifolia</u> (Papadi) 15. <u>Eucalyptusglobules</u> (Blue Gum) 16. <u>Madhucaindica</u> (Mahua) 17. <u>Citrusmaxima</u> (Chaktora) 18. <u>Populus tremuloides</u> (Quaking aspen)</p>

The LDPE lining at underground beneath the ash pile dumped will mitigate the presence of trace metals in the soil. Moreover provisions have been made for LDPE/HDPE lining in the existing Ash Pond for the proposed units in the EPC contract.



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Point No. 7: Details of existing fly ash utilization and detailed Action Plan

- ❖ Dry fly ash of Unit # 1,2& 9 is being lifted by M/s J.P. Associated through Dry Fly Ash Collection System after completion of R&M of these units.

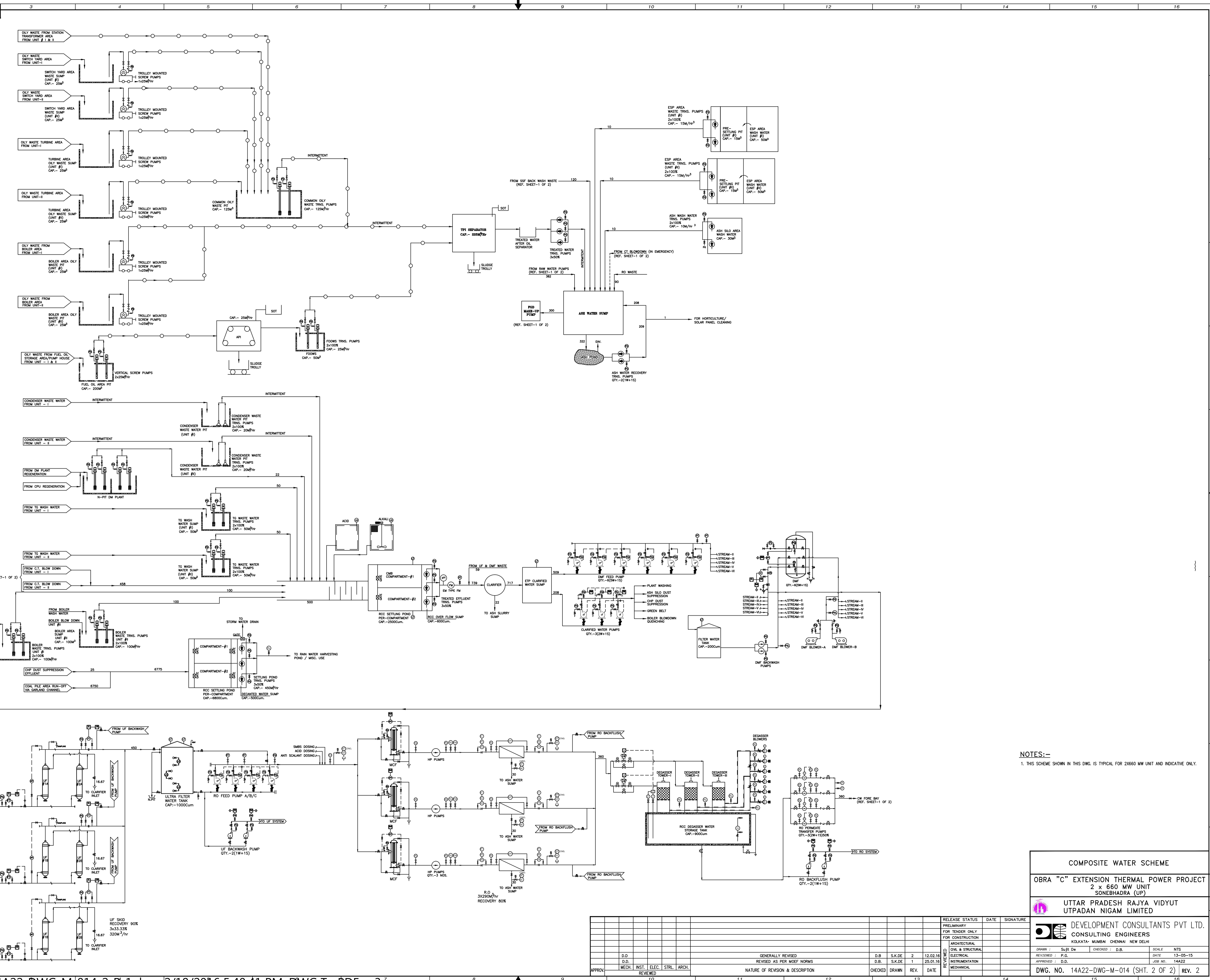
Ash Utilization Details of Unit No.1,2&9 where DFAES has been installed				Ash Utilization details of Unit no. 12&13 where DFAES is not installed		Overall ash utilization in % (Unit No.1,2,&9 + Unit No. 12 & 13)		
Month	Total ash generation in MT from unit No. 1,2&9	Ash Utilization in MT from unit No. 1,2&9	Ash Utilization in %	Total ash generation in MT from unit No. 12&13	Ash Utilization	Total ash generated	Total ash utilized	% ash utilization
April 2015	57128.726	30168.820	52.81	64669.196	Dry Fly Ash collection system shall be installed during R&M of these units. At present Ash generated from these units is being disposed off in Ash pond in the form of ash slurry.	121797.922	30168.820	24.77
May 2015	57386.562	28184.460	49.11	68249.071		125635.633	28184.460	22.43
June 2015	55174.624	24076.780	43.64	64847.682		120022.306	24076.780	20.06
July 2015	55545.628	25078.370	45.15	60697.708		116243.336	25078.370	21.57
Aug.2015	55483.083	26220.540	47.26	66377.528		121860.611	26220.540	21.52
Sep. 2015	55672.554	27925.960	50.16	72890.314		128562.868	27925.960	21.72
Oct. 2015	54822.029	26728.710	48.76	72142.994		126965.023	26728.710	21.05
Nov. 2015	45995.525	19879.380	43.22	68219.438		114214.963	19879.380	17.41
Dec. 2015	55700.004	25399.130	45.60	70549.067		126249.071	25399.130	20.12
Jan. 2016	53135.391	27365.610	51.50	73719.634		126855.025	27365.610	21.57
Total	546044.126	261027.760	47.80	682362.632		1228406.758	261027.760	21.25



- ❖ Unit # 10 & 11 are presently under R&M. After completion of their R&M by Feb 2016 and June 2016 respectively, dry fly ash from these units shall be collected through Dry Fly Ash Collection System and same will be lifted by M/s J.P. Associated as per ash existing agreement with them. **(Annexure-16)**
- ❖ Unit # 12 & 13 are currently under operation, and these shall be put under R&M in phased manner. Their R&M is proposed to be completed by Dec 2017. Dry Fly Ash Collection system shall be installed during R&M. After completion of R&M, dry fly ash from these units shall be by M/s J.P. Associated as per existing agreement with them.
- ❖ National Highway Authority/PWD and other agencies of nearby area have been contacted for lifting of fly ash/pond ash and some of the agencies have expressed their interest for lifting fly ash/pond ash from Obra TPS for construction of Roads as well as making Bricks/Tiles etc. and LOI have been issued to them. **(Annexure-18)**
- ❖ **M/s J.P. Associates have expressed their interest to utilized entire dry fly Ash generated from the proposed 2x660 M.W. Obra C TPP. (Annexure-17)**
- ❖ Action plan for 100% fly ash utilization is attached. **(Annexure-19)**

Point No. 8: An integrated water balance factoring effluent treatment plan of desired degree to fulfill Zero Liquid Discharge along with water quality profile at various important locations has to be provided.

- ❖ *Total water requirement for proposed 2x660 M.W. Obra C is 3300 m³/hr with AWRS.*
- ❖ *Water Balance Diagram is tentative with ash water recovery based on zero discharge ETP and COC 6 Cooling Tower. (Annexure-20)*
- ❖ *Water requirement for SCR is not taken into account as technology for ammonia injection - Anhydrous/ Aqueous Ammonia/ Urea is yet to be freeze.*
- ❖ *Following Treatment systems have been considered for the Effluent Treatment Plant of the proposed project.*
 - *Oil Handling Area Effluent & Service Oil Waste.*



NOTES:-
1. THIS SCHEME SHOWN IN THIS DWG. IS TYPICAL FOR 2X660 MW UNIT AND INDICATIVE ONLY.

COMPOSITE WATER SCHEME
OBRA "C" EXTENSION THERMAL POWER PROJECT
2 x 660 MW UNIT
SONEBHADRA (UP)
UTTAR PRADESH RAJYA VIDYUT
UTPADAN NIGAM LIMITED

APPROV.	REVIEWED	DATE	RELEASE STATUS	DATE	SIGNATURE
			PRELIMINARY		
			FOR TENDER ONLY		
			FOR CONSTRUCTION		
			ARCHITECTURAL		
			ELECTRICAL		
			INSTRUMENTAL		
			MECHANICAL		

DRWN	CHKD	DATE	SCALE
SUN De	D.B.	12.02.16	NTS
P.C.		25.01.16	13-05-15
D.D.			14A22

DWG. NO. 14A22-DWG-M-014 (SHT. 2 OF 2) REV. 2



Environmental Impact Assessment of proposed 2 x 660 MW Extension Units at Obra Thermal Power Station of M/s UPRVUNL.

- *CHP Dust Suppression/Coal Pile Run Off.*
- *Zero Discharge ETP*

Water quality at various important locations:

- ❖ *Input / Output quality of Oil Handling Area Effluent & Service Oil Waste*

Parameter	Unit	Inlet	Outlet
Oil Concentration	ppm	1000	10
Suspended Solids	ppm	300	<100

- ❖ *Oil waste from Station Transformer Area, Switch Yard Area, Turbine Area, and Boiler Area for both units have been considered for treatment. The treated water after Oil Water Separator shall be pumped to Ash Water Sump.*

Input / Output quality of Coal Settling Pond

Parameter	Unit	Inlet	Outlet
Suspended Solids	ppm	1000	50
Particle size to be Settled	microns	50	--

- ❖ *Decanted water from Coal Settling Pond shall be collected in decanted water sump and thereafter pumped to Rain Water Harvesting Pond for Miscellaneous uses.*

Zero Discharge ETP



Environmental Impact Assessment of proposed 2 x 660 MW Extension Units at Obra Thermal Power Station of M/s UPRVUNL.

Feed water to UF-RO System- TDS	ppm	2000
Permeate – TDS	ppm	<130

- ❖ **Permeate of ETP RO system shall be pumped to CW Fore-bay.**
- ❖ *The water quality at important locations around power house is shown in latest IITR report for the month of Jan. 2016. (Annexure-25)*

❖ **EFFLUENTS QUALITY DATA OF OTPS**

Site : M/s. Obra Thermal Power Station, Sonebhadra
 Source of Sample : Industrial Effluent
 Type of Sample : Grab
 Date of Sampling : January 21st, 2016
 Season and Weather : Winter & Clear day

Physico-chemical Parameters

Sl. No	Parameters	Unit	Plant Effluent (Jharia Nala)	Ash Pond Effluent	ETP		Standard Tolerance Limits (max)
					Inlet	Outlet	
1.	pH	-	7.42	7.54	7.18	7.22	5.5-9.0
2.	TSS	mg/l	161	169	120	84	100
3.	TDS	mg/l	134	156	105	62	NA
4.	Oil & Grease	mg/l	2.4	2.6	2.2	2.0	10

- ❖ *Note: Sampling locations as suggested by the sponsor*
- ❖ *NA- Not Available*
- ❖ ** All values are in mg/l except pH*



Point No. 9: Revised Budgeted Action Plan for addressing the issues arising out of the Public Hearing and accordingly, CSR Budgeted Action Plan also to be submitted.

Public hearing was conducted on 17.10.2014 in the presence of Sri Kalika Singh, RO, UPPCB, Sonebhadra, Sri Mani Lal Yadav, ADM (F/R), Sonebhadra, Sri Sanjay Tiwari, CGM, Obra TPS and other Project Officers and public. Main issues & action taken/proposed are as under :

S.N	Issues raised	Issues raised by	Action taken / proposed
1.	Water is drawn from Rihand reservoir by the power plant, and the polluted ash- mixed water is disposed in the river through Jharia Nala. Ground water is contaminated with Fluoride, Arsenic etc. and the residents are afflicted by various diseases. The local people have not been given employment. Earlier this area was rich agriculture which has been damaged by the poisonous smoke emission from chimney. The district should be provided 100MW Electricity free of cost.	Sri Chaudhari Yasvant Singh of NGO- Jan Sevak Gramodyog Sewa Sansthan, Robertsganj)	Obra TPS have taken many effective measures to control the pollution. To control air pollution , ESP in Unit # 1, 2 (each of 50MW) have already been installed during their R&M work . These units will be phased out in near future. Unit # 3, 4 & 5 (each of 50 MW) have already been deleted by CEA Unit # 7 (94 MW) is under shut-down for R&M works. ESP in Unit # 7 is also proposed to be installed for which consultants have been appointed who have submitted DPR for the same. Further action is in process. Unit # 6 (100MW) have been



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			<p>deleted and Unit # 8 (100MW) is under process of deletion by CEA.</p> <p>ESP in Unit # 9 (200MW) has already been installed.</p> <p>ESP in Unit # 10 & 11 (each of 200MW) is being installed in their R&M works which is under progress. The R&M of these units is scheduled to be completed by Feb. 2016 and June 2016 respectively.</p> <p>ESP work of Unit 12 & 13 (each of 200MW) is also proposed to be carried out which is scheduled to be completed by December,2017. These units will be closed/shutdown for R&M in next phase.</p> <p>AWRS is now functional , and no polluted ash- mixed water is disposed in the reservoir.</p> <p>No contaminated water is being discharged into the river from existing units. ETP and AWRS have been installed and functional. Moreover, provisions have been made for LDPE lining in the existing Ash Pond for the proposed units.</p> <p>Indirect employment is being provided by various working contracting agencies.</p> <p>Electricity shall be provided as per U.P. Govt./ U.P.Power Corporation Ltd. policy.</p>
2.	Ash is being disposed into the river through Jharia Nala.	Sri Sangram Misra (Ex. Distt. President, Hindu Yuva Vahini), Sonebhadra	The AWRS system is functional , and no ash is being disposed into the river through Jharia Nala. Moreover, dredging of earlier deposited ash in Jharia Nala/river has been got done by UPRVUNL through Irrigation



			Deptt as Deposit work.
3.	Medicines are not provided by the project to the poor tribals of this area. We drink polluted water. The youth are unemployed. Proper shelters & residences may be provided to the poor living in slums in the area of Obra- C project.	Sri Vipin Singh, Corporator, Obra	<p>UPRVUNL has framed its CSR policy. Health camps on regular intervals are being organized in the area. Necessary provisions of medicine distribution and other health care shall be ensured as per policy.</p> <p>Seven number RO plants (costing approx. 64 lacs) at different locations in the area identified by district authorities have been provided to ensure pure and safe drinking water for the residents under CSR works. These are operated and maintained by UPRVUNL.</p> <p>Improvement and development of slum area shall be undertaken as per approved CSR policy.</p>
4.	The tribals of the area should be accorded priority, and they should be given employment. The pollution control authority is requested to decide upon electricity sharing. This is a moot question. Pollution should be reduced and maximum possible employment should be made available so that the woes of the people are over. If the District is supplied even 105 MW Electricity then 24 hours power would be available in Distt. Sonebhadra.	Sri Imtiyaz Ahmad, Chairman, Nagar Panchayat, Chopan, Sonebhadra	<p>Skill development program and other schemes as per approved CSR policy shall be undertaken for empowerment of the tribals and others for employment.</p> <p>Electricity shall be provided as per U.P. Govt./ U.P. Power Corporation Ltd. policy.</p>
5.	Provisions for modern health facilities/ hospitals should be made and the provision for education should also be made better. Employment be made available to the slum - dwellers.	Sri Ramesh singh Yadav, Social Activist , Obra, Sonebhadra	Obra TPS have its own 90 bed Hospital with one Operation Theater and X-ray, Ultra sound facilities. The same shall be strengthened as per need.



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	For the developments of the distt. many more plants should be installed other than Obra 3C3 plant.		<p>Obra TPS township has total 24 Primary Schools and 03 Intermediate Colleges. There is also one Govt. Post graduate Degree College.</p> <p>Moreover medical & educational facilities shall be provided as per UPRVUNL CSR Policy.</p> <p>Trees Shall be planted and green belt shall be developed to improve environment for which fund allocation of Rs2.45Cr based on estimate by UP Forest department has been made by UPRVUNL.</p>
6.	Pollution & disease prevail in this area in the name of development. Compensation, education & employment may be provided to the already displaced people of this area. 25% electricity generated should be provided to the people here. Public demand may be considered.	Sri Rambharose Singh, Worker, Jantadal, Robersganj	<p>Expansion project will comply all latest pollution norms. Compensation / employment has been paid / provided long back for the land acquired for the existing units ; and no additional land is proposed to be acquired for the new project.</p> <p>Electricity shall be provided as per U.P. Govt./ U.P.Power Corporation Ltd. policy.</p>
7.	Expansion of industries cause pollution. Obra generates so much smoke which is a matter of shame. There is no proper arrangement for water storage.	Sri Shaikh Kaleem, president All Nature Climate Environmental Society, Churk, Sonebhadra	<p>To control air pollution ESP in Unit # 1, 2 (each of 50MW) have already been installed during their R&M work. These units will be phased out in near future. Unit # 3, 4 & 5 (each of 50MW) have already been deleted by CEA.</p> <p>Unit # 7 (94 MW) is under shut-down for R&M works. ESP in Unit # 7 (94 MW) is also proposed to be installed for which consultants have been appointed who have submitted</p>



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			<p>DPR for the same. Further action is in progress. Unit # 6 (100MW) have been deleted and Unit # 8 (100MW) is under process of deletion by CEA.</p> <p>ESP in Unit # 9 (200MW) has already been installed.</p> <p>ESP in Unit # 10 & 11 (each of 200MW) is being installed in their R&M works which is under progress and is scheduled to be completed by Feb. 2016 and June 2016 respectively.</p> <p>ESP work of Unit 12 & 13 (each of 200MW) is also proposed to be carried out which is scheduled to be completed by December,2017. These units will be closed/shutdown for R&M in next phase.</p> <p>Provisions have been made for Rain Water Harvesting in proposed plant area.</p>
8.	The project is very old & sick and is under treatment. The units causing pollution are being renovated. The residents should be given employment.	Sri Vishal Gupta, Zone Chairperson, Lions Club, Obra	Renovation of existing units is under progress. Some of the unit are functional after having undergone R&M. R&M of remaining units shall be done and completed by December 2017.
9.	The process of providing employment to the youth of this area should be simplified.	Sri Alok Bhatia, Distt. Vice President, VyaparMandal, Obra	Skill development programs shall be organized for the youth as per CSR policy of UPRVUNL.
10.	The district is facing naxal& poverty. The poor is meted step-motherly treatment. Minimum wages are not provided. The religious places of Bhutesvar Darbar, natural Shiv Mandir are located in	Sri Dinesh Shukla, Bharti Janta Yuva Morcha, KashiPrant	Minimum wages are being provided. The religious places of Bhutesvar Darbar, natural Shiv Mandir do not lie on the plot plan of proposed expansion.



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	sector-3, and thus is a natural heritage & it should be preserved. The youths of Obra should be provided 100% employment. 24 hrs electricity Supply must be provided.		<p>Skill development programs shall be organized for the youth as per CSR policy of UPRVUNL. Expansion of the power plant would result in sustainable industrial activity and growth, which in turn would generate direct and indirect opportunities of employment and business in the region.</p> <p>Electricity shall be supplied as per U.P. Govt./ U.P.Power Corporation Ltd. policy.</p>
11	The project is not able to provide electricity to the nearby areas within even 100 mtrs. Where shall the slum dwellers be shifted. Rs. 500 is charged as medical fee from private people, which is not justified. Thousands of trees have been felled. Trees should be planted otherwise the project will not be allowed to be constructed.	Sri Vikas Singh (Chinku) Student Leader, Obra	<p>Electricity shall be provided as per U.P. Govt./ U.P.Power Corporation Ltd. policy.</p> <p>OPD facility is being provided at nominal medical fee Rs 30 only to private people.</p> <p>Trees shall be planted and green belt shall be developed for which fund allocation of Rs2.45Cr based on estimate by UP Forest department has been made by UPRVUNL.</p>
12	There is no power but darkness in Sinduria & Vardia. These villages should be adopted, and they should be nominated for this purpose.	Ajay Kumar Pathak, Student PG College, Obra	UPRVUNL has framed its CSR policy. CSR activities shall be undertaken as per approved CSR policy.
13.	We express thanks to The UP Govt. & Hon'ble CM of U.P. Electy. Generation is very important and we extend support for Obra C Project.	Sri Vijay Yadav, Distt. President, Samajwadi Yuvjan Sabha, Obra	No issues.
14.	Employment should be made available.	Sri Mithlesh Singh Bajarangi, Obra	Skill development programs shall be organized for the youth as per CSR policy of UPRVUNL. Expansion of this power plant will result in sustainable industrial activity and growth,



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			which in turn generates direct and indirect opportunities of employment and business in the region.
15.	The facility of electricity must be ensured within 5 km, and the hospital should be properly managed, employment opportunities should be made available to the youths.	Sri Neeraj Bhatia, Ex. Students Union, Obra	<p>Electricity shall be provided as per U.P. Govt./ U.P.Power Corporation Ltd. policy.</p> <p>Obra TPS has its own 90 bed Hospital with one Operation Theater and X-ray, Ultra sound facilities. The same shall be strengthened as per need.</p> <p>OPD facility is being provided at nominal medical fee Rs 30 only to private people.</p> <p>Expansion project will provide indirect employment to about 1500 man/day during construction phase.</p>
16.	It would be appreciated if employment is made available to the local people. We will require 24 hrs. electricity supply.	Sri Pawan Kumar Yadav, Obra	<p>Skill development programs shall be organized for the youth as per CSR policy of UPRVUNL. Expansion of this power plant result in sustainable industrial activity and growth, which in turn generates direct and indirect opportunities of employment and business in the region.</p> <p>Electricity shall be provided as per U.P. Govt./U.P.Power Corporation Ltd. policy.</p>



Environmental Impact Assessment of proposed 2 x 660 MW Extension
Units at Obra Thermal Power Station of M/s UPRVUNL.

CSR Plan

- ❖ UPRVUNL has framed its CSR policy and constituted CSR committee. **(Annexure-22)**
- ❖ UPRVUNL is committed to spend 0.4% of capital cost of the proposed project i.e. approx. Rs 35 crores as one time investment under CSR activities. The list of activities under CSR plan has been obtained from District Administration. **(Annexure-23)**
- ❖ Besides, an order has been placed with I.I.T. Kanpur to carry out need based Socio-economic study in study area of proposed project site vide LOI no.69/Obra C/CCD-II/LOI dated 02.02.2016. **(Annexure-24)**
- ❖ Study is under progress and I.I.T. Kanpur shall submit their Final report by April 2016.
- ❖ Based on both these documents CSR activities as per the need of local population shall be carried out by UPRVUNL.



कार्यालय जिलाधिकारी, सोनभद्र

पत्रांक 603-04 / सी.एस.आर. / 2015-16

दिनांक- 24-02-2016

मुख्य महा प्रबन्धक,
ओबरा तापीय परियोजना,
ओबरा, सोनभद्र

विषय - कार्पोरेट सोशल रिस्पॉन्सिबिलिटी के अन्तर्गत कार्य योजना

आज दिनांक-24.02.2016 को अपराह्न 1:00 बजे अधोहस्ताक्षरी के कार्यालय में सी.एस.आर. के सम्बन्ध में जनपद के विभिन्न परियोजनाओं के प्रतिनिधियों से विचार-विमर्श किया गया, जिसमें आपके प्रतिष्ठान के प्रतिनिधि द्वारा अवगत कराया गया कि ओबरा तापीय परियोजना, ओबरा, सोनभद्र के परिसर में ओबरा-“सी” विस्तार 2 x 660 मे0वा0 परियोजना स्थापित किया जाना प्रस्तावित है, जिसकी पर्यावरण स्वीकृति पर्यावरण मन्त्रालय, भारत सरकार से प्रतीक्षित है। एम.ओ.ई.एफ.सी.सी. ने अपने “टर्मस आफ रिफरेंस” में ओबरा तापीय परियोजना के आस-पास के क्षेत्रों में सी.एस.आर. कार्यों को सम्पादित कराने हेतु कार्य योजना प्रस्तुत करने के निर्देश दिये हैं। तत्कम में एतद्वारा जनपद सोनभद्र में आगामी पाँच वर्षों में कराये जाने वाले कार्यों की स्वीकृति निम्न विवरणानुसार प्रदान की जाती है :-

क्र० सं०	कार्य विवरण	अनुमानित लागत (लाख ₹0 में)
1	बालक-बालिकाओं हेतु अलग-अलग स्कूल शौचालय निर्माण	300.00
2	सिलाई-कढ़ाई एवं मेंहदी प्रशिक्षण कार्यक्रम	20.00
3	मध्याह्न भोजन शेड निर्माण	250.00
4	हैण्ड पम्प मरम्मत प्रशिक्षण कार्यक्रम	20.00
5	सोलर स्ट्रीट लाईट आपूर्ति एवं स्थापन का कार्य	500.00
6	हैण्ड पम्प स्थापन का कार्य	500.00
7	एल0ई0डी0 लाईट वितरण	45.00
8	दिव्यांग उपकरणों का वितरण	12.00
9	पेयजल आपूर्ति हेतु ओवरहेड टैंक, सबमर्सिबल पम्प एवं सोलर सिस्टम स्थापना का कार्य	225.00
10	शुद्ध पेय जल आपूर्ति हेतु बोरिंग पम्प एवं सोलर सिस्टम सहित आर0ओ0 प्लांट की स्थापना का कार्य	240.00
11	पेयजल की आपूर्ति हेतु सोलर पम्प की स्थापना का कार्य	200.00
12	घाट सहित सार्वजनिक तालाब का निर्माण का कार्य	100.00
13	कम्प्यूटर प्रशिक्षण कार्यक्रम	40.00
14	सामुदायिक शौचालय का निर्माण कार्य	100.00

कमश:...../2



Environmental Impact Assessment of proposed 2 x 660 MW Extension
Units at Obra Thermal Power Station of M/s UPRVUNL.

(2)

क्र० सं०	कार्य विवरण	अनुमानित लागत (लाख रू० में)
15	कक्षा-12 तक के विद्यार्थियों हेतु कोचिंग क्लासेज का संचालन कार्य	20.00
16	गरीब बालिकाओं को साईकिल वितरण का कार्य	35.00
17	सी०सी० रोड एवं नाली निर्माण का कार्य	320.00
18	विद्यालयों में मेज, कुर्सी, बैंच इत्यादि उपलब्ध कराने का कार्य	50.00
19	आँगन बाड़ी केन्द्रों के सुधार/नवीनीकरण का कार्य	250.00
20	विद्यालयों का सौंदर्यकरण का कार्य	250.00
21	पर्यटन विकास का कार्य	500.00
	कुल योग	3977

उपरोक्त कार्य विवरण एवं उसकी अनुमानित लागत अनन्तिम है, जिसमें कार्य की आवश्यकता के अनुरूप परिवर्तन किया जा सकता है। उपरोक्त कार्य विभाग द्वारा धन अवमुक्त किये जाने के उपरान्त जनपद के किसी भी क्षेत्र में आवश्यकतानुसार कराया जा सकता है।

24/2/16
(जी०एस० प्रियदर्शी)
जिलाधिकारी,
सोनभद्र

पृ० पत्रांक...../यथोक्त।

तददिनांकित।

प्रतिलिपि निम्नोक्त को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :-

- 852-16
1. मुख्य विकास अधिकारी, सोनभद्र
 2. सहायक आयुक्त उद्योग, जिला उद्योग एवं उद्यम प्रोत्साहन केन्द्र, सोनभद्र

(जी०एस० प्रियदर्शी)
जिलाधिकारी,
सोनभद्र

MINUTES OF THE 50th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER & COAL MINING PROJECTS

MINUTES OF THE 50th MEETING OF THE RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) ON ENVIRONMENTAL IMPACT ASSESSMENT (EIA) OF THERMAL POWER & COAL MINING PROJECTS

The 50th Meeting of the reconstituted EAC (Thermal Power) was held on 28th-29th January, 2016 in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, Vayu Wing, First Floor, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi-110003. The following members were present:

- | | | |
|---|---|--|
| 1. Shri Anil Kumar | - | Chairman |
| 2. Prof. C.R. Babu | - | Member |
| 3. Shri T.K.Dhar | - | Member |
| 4. Shri N.K. Verma | - | Member |
| 5. Shri J.L Mehta | - | Member |
| 6. Shri G.S. Dang | - | Member |
| 7. Shri Shantanu Dixit | - | Member (attended only on 29 th January, 2016) |
| 8. Shri P.D. Siwal/
Shri N.S. Mondal | - | Member (Representatives of CEA) |
| 9. Shri B.B. Barman | - | Member Secretary |

Shri A.K. Bansal, Dr. Ratnavel, Representatives of IMD, CPCB and WII could not be present. List of other participants is at **Annexure-I**.

On the second day i.e. 29th Jan 2016, at the outset, the Committee welcomed the new member, Shri Shantanu Dixit and introduced themselves.

Item No.1: CONFIRMATION OF THE MINUTES OF THE 48th EAC (LAST) MEETING.

No comments/observations were received and therefore, the Minutes of the 48th EAC (Thermal Power) meeting held on 18th December, 2015 were confirmed.

Item No. 2: CONSIDERATION OF PROJECTS

2.1 Expansion of Obra TPP by addition of 2x660 MW at Obra, Tehsil Robertsganj, District Sonbhadra, Uttar Pradesh by M/s Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. - reg. EC.

(2.1.1) The Project proponent (PP) along with their environmental Consultant, BHEL, PCRI, Haridwar made a presentation and *inter-alia*, provided the following information:

TOR was granted by MoEF on 05.10.2007. Based on TOR issued, EIA studies were carried out during 2007-2008 and Public Hearing was conducted on 18.12.2008. Request for change in unit configuration from 2X500 MW to 2X660 MW was made by UPRVUNL. The same was considered by EAC during its 36th meeting held on November 14-15, 2011 and it was directed to revise the EIA/EMP report, Form-1 in consonance with the changed scenario with a few points for consideration vide letter dated 30.01.2012 (Letter of Change in Configuration). Accordingly, revised EIA report of the project was submitted for appraisal before EAC during its 60th meeting held on November 5-6, 2012. MoEF desired additional information on some of the issues and also advised to collect the fresh AAQ, Water and Soil data and revise EIA/EMP report and also re-conduct Public Hearing on revised report vide letter dated 25.04.2013. EIA Report has been revised incorporating the points suggested by MOEF. UPPCB re-

conducted Public Hearing on 17.10.2014. Present presentation is as per MoEF letter dated 25.04.2013. It was seen that the baseline data related to the period March to June 2013. The imported coal characteristics of sulphur and particularly ash were very high, while the GCV was low.

(2.1.2) *After detailed deliberations, the Committee sought the following documents/ information which were either not available in the EIA/EMP report or not found in order:*

- (i) *NBWL clearance*
- (ii) *Detailed compliance report to the latest Consent to Operate (CTO) accorded by SPCB for the existing units.*
- (iii) *Action plan for phasing out the older Units to be submitted within six months to the MoEF & CC.*
- (iv) *Imported coal proposed to be used shall have lower sulphur & ash content and higher GCV so that the coal quantity to be imported, and its ash generation can be reduced. The imported coal may also be blended with the domestic coal presently being used for the existing units which will also ensure boiler efficiency to the designed parameters. In any case, the Ministry's O.Ms dated 05.02.2013 and 02.11.2015 on imported coal quality shall be complied with. Accordingly, the MoU/FSA for imported coal shall be revised.*
- (v) *Revised AAQ factoring the R&M and closing down option of the existing Units to be assessed/predicted and submitted.*
- (vi) *Justification/ explanation for the high concentration of toxic trace metals in the soil.*
- (vii) *Details of existing fly ash utilization and detailed Action Plan for the same.*
- (viii) *An integrated water balance factoring effluent treatment plan of desired degree to fulfill Zero Liquid Discharge along with water quality profile at various important locations has to be provided.*
- (ix) *Revised Budgeted Action Plan for addressing the issues arising out of the Public Hearing and accordingly, CSR Budgeted Action Plan also to be submitted.*

*In view of the above, the proposal was **deferred with advice to the PP to submit the above information/document/clarification within the validity of baseline data for submission of the same.***

2.2. Addition of 6 MW Turbine to existing 2x18 MW Captive Power Plant (CPP) of Alathiyur Cement Plant at Village Alathiyur, Taluk Sendurai, District Ariyalur, Tamil Nadu by M/s. The Ramco Cements Ltd.- reg. EC.

(2.2.1) The PP along with their environmental consultant, Environmental System Consultants & Ambiente Lab Solutions Private Limited, Chennai made a presentation and *inter alia*, provided the following information.

- (i) The Ramco Cements Ltd. (RCL) had established its Alathiyur Cement Plant near Pennadam in Ariyalur District in the Year 1996 along with its Township in an extent

Application to Principal Conservative Forest Department.

Application to Principal Conservative Forest Department

PART - 1

Proposal for Investigation and Survey in the National Park/Sanctuary

(Details to be provided by the Applicant)

1. Name of the Organization: U.P. RAJYA VIDYUT UTPADAN NIGAM Ltd.
(U.P. Government Undertaking)
2. Aims and Objectives of the Proposed Project: To bridge the gap between the demand and supply of electricity in the state of U.P.
3. Location and Map (1:50,000 scale) of the area duly authenticated by the competent authority to be investigated/surveyed: Enclosed
4. Whether investigation/survey requires clearing of vegetation: No
5. If yes, please specify the extent (in Ha.) In view of the above information at point No.4, the extent in Ha is Nil
6. Opinion of the Officer In Charge of NP/WLS (Attach signed copy). The following be included in the opinion:
- Brief history of the protected area
 - Current status of wildlife
 - Current status of pressures on protected area
 - Projected impacts of projects on wildlife, habitat management and access, use of resource by various stakeholders.
 - Contiguous wildlife areas which would benefit wildlife if added to national park/sanctuary.
 - Other areas in the State which have been recommended by State Government Wildlife Institute of India, BNHS, SACON, IISC, IUCN or other expert body for inclusion in protected area network.

Opinion of the Officer Incharge of the NP/WLS on the above mentioned points is enclosed

Signed



Project Head
Name: P. CHOUDHARY
Organization: Obra Thermal Power Station
U.P. Rajya Vidyut Utpadan Nigam Ltd.

Signed



The Officer In Charge of the NP/WLS
Official Seal
उत्पन्न विद्युत उत्पादन निगम
विद्युत

Signed

The C.W.F.
Official Seal

PART- II

(To be filled in by the Applicant)

1. Project details:

- (i) Copy of the Investigation and Survey report.
(The report should include the date of survey and the names of the investigators, Surveyors and all officials of the concerned NP/WLS who remained present during the period):

Joint survey by Wildlife Authority and UPRVUNL was conducted on 22.11.2012 in the presence of the following Officers/Officials-

Representative of Wildlife Authority	Representative of UPRVUNL
Shri S.N. Tripathi	1-Rajeev Kumar, Executive Engineer
Range Officer, Gurma	2- Akash Gauba, Assistant Engineer
	3- N.P.Sinha, Junior Engineer

- (ii) Self contained and factual project report for which NP/WLS area is required
(Enclose copy of the Project Appraisal document)

No area of the NP/WLS is required for the Project proposed

- (iii) Map (duly authenticated by the Divisional/District Head of the Department dealing with Forests and Wildlife) on a scale of 1:50,000 showing the boundaries of the NP/WLS, delineating the area in question in red color).

A map as per above guidelines is attached.

- (iv) Self contained and factual report of at least two alternatives considered by the Project authorities along with technical and financial justification for opting national park/ sanctuary area.

The proposed Project (2x660 MW Obra 'C' Project) is the extension of the existing Obra Thermal Power Station so no other alternative were explored and no land of NP/WLS area is involved for the proposed Project as the proposed project is about 8 km away from the nearest boundary of Wildlife Sanctuary.

- (v) Copy of the Bio diversity Impact Assessment report in case the proposal involves diversion of more than 50 ha. NP/WLS area

There is no diversion of NP/WLS area; hence no Biodiversity Impact Assessment is required.

2. Location of the project/scheme:

- | | |
|---|------------------------------------|
| (i) State/Union Territory: | Uttar Pradesh |
| (ii) District : | Sonbhadra |
| (iii) Name of the National Park/Sanctuary : | Kaimoor Wild Life Sanctuary |

3. Details of the area required (in Hectares only) : **No Forest/NP/WLS area is required**
(provide break up of the land use under the project,
e.g., construction of dam, submergence, housing for staff, road etc)
4. Details of displacement of people, if any, due to the project
- (i) Total number of families involved in displacement
 - (ii) Number of scheduled caste/scheduled tribe families involved in displacement
 - (iii) Detailed rehabilitation plan

The information in respect of i, ii & iii above is nil as there is no displacement of the people involved in this project.

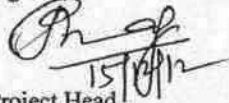
5. Any other information relevant to the proposal but not covered in any of the columns above.

Under proposal 2 units of 660MW coal based Thermal Power Station (2x660 MW Obra 'C' Project) is proposed to be constructed to bridge the gap between the demand and supply of Electricity in the State on the land of Obra Thermal Power Station (U.P. Rajya Vidyut Utpadan Nigam Limited, U.P.Govt Undertaking) which is adjacent to the existing Plant and is located at about 8 Km from the nearest boundary of Wild Life Sanctuary . Various units of existing plant were commissioned during 1967 to 1982. There is no diversion of the land of Kaimoor Wild Life Sanctuary involved.

The proposed project is a Super Critical unit based on latest technology due to which the plant performance will improve. From the environment point of view the following advantages will beachieved:

- **Reduction in coal consumption.**
- **Reduction in ash generation.**
- **Reduction in effluent gases in the atmosphere.**
- **Reduction in Suspended Particulate Matter (SPM) in the environment.**

Signed



Project Head

Name : P.CHOUDHARY

Organization: Obra Thermal Power Station,
U.P.Rajya Vidyut Utpadan Nigam Ltd.

Date of submission to the Head of the National Park/Sanctuary

Letter to Office of Chief Conservative Officer, Mirzapur.

कार्यालय प्रभागीय वनाधिकारी, कैमूर वन्य जीव प्रभाग, मिर्जापुर ।
 पत्रांक 3947 / 334 दिनांक, मिर्जापुर, मई 02 2013.
 सेवा में,
 मुख्य वन संरक्षक, वन्य जीव
 पश्चिमी क्षेत्र, उ०प्र० कानपुर।

विषय 2×660 मे०वाट ओबरा सी विस्तार परियोजना हेतु अनापत्ति/पर्यावरणीय क्लीयरेंस के सम्बन्ध में।

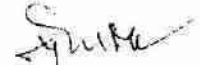
संदर्भ प्रमुख वन संरक्षक, वन्य जीव, उ०प्र० लखनऊ का पत्रांक 3162/26-11 (ओबरा ता०वि०परि०) दिनांक 28-3-2013 तथा आपका पत्रांक 3099/26-11 (कैमूर) दिनांक 8-4-2013.

सहोदय,
 उपर्युक्त विषयक संदर्भगत पत्र के क्रम में 2×660 मे०वाट ओबरा सी विस्तार परियोजना हेतु अनापत्ति/पर्यावरणीय क्लीयरेंस के प्रस्ताव के संदर्भ में बिन्दु संख्या 6 के सम्बन्ध में मनतब्य एवं आख्या तथा वांछित सूचना निम्न प्रकार से है।

1- प्रस्तावित परियोजना से सम्बन्धित कोई वाद माननीय उच्च न्यायालय /किसी न्यायालय में विचाराधीन नहीं है।

2- प्रस्तावित परियोजना की शर्तों का अनुपालन सुनिश्चित कराने के सम्बन्ध में पब्लिक हियरिंग आयोजित की जायेगी। उ०प्र० प्रदूषण नियंत्रण बोर्ड द्वारा पब्लिक हियरिंग आयोजन के पश्चात उनकी सहमति प्राप्त कर प्रस्ताव पर्यावरण एवं वन मंत्रालय, भारत सरकार को प्रेषित किया जायेगा। प्रस्तावित परियोजना कैमूर वन्य जीव विहार सीमा से न्यूनतम लगभग 7-7 किमी० की दूरी पर है तथा वन्य जीव क्षेत्र के प्रबन्धन में प्रस्तावित परियोजना से कोई भी कुप्रभाव नहीं पड़ेगा।

भवदीय



(पी०एस०दुबे)

 प्रभागीय वनाधिकारी
 कैमूर वन्य जीव प्रभाग,
 मिर्जापुर।

Letter to Wild Life Division MoEF, New Delhi.

महत्वपूर्ण

संख्या-1328 / 14-4-2013

प्रेषक,

पवन कुमार,
सचिव,
उत्तर प्रदेश शासन।

सेवा में,

महानिरीक्षक,
वाइल्ड लाइफ डिवीजन,
पर्यावरण एवं वन मंत्रालय,
भारत सरकार,
सी0जी0ओ0 काम्प्लेक्स, लोधी रोड,
नई दिल्ली।

वन अनुभाग-4

लखनऊ, दिनांक, 24 दिसम्बर, 2013

विषय-

जनपद सोनभद्र में स्थित ओवरा ताप विद्युत परियोजना के विस्तार हेतु
2x660 एम.डब्लू. यूनिट की स्थापना की अनुमति के संबंध में।

महोदय,

उपर्युक्त विषयक जनपद सोनभद्र में स्थित ओवरा ताप विद्युत परियोजना के विस्तार हेतु 2x660 एम.डब्लू. यूनिट की स्थापना के संबंध में उ0प्र0 राज्य वन्य जीव बोर्ड की अनुमति प्राप्त हो गयी है। अतः उक्त प्रस्ताव की 15 प्रतियां संलग्न कर प्रेषित करते हुए मुझे यह कहने का निदेश हुआ है कि प्रस्ताव पर राष्ट्रीय वन्य जीव बोर्ड की अनुमति प्रदान करने के संबंध में आवश्यक कार्यवाही करने का कष्ट करें।

संलग्नक- यथोक्त।

भवदीय,

(पवन कुमार)
सचिव।

संख्या व दिनांक तदैव।

प्रतिलिपि प्रमुख वन संरक्षक, वन्य जीव, उ0प्र0, लखनऊ को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

आज्ञा से,

(पवन कुमार)
सचिव।

2x660 MW Obra "C" Thermal power Project

PART-V

(To be completed by the Department in Charge of Forestry and Wild Life in consultation with the State Board for Wild Life with in 30 days of the receipt of PART-II, III and IV)

1-Date of RECEIPT of PART II, III and IV by the Department	28.05.2013
2-Do you agree with the recommendatios of the Chief Wild Life Warden	Yes
3-If not, please provide the reasons.	N.A.
4-Did you provide PART, I, II, III, and IV to the members of the State Board for Wild Life	Yes
5-Attach copy of the opinion of the State Board for Wild Life	Minutes attached
6-Give details of the recommendations of the State Government	recommended for approval in public intrest

Signed by



The Principal Secretary

Name

(वी० एन० गर्ग)

प्रमुख सचिव

State

वन एवं पर्यावरण विभाग
उत्तर प्रदेश शासन।

Official Seal

Date of submission to the Central Government

Letter from Chief Forest Secretary to Wild Life Division, New Delhi

कार्यालय प्रमुख वन संरक्षक, वन्य जीव, उत्तर प्रदेश, लखनऊ।

पत्रसंख्या- /26-11. (ओबरा ता0वि0परि0), लखनऊ: दिनांक: फरवरी 11, 2016
सेवा में,

उप महानिरीक्षक,
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय,
(वन्य जीव डिवीजन), भारत सरकार,
छटा तल, वायु विंग, इन्दिरा पर्यावरण भवन,
जोरबाग रोड, अलीगंज,
नई दिल्ली 110003

विषय:- Proposal for extension of 2x660 MW (660 MW each unit) existing project Obra Thermal Power Station, distt. Sonbhadra, Uttar Pradesh.
संदर्भ:- पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार, नई दिल्ली की पत्रसंख्या-F.No.6-6/2014WL, दिनांक 22.06.2015 एवं पत्रसंख्या-F.No.6-6/2014WL, दिनांक 14.07.2015

महोदय,

कृपया उक्त संदर्भित पत्र का अवलोकन करने का कष्ट करें। विषयक परियोजना प्रस्ताव के सम्बन्ध में उक्त पत्र के कम में सम्बन्धित प्रस्तावक विभाग/प्रभाग स्तर से प्रेषित सूचनाएँ/अभिलेख निम्न प्रकार संलग्न कर प्रेषित हैं।

- 1- **विन्दु संख्या-(a)** प्रस्तावित परियोजना प्रस्ताव से सम्बन्धित टोपोशीट/रंगीन मानचित्र 5 प्रतियों में जिसमें (कैमूर वन्य जीव विहार के अन्तर्गत आने संरक्षित क्षेत्र) की सीमा को दर्शाते हुए उसमें परियोजना स्थल को इंगित कर दिया गया है। उक्त मैप की साफ्ट कापी भी सी0डी0 में संलग्न कर प्रेषित है।
- 2- **विन्दु संख्या-(b)** प्रस्ताव के संदर्भ में उ0प्र0 राज्य वन्य जीव बोर्ड की संस्तुति/अनुमोदन। (कार्यवृत्त बैठक दिनांक 21.10.2013) 5 प्रतियों में।
- 3- **विन्दु संख्या-(C)** प्रभागीय वनाधिकारी, कैमूर वन्य जीव प्रभाग, मिर्जापुर के पत्रांक-1790/23-1, दिनांक-05.01.2016 के द्वारा प्रेषित आख्या के अनुसार "प्रस्तावित ओबरा "सी" परियोजना के सम्बन्ध में कोई भी वाद किसी भी न्यायालय में लम्बित नहीं है।
- 4- **विन्दु संख्या-(d)** प्रस्तावित ओबरा "सी" परियोजना का प्लॉट प्लान (Area) GPS coordinates इंगित करते हुए 5 प्रतियों में संलग्न है।

संलग्नक:- उपरोक्तानुसार।

भवदीय,

(डा0 रूपक डे)
प्रमुख वन संरक्षक, वन्य जीव,
उत्तर प्रदेश, लखनऊ।

पत्रसंख्या-1880 / उक्तदिनांकित।

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित:-

- 1-प्रतिलिपि- मुख्य अभियन्ता(पीपीएमएम), उ0प्र0रा0वि0उ0 निगम लि0 7वाँ तल, शक्ति भवन विस्तार, लखनऊ।
- 2-प्रतिलिपि- मुख्य वन संरक्षक, वन्य जीव, पश्चिमी क्षेत्र, उ0प्र0, कानपुर।
- 3-प्रतिलिपि- प्रभागीय वनाधिकारी, कैमूर वन्य जीव प्रभाग, मिर्जापुर।
- 4-प्रतिलिपि- परियोजना निदेशक, ओबरा ताप विद्युत परियोजना, ओबरा, सोनभद्र।

(डा0 रूपक डे)
प्रमुख वन संरक्षक, वन्य जीव,
उत्तर प्रदेश, लखनऊ।

रजिस्ट्री सं० डी० एल०-33004/99

REGD. NO. D. L.-33004/99



भारत का राजपत्र

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पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय

अधिसूचना

नई दिल्ली, 22 सितम्बर, 2015

का.आ. 2601(अ).—निम्नलिखित प्रारूप अधिसूचना, जिसे केन्द्रीय सरकार, पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (2) के खंड (v) और खंड (xiv) और उपधारा (3) के साथ पठित उपधारा (1) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, जारी करने का प्रस्ताव करती है, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) की अपेक्षानुसार, जनसाधारण की जानकारी के लिए प्रकाशित की जाती है; जिनके उससे प्रभावित होने की संभावना है; और यह सूचना दी जाती है कि उक्त प्रारूप अधिसूचना पर, उस तारीख से, जिसको इस अधिसूचना वाले भारत के राजपत्र की प्रतियां जनसाधारण को उपलब्ध करा दी जाती हैं, साठ दिन की अवधि की समाप्ति पर या उसके पश्चात् विचार किया जाएगा;

ऐसा कोई व्यक्ति, जो प्रारूप अधिसूचना में अंतर्विष्ट प्रस्तावों के संबंध में कोई आक्षेप या सुझाव देने में हितबद्ध है, इस प्रकार त्रिनिदिष्ट अवधि के भीतर, केन्द्रीय सरकार द्वारा विचार किए जाने के लिए, आक्षेप या सुझाव सचिव, पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय, इन्द्रा पर्यावरण भवन, जोर बाग रोड, अलीगंज, नई दिल्ली-110003 या ई-मेल पते: esz-mef@nic.in पर लिखित रूप में भेज सकेगा।

प्रारूप अधिसूचना

और कैमूर वन्यजीव अभयारण्य, उत्तर प्रदेश राज्य के जिले मिर्जापुर और सोनभद्र में 24° 27' 51" "उ. से 24° 52' 0.9" "उ. और 24° 38' 19.11" "उ. से 24° 39' 9.05" "उ. अक्षांश और 82° 20' 15.30" "पू. से 83° 08' 23.3" "पू. और 82° 44' 59.9" "पू. से 82° 45' 0.07" "पू. देशांतर के बीच अवस्थित है और 500.73 वर्ग किलोमीटर क्षेत्र तक फैला हुआ है।

और जहाँ कैमूर वन्यजीव अभयारण्य ब्लैक बक, स्लोथ बियर, वाइल्ड बियर, स्ट्रिपड हेयना, सांभर, पैंगोलीन, इंडियन फाक्स, सियार, बंदर, चित्तीदार हिरण, और चिकारा के लिए प्राकृतिक आवास प्रदान करना है। यहाँ पर कई जलचर और कई प्रकार के जलीय तथा स्थलीय पक्षी पाये जाते हैं। जिनमें मोनीटर लिजार्ड, कोबरा कामन करैट, रैसल वाइपर, रैट स्नैक तथा पैथन सम्मिलित हैं। स्वच्छ जल मगरमच्छ, बेलन तथा बाखार नदियों में पाये जाते हैं।

और, पारिस्थितिकीय और पर्यावरणीय दृष्टि से पारिस्थितिकीय संवेदी जोन के रूप में कैमूर वन्यजीव अभयारण्य के चारों ओर के संरक्षित क्षेत्र, जिसका विस्तार और सीमाएं इस अधिसूचना के पैरा 1 में विनिर्दिष्ट हैं, को संरक्षित और सुरक्षित करना आवश्यक है तथा उक्त पारिस्थितिकीय संवेदी जोन में उद्योगों या उद्योगों के वर्गों का प्रचालन और प्रसंस्करण करने को प्रतिबिद्ध करना आवश्यक है ;

अतः, अब, केन्द्रीय सरकार, पर्यावरण (संरक्षण) नियम, 1986 के नियम 5 के उपनियम (3) के साथ पठित पर्यावरण (संरक्षण) अधिनियम, 1986 (1986 का 29) की धारा 3 की उपधारा (1) और उपधारा (2) के खंड (v) और खंड (xiv) तथा उपधारा (3) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, कैमूर वन्यजीव अभयारण्य पारिस्थितिक संवेदी जोन (जिसे इसमें इसके पश्चात् पारिस्थितिक संवेदी जोन कहा गया है) के रूप में उत्तर प्रदेश राज्य में कैमूर वन्यजीव अभयारण्य, की सीमा के चारों ओर 1 किलोमीटर तक के विस्तार क्षेत्र को अधिसूचित करती है जिसके ब्यौरे निम्नानुसार हैं, अर्थात्:—

1. पारिस्थितिक संवेदी जोन का विस्तार और उसकी सीमाएं—(1) पारिस्थितिक संवेदी जोन का विस्तार कैमूर वन्यजीव अभयारण्य की सीमा के चारों ओर 1 किलोमीटर तक होगा।

(2) पारिस्थितिक संवेदी जोन के मानचित्र में इसके अक्षांश और देशांतर के साथ मुख्य विशेषताओं सहित सीमा को दर्शाया गया जो उपाबंध I के रूप में उपाबंध है।

(3) पारिस्थितिक संवेदी जोन में आने वाले 70 ग्रामों की सूची के साथ भूमंडलीय स्थिति प्रणाली के निर्देशांक उपाबंध II के रूप में उपाबंध है।

2. पारिस्थितिक संवेदी जोन के लिए आंचलिक महायोजना—(1) राज्य सरकार, पारिस्थितिक संवेदी जोन के प्रयोजन के लिए राजपत्र में अधिसूचना के अंतिम प्रकाशन की तारीख से दो वर्ष की अवधि के भीतर, स्थानीय व्यक्तियों के परामर्श से, इस अधिसूचना में संलग्न अनुबंधों के सामंजस्य से आंचलिक महायोजना तैयार करेगी।

(2) उक्त महायोजना राज्य सरकार में सक्षम प्राधिकारी द्वारा अनुमोदित होगी।

(3) पारिस्थितिक संवेदी जोन के लिए उक्त महायोजना इस अधिसूचना में विनिर्दिष्ट रूप में ऐसी रीति में राज्य सरकार तथा सुसंगत केन्द्रीय और राज्य विधियों के सामंजस्य में भी तथा केन्द्रीय सरकार द्वारा जारी मार्गनिर्देश, यदि कोई हों, द्वारा तैयार होगी।

(4) उक्त महायोजना सभी संबद्ध राज्य सरकार के विभागों के परामर्श से तैयार होगी, अर्थात्:—

(i) पर्यावरण;

(ii) वन;

(iii) नगर विकास;

(iv) पर्यटन;

(v) नगरपालिका;

(vi) राजस्व;

(vii) कृषि;

(ix) उत्तर प्रदेश राज्य प्रदूषण नियंत्रण बोर्ड;

(x) शिंघाई; और

(xi) लोक निर्माण विभाग।

4. भू-अभिलेख में सदृश्य वृष्टियों के सुधार के लिए ब्यौहार किए गए मामलों का सारांश (पारिस्थितिक संवेदी जोनवार)।
5. ईआईए अधिसूचना, 2006 (पारिस्थितिक संवेदी जोनवार) के अधीन आने वाली गतिविधियों की संविक्षा के मामलों का सारांश। ब्यौरे एक पृथक् उपाबंध के रूप में उपाबद्ध किए जा सकते हैं।
6. ईआईए अधिसूचना, 2006 (पारिस्थितिक संवेदी जोनवार) के अधीन न आने वाली गतिविधियों की संविक्षा के मामलों का सारांश। ब्यौरे एक पृथक् उपाबंध के रूप में उपाबद्ध किए जा सकते हैं।
7. पर्यावरण (संरक्षण) अधिनियम, 1986 की धारा 19 के अधीन दर्ज की गई शिकायतों का सारांश (पारिस्थितिक संवेदी जोनवार)।
8. कोई अन्य महत्वपूर्ण विषय।

MINISTRY OF ENVIRONMENT, FORESTS AND CLIMATE CHANGE

NOTIFICATION

New Delhi, the 22nd September, 2015

S.O. 2601(E).—The following draft of the notification, which the Central Government proposes to issue in exercise of the powers conferred by sub-section (1), read with clause (v) and clause (xiv) of sub-section (2) and sub-section (3) of Section 3 of the Environment (Protection) Act, 1986 (29 of 1986) is hereby published, as required under sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, for the information of the public likely to be affected thereby; and notice is hereby given that the said draft notification shall be taken into consideration on or after the expiry of a period of sixty days from the date on which copies of the Gazette containing this notification are made available to the public;

Any person interested in making any objections or suggestions on the proposals contained in the draft notification may forward the same in writing, for consideration of the Central Government within the period so specified to the Secretary, Ministry of Environment, Forests and Climate Change, Indira Paryavaran Bhawan, Jorbagh Road, Aligarj, New Delhi-110003, or send it to the e-mail address of the Ministry at: - esz-mef@nic.in

Draft Notification

Whereas Kaimoor Wild Life Sanctuary situated in the Mirzapur and Sonbhadra districts of Uttar Pradesh lying between 24°27'51"N to 24°52'0.9"N and 24°38'19.11"N to 24°39'9.05"N latitudes and 82°20'15.30"E to 83°08'23.3"E and 82°44'59.9"E to 82°45'0.07"E longitudes is spread over an area of 500.73 Sq. km.

And whereas, Kaimoor Wild Life Sanctuary offers natural habitat for Black Bucks, Sloth Bears, Wild Boars, Striped Hyena, Sambhar, Pangolin, Indian Fox, Jackals, Apes, Spotted Deer and Chinkara. There are a number of water bodies and a number of species of land and water birds. All the major orders of Reptelia are represented in this Sanctuary. These include the Monitor Lizard, Cobra, Common Krait, Russell's Viper, Rat Snake and Pythons. Fresh water crocodiles are found in the Belan and Bakhar rivers.

And whereas, it is necessary to conserve and protect the area, the extent and boundaries of which are specified in paragraph 1 of this notification around the protected area of Kaimoor Wildlife Sanctuary as Eco-sensitive Zone from ecological and environmental point of view and to prohibit industries or class of industries and their operations and processes in the said Eco-sensitive Zone.

Now therefore, in exercise of the power conferred by sub section (1) and clauses (v) and (xiv) of sub-section (2) and sub-section (3) of Section 3 of the Environment (Protection) Act 1986 (29 of 1986) read with sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby notifies an area to an extent of 1 km all around the boundary of Kaimoor Wildlife Sanctuary in the State of Uttar Pradesh as the Kaimoor Wildlife Sanctuary Eco-sensitive Zone (herein after referred to as the Eco-sensitive Zone) details of which are as under, namely:—

1. **Extent and Boundaries of Eco-sensitive Zone.**—(1) The extent of eco-sensitive zone shall be 1 km all around the boundary of Kaimoor Wildlife Sanctuary.

कार्यालय मुख्य महाप्रबन्धक
ओबरा ताप विद्युत परियोजना
उ०प्र०रा०वि०उत्पादन नि०लि०
(उ०प्र० सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ०प्र०)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(A U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)

CIN-U40101UP1980SGC005065

संख्या 4827/सीजीएम/डब्लू-1/2316

दिनांक 14.11.2016

विषय: वायु (प्रदूषण निवारण तथा नियन्त्रण) अधिनियम-1981 की धारा-21 के अन्तर्गत सहमति के सम्बन्ध में।

मुख्य पर्यावरण अधिकारी (वृत्त-9)
उ०प्र० प्रदूषण नियन्त्रण बोर्ड,
टी०सी० 12वीं, विभूति खण्ड,
गोमती नगर, लखनऊ।

महोदय,

कृपया अपने कार्यालय पत्र सं०-59663/सी-9/वायु प्रदूषण-79/2014, दिनांक 28.04.2015 का सन्दर्भ ग्रहण करने की कृपा करें। इस सम्बन्ध में आप द्वारा मांगी गई बिन्दु संख्या 01, 03 एवं 05 से 12 के सम्बन्ध में निम्नवत् सूचित करना है :-

01. उ०प्र० प्रदूषण नियन्त्रण बोर्ड/केन्द्रीय प्रदूषण नियन्त्रण बोर्ड द्वारा दिये गये निर्देशों का अनुपालन परियोजना द्वारा किया जाता है। इस सम्बन्ध में बिन्दुवार निम्नवत् अवगत कराना है कि
 - क. ओबरा ताप विद्युत गृह, उ०प्र० राज्य विद्युत उत्पादन निगम लि० की इकाईयां काफी पुरानी हैं। इस क्रम में सूच्य है कि यूनिट संख्या 01, 02 एवं 09 का आर०एण्डएम० कार्य पूर्ण हो चुका है। इन इकाईयों के आर०एण्डएम० कार्य के अन्तर्गत उच्च दक्षता ई०एस०पी० लगाया गया है जिससे वायु में एस०पी०एम० लेवल निर्धारित मानकों से कम है। वर्तमान में यूनिट संख्या 10 एवं 11 का आर०एण्डएम० कार्य प्रगति पर है। इन इकाईयों में उच्च दक्षता के ई०एस०पी० लगाये जा रहे हैं। इन इकाईयों के कार्य क्रमशः फरवरी 2016 एवं जून 2016 तक पूर्ण हो जायेंगे। शेष 2 इकाईयों अर्थात् इकाई सं० 12 एवं 13 का आर० एण्ड एम० कार्य ई०एस०पी० स्थापना सहित दिसम्बर 2017 तक पूर्ण करा लिये जायेंगे। इन उच्च दक्षता के ई०एस०पी० लग जाने के उपरान्त वायु प्रदूषण निर्धारित मानकों की सीमा के अन्दर होगा।
 - ख. परियोजना से उत्सर्जित हो रहे उत्प्रवाह के शोधन हेतु ई०टी०पी० (Effluent Treatment Plant) की स्थापना की गयी है जो दिनांक 17.09.2014 से कियाशील है। ई०टी०पी० के इनलेट एवं आउटलेट के नमूनों की नवीनतम विश्लेषण आख्या आई०आई०टी०आर०, लखनऊ द्वारा प्रस्तुत दिसम्बर-2015 की रिपोर्ट में अंकित है।
 - ग. परियोजना से ऐश पाण्ड में ऐश स्लरी के निस्तारण के उपरान्त पॉण्ड से निकलने वाले डीकैन्टेड वाटर के पुनः प्लान्ट में उपयोग करने हेतु एडब्लूआरएस (Ash Water Recirculation System) की स्थापना की गयी है, जो दिसम्बर 2015 से कियाशील है। ई०टी०पी० एवं एडब्लूआरएस की स्थापना के उपरान्त प्लान्ट से जीरो डिस्चार्ज सुनिश्चित किया जा रहा है तथा ई०टी०पी० के इनलेट एवं आउटलेट के नमूनों की नवीनतम विश्लेषण आख्या आई०आई०टी०आर०, लखनऊ द्वारा प्रस्तुत दिसम्बर-2015 की रिपोर्ट में अंकित है।
03. फ्लू गैस/प्रक्रिया उत्सर्जन सम्बन्धित सूचना प्रत्येक माह आई०आई०टी०आर०, लखनऊ द्वारा वायु एवं जल नमूने एकत्रित किये जाते हैं तथा उनके द्वारा किये गये विश्लेषण की रिपोर्ट प्रत्येक माह उ०प्र० प्रदूषण नियन्त्रण बोर्ड, केन्द्रीय प्रदूषण नियन्त्रण बोर्ड एवं क्षेत्रीय अधिकारी, उ०प्र० प्रदूषण नियन्त्रण बोर्ड, राबर्टसगंज-सोनभद्र को प्रेषित किया जाता है। जैसा कि ऊपर अवगत कराया गया है कि वायु गुणवत्ता सुधार हेतु ओबरा तापीय परियोजना के यूनिटों में उच्च दक्षता ई०एस०पी० लगाई गई है/लगाई जा रही है जिससे कि वायु प्रदूषण निर्धारित मानकों से कम रहेगा।
05. ओबरा तापीय परियोजना की इकाई संख्या 01, 02 एवं 09 में आर०एण्डएम० कार्य के अन्तर्गत उच्च दक्षता के ई०एस०पी० लगाये गये हैं जिससे वायु में एस०पी०एम० लेवल निर्धारित मानकों से कम है। इसी प्रकार यूनिट संख्या 10, 11, 12 एवं 13 में भी वायु प्रदूषण के अवयवों के निर्धारित मानकों के अनुरूप उत्सर्जन हेतु उच्च दक्षता के ई०एस०पी० लगाये जायेंगे।
06. उद्योग की ऑडिट की गई नवीनतम बैलेंस शीट की छाया प्रति संलग्न है।

[Signature]

07. जैसा कि बिन्दु संख्या 01 में अवगत कराया गया है कि परियोजना द्वारा वायु प्रदूषण नियन्त्रण हेतु यूनिट संख्या 01, 02 एवं 09 में ई0एस0पी0 लगाये जा चुके हैं तथा यूनिट संख्या 10, 11, 12 एवं 13 में आर0एण्डएम0 कार्यों के अन्तर्गत ई0एस0पी0 लगाये जा रहे हैं। इन यूनिटों में ई0एए0पी0 लगाने के उपरान्त कमिशनिंग की तिथि निम्नवत् है:-

क्रम संख्या	यूनिट	कमिशनिंग की तिथि
01.	यूनिट संख्या 10 (200 मे0वा0)	29.02.2016
02	यूनिट संख्या 11 (200 मे0वा0)	30.06.2016
03	यूनिट संख्या 12 (200 मे0वा0)	31.12.2017
04	यूनिट संख्या 13 (200 मे0वा0)	31.12.2017

08. जैसा कि बिन्दु संख्या 03 में अवगत कराया गया है, परियोजना द्वारा आई0आई0टी0आर0, लखनऊ के माध्यम से वायु गुणवत्ता सम्बन्धित अनुश्रवण आख्या प्रत्येक माह यूपीपीसीबी/सीपीसीबी को भेजी जाती है। सुलभ सन्दर्भ हेतु माह दिसम्बर-2015 की रिपोर्ट संलग्न है।
09. वॉछित सूचना उपरोक्तानुसार है।
10. सिंगरौली एक्शन प्लान से सम्बन्धित अनुपालन आख्या निम्नवत् है:-

Compliance report of Singrauli action plan

Short term action point

SN.	Action point	Compliance status	Time target
1	Complete recycling of ash pond over flow.	AWRS has been commissioned on 07.12.2015 and since 07.12.2015 the system is in operation.	Complied
2	Provision of dry ash collection system	Provision of dry ash collection system in unit no. 1,2&9 has already been made and dry fly ash from these units is being lifted by M/s J.P Associate for manufacturing of cement. The Dry Fly Ash Extraction System shall be installed during R&M works of the other units. The R&M of unit no 10 and 11 is under progress and shall be completed by Feburary 2016 and June 2016 respectively. The R&M of remaing units shall be completed by December 2017.	In phased manner upto December 2017
3	To prevent High oil spillage	11 nos. oil trap pits have been constructed to arrest the spillage of oil. Besides above the Effluent treatment plant (ETP) at Obra project has also been constructed and same is in operation since 17/09/2014.	Complied
4	Use of low sulphur auxiliary fuel in Obra TPS	Low sulphur auxiliary fuel is being used by Obra TPS	Complied
5	Installation of opacity meter	Opacity meters in unit no. 1,2&9 have been installed. The Opacity meter in other units shall be installed during R&M works of these units.	In phased manner upto December 2017

Compliance report of singrauli action plan

Long term action point

SN.	Action point	Compliance status	Time target
1	Installation of ESP to achieve PM emission of 100mg/NM ³	ESPs in unit no. 1,2&9 have been installed during R&M of these units and the same are functional. ESPs shall be installed during R&M works of the other units also. The R&M of unit no 10 and 11 is under progress and shall be completed by Feburary 2016 and June 2016 respectively. The R&M of remaing units shall be completed by December 2017.	Complied In phased manner upto December 2017
2	Road map for 100% fly ash utilization	Dry fly ash of Unit # 1, 2 & 9 is being lifted by M/s J.P. Associates through Dry Fly Ash Collection System after completion of R&M of these units. Unit # 10 & 11 are presently under R&M. After completion of their R&M by Feb2016 and June 2016 respectively, dry fly ash from these units shall be collected through Dry Fly Ash Collection System, and same will be lifted for utilization. Unit # 12 & 13 are currently under operation, and these shall be put under R&M in phased manner. Their R&M is proposed to be completed by Dec 2017. Dry Fly Ash Collection system shall be installed during R&M. After completion of R&M, dry fly ash of these units shall be lifted by M/s J.P. Associates as per existing agreement with them. Besides, Highway Authority/PWD and other agencies of nearby area have been contacted and requested to lift the pond ash for construction of Roads as well as making Bricks/Tiles etc.	Complied In phased manner upto December 2017

3	To control fugitive emissions from ash dyke area, action plan may be prepared including the possibility of installation of high concentration slurry disposal system.	<ol style="list-style-type: none"> 1. At Obra one ash dyke is filled up with ash and covered with dense forest due to which there is no fugitive emission from this ash pond 2. One ash pond at Chakari village is in running condition in which wet slurry is being disposed off and remains in wet condition therefore there are no chances of fugitive emission from this ash pond 3. Water sprinkler is being used during unloading of coal from rail wagon 4. Dry fly ash is transported in closed container 5. Moreover, Green belt development shall also be done through Forest department. 	Complied
4	Complete recirculation of new ash pond over flow to achieve zero discharge	AWRS has been commissioned on 07.12.2015 and it is operational since then.	Complied

11. वायु गुणवत्ता सम्बन्धित अनुश्रवण प्रत्येक माह आई0आई0टी0आर0, लखनऊ से कराई जाती है। सुलभ सन्दर्भ हेतु माह दिसम्बर-2015 की रिपोर्ट संलग्न है।
12. केन्द्रीय प्रदूषण नियन्त्रण बोर्ड के पत्र संख्या बी-33014/7/2006/ई0एस0एस0-पी0सी0आई0-11/1236, दिनांक 30.11.2010 के अनुक्रम में बिन्दुवार आख्या निम्नवत् है:-
- क. वर्तमान में यूनिट संख्या 03, 04, 05, 06 एवं 08 बन्द है।
- ख. वायु प्रदूषण नियन्त्रण हेतु यूनिट संख्या 01, 02 एवं 09 में उच्च दक्षता के ई0एस0पी0 लगाये जा चुके हैं तथा यूनिट संख्या 10, 11, 12 एवं 13 में आर0एण्डएम0 कार्यों के अन्तर्गत उच्च दक्षता के ई0एस0पी0 लगाये जा रहे हैं। इन यूनिटों में ई0एस0पी0 लगाने के उपरान्त कमिशनिंग की तिथि निम्नवत् है:-

क्रम संख्या	यूनिट	कमिशनिंग की तिथि
01.	यूनिट संख्या 10 (200 मे0वा0)	29.02.2016
02	यूनिट संख्या 11 (200 मे0वा0)	30.06.2016
03	यूनिट संख्या 12 (200 मे0वा0)	31.12.2017
04	यूनिट संख्या 13 (200 मे0वा0)	31.12.2017

- ग. एडब्लूआरएस का संचालन किया जा रहा है तथा झरियानाला में ऐश ड्रेजिंग का कार्य सिंचाई विभाग उ0प्र0 के माध्यम से डिपॉजिट कार्य के रूप में उनिलि द्वारा कराया जा चुका है।
- घ. ओबरा तापीय परियोजना के यूनिट संख्या 09, 10, 11, 12 एवं 13 से उत्सर्जित फलाई ऐश को उपयोग में लेने हेतु मेसर्स जे0पी0 एसोसिएट, डाला से अनुबन्ध किया गया है तथा उनके द्वारा अधिक से अधिक मात्रा में फलाई ऐश उठवाने का प्रयास किया जा रहा है।
- ङ. यूनिट संख्या 01, 02 एवं 09 में ओपैसिटी मीटर लगाये जा चुके हैं। इसी प्रकार यूनिट संख्या 10, 11, 12 एवं 13 में ओपैसिटी मीटर आर0एण्डएम0 कार्यों के अन्तर्गत लगाये जायेंगे। उक्त कार्य चरणबद्ध तरीके से दिसम्बर-2017 तक पूर्ण किया जायेगा।
- उपरोक्त के अतिरिक्त पत्रांक दिनांक 16.08.2010 से सम्बन्धित बिन्दुओं पर आख्या निम्नवत् है:-
- (i) वर्तमान में यूनिट सं0-06, 07 एवं 08 बन्द है तथा यूनिट संख्या 07 का आर0एण्डएम0 कार्य प्रगति पर है।
- (ii) यूनिट संख्या 09 का आर0एण्डएम0 कार्य पूर्ण हो चुका है तथा इस यूनिट में उच्च दक्षता की ई0एस0पी0 भी लगाई गई है। यह इकाई क्रियाशील है तथा इससे होने वाला उत्सर्जन निर्धारित मानकों से कम है। वर्तमान में यूनिट संख्या 10 एवं 11 के आर0एण्डएम0 कार्य प्रगति पर है। इन यूनिटों में भी उच्च दक्षता की ई0एस0पी0 लगाई जा रही है ताकि वायु उत्सर्जन में प्रदूषण निर्धारित मानकों से कम हो। यूनिट संख्या 10 का आर0एण्डएम0 कार्य दिनांक 29.02.2016 तक पूर्ण हो जायेगा तथा यूनिट संख्या 11 का आर0एण्डएम0 कार्य दिनांक 30.06.2016 तक पूर्ण हो जायेगा। वर्तमान में यूनिट संख्या 12 एवं 13 क्रियाशील हैं तथा इन यूनिटों का भी आर0एण्डएम0 भी चरणबद्ध तरीके से अब आरम्भ होने वाला है तथा इन यूनिटों अर्थात् यूनिट संख्या 12 एवं 13 का आर0एण्डएम0 कार्य दिनांक 31.12.2017 तक पूर्ण किया जाना लक्षित है।
- (iii) फलाई ऐश को सीमेन्ट उत्पादन हेतु उपयोग में लाने के लिये मेसर्स जे0पी0 एसोसिएट लि0, डाला से अनुबन्ध किया गया है। उक्त के अनुपालन में मेसर्स जे0पी0 एसोसिएट लि0, डाला द्वारा यूनिट संख्या 01, 02 एवं 09 से उत्सर्जित होने वाली फलाई ऐश का लगभग 70 प्रतिशत भाग उपयोग किया जा रहा है। यूनिट संख्या 10, 11, 12 एवं 13 का आर0एण्डएम0 कार्य पूर्ण होने पर इन यूनिटों से उत्सर्जित होने वाले फलाई ऐश का उपयोग भी उक्त अनुबन्ध के अन्तर्गत मेसर्स जे0पी0 एसोसिएट लि0, डाला द्वारा किया जायेगा।

- (iv) झरियानाला में ऐश ड्रेजिंग का कार्य सिंचाई विभाग, उ0प्र0 के माध्यम से डिपॉजिट कार्य के रूप में उन्निलि द्वारा कराया जा चुका है।
- (v) यूनिट संख्या 01, 02 एवं 09 में ओपैसिटी मीटर लगाया जा चुका है तथा यूनिट संख्या 10, 11, 12 एवं 13 में ओपैसिटी मीटर आर0एण्डएम0 कार्यों के अन्तर्गत लगाया जायेगा।
- (vi) ओबरा ताप विद्युत गृह पर ए0डब्लू0आर0एस0 लगाया जा चुका है जिसका परिचालन दिनांक 07.12.2015 से नियमित किया जा रहा है।
- (vii) बिन्दु संख्या (iii) से (vi) में वर्णित कार्यों की प्रगति आख्या उपरोक्तानुसार सूचित की गई है।
- अतः आपसे अनुरोध है कि परियोजना के संचालन हेतु वायु एवं जल सहमति प्रदान करने की कृपा करें।

संलग्नक : यथोपरि।

(संजय तिवारी)
मुख्य महाप्रबन्धक

संख्या 4827 / सीजीएम / उब्लू-1 / तददिनांक

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

- 01. अधीक्षण अभियन्ता, ओबरा 'सी' जानपद निर्माण मण्डल, ओबरा।
02. अधिशासी अभियन्ता, केप तथा पर्यावरण एवं सुरक्षा खण्ड, ओबरा ताप विद्युत गृह, ओबरा।
03. कारखाना प्रबन्धक 'अ' / 'ब' ताप विद्युत गृह, ओबरा।

S. Anil Kumar
12/01/16
(संजय तिवारी)
मुख्य महाप्रबन्धक



853
RV 051176961N

714
फ़ी सं० 1404040/कम्प/ओबरा
नं० 09/05/15

उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड,
टी.सी. 12वीं, विमूति खण्ड,
गोमती नगर, लखनऊ।
/सी-9/वायु प्रदूषण-78/2014

संदर्भ संख्या

दिनांक 28/4/15

सेवा में,

सक्षम अधिकारी की अनुमति से निर्गत

मै० ओबरा थर्मल पावर स्टेशन
(यूनिट ब),
ओबरा, सोनमद्र।

विषय: वायु (प्रदूषण निवारण तथा नियंत्रण) अधिनियम, 1981 की धारा-21 के अन्तर्गत सहमति के संबंध में।

महोदय,

कृपया उपरोक्त विषयक आप अपने सहमति आवेदन पत्र दिनांक-27.11.2014 का अवलोकन करें। आपके आवेदन पत्र का परीक्षण किया गया और आपका ध्यान निम्न बिन्दुओं 1, 3 एवं 5 से 12 पर आवश्यक कार्यवाही करने हेतु दिलाया जाता है :-

1. आपका उद्योग प्रदूषित प्रकृति का है तथा आपने प्रदूषण नियंत्रण हेतु कोई पर्याप्त व्यवस्था नहीं कर रखी है।
2. आपके उद्योग में.....संलग्न चिमनी की ऊँचाई अपर्याप्त पाई गई है। उक्त चिमनी की उचाई भूतल /मवन छत से मै० ऊँची की जाय।
3. आप फ्लू गैस/प्रक्रिया उत्सर्जन सम्बंधी वॉछित सूचना प्रेषित नहीं की गयी है तथा आपका सहमति आवेदन पत्र अपूर्ण है। आप द्वारा फ्लू गैस/प्रक्रिया उत्सर्जन/वायु गुणता सम्बंधी अनुश्रवण आख्या भी नहीं प्रेषित की गई है।
4. आपने निर्धारित सहमति शुल्क जमा नहीं किया गया है। कृपया आप शेष शुल्क रु..... वर्ष..... तक के लिए अविलम्ब जमा करें।
5. वायु प्रदूषण नियंत्रण व्यवस्था जैसे ई०एस०पी० का प्राविधान संचालन एवम् रख-रखाव इस प्रकार किया जाये, जिससे प्रदूषणकारी अवयवों की मात्रा बोर्ड द्वारा निर्धारित मानकों के अनुरूप हों।
6. आपके उद्योग की आडिट की हुई नवीनतम बैलेन्सशीट की प्रतिलिपि या चार्टर एकाउन्टेन्ट द्वारा पूर्ण विनियोजन (अचल सम्पत्ति+वर्तमान सम्पत्ति-वर्तमान देनदारियाँ) का सत्यापन प्रमाण पत्र प्रेषित करने के निर्देश दिये जाते हैं, जिससे कि आपके द्वारा देय सहमति शुल्क की जाँच की जा सके।
7. आप अपने उद्योग व वायु प्रदूषण नियंत्रण हेतु सहमति संयंत्रों के अधिष्ठान एवम् संचालन के विषय में समयबद्ध कार्यक्रम प्रस्तुत करें।
8. आपको निर्देश दिये जाते हैं कि पत्र की प्राप्ति के एक माह में फ्लू गैस/प्रक्रिया उत्सर्जन वायु गुणता सम्बंधी अनुश्रवण आख्या प्रस्तुत करें।

Immediate reply
desaad. X...
G.M. Adm. B
for n.a.
K...
CEM

3/E OGD/IB
13/05/15

AHD-01/II
CRFP

गु गु प्रवर्धक
क.स.प. सं. सं.
100

25 SWI
को SE-III
को OGD-III BTPS
2/5/15

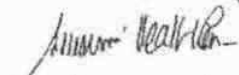
AHD-02/II

- 9 आपको निर्देशित किया जाता है कि इस पत्र प्राप्त के एक माह के अन्दर उपरोक्त वर्णित संगस्त सूचनाओं सहित पुनः आवेदन करें, अन्यथा उद्योग को बन्द कराने संबंधी विधिक कार्यवाही की जायेगी।
- 10 सिंगरोली एक्सन प्लान के अन्तर्गत निर्दिष्ट बिन्दुओं पर अनुपालन आख्या प्रेषित नहीं की गयी है, एवं जनित राख की अधिकतम मात्रा 34 प्रतिशत से कम होने की आख्या प्रेषित नहीं दिया गया है।
PAW-I
- 11 इस कार्यालय के पत्रांक एफ 52958/सी-9/सहमति वायु/80/2014 दिनांक 19.12.14 के द्वारा प्रेषित जॉच पत्र का उत्तर प्रेषित नहीं किया गया है।
- 12 केन्द्रीय प्रदूषण नियंत्रण बोर्ड दिल्ली के पत्र दिनांक 16-08-2010 एवं दिनांक 30-11-2010 की अनुपालन आख्या प्रेषित नहीं की गयी है।

उपरोक्त परिस्थितियों में, आपको जनहित में प्रदूषित उत्सर्जन के निस्तारण हेतु सहमति प्रदान नहीं की जा सकती है। अतः वायु अधिनियम, 1981 की धारा-21 तथा संशोधित अधिनियम, 1987 के अन्तर्गत आपकी सहमति अस्वीकार की जाती है। आपको यह भी निर्देशित किया जाता है कि आप उपरोक्त के संबंध में आवश्यक कार्यवाही करें अन्यथा आपके विरुद्ध अधिनियम के अन्तर्गत आवश्यक कार्यवाही की जायेगी।

FM-PC

भवदीय,


(स्वामी नाथ राम)

मुख्य पर्यावरण अधिकारी
वृत्त-9

पत्रांक : /वायु प्रदूषण/

तद दिनांक-

प्रतिलिपि : निम्नलिखित को सूचनार्थ एवम् आवश्यक कार्यवाही हेतु प्रेषित :-

- 1 क्षेत्रीय कार्यालय, उत्तर प्रदेश प्रदूषण नियंत्रण बोर्ड, सोनभद्र।

मुख्य पर्यावरण अधिकारी
वृत्त-9

कार्यालय अधिशासी अभियन्ता
क्रेप तथा पर्यावरण एवं सुरक्षा खण्ड
ओबरा तापीय विद्युत परियोजना
उ०प्र०राज्य विद्युत उत्पादन नि०लि०
(उ०प्र० सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ०प्र०)



OFFICE OF THE EXECUTIVE ENGINEER
CREP & ENVIRONMENT & SAFETY DIVISION
OBRA THERMAL POWER PROJECT
U.P. RAJYA VIDYUT UTPADAN NIGAM LTD.
(A U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)

No. 371 /CESD/U-3/Vol-20

Dated: 18-12-2015

Subject: Monthly Environmental Report for the month of November-2015.

Chief Engineer
Central Electricity Authority
Conservation & Efficiency Division
Sewa Bhawan, R.K. Puram,
New Delhi-110066.

No. 130/.....C.E (CHIEF P.M.M.)
Date: 26.11.2015

SB Swaroop
D Swaroop

Kindly find enclosed herewith the monthly environmental report regarding ash generation/Utilization of Obra TPS, sampling & testing of polluted water, ambient air from stack of units in prescribed format for the month of November-2015 for your kind information and necessary action. The sampling and testing of water, air, noise etc. has been conducted by I.I.T.R. Lucknow.

Encl: As above.

(Diwakar Swaroop)
Executive Engineer

No. _____ /CESD/U-3/Vol-20/dated

Copy forwarded to the following for information and necessary action:-

01. Director, Central Electricity Authority, Conservation & Efficiency Division, Sewa Bhawan, R.K. Puram, New Delhi-110066 (with above enclosure).
02. Chief Engineer (Civil), 7th floor, Shakti Bhawan Extn., 14-Ashok Marg, Lucknow (with above enclosure).
03. Member Secretary, Central Pollution Control Board, Pick-up Bhawan, Gomati Nagar, Lucknow (with above enclosure).
04. Member Secretary, U.P. Pollution Control Board, Third floor, Pick-up Bhawan, Gomati Nagar, Lucknow (with above enclosure).
05. Regional officer, U.P. Pollution Control Board, Uttar Muhal, Robertsganj-Sonebhadra (with above enclosure).
06. Dy. Director, Ministry of Environment and Forest, Central Regional Office, Kendriya Bhawan, 5th road, sector-H, Aliganj, Lucknow-226024. (with encl.).
07. General Manager (Admn.), U.P.R.V.U.N.Ltd, Obra Thermal Power Station, Obra-Sonebhadra (with above enclosure).
08. Superintending Engineer, Obra 'C' Civil Construction Circle, Obra Thermal Power Station, Obra-Sonebhadra (with above enclosure).
09. Executive Engineer, Water Treatment Plant & Lab Division, BTPS, Obra-Sonebhadra (with above enclosure).
10. Executive Engineer, Boiler Maintenance Division-I, 2x50MW, 'A' Thermal Power Station, U.P.R.V.U.N.Ltd, Obra-Sonebhadra.
11. Executive Engineer, Ash Handling Division-I, 'B' Thermal Power Station, U.P.R.V.U.N.Ltd, Obra-Sonebhadra.

Encl: As above.

Diwakar Swaroop
18/12/15
(Diwakar Swaroop)
Executive Engineer

SB
W. C. Puram
26/12
A.E.
f. n. c.
26/12

राख उत्सर्जन एवं उपयोग सम्बन्धी विवरण

परियोजना का नाम :- ओबरा ताप विद्युत गृह, ओबरा, जिला-सोनभद्र

माह : नवम्बर-2015

क्र०सं०	विवरण	इकाई	मात्रा
1.	कोयले का खर्च	1000 मी०टन	275.868
2.	उत्सर्जित राख	1000 मी०टन	114.367
3.	ऐश पॉड में राख की मात्रा अक्टूबर-2015 तक	1000 मी०टन	34267.272
4.	राख की खपत सम्बन्धी विवरण		-
(क)	सीमेन्ट उत्पादन में	1000 मी०टन	19.879
(ख)	भराई हेतु	1000 मी०टन	-
(ग)	ईट निर्माण में	1000 मी०टन	-
(घ)	कृषि कार्य हेतु	1000 मी०टन	-
(ङ.)	रोड एम्बैकमेन्ट	1000 मी०टन	-
(च)	अन्य कार्य	1000 मी०टन	-
5.	कुल राख की खपत	1000 मी०टन	19.879
6.	ऐश पॉड में राख की शेष मात्रा नवम्बर-2015 तक	1000 मी०टन	34361.760



(दिवाकर स्वरूप)
अधिशाली अभियन्ता

1415

IITR Report Code: SSP-299

Date of Preparation: 23rd November, 2015

Total No. of pages: 10

**COLLECTION OF SAMPLES FROM DIFFERENT PLACES
OF OBRA THERMAL POWER STATION, SONEBHADRA
FOR TESTING OF VARIOUS PARAMETERS**



**CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
(Formerly: Industrial Toxicology Research Centre)**

Mahatma Gandhi Marg, Lucknow - 226001

Telefax: 2628227, 2611547

Email: rpbdiitr@yahoo.com

No. of copies 4 (Four)

✓1 & 2 - Client Copy

3-R.P.B.D. Copy

4- P.I. Copy

Page 1 of 10

Name and Address of the Client : Executive Engineer
Water Treatment Plant & Lab Division
U.P.Rajya Vidyut Utpadan Nigam Ltd.,
P.O. Obra, Distt Sonebhadra, (U.P.)


Reference No. : 22/WTP/IITR/2015-16, dated 01 Sep., 2015

Description and Identification of the Test : Collection of samples from different places of
Obra Thermal Power Station, Sonebhadra
for testing of various parameters

IITR Code No. for the Work : SSP-299

Date of Commencement of

First Phase Study : September 21st, 2015
Second Phase Study : October 19th, 2015
Third Phase Study : November 14th, 2015


Head,

Research, Planning &
Business Development

(बी० डी० भट्टाचारजी) / B. D. Bhattacharji
वरिष्ठ प्रधान वैज्ञानिक / Sr. Principal Scientist
अनुसंधान विकास एवं व्यापार परियोजना अनुभाग
Research Planning and Business Development Division
सी.एस.आई.आर.—भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-Indian Institute of Toxicology Research
पो० बा० नं० 80 / P.B. No. 80
महात्मा गांधी मार्ग / Mahatma Gandhi Marg
लखनऊ-226 001 / Lucknow-226 001

Test Report

1. Study Code No. : SSP- 299
2. Date of Sample Collection/ Monitoring : 14-11-2015 to 15-11-2015
3. Test Required by Sponsor

1. Stack Monitoring Parameters:

Units	Unit No.	Units Monitored*	Parameters
2 x 50 MW	1,2	-	Particulate Matter, SO ₂ , NO _x
3 x 200 MW	9,10,11	9	
2 x 200 MW	12,13	12,13	

*Note: Scope of work: Monthly 5 units

2. Ambient Air Quality Parameters:

S. No.	Locations	Parameters
1.	Plant Area-WTP	RSPM, SPM, SO ₂ , NO _x
2.	Colony- VIP Guest House	

3. Industrial Effluent Quality Parameters:

S. No.	Samples	Parameters
1.	Plant Effluent (Jharia Nala)	pH, TDS, TSS, Oil & Grease,
2.	Ash Pond Effluent	
3.	ETP Inlet	
4.	ETP Outlet	

4. **Methodologies and reference standards used for testing**

(I) Stack Monitoring

Flow Rate : IS: 11255 (Part 3): 1985
SPM : IS: 11255 (Part 1): 1985, reaffirmed in 1995
SO₂ : IS: 11255 (Part 2): 1985, reaffirmed in 1995
NO_x : EPA Method 7 (Colorimetric Method)

(II) Ambient Air Quality Monitoring

Methods for measurement of air pollution

RSPM : IS: 5182 (Part 23): 2006
SPM : IS: 5182 (Part-4): 1999
SO₂ : IS: 5182 (Part-2): 2001
NO_x : IS: 5182 (Part-6): 2006

(III) Effluent Sampling and Analysis

Grab sampling was done at the desired locations during plant in operation. The collected samples were preserved, stored and analyzed as per methods given in "Standard Methods for the Examination of Water and Wastewater (APHA, AWWA & WEF, 2005)".

5. **Date study initiated** : 14-11-2015

6. **Date study completed** : 23-11-2015

7. **Test Results**

**STACK EMISSION DATA OF OTPS
(2x50 MW Units)**

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit-1	Unit-2
1.	Date of sampling	14-11-2015	14-11-2015
2.	Stack attached to	S H U T D O W N	S H U T D O W N
3.	Stack height from ground (m)		
4.	Type of stack		
5.	Type of duct		
6.	Material of duct		
7.	Height of sampling port from ground (m)		
8.	Diameter of sampling port (mm)		
9.	Load during monitoring (MW)		
10.	Type of fuel used		
11.	Quantity of fuel used (t/hr)		
12.	Ambient temperature (K)		
13.	Duct temperature (K)		
14.	Flue gas velocity (m/sec)		
15.	Sampling period (min)		
16.	Concentration of pollutants (mg/Nm ³)		
	Particulate Matter		
	SO ₂		
	NO _x		

Note: Information from Sl. No.2 to 11 provided by the sponsor

Emission Standards for Coal base Thermal Power Plant:

Particulate matter – 150 mg/Nm³

SO₂ and NO_x – Not Available

STACK EMISSION DATA OF OTPS
(1x200 MW Unit)

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit 9*
1.	Date of sampling	14-11-2015
2.	Stack attached to	ESP Outlet
3.	Stack height from ground (m)	170
4.	Type of stack	Circular
5.	Type of duct	Rectangle
6.	Material of duct	Mild Steel
7.	Height of sampling port from ground (m)	15
8.	Diameter of sampling port (mm)	10
9.	Load during monitoring (MW)	199
10.	Type of fuel used	Coal
11.	Quantity of fuel used (t/hr)	132
12.	Ambient temperature (K)	305
13.	Duct temperature (K)	392
14.	Flue gas velocity (m/sec)	15.6
15.	Sampling period (min)	30
16.	Concentration of pollutants (mg/Nm ³)	
	Particulate Matter	154
	SO ₂	704
	NO _x	395

Note: Information from Sl. No.2 to 11 provided by the sponsor

*Unit- 9 (with new ESP operational since October, 2011)

Emission Standards for Coal base Thermal Power Plant:
Particulate matter – 150 mg/Nm³
SO₂ and NO_x – Not Available

**STACK EMISSION DATA OF OTPS
(2x200 MW Units)**

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit 12	Unit 13
1.	Date of sampling	14-11-2015	14-11-2015
2.	Stack attached to	ESP Outlet	ESP Outlet
3.	Stack height from ground (m)	170	170
4.	Type of stack	Circular	Circular
5.	Type of duct	Rectangle	Rectangle
6.	Material of duct	Mild Steel	Mild Steel
7.	Height of sampling port from ground (m)	3	3
8.	Diameter of sampling port (mm)	10	10
9.	Load during monitoring (MW)	117	146
10.	Type of fuel used	Coal	Coal
11.	Quantity of fuel used (t/hr)	130	131
12.	Ambient temperature (K)	305	304
13.	Duct temperature (K)	406	410
14.	Flue gas velocity (m/sec)	15.3	15.7
15.	Sampling period (min)	30	30
16.	Concentration of pollutants (mg/Nm ³)		
	Particulate Matter	1205	1248
	SO ₂	675	730
	NO _x	408	427

Note: Information from Sl. No.2 to 11 provided by the sponsor

Emission Standards for Coal base Thermal Power Plant:

Particulate matter – 150 mg/Nm³

SO₂ and NO_x – Not Available

AMBIENT AIR QUALITY DATA OF OTPS

Site : M/s. Obra Thermal Power Station, Sonebhadra
 Type of Sampling : Continuous on 24 hourly basis
 Season & Weather : Post Monsoon & Clear day

S.No.	Location and Date	Parameter	Concentration ($\mu\text{g}/\text{m}^3$)	*NAAQS 2009 ($\mu\text{g}/\text{m}^3$)
1.	Plant Area-WTP 14 th November, 2015	RSPM	218	100
		SPM	432	500**
		SO ₂	16.7	80
		NO _x	29.3	80
2.	Colony- VIP Guest House 14 th November, 2015	RSPM	176	100
		SPM	378	500**
		SO ₂	12.9	80
		NO _x	26.5	80

* National Ambient Air Quality Standards 2009

** Old National Ambient Air Quality Standards

EFFLUENTS QUALITY DATA OF OTPS

Site : M/s. Obra Thermal Power Station, Sonebhadra
 Source of Sample : Industrial Effluent
 Type of Sample : Grab
 Date of Sampling : November 15th, 2015
 Season and Weather : Post Monsoon & Clear day

Physico-chemical Parameters

Sl. No	Parameters	Unit	Plant Effluent (Jharia Nala)	Ash Pond Effluent	ETP		Standard Tolerance Limits (max)
					Inlet	Outlet	
1.	pH	-	7.21	7.33	7.25	7.35	5.5-9.0
2.	TSS	mg/l	141	183	105	83	100
3.	TDS	mg/l	135	175	99	54	NA
4.	Oil & Grease	mg/l	2.1	2.0	1.8	1.9	10

Note: Sampling locations as suggested by the sponsor

NA- Not Available

* All values are in mg/l except pH

8. Conclusions

The results of stack emission monitoring were compared with the Thermal Power Emission Standards (Source EPA Notification: G.S.R.742 (E), dated 30th August, 1990). Concentrations of particulate matters for Unit- 9, Unit-12 and Unit-13 were higher than the prescribed limit of 150 mg/m³.

The results of ambient air quality monitoring were compared with the National Ambient Air Quality Standards (NAAQS-09) for industrial, residential, rural and other area. Values of RSPM (PM₁₀) at both the locations were above the permissible limit of 100 µg/m³. The corresponding values of SPM were within the permissible limit of 500 µg/m³ at Plant Area WTP and colony-VIP Guest House as per old NAAQS. SO₂ and NO_x were within the permissible limits of 80 µg/m³ at both the locations.

The results of effluent analysis were compared with the General Standards for Discharge of Environmental Pollutants, Part-A: Effluents, into Inland Surface Waters. The values were found within the permissible limits. (Source: GSR 801 (E), EPA, 1986, BIS IS 10500 dated December 24th, 2009).

A.H.Khan
(A.H.Khan)
Principal Scientist

9. Notes:

- a. The above results relate only to the tests required by sponsor as indicated in item 3 (Page 3 of 10).
- b. The report shall not be reproduced in fragments without the written approval of Director, IITR, Lucknow.
- c. This report shall not be used for any purpose other than environmental management related activities of the plant/ site by the sponsor.



CSIR-IITR

सी.एस.आई.आर - भारतीय विषविज्ञान अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

महात्मा गांधी मार्ग, पोस्ट बाक्स नं० 80,

लखनऊ - 226 001 (भारत)

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

(Council of Scientific and Industrial Research)

MAHATMA GANDHI MARG, POST BOX NO. 80

LUCKNOW-226 001 (U.P.) INDIA

A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015

Date: 23rd November, 2015

ANALYTICAL REPORT ON MERCURY IN COAL
(Phase-III)

Site : Obra Thermal Power Station Obra, Sonbhadra

Type of Sampling : Coal dust

Season & Weather : Monsoon & Clear day

S.No.	Coal Sample No.	Date of Sampling	Concentration($\mu\text{g/g}$)
1.	1	14-11-2015	ND
2.	2	14-11-2015	0.057

A.H.Khan
23-11-2015
(A.H. Khan)

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(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)

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A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015

Date: 23rd November, 2015

**ANALYTICAL REPORT ON MERCURY IN AMBIENT AIR
(Phase-III)**

Site : Around Obra Thermal Power Station Obra, Sonbhadra

Type of Sampling : 24 hourly basis

Season & Weather : Monsoon & Clear day

S.No	Location and Date	Parameter	Concentration($\mu\text{g}/\text{m}^3$)
1.	Plant Area-WTP 14 th November, 2015	Hg	ND
2.	Colony-VIP Guest House 14 th November, 2015	Hg	ND

A.H.Khan
23-11-2015
(A.H. Khan)

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सी.एस.आई.आर - भारतीय विषविज्ञान अनुसंधान संस्थान

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A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015

Date: 23rd November 2015

NOISE MONITORING DATA OF OTPS

(Phase-III)

Site : M/s. Obra Thermal Power Station, Sonebhadra

Date of Monitoring : 14-11-2015 to 15-11-2015

S.No.	Location Name	Noise level dB(A)
a.	At crushers of 'A' TPS. Obra	70.5
b.	At crushers of 'B' TPS. Obra	86.0
c.	At Ball Mill / Bowl Mills area (Near Ball Mills) 'A' TPS. Obra	71.2
d.	At Ball Mill / Bowl Mills area (Near Ball Mills) 'B' TPS. Obra	92.8
e.	ID fan area of 'A' TPS. Obra	69.3
f.	ID fan area of 'B' TPS. Obra	94.1
g.	In Control Room of 'A' TPS. Machines	61.5
h.	In Control Room of 'B' TPS. Machines	62.3
i.	T.G. Hall near T.G. set of 'A' TPS. Obra	73.6
j.	T.G. Hall near T.G. set of 'B' TPS. Obra	96.8
k.	Office area at CGM Office (Administrative Building)	59.6
l.	Colony area at V.I.P.	52.4

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23.11.2015
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MINUTE BOOK

उत्तर प्रदेश राज्य विद्युत उत्पादन निगम लिमिटेड के निदेशक मण्डल की 167वीं बैठक जो दिनांक 22.09.2015 को सम्पन्न हुई, का कार्यवृत्त।

उपस्थिति

- | | |
|---|---|
| 1- श्री संजय अग्रवाल,
प्रमुख सचिव, ऊर्जा | अध्यक्ष |
| 2- श्री ए०पी० मिश्रा, | प्रबन्ध निदेशक
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निदेशक |
| 3- श्रीमती नीरजा कृष्णा,
संयुक्त निदेशक, सार्व०उद्यम विभाग | निदेशक |
| 4- श्री एस० रॉय,
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| 5- श्री मुरलीधर भागचन्दानी | निदेशक (वित्त) |
| 6- श्री ए० के० अग्रवाल | निदेशक (परियोजना एवं वाणिज्य) |
| 7- श्री राकेश त्रिवेदी | निदेशक (कार्मिक एवं प्रशासन) |
| 8- श्री बी० एस० तिवारी | |

विशेष आमंत्रि

- | | |
|---|--------------------------|
| 1- श्री जे०पी० सिंह,
विशेष सचिव, न्याय | न्याय विभाग के प्रतिनिधि |
|---|--------------------------|

सहायतार्थ

श्री एच० के० अग्रवाल, कम्पनी सचिव

लीव ऑफ एब्सेन्स

श्री नील रतन कुमार, विशेष सचिव (वित्त) अन्य व्यस्तता के कारण बैठक में भाग नहीं ले सके, को लीव ऑफ एब्सेन्स प्रदान किया गया।

क्रम	एजेण्डा आइटम	लिया गया निर्णय
1	167(1)/2015 निगम में नये निदेशक के मनोनीत किए जाने के सम्बन्ध में।	167(1)/2015 निदेशक मण्डल ने शासनादेश सं० 5/2015/2237/24-पी-2- 15 सा० (117)/2015 दिनांक 02.09.2015 के द्वारा श्री बिद्या सागर तिवारी, मुख्य अभियन्ता, हरदुआगंज थर्मल पावर प्रोजेक्ट को, उ०प्र० राज्य विद्युत उत्पादन निगम लि० में निदेशक (कार्मिक एवं प्रशासन) के पद पर तैनात किया गया है, के संदर्भ में निम्न प्रस्ताव पारित किये :- 1. निदेशक मण्डल ने श्री आर० वी० पाण्डेय जो

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MINUTE BOOK

<p>53</p>	<p>167(53)/2015 हरदुआगंज तापीय परियोजना की इकाई सं० 5 (60 मे०वा०) एवं ओबरा तापीय परियोजना की इकाई सं० 1 एवं 2 (50 मे०वा०) को बंद किये जाने के सम्बन्ध में।</p>	<p>167(53)/2015 निदेशक मण्डल ने हरदुआगंज तापीय परियोजना की इकाई सं० 5 (60 मे०वा०) एवं ओबरा तापीय परियोजना की इकाई सं० 1 एवं 2 (50 मे०वा०) को बंद किये जाने के सम्बन्ध में सम्यक विचारोपरान्त निम्न निर्णय लिया :-</p> <ol style="list-style-type: none"> 1- हरदुआगंज तापीय परियोजना की इकाई सं० 5 (60 मे०वा०) को इकाई सं० 7(120 मे०वा०) के स्टेबिल होने के बाद स्थायी रूप से बंद किये जाने का अनुमोदन प्रदान किया। 2- ओबरा तापीय परियोजना की इकाई सं० 1 एवं 2 (50 मे०वा०) को अनपरा तापीय परियोजना की इकाई सं० 6 एवं 7 का सी०ओ०डी० हो जाने के बाद बंद किये जाने का अनुमोदन प्रदान किया। <p>यह भी निर्देशित किया गया कि उपरोक्त प्रस्ताव का अनुमोदन शासन से प्राप्त करने की कार्यवाही की जाये।</p>
<p>54</p>	<p>167(54)/2015 पारीछा तापीय परियोजना की 2x250 मे०वा० इकाई सं०-6 के क्षतिग्रस्त जनरेटर स्टेटर को बदलने हेतु सीमित एकल प्रस्ताव के आधार पर मेसर्स बी०एच०ई०एल० से 01 नग नये जनरेटर स्टेटर के कय एवं क्षतिग्रस्त जनरेटर स्टेटर को सीमित निविदा के आधार पर प्रतिष्ठित फर्म से रिपेयर कराने के सम्बन्ध में।</p>	<p>167(54)/2015 निदेशक मण्डल ने पारीछा तापीय परियोजना की 2x250 मे०वा० इकाई सं०-6 के क्षतिग्रस्त जनरेटर स्टेटर को बदलने हेतु सीमित एकल प्रस्ताव के आधार पर मेसर्स बी०एच०ई०एल० से 01 नग नये जनरेटर स्टेटर के कय एवं क्षतिग्रस्त जनरेटर स्टेटर को सीमित निविदा के आधार पर प्रतिष्ठित फर्म से रिपेयर कराने हेतु सम्यक विचारोपरान्त निम्न निर्णय लिये :-</p> <ol style="list-style-type: none"> 1. पारीछा तापीय परियोजना की इकाई सं०-6 2x250 मे०वा० हेतु 270 मे०वा० के एक नग जनरेटर स्टेटर का कय पूंजीगत मद में सीमित एकल प्रस्ताव के आधार पर सक्षम निविदा समिति से मोलभाव के प्रतिबन्धाधीन रू० 40.00 करोड़ में मै० बी०एच०ई०एल० से कय का अनुमोदन इस प्रतिबन्ध के साथ प्रदान किया कि शासन स्तर पर गठित ई०टी०एफ० से भी इसका औपचारिक अनुमोदन प्राप्त कर लिया

CHAIRMAN'S
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[Handwritten Signature]

Report of CSIR Lucknow.



CSIR-IITR Report Code: SSP-299
Date of Preparation: 29th January, 2016
Total No. of pages: 08

**COLLECTION OF SAMPLES FROM DIFFERENT PLACES
OF OBRA THERMAL POWER STATION, SONEBHADRA
FOR TESTING OF VARIOUS PARAMETERS**

(Phase - V)

FINAL REPORT

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
(Formerly: Industrial Toxicology Research Centre)
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CSIR-Indian Institute of Toxicology Research
LUCKNOW-226 001

Name and Address of the Client : Executive Engineer
Water Treatment Plant & Lab Division
U.P.Rajya Vidyut Utpadan Nigam Ltd.,
P.O. Obra, Distt Sonebhadra, (U.P.)

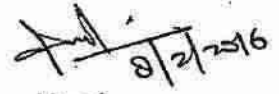
Reference No. : 22/WTP/IITR/2015-16, dated 01 Sep., 2015

Description and Identification of the Test : Collection of samples from different places of
Obra Thermal Power Station, Sonebhadra
for testing of various parameters

CSIR-IITR Code No. for the Work : SSP-299

Date of Commencement of

First Phase Study : September 21st, 2015
Second Phase Study : October 19th, 2015
Third Phase Study : November 14th, 2015
Fourth Phase Study : December 08th, 2015
Fifth Phase Study : January 20th, 2016


8/2/2016

Head,
Research, Planning &
Business Development

डॉ. सी. खुबे / Dr. KC Khulbe
मुख्य अधिकारी एवं प्रशासन विभाग
Research & Business Development Division
मुख्य परीक्षण अनुसंधान संस्थान
CSIR-Indian Institute of Toxicology Research
एन. मार्ग, लखनऊ-226001 भारत
N. Garde Marg, Lucknow-226001, India

**STACK EMISSION DATA OF OTPS
(1x200 MW Unit)**

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit 9*
1.	Date of sampling	21-01-2016
2.	Stack attached to	ESP Outlet
3.	Stack height from ground (m)	170
4.	Type of stack	Circular
5.	Type of duct	Rectangle
6.	Material of duct	Mild Steel
7.	Height of sampling port from ground (m)	15
8.	Diameter of sampling port (mm)	10
9.	Load during monitoring (MW)	149
10.	Type of fuel used	Coal
11.	Quantity of fuel used (t/hr)	132
12.	Ambient temperature (K)	288
13.	Duct temperature (K)	412
14.	Flue gas velocity (m/sec)	22.5
15.	Sampling period (min)	30
16.	Concentration of pollutants (mg/Nm ³)	
	Particulate Matter	97
	SO ₂	575
	NO _x	318

Note: Information from Sl. No.2 to 11 provided by the sponsor

*Unit- 9 (with new ESP operational since October, 2011)

Emission Standards for Coal base Thermal Power Plant:
Particulate matter – 100 mg/Nm³
SO₂ and NO_x – 600 mg/Nm³

Letter of Deletion of Old Units

एस0पी0 चौबे
मुख्य अभियन्ता(स्तर-2)



तापीय परिचालन इकाई
उ0प्र0राज्य विद्युत उत्पादन निगम लिमि0
14^{वाँ} तल, शक्ति भवन विस्तार,
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CIN:U40101UP1980SGC005065

पत्रांक: 105 / मु0अभि0(ता0परि0) / जी0एम0 /

दिनांक: 05 फरवरी, 2016

मुख्य अभियन्ता (न्यू कोल ब्लॉक इकाई)
उ0नि0लि0,
शक्ति भवन विस्तार, लखनऊ।

विषय:- पुरानी इकाईयों के डिलीशन के सम्बन्ध में सूचना।

कृपया उपरोक्त विषयक अपने कार्यालय 285-उनिलि/न्यू कोल ब्लॉक/2016 दिनांक 30 जनवरी 2016 का सन्दर्भ ग्रहण करें जिसके द्वारा उनिलि की अत्यधिक पुरानी इकाईयों के डिलीशन की सम्भावना के सम्बन्ध में सूचना मांगी गयी है।
प्रश्नगत इकाईयों के डिलीशन की सम्भावित स्थिति निम्नवत है।

परियोजना का नाम	इकाई सं0	डिलीशन का सम्भावित समय	टिप्पणी
1. पनकी	03 एवं 04	1X 660 मे0वा0 पनकी विस्तार की इकाई के वाणिज्यिक भार पर आने के उपरान्त एक इकाई को 6 महीने पर, तत्पश्चात् अगले 6 महीने बाद दूसरी इकाई को Phase out किया जाना प्रस्तावित है।	यह प्रस्ताव अध्यक्ष महोदय उ0नि0लि0 द्वारा अनुमोदित है।
2. ओबरा	01 एवं 02	इन इकाईयों को अनपरा तापीय परियोजना की इकाई सं0 6 एवं 7 का सी0ओ0डी0 हो जाने के बाद बंद किया जाना है।	निदेशक मंडल की दिनांक 22.09.2015 को सम्पन्न हुई 167वीं बैठक में यह निर्णय लिया गया।
3. ओबरा	10 से 13	इकाई सं0 10 एवं 11 का आर0एण्डएम0 कार्य प्रगति पर है और इनके क्रमशः मार्च 2016 एवं जून 2016 में भार पर आने की सम्भावना है उसके पश्चात् इकाई सं0 12 एवं 13 को आर0एण्डएम0 हेतु बंद किया जायेगा। इन चारों इकाईयों के डिलीशन का अभी कोई प्रस्ताव नहीं है।	-
4. पारीछा	01 एवं 2	इन इकाईयों के डिलीशन का अभी कोई प्रस्ताव नहीं है। इकाई सं0 01 को गीष्मकाल के बाद आर0एण्डएम0 हेतु बन्द किये जाने का प्रस्ताव है।	दिनांक 08.01.2016 की बैठक में प्रबन्ध निदेशक महोदय द्वारा यह निर्णय लिया गया।

सूचनार्थ एवं अग्रेतर कार्यवाही हेतु प्रेषित।

A. G. Mehta
24-2-16
o/c (एस0पी0 चौबे)
मुख्य अभियन्ता (ता0परि0)

प्रतिलिपि :- 1. निदेशक (तकनीकी), उ0नि0लि0।
2. निदेशक (परियोजना एवं वाणिज्य), उ0नि0लि0।

Allotment order of Saharpur Jamarpani Coal Mine.

Allotment Order for Saharpur Jamarpani Coal Mine

Government of India
Ministry of Coal
O/o the Nominated Authority

World Trade Tower, New Delhi

Office of the nominated authority constituted under section 6 of the Coal Mines (Special Provisions) Act, 2015.

Allotment order under clause (c) of sub-rule (2) of rule 7 and sub-rule (1) of rule 13

In re: **Saharpur Jamarpani Coal Mine** (the "mine") particulars of which is specified in **Annexure 1**

Order no.: 103/22/2015/NA

Date: August 13, 2015

In favour of: **UP Rajya Vidyut Utpadan Nigam Ltd** incorporated in India under the Companies Act, 1956 with corporate identity number U40101UP1980SGC005065, whose registered office is at Shakti Bhawan Extn., 14 Ashok Marg, Lucknow, Uttar Pradesh, India (the "Allottee").

For utilisation in: End Use Plants situated at 1) Jawaharpur, District Etah, Uttar Pradesh 2) Obra, District Sonbhadra, Uttar Pradesh 3) Harduaganj, Kasimpur, District Aligarh, Uttar Pradesh and 4) Panki, District Kanpur, Uttar Pradesh, as more particularly described below (the "End Use Plant").

S. No.	Name of Specified End Use Plant	Address	Configuration	Capacity
1	Jawaharpur Vidyut Utpadan Nigam Limited	Jawaharpur, District Etah, Uttar Pradesh	2 x 660 MW	1320 MW
2	Obra C Thermal Power Plant	Obra, District Sonbhadra, Uttar Pradesh	2 x 660 MW	1320 MW
3	Harduaganj Extn- II Thermal Power Plant	Harduaganj, Kasimpur, District Aligarh, Uttar Pradesh	1 x 660 MW	660 MW
4	Panki Extn Thermal Power Plant	Panki, District Kanpur, Uttar Pradesh	1 x 660 MW	660 MW

*MW stands for Mega Watt

Mahendra K.

Hick Bharadwaj
M/o Coal

WHEREAS, the nominated authority has, in accordance with the provisions the Coal Mines (Special Provisions) Act, 2015 (the "Act") and the Coal Mines (Special Provisions) Rules 2014 (the "rules") conducted the allotment of the relevant Schedule I coal mine;

AND WHEREAS the allottee is eligible to receive this allotment order with respect to the mine, including, inter-alia -

- (a) the coal bearing land acquired by the prior allottee and the lands, in or adjacent to the coal mines used for coal mining operations acquired by the prior allottee; and
- (b) any existing mine infrastructure as defined in clause (j) of sub-section (1) of section 3 of the Act;

AND WHEREAS the allottee has furnished performance bank guarantees dated a) April 29, 2015 for an amount equal to INR 92,50,00,000 (Indian Rupees Ninety Two Crore and Fifty Lakh) issued by Allahabad Bank, b) April 29, 2015 for an amount equal to INR 2,50,00,00,000 (Indian Rupees Two Hundred and Fifty Crore) issued by Punjab National Bank and c) April 29, 2015 for an amount equal to INR 70,00,00,000 (Indian Rupees Seventy Crore) issued by Union Bank of India, in accordance with the allotment document and in accordance with the provisions of sub-section (6) and sub-section (12) of section 8 of the Act;

AND WHEREAS the allottee has entered into an Allotment Agreement dated March 30, 2015 (as amended) with the nominated authority in accordance with the provisions of sub-rule (5) of rule 13.

NOW, THE NOMINATED AUTHORITY DOES ORDER:

1. On and from August 13, 2015 ("allotment date") and in accordance with sub-section (4) of section 8 read with sub-section (12) section 8 of the Act, with respect to the mine, the following shall stand fully and absolutely transferred and vested in the allottee, namely: -
 - (a) all the rights, title and interest of the prior allottee in and over the land and mine infrastructure free from all encumbrances;
 - (b) entitlement to a mining lease to be granted by the State Government with the terms and conditions of the Allotment Agreement forming a part of it on making an application;
 - (c) all statutory licences, permits, permissions, approvals or consents as per rules, required to undertake coal mining operations in the mine, if already issued by the Central Government, to the prior allottee on the same terms and conditions as were applicable to the prior allottee, as listed in the **Annexure 2**;
 - (d) entitlement to any statutory licence, permit, permission, approval or consent required to undertake coal mining operations in the mine, if already issued by the Central Government, to the prior allottee on making an application on the same terms and conditions as were applicable to the prior allottee, as listed in the **Annexure 3**;

Maharaja



- (e) entitlement to any statutory licence, permit, permission, approval or consent required to undertake coal mining operations in the mine, if already issued by the State Government, to the prior allottee on making an application on the same terms and conditions as were applicable to the prior allottee, as listed in the **Annexure 4**;
 - (f) rights appurtenant to the approved mining plan of the prior allottee;
 - (g) any subsisting contract in relation to coal mining operations, to which the prior allottee was a party and which is assumed, adopted and continued by the Allottee and listed in the **Annexure 5** shall stand novated (by virtue of a deemed consent from the relevant party(ies)), in accordance with the provisions of sub-section (1) of section 11 of the Act in favour of the allottee for the residual term or residual performance of such contract;
2. The Allottee may seek any change in the terms and conditions attached to such licence, permit, permission, approval or consent by making an application in accordance with applicable laws;
 3. Hereinafter, the Allottee shall be entitled to take possession of the mine as specified in Annexure-1 without let or hindrance;
 3. This allotment order is liable to be cancelled in accordance with the provisions of sub-rule (6) of rule 13.

Mahendra K

(MAHENDRA KUMAR)
Chief Engineer (Fuel)
U.P. Rajya Vidyut Utpadan Nigam Ltd.
Shakti Bhawan Extension, Lucknow

Vivek Bhargava

(By the nominated authority)

Annexures

Annexure 1: Particulars of the mine

Part A – Description of the mine

Name of Coal Mine	Saharpur Jamarpani
Latitude	24°11'55" N to 24°14'21" N
Longitude	87°32'28" E to 87°36'18" E
Coalfield	Rajmahal Group of Coalfields
District	Dumka
State	Jharkhand



Part B – Description of Land in relation to the mine

Not applicable



Part C – Description of Mine Infrastructure in relation to the mine

Not applicable



Annexure 2: Particulars of statutory licences, permits, permissions, approvals or consents issued by the Central Government which are being transferred along with this Allotment Order.

Not applicable



Annexure 3: Particulars of statutory licences, permits, permissions, approvals or consents issued by the Central Government to be obtained on application by the Allottee.

Not applicable



Annexure 4: Particulars of statutory licences, permits, permissions, approvals or consents issued by the State Government to be obtained on application by the Allottee.

S. No	Statutory Clearance	Ministry/ Agency	Letter No.	Date
1.	Prospecting License	Government of Jharkhand	309/M	24.02.2012



Annexure 5: Particulars of the contracts adopted by the Allottee.

The Allottee does not intend to adopt and continue with any of the contracts of the Prior Allottee.



Letter of CEA to Phaseout Old Units

14



केन्द्रीय विद्युत प्राधिकरण

Telefax- 26107990

Central Electricity Authority

तापीय परियोजना, योजना एवं विकास प्रभाग



TPP & D DIVISION

9वां तल, सेवा भवन, आर.के.पुरम, नई दिल्ली-110066 [आई.एस.ओ. 9001:2000 प्रमाणित]

9th Floor Sewa Bhavan, R.K. Puram, New Delhi - 110 066

No. No. 226/TPI/CEA/2015/48

Dated 07.01.2016

✓ Chairman,

Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited,
Shakti Bhawan, 14 Ashok Marg Lucknow,
Uttar Pradesh - 226 001
Fax .No. 0522 - 228 7798

Subject: Replacement of old subcritical units with Supercritical Units –
regarding.

Dear Sir,

CEA in consultation with various power utilities identified old & inefficient thermal power plants that could be replaced with super critical units. A preliminary report was prepared by CEA and same is also uploaded in CEA website. As regard Uttar Pradesh following Thermal Power Plants were identified.

Obra TPS: Obra TPS Unit 1 & 2 (2x50 MW) are planned to be phased out after COD of Units 6 and 7 of Anpara D (2x500 MW) which is likely to be achieved during the current financial year. Obra Unit 3,4,5&6 (3x50+94 MW) have been retired. Unit 7 (94 MW) is under R&M by M/s BHEL since July 2010 and is expected on load by December, 2015. Obra Unit 8 (94 MW) is not in operation since 2005-06 and proposed to be retired.

The action plan and schedule of various activities for setting up replacement units at above station be communicated to CEA immediately.

D (T) / Dr. P. S. /
A. B. S. (T. M.)

मुख्य अभियन्ता (पीपीएम) /
(जानपद-नव परियोजनाएं) / (न्यू कॉमिन्स) / (2100 कॉमिन्स)

M.D. - U.N.L.

120 / G.M. / 2016
18.01.2016

Yours faithfully,

311116
(P.D. Siwal)
Secretary, CEA

18/01/16
(राकेश त्रिषेदी)
निदेशक (परियोजना एवं वाणिज्य)

104 18.1.16

MOM of Imported Coal to MMTC



उत्तर प्रदेश UTTAR PRADESH

CP-286597

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (hereinafter referred to as "MOU") entered into on this 14th Day of Sept 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 Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd a company incorporated under Companies Act, 1956, having its office at 10th Floor Shakti Bhawan Extn, Ashok Marg, Lucknow-226001, (hereinafter called as "UPRVUNL" which expression shall unless the context requires otherwise, include its successors and permitted assigns) of the **Second Part**.

Memorandum of Understanding

-1-

WHEREAS:

- a) UPRVUNL has proposed to establish 2X660 MW Obra 'C', Sonebhadra to improve the power supply situation in Uttar Pradesh;
- b) UPRVUNL propose to operate the plant with imported coal in view of the possible delay in developing the linked coal block i.e. Saharpur-Jamarpani (Dumka- Jharkhand);
- c) MMTC is having vast experience in supplying imported coal for various central/state Govt. Thermal Plants;
- d) MMTC has agreed to supply imported coal of about 5.54 Million tonnes per annum (5.54 MTPA) for the above proposed project at the request of UPRVUNL.
- 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:

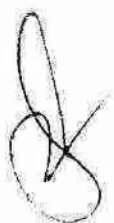
1. INTENT:

- a) MMTC shall import coal for Long term supply for operation of 2X660 MW Obra 'C', Sonebhadra thermal Power Project having coal requirement of 5.54 MTPA to be commissioned in 2020-21.
- b) The characteristics of imported coal shall be:-

CHARACTERISTICS OF IMPORTED COAL

PARAMETER	UNIT	ACCEPTABLE RANGE
Total Moisture (ARB)	%	Upto 10%
Ash (ADB)	%	Upto 30% Max
Gross Calorific Value (NAR)	Kcal/Kg	4463-4800
Sulphur (ADB)	%	Upto 1.00% Max.
SIZE	MM	Up to 50mm However, size of coal less than 2.36 mm shall not be more than 25% of quantity received.
Fixed Carbon (ADB)	%	By difference
Volatile Matter (ADB)	%	25-30%
IM	%	2-4%
HGI	-	45-60

Memorandum of Understanding



IDT under reducing atm. Degree Centigrade 1180-1250.

Guaranteed Parameters for coal under this tender for Price Basis are as under:

Total Moisture (ARB)	: 9%
Ash (ADB)	: 26%
Sulphur (ADB)	: 0.80%
Gross Calorific Value (NAR)	: 4800 Kcal/Kg
Size (less than 2.36mm)	: Not exceeding 25% of quantity received at power plant

- c) Quantity: The quantity of imported coal shall be 5.54 MTPA.
- d) MMTC shall source the coal of specification as per clause 1(b) above.
- e) The plant is expected to be commissioned by 2020-21. The supply of imported coal shall commence from 2020-21 tentatively.
- f) UPRVUNL shall intimate exact date of commissioning of the Project to MMTC three months in advance so that MMTC shall arrange necessary logistics.
- g) UPRVUNL shall furnish month-wise requirement of coal to MMTC sufficiently in advance for supply of coal.
- h) The imported coal shall be brought at Project, if Railway track is available, or the nearest railway siding and MMTC shall arrange Panamax Vessels for transporting the coal.
- i) MMTC shall follow CVC guidelines /other Govt. notifications issued from time to time for procurement of imported coal and the guidelines approved by its Board of Directors for import of coal.
- 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 trade margin of MMTC.
- k) MMTC and UPRVUNL shall mutually discuss and agree on the price of coal every year for the supply of imported coal.
- l) MMTC shall arrange for sampling Analysis weightment of coal shipment at load port through mutually agreed Internationally accredited inspection Agency.
- m) C&F Price shall be adjusted for Gross Calorific Value, Total moisture, ash and sulphur as per mutually agreed terms before shipment.

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

Memorandum of Understanding

violation of the foregoing, the said party agrees to indemnify, defend and hold the other parties harmless from and against any and all claims, demands, losses, 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.

5. SETTLEMNT OF DISPUTES AND ARBITRATION:

In the event of any difference/dispute arising between the parties hereof under these presents, such disputes/difference shall in the first instance be resolved amicably by mutual consultation 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 venue of the Arbitration shall be at 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

Memorandum of Understanding

-4-



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.

Address

Attention

MMTC Limited,
Core 1, Scope complex,
7, Institutional area,
Lodhi Road,
New Delhi - 110 003.
Tel No. :011-24362200
Fax no : 011-24366362

Attention

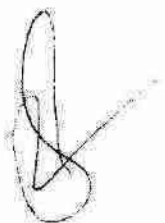
Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited
10th Floor , Shakti Bhawan Extn
Ashok Marg,
Lucknow- 226001
Tel.No. 0522-2288582
FAX No:0522-2288975

8.0 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 or regulations to any judicial or other authorities.

Memorandum of Understanding

-5-



- Consultants / advisors, provided they, in turn, sign undertaking of confidentiality.

9. 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 whatsoever, 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.

10. 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 New Delhi on the date first mentioned above in the presence of witnesses as mentioned hereunder.

For and behalf of MMTC Limited

CHIEF GENERAL MANAGER

For and behalf of UPRVUNL

SUPERINTENDING ENGINEER

(ATUL KUMAR)

Superintending Engineer
(New Coal Block)

U.P. Rajya Vidyut Utpadan Nigam Ltd.
4th Floor, Samaj Kalyan Building,
Gomti Nagar, Lucknow

WITNESSES:

- 1. *Achal Meena*
CAHAL MEENA)
MGR, MMTC

- 1. *Yashwanth*
(General Yashwanth)
सहायक अभियन्ता
न्यू कोल ब्लॉक
उत्पत्ति विभाग
लखनऊ



उत्तर प्रदेश UTTAR PRADESH

CW 615486

Amendment no. 1 to Memorandum of Understanding entered on 14th Sept. 2015 between MMTc Ltd. and Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd for procurement and supply of imported coal to 2x660 MW Obra 'C' Sonebhadra thermal power project.

1. The Characteristics of imported coal appearing at 1 (b) is amended as:

Parameters	Unit	Proposed Range	
Total Moisture (ARB)	%	-	Sum of Ash and Total Moisture should not be more than 40%
Ash (ARB)	%	As per prevailing MOEF&CC guidelines at the time of procurement : Presently 12% Maximum	
Gross Calorific Value (ARB)	Kcal/Kg	5000 – 5500	
Sulphur (ARB)	%	0.60%	
SIZE	MM	Upto 50mm However, size of coal less than 2.36 mm shall not be more than 25% of quantity received at discharge point	
Fixed Carbon (ARB)	%		35-44
Volatile Meter (ARB)	%		25-45
HGI	-		45-60
IDT under reducing atmosphere	Deg Centigrade		>=1100



2. The quantity of 5.54 MTPA wherever appearing is amended to 3.4 MTPA.

This amendment shall be integral part of the MoU dated 14.9.2015. All other terms and conditions of MoU remain unchanged.

For and behalf of MMTC Limited

CHIEF GENERAL MANAGER

For and behalf of UPRVUNL

SUPERINTENDING



WITNESSES:

1. *Sham*
Shamikaant
Mgr (Coal)
MMTC Ltd.

1. *Gaurav*
(Gaurav Yadav)
AE NCB, UPRVUNL.

Consent for transportation of Imported coal from Nearest port.

भारत सरकार / GOVERNMENT OF INDIA
रेल मंत्रालय / MINISTRY OF RAILWAYS
(रेलवे बोर्ड / RAILWAY BOARD)

No.2014/TTN/58/UP

New Delhi Dated /६ . 10 .2015

Chief Engineer,
U.P.Rajya Vidut Utpadan Nigam Ltd.
10th Floor Shakti Bhavan Extn.,
Ashok Marg,
Lucknow-226001.

Sub: - Consent for transportation of imported coal from nearest Port (Western / Eastern) to Panki, Obra 'C' and Jawaharpur TPS in Uttar Pradesh.

Please refer to your letters bearing No. 167-UNL/New Coal Block/2015/Coal mines, No.168-UNL/New Coal Block/2015/Coal mines and No. 169-UNL/New Coal Block/2015/Coal mines dated 12.10.2015 on the above mentioned subject.

As per existing Logistic Plan of Railways, power plants located in Uttar Pradesh are linked to Western Ports for evacuating imported coal. Accordingly, movement of imported coal for above three upcoming plants would be undertaken by Railways from the Western Ports (Mundra, Kandla, Dahej ports etc) only. You are advised to plan these imports accordingly.

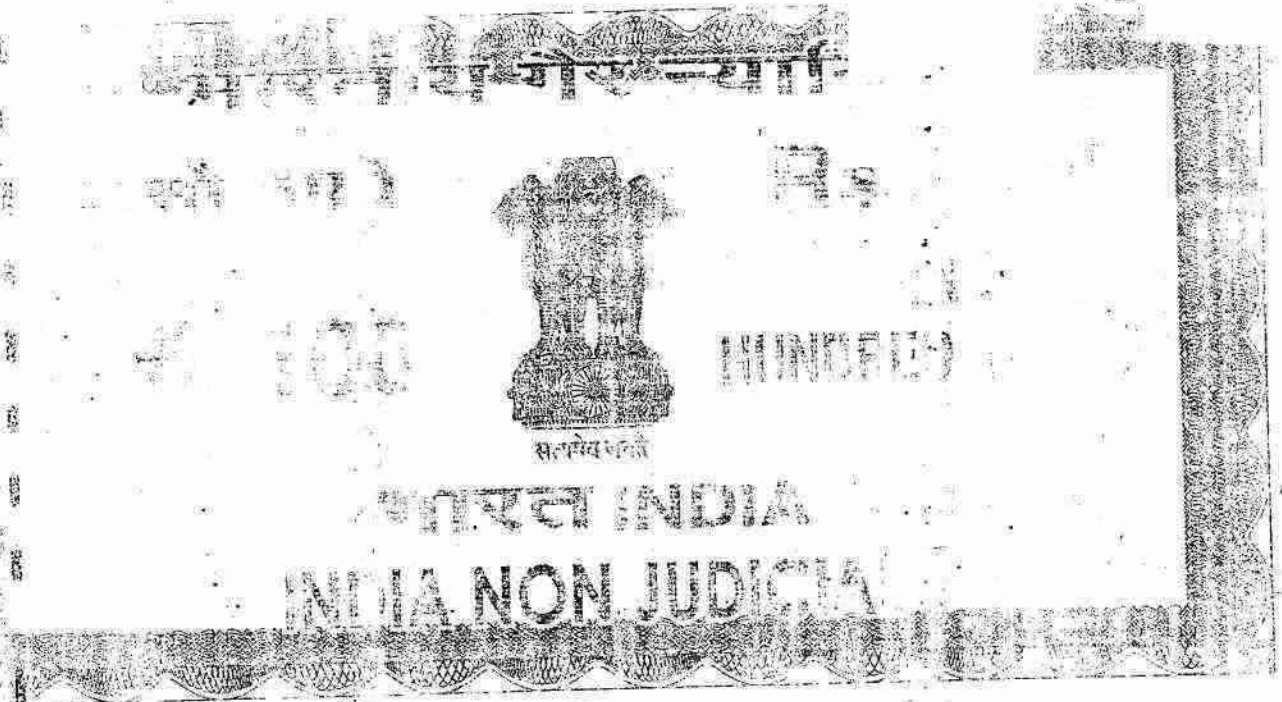


(H.S. Bajwa)
Director Traffic Trans (G)
Railway Board

Ash Utilization details of Obra TPS from April-2015 to January-2016.

Ash Utilization Details of Obra TPS

Ash Utilization Details of Unit No.1,2&9 where DFAES has been installed				Ash Utilization details of unit no. 12&13 where DFAES is not installed		Overall ash utilization in %			
Month	Total ash generation in MT from unit No. 1,2&9	Ash Utilization in MT from unit No. 1,2&9	Ash Utilization in %	Total ash generation in MT from unit No. 12&13	Ash Utilization	Total ash generated	Total ash utilized	% ash utilization	
April 2015	57128.726	30168.820	52.81	64669.196	Dry Fly Ash collection system shall be installed during R&M of these units. At present Ash generated from these units is being disposed off in Ash pond in the form of ash slurry.	121797.922	30168.820	24.77	
May 2015	57386.562	28184.460	49.11	68249.071		125635.633	28184.460	22.43	
June 2015	55174.624	24076.780	43.64	64847.682		120022.306	24076.780	20.06	
July 2015	55545.628	25078.370	45.15	60697.708		116243.336	25078.370	21.57	
Aug.2015	55483.083	26220.540	47.26	66377.528		121860.611	26220.540	21.52	
Sep. 2015	55672.554	27925.960	50.16	72890.314		128562.868	27925.960	21.72	
Oct. 2015	54822.029	26728.710	48.76	72142.994		126965.023	26728.710	21.05	
Nov. 2015	45995.525	19879.380	43.22	68219.438		114214.963	19879.380	17.41	
Dec. 2015	55700.004	25399.130	45.60	70549.067		126249.071	25399.130	20.12	
Jan. 2016	53135.391	27365.610	51.50	73719.634		126855.025	27365.610	21.57	
Total	546044.126	261027.760	47.80	682362.632			1228406.758	261027.760	21.25



उत्तर प्रदेश UTTAR PRADESH

AGREEMENT

This Agreement entered into this 21 day of March 2007

BETWEEN

U.P. Rajya Vidyut Utpadan Nigam Ltd., a company incorporated under the Companies Act 1956, having its Registered Office at Shakti Bhawan Extension, 14-Ashok Marg Lucknow, UP (herein after referred to as 'UPRVUNL' which expression shall unless repugnant to the subject or context or contrary to the meaning thereof include its successors and assigns) as one part

AND

M/s Jaiprakash Associates Limited (JAL) incorporated under the Companies Act 1956, having its Registered Office at Sector 128, Noida 201304, U.P, India (herein after referred to as 'JAL' which expression shall unless repugnant to the subject or context or contrary to the meaning thereof include its successors and assigns) on the other part.

AND WHERE AS

- a. UPRVUNL is desirous to dispose off dry fly ash from their Obra-B Thermal Power Station, Obra, Sonbhadra according to guidelines issued by MOEF, Government of India vide gazette notification 763 (a) dated 14.9.1999.

K. Gupta
 (Signature)
 21/3/07

Adarsh

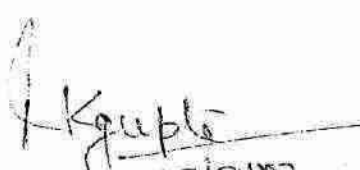
b. JAL is desirous to utilize dry fly ash for their cement plant situated at Dalla Sonebhadra & Chunar, Mirzapur.

Various discussions were held between the representatives of UPRVUNL and JAL which have culminated in certain agreed terms and conditions, in this Agreement relating to utilization of dry fly ash of Obra-B Thermal Power Project, Obra, Sonebhadra of UPRVUNL by JAL for their Cement Plant situated at Dalla, Sonebhadra & Chunar, Mirzapur of UP State Cement Corporation Ltd. (Under liquidation) for which the bid of Jaiprakash Associated Ltd. (JAL) being the highest bidder has been accepted by the Hon'ble High Court of Judicature at Allahabad and the has been confirmed after payment of the final installment on 11-10-2006.

NOW THEREFORE forth and in consideration of the discussion, mutual covenants set forth herein and MOU dated 19-09-2006 both the parties enter into an agreement as follows;

- 1 That JAL shall install, operate and maintain the Dry Fly Ash Extraction System (DFAES) at Obra B Thermal Power Station, Obra, Sonebhadra Of UPRVUNL at a cost of approximately Rs. 8 crore.
- 2 For the purpose of installation of the DFAES as above UPRVUNL shall permit the use of 4 nos. RCC silos and supporting system installed on as is where is basis. In addition UPRVUNL shall permit JAL for installation of Dry Fly Ash collection System adjacent to Wet Collection Tower. None of the ESP Hoppers will be disturbed and Ash will be allowed to travel through existing pipes by vacuum up to Wet Collection Tower. Unlike Hydraulic Exhausters, the vacuum will be created by High Efficiency Low Power Vacuum pumps. The extraction line will be tapped at a point before it gets mixed with water, for further conveying to the existing 4 nos. RCC silos and shall also provide suitable space for carrying out this activity, free of cost within the premises of Obra B Thermal Power Station.
- 3 A Control Room shall be made by JAL for Operations of the system. The whole system shall be Maintained and Operated round the clock by JAL.
- 4 JAL shall at no time gain any rights or title in the land upon which such DFAES is proposed to be set up. However, if any improvement in power generating units requires on this land, then it will be binding on the JAL to modify the system suitably.
- 5 For Operation of the system three phase 0.4 KV(415Volts) Electric Supply shall be facilitated by UPRVUNL and the cost of all the works involved shall be borne by JAL.
- 6 During Shutdown of the new system installed by JAL, UPRVUNL will dispose the Ash as slurry. For this purpose UPRVUNL shall maintain their Existing Ash Disposal system healthy and operative. For the purpose of trial JAL will allow 2 to 4 hrs shutdown of new system twice a week.
- 7 UPRVUNL shall supply 7.00 lac MT of Dry Fly Ash per annum on as is where is basis from the date of installation and operation of the Dry Fly Ash Extraction System by JAL free of cost. UPRVUNL shall supply Dry Fly Ash at its silos and JAL shall make arrangements for carrying the same to their premises at their own cost.

Contd.....P(3)


(Anand Kumar) (JAL)
Chief Engineer - Safety
Thermal Power Station, Obra B, Sonebhadra, U.P.

- 8 UPRVUNL shall supply Dry Fly Ash, Free of Cost for a period of 25 years or life time of the plant of either of the said parties.
- 9 As the DFAES, to be installed by JAL, is the integral part of the Thermal Power Station, hence electricity and water used for collection of Dry Fly Ash from hopper and conveying it to the silos shall be treated as the auxiliary consumption to Thermal Power Station.
- 10 M/S JAL shall obtain NOC/Permission from the other department if any and if required, however assistance if any shall be provided by UPRVUNL.
- 11 UPRVUNL shall provide facilities like accommodation, medical, etc. for the staff of JAL, subject to availability on chargeable basis.
- 12 If any dispute of difference arises between the two parties, the same shall be conducted in accordance with the Arbitration and Conciliation Act, 1996 and it is agreed that the Arbitration shall be bound by the principle of Indian Laws. All disputes of any nature shall be subject and under the Jurisdiction of Allahabad High Court at Lucknow.
- 13 UPRVUNL will not be liable legally or financially to pay any kind of damages or compensation to M/s JAL in the event of it not being able to supply dry fly ash during the period of the MOU for reasons beyond its control and decision regarding shut down and maintenance of electricity generating units will be solely of UPRVUNL and will be binding on JAL.
- 14 JAL shall observe all the safety rules & regulations as per the Factories Act, 1948 and UP Factory rules and will arrange labour insurance for their employees. In case of any accident or mis-happening during installation, operation & maintenance of DFAES, JAL shall be responsible for payment of compensation to their employees as per 'Workmen's Compensation Act.' And any other rules & regulations as prevalent at that point of time.
- 15 JAL shall be liable and indemnify UPRVUNL and its employees for all losses and damages suffered by them due to the negligence of JAL, its employees or agents.
- 16 Any change in GOI guidelines regarding cost of fly ash shall be binding on both the parties.

General Conditions

- 1 JAL shall deposit Security, Deposit of Rs. 10.00 lacs (Rs Ten lacs only), in the form of Cash/ Demand Draft/ FDR or Bank Guarantee (valid during the currency of agreement) in favour of UPRVUNL, Lucknow payable at SBI, Lucknow, which shall be released after successful completion of this agreement or extension thereof or earlier termination of agreement for any reason whatsoever. No interest shall be payable on the said amount of security deposit.
- 2 Any taxes and duties, other levies viz. Octroi etc. imposed by Govt./local authority shall be payable by JAL on actuals and their responsibility shall include to furnish such clearance certificates as may be asked by UPRVUNL from time to time under prevailing statutory provisions.

Conrd.....P(4)

[Handwritten signature]
2/13/07

[Handwritten signature]

- 3 JAL will abide by all the general security rules/procedures and have to keep the records of fly ash lifted on daily basis and submit a certificate on monthly basis to acknowledge the lifted quantity of fly ash for manufacturing of PPC/Ready Mix Concrete (RMC) plants.
- 4 All the house keeping and cleaning of the whole DFAES area will be the responsibility of JAL
- 5 JAL will actually use the lifted quantity of fly ash for manufacturing of PPC/RMC plants only and trading of fly ash will not be permitted.
- 6 JAL will develop green belt on the of 5 hect. Land of UPRVUNL by planting the 5000 No. of non exotic Indian species plants such as Neem, Pepal Kadam, Jangali Jalebi, Shisham, Imli etc, However the cost of plant and their maintenance shall be born by the JAL The plants shall remain the properties of UPRVUNL
- 7 In case of any dispute/doubts/clarification on day to day basis JAL shall contact to Chief Engineer/Environment and Safety (UPRVUNL) or any other person as designated by him whose decisions shall be final and binding.
- 8 All cost necessary for modification of the system for taking fly ash from DFAES at B-OTPS, if any required shall be borne by the JAL subject to prior approval from Chief Engineer, Environment and Safety, unit UPRVUNL, Lucknow.
- 9 The quantity of fly ash under this agreement would be 7 lacs MTPA/ approximately, as production of ash is dependent on electricity generation hence it may vary according to the generation at B-OTPS and the JAL will have no claim if quantity made available is less.
- 10 All the operation and maintenance instructions for DFAES given by Chief Engineer, B-OTPS or his appointed nominee shall be binding on JAL.
- 11 In case JAL is not able to lift the fly ash for a continuous period of Four Weeks because of their own inability and no genuine reasons agreed by Chief Engineer (E&S). Chief Engineer (E&S), UPRVUNL may impose a penalty as deemed fit to a maximum of Rs. 10,000/- (Rupees Ten thousand only) per day.
- 12 UPRVUNL shall not be responsible for supply of any specific quality/grade of fly ash to JAL as the chemical composition and physical properties of fly ash depends on grades of coal and varying firing conditions in the boiler.
- 13 The area under the silo and other related places shall be kept clean. The spilled ash collected by cleaning in the above area shall be cleared and disposed off from the areas as directed by Chief Engineer B-OTPS or any other person designated by him.
- 14 JAL shall use only rubber tyre vehicle for transporting of fly ash so that UPRVUNL roads are not subjected to any undue wear and tear.
- 15 All vehicles of JAL which will carry fly ash, shall be liable for checking by B-OTPS for ensuring of safety regulations enforced in the area from time to time. The JAL shall indemnify UPRVUNL against all possible thefts, pilferage etc. of the UPRVUNL's property by their workmen or any member of their establishment. The JAL must ensure that the fly ash must be transported through closed vessel carriers.
- 16 UPRVUNL reserves the right to terminate the contract earlier and forfeit the security deposit in case of Chief Engineer (E&S) is satisfied without prejudice to any other proceedings that may be taken up by UPRVUNL that the progress of installation of Dry Fly Ash Extraction System is not up to the mark.

Contd.....P(5)

K. G. Gupta
2/3/07

- 17 UPRVUNL reserves the right to terminate the contract earlier for non-fulfillment of any of the conditions as stipulated in the contract without prejudice to any other proceedings that may be taken up by UPRVUNL. Such termination will not entitle JAL to any claim for compensation of any kind whatsoever. This clause shall not be effective for day to day working minor disputes at site.
- 18 No part of this Agreement shall be sublet without written permission of Chief Engineer, Environment & Safety unit, Luknow nor Shall be transferred by way of Power of Attorney authorizing others to act on behalf of JAL.
- 19 JAL shall arrange for the necessary tools, safety appliances to and for the workmen for collection, handling and transport of fly ash.
- 20 JAL shall indemnify and save harm to the property of B-OTPS against all actions, claims, suits, demands, costs or expenses arising in connection with injuries suffered during the Agreement period by persons employed by the JAL or his sub-contractor on the works whether under the General Law or under the Workmen's Compensation Act 1923, or any other statute in force during the currency of the Agreement.
- 21 If any time during the currency of agreement, the UPRVUNL wants to use the total or part the quantity of Fly Ash generated from the unit no. 3,4,5 and 7 after modernization for own purpose, the JAL will not have any claim.
- 22 Liability for damages to works or plants :
JAL shall during the currency of Agreement, properly protect the work/plant, and shall take every reasonable, proper, timely and useful precaution against accident or injury to the same from any cause and shall remain answerable and liable for all accidents or injuries there to which until the same be or deemed to be or be occasioned by the Acts or commissions of or their contractor or their workmen or their sub-contractors and all losses and damages to the work/plant arising from such accidents or injuries as aforesaid shall be made good in the most complete and substantial manner by and at the cost of JAL and to the reasonable satisfaction of the Chief Engineer B-OTPS or any other person designated by him.
- 23 If available, on chargeable basis, the residences shall be given to the staff of JAL in the project premises.
- 24 FORCE MAJEURE
That notwithstanding anything contained herein the obligation of UPRVUNL and JAL under this agreement shall remain suspended and neither of them shall be entitled to claim any compensation from each other for any loss or damage caused by such suspension whether total or partial during the force majeure events such as but not limited to flood, earthquake, strike, war, terrorist attack etc. it shall be obligatory on the part of both the parties to communicate to each other the happening of force majeure events and its cessation within 10 (Ten) days of its happening or cessation as the case may be. Both the parties shall mutually discuss and decide the future course of action on the happening of force majeure events if it continue for more than 60 days.

Contd.....P(6)

K. Gupta
Adm
21/2/07

(6)

Person authorized on behalf
of UPRVUNL

Signature

[Handwritten Signature]
21/3/10

Chief Engineer (E&S)
UPRVUNL, Lucknow

Witness on behalf of UPRVUNL

1. Signature

Name
Address

[Handwritten Signature]

2. Signature

Name
Address

[Handwritten Signature]
VISHAL SHARMA
Environment & Safety

Person authorized on behalf of
M/s. Jai Prakash Associates Ltd.

Signature

[Handwritten Signature]

Name
Designation
Address

Witness on behalf of JAL

Signature

Name
Address

[Handwritten Signature]
Anil Sharma
Sales Manager
Vishnu Engineering & Project Pvt. Ltd.
Haryana Engineering

Signature

Name
Address

[Handwritten Signature]
Taranjit Kumar
Vishnu Sadan, 5 Park Road
Anand Nagar, Lucknow

Last Page

[Handwritten Signature]
21/3/10
(Narash Kumar) (Chief)
Chief Engineer (E&S) & Safety
7th Floor, Shri... Ivan Ex...
Lucknow.

LOI for Lifting of Dry fly Ash from Obra TPS.

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उपग्रोरा विद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पो आ० : ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065

No. 4857CGM/W-1/83B-16

Dated/Feb. 17 2016

Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station, Obra.

Sri Sudama Singh
14/126, Near Gayatri Mandir,
Sector-8, Obra- Sonebhadra

Dear sir,

Please refer to your letter dated 09-02-2016 vide which you have submitted your expression of interest for lifting of 30 MT of dry fly ash / Day free of cost for manufacturing of fly ash bricks, Block & Tiles. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of fly ash bricks, Block & Tiles is hereby accepted. Dry fly ash from Obra thermal Power Plant will be transported by M/s Sudama Singh in their closed vehicle at their own cost so that there is no fugitive emission.

Thanking you.

Sanjay
17/02/16
(Sanjay Tewary)
Chief General Manager

No. 4857CGM/W-1/83B-16 of dated 17/2/2016.

- Copy forwarded for following for information and necessary action-
- 1- General Manager (Admn.) Obra Thermal Power Station, Obra.
 - 4- Superintending Engineer, OCO&MC, Obra.
 - 5- Executive Engineer, OCMD, BTPS, Obra.

Sanjay
17/02/16
(Sanjay Tewary)
Chief General Manager

Sanjay
17/2/16

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्प्रेरणविद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA – 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065

No. 4858 CGM/W-1/83B-16

Dated/Feb. 17 2016

Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station, Obra.

Sri Pawan Kumar Sinha,
Green Tech Infra.
Shivpur Bypass, Hatia
Varanasi-221003

Dear Sir,

Please refer to your E-mail letter dated 10-02-2016 vide which you have submitted your expression of interest for lifting of 500 MT of dry fly ash / month free of cost for manufacturing of fly ash brick at Varanasi. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of fly ash brick is hereby accepted. Dry fly ash from Obra thermal Power Plant will be transported by Green Tech Infra. in their closed vehicle at their own cost so that there is no fugitive emission.

Thanking you,

Sanjay Tewary
16/02/16

(Sanjay Tewary)

Chief General Manager

No. 4858 CGM/W-1/83B-16 of dated 17/2/2016

Copy forwarded for following for information and necessary action-

- 1- General Manager (Admn.) Obra Thermal Power Station, Obra.
- 2- Superintending Engineer, OCO&MC, Obra.
- 3- Executive Engineer, OCMD, BTPS, Obra.

Sanjay Tewary
16/02/16

(Sanjay Tewary)

Chief General Manager

Sanjay Tewary
16/2/16

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्पादन विद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
प० आ० ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065

4859
No. CGM/W-1/83B-16

Dated/Feb. 17/2016

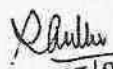
Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station, Obra.

Sri Deen Dayal
Sector- 8, Near Geeta Mandir,
Obra- Sonebhadra

Dear sir,

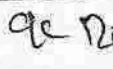
Please refer to your letter dated 09-02-2016 vide which you have submitted your expression of interest for lifting of 30 to 35 MT of dry fly ash for manufacturing of fly ash bricks and 100 M³ of pond ash per day for reclamation of low lying area. In this reference your request for lifting of dry fly ash from Plant for manufacturing of fly ash bricks, and pond ash from Ash ponds of Obra Thermal Power Plant for reclamation of low lying area is hereby accepted. Dry fly ash from Plant and pond ash from ash pond of Obra Thermal Power Plant will be transported by M/s Deen Dayal in their closed vehicle at their own cost so that there is no fugitive emission.

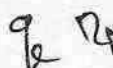
Thanking you.


17/02/16
(Sanjay Tewary)
Chief General Manager

No. 4859 CGM/W-1/83B-16 of dated 17/2/2016.

- Copy forwarded for following for information and necessary action-
- 1- General Manager (Admin.) Obra Thermal Power Station, Obra.
 - 2- Superintending Engineer, OCO&MC, Obra.
 - 3- Executive Engineer, OCMD, BTPS, Obra.


17/2/16
(Sanjay Tewary)
Chief General Manager


17/2/16

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्पादन विद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पौ० आ० : ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065

No. 4860 CGM/W-1/83B-16

Dated/Feb. 17 2016

Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station, Obra.

Sri Sant Lal Maurya,
Apco Infratech Pvt. Ltd.
B-9, Vibhuti Khand, Gomti Nagar
Lucknow- 226010

Dear sir,

Please refer to your your letter No.APCO/UPRVUNL/VNS BYPASS SITE/001 dated 10-02-2016 vide which you have submitted your expression of interest for lifting of 500 MT of dry fly ash / month free of cost for manufacturing of fly ash brick at Varanasi. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of fly ash brick is hereby accepted. Dry fly ash from Obra thermal Power Plant will be transported by Apco Infratech PVT. Ltd in their closed vehicle at their own cost so that there is no fugitive emission.

Thanking you.

Sanjay Tewary
16/02/16

(Sanjay Tewary)

Chief General Manager

No. 4860 CGM/W-1/83B-16 of dated 17/2/2016

Copy forwarded for following for information and necessary action-

- 1- General Manager (Admn.) Obra Thermal Power Station. Obra.
- 2- Superintending Engineer, OCO&MC, Obra.
- 3- Executive Engineer, OCMD, BTSP, Obra.

Sanjay Tewary
16/02/16

(Sanjay Tewary)

Chief General Manager

Sanjay Tewary
16/2/16

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्प्रेरणविद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनमद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA – 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065
Dated/February 2016

No. 4861 CGM/ W-1/83B-16

Subject:- Consent for lifting of dry fly ash from proposed 2x660 MW Obra "C" Thermal Power Project, Obra.

Sri Ajay Sharma,
Executive President (CZ&UPZ)
Jai Prakash Associates Ltd.
Chunar Cement Factory

Dear sir,

Please refer to your letter No. JAL/DCF/UPRVUNL dated 08-02-2016 vide which you have submitted expression of interest for lifting of dry fly ash from proposed 2x660 MW Obra Thermal Power Project free of cost for a period 25 years for manufacturing of cement. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of cement is hereby accepted. Dry fly ash from Obra thermal Power Plant will be transported by Jai Prakash Associate Ltd. in their closed vehicle at there own cost so that there no fugitive emission.

Thanking you,

No. 4861 CGM/ W-1/83B-16 of dated 17/2/2016

Copy forwarded for following for information and necessary action-

- 1- General Manager (Admn.) Obra Thermal Power Station, Obra.
- 2- Superintending Engineer ,OCO&MC, Obra.
- 3- Executive Engineer, OCMD, BT/PS, Obra.

Sanjay Tewary
16/02/16
(Sanjay Tewary)

Sanjay Tewary
16/02/16
Chief General Manager

Sanjay Tewary
16/02/16
Rem
16.2.16

Sanjay Tewary
16/02/16
(Sanjay Tewary)

Sanjay Tewary
16/02/16
Chief General Manager

Sanjay Tewary
16.2.16

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्पादन विद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065
Dated/Feb. 17-2016

No. 4882-CGM/W-1/83B-16

Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station . Obra.

Shri Brishbhan, Agarwal
Managing Director,
M's B. Agarwal Stone Product Ltd.
14/364, Ram Mandir Colony
Obra-Sonebhadra

Dear Sir,

Please refer to your letter dated 21-12-2015 vide which you have submitted your expression of interest for lifting of 500 MT of dry fly ash / month free of cost for manufacturing of fly ash brick at Varanasi. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of fly ash brick is hereby accepted subject to the condition that land for the establishment of fly ash brick plant shall be arranged by you. Dry fly ash from Obra thermal Power Plant will be transported by B. Agarwal Stone Product Ltd, by their closed vehicle at there own cost so that there no fugitive emission .

Thanking you.

Shukla
16/02/16

(Sanjay Tewary)

Chief General Manager

No. 4882-CGM W-1/83B-16 of dated 17/12/2016.

Copy forded for following for information and necessary action-

- 1- General Manager (Admn.) Obra Thermal Power Station, Obra.
- 2- Superintending Engineer ,OCO&MC, Obra.
- 3- Executive Engineer, OCMD.BTPS, Obra.

Shukla
16/02/16

(Sanjay Tewary)

Chief General Manager

कार्यालय मुख्य अभियन्ता
ओबरा ताप विद्युत परियोजना
उत्पादन विद्युत उत्पादन निगम लि०
(उ प्र सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ प्र)



OFFICE OF THE CHIEF GENERAL MANAGER
OBRA THERMAL POWER PROJECT
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)
CIN: U40101UP 980SGC005065

No. 4863 CGM/W-1/83B-16

Dated/Feb.17-2016

Subject:- Consent for lifting of dry fly ash from Obra Thermal Power Station, Obra.

Sri Baleshwar Prasad Jaiswal,
A.K. Prothers & Associates
Dibuljang, Anpara, Sonebhadra

Dear sir,

Please refer to your letter dated 10-02-2016 vide which you have submitted your expression of interest for lifting of 500 MT of dry fly ash / month free of cost for manufacturing of fly ash brick at Varanasi. In this reference your request for lifting of dry fly ash from Obra Thermal Power Station for manufacturing of fly ash brick is hereby accepted. Dry fly ash from Obra thermal Power Plant will be transported by A.K. Brothers in the closed vehicle at their own cost so that there is no fugitive emission.

Thanking you.

Sanjay
16/02/16

(Sanjay Tewary)
Chief General Manager

No. 4863 CGM/W-1/83B-16 of dated 17/12/2016

Copy forwarded for following for information and necessary action-

- 1- General Manager (Admn.) Obra Thermal Power Station, Obra.
- 2- Superintending Engineer, OCO&MC, Obra.
- 3- Executive Engineer, OCMD, BTIPS, Obra.

Sanjay
16/02/16

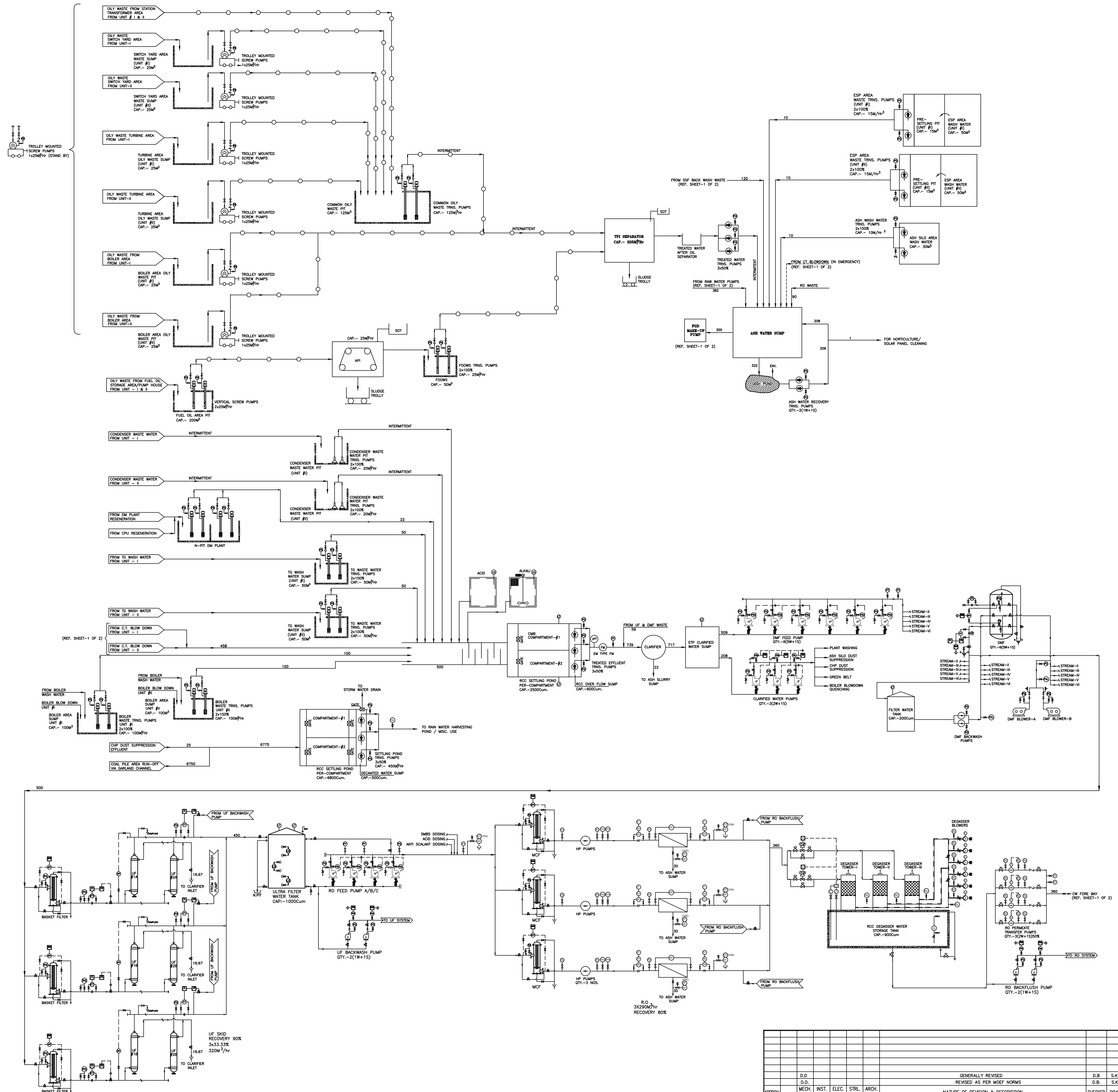
(Sanjay Tewary)
Chief General Manager

Sanjay
16/2/16

Ash Utilization details of Obra TPS from 2015-16 to 2023-24.

Ash Utilization Plan for OBRA TPS

Year	Ash Generation (Ton/Annum)			ESP Fly Ash Utilization (i.e. excluding Bottom ash)		Planned mode of Ash Utilization (Integrated i.e. Fly ash & Bottom ash)				Storage in Ash pond (Ton/Annum)
	Bottom Ash (@20% of total ash)	Fly Ash	Total Ash	Ton/Annum	% utilization (of Col 3)	Cement manufacturing (Ton/Annum)	Ash Brick plant (Ton/Annum)	Pond ash utilization in Highways etc. (20% of Bottom Ash)	Total Ash Utilized (Ton/Annum)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2015-16	3,53,179	14,12,714	17,65,893	4,23,814	30%	4,23,814	0	70,636	4,94,450	12,71,443
2016-17	3,98,656	15,94,626	19,93,282	6,37,850	40	6,37,850	37,025	79,731	7,54,607	12,38,675
2017-18	4,44,881	17,79,522	22,24,403	8,89,761	50	8,89,761	37,025	88,976	10,15,763	12,08,641
2018-19	6,02,422	24,09,687	30,12,109	14,45,812	60	14,45,812	37,025	1,20,484	16,03,322	14,08,787
2019-20	6,02,422	24,09,687	30,12,109	16,86,781	70	16,86,781	37,025	1,20,484	18,44,291	11,67,819
2020-21	7,76,140	31,04,559	38,80,699	22,75,186	80% of old unit +50% of new unit	22,75,186	37,025	1,55,228	24,67,439	14,13,260
2021-22	,954,683	38,18,733	47,73,416	31,55,051	90% of old unit +70% of new unit	31,55,051	37,025	1,90,937	33,83,012	13,90,403
2022-23	9,54,683	38,18,733	47,73,416	36,77,828	100% of old unit +90% of new unit	36,77,828	37,025	1,90,937	39,05,790	8,67,626
2023-24	9,54,683	38,18,733	47,73,416	38,18,733	100% of old unit +100% of new unit	38,18,733	37,025	1,90,937	40,09,670	7,26,721



NOTES:-
1. THIS SCHEME SHOWN IN THIS DWG. IS TYPICAL FOR 2X660 MW UNIT AND INDICATIVE ONLY.

COMPOSITE WATER SCHEME

OBRA "C" EXTENSION THERMAL POWER PROJECT
2 x 660 MW UNIT
SONEBHADRA (UP)

UTTAR PRADESH RAJYA VIDYUT
UTPAPAN NIGAM LIMITED

DRWN	SUJ/De	CHECKED	D.B.	SCALE	NTS
APPROVED	P.C.	DATE	13-05-15		
APPROVED	D.D.	DATE	25.01.16		
DWG. NO. 14A22-DWG-M-014 (SHT. 2 OF 2) REV. 2					

REVISION	DATE	DESCRIPTION	BY	CHKD	DATE
D.D		GENERALLY REVISED	D.B	S.K.DE	2 12.02.16
D.D		REVISED AS PER MOEF NORMS	D.B	S.K.DE	1 25.01.16
APPROV		NATURE OF REVISION & DESCRIPTION	CHECKED	DRAWN	REV. DATE

Approved UPRVUNL CSR Policy.

UPRVUNL CSR POLICY

Preamble

Committed to inclusive growth, energy conservation and sustainable development with special focus on the communities in the neighbourhood of its operations, UPRVUNL has set-out the following Corporate Objectives on CSR.

Corporate Objectives on CSR

- ***"To contribute to sustainable power development by discharging corporate social responsibilities"***
- ***"To lead the sector in the areas of resettlement & rehabilitation and environment protection including effective ash-utilization, peripheral development and energy conservation practices"***

UPRVUNL endeavours to improve the quality of life in neighbourhood community through various community development initiative under its CSR policy.

COMMITMENT for CSR

"UPRVUNL commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society at large, especially the community in the neighbourhood of its operations by improving the quality of life of the people."

Guiding Principles

- Strive to improve standard of living of society at large, with preference to local and backward areas.
- Promote inclusive growth by focusing on needs of the deprived, under privileged, neglected and weaker sections of the society especially women, girl child, physically challenged and elderly persons.
- Contribute towards clean and sustainable development by protecting & maintaining the environment (air, soil and water), conserve natural resources.

Scope and Coverage

This Policy for CSR applies to formulation, implementation, monitoring, evaluation, documentation, reporting of CSR activities taken up by UPRVUNL.

This policy does not cover activities undertaken in pursuance of UPRVUNL's normal course of business and activities exclusively for benefit of UPRVUNL's employees or their family, as the same are not considered as CSR activities.

This policy is intended to be in conformity with the provisions of Companies Act 2013 and DPE (Department of Public Enterprises) Guidelines on CSR, if any. In case of






any contradiction between this policy and provisions of the Companies Act, the latter shall prevail.

Any new provision arising out of amendments to Companies Act, 2013 or rules made there under shall be construed to be a part of this policy. However, such new provisions shall be specifically incorporated in the policy.

Mechanism and Process

Towards fulfilment of its commitments for CSR and implementation of its Policy for CSR, mechanism adopted by UPRVUNL is as detailed below:

1.0 Structure

1.1 The Board level Corporate Social Responsibility Committee comprising at least three Directors shall recommend to the Board for approval of the policy, the amount of expenditure to be incurred on the activities and monitor from time to time the Policy for Corporate Social Responsibility approved by the Board. As on date there is no Independent Director on the Board of UPRVUNL thus the CSR Committee also does not have a Independent Director. As and when Independent Director is appointed in UPRVUNL accordingly the CSR Board level Committee shall be reconstituted.

1.2 Two-tier structure i.e. Project and Corporate Level is responsible for planning, implementation, monitoring and reporting on **CSR** projects.

1.3 A CSR Committee headed by Project Head shall be responsible for formulation, implementation and monitoring of CSR activities at their project.

1.4 At Head Quarter Chief Engineer (Civil-New Projects) / Chief Engineer (Civil), PPMM shall coordinate between project CSR Committee and HQ CSR Committee for their respective jurisdiction.

2.0 Programme

2.1 CSR programs undertaken by UPRVUNL include activities specified in Schedule VII of the Companies Act 2013 & rules made there under and any other activity for benefit of community at large. An Indicative list of CSR programs / projects of UPRVUNL is given at **Annexure-I**.

2.2 Focus areas of UPRVUNL CSR activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability and Energy Conservation promotion activities.

3.0 Fund Allocation & Expenditure

3.1 In line with the requirement of the Companies Act 2013 UPRVUNL will spend two percent (2.0%) of the average net profits (to be calculated in accordance with the



provisions of the Companies Act) made during the three immediately preceding financial years, for CSR activities.

3.2 UPRVUNL endeavours to fully spend the funds annually allocated for CSR activities / projects.

3.3 Surplus arising out of any CSR projects/ activities does not form part of business profit of UPRVUNL.

3.4 The unspent CSR amount in a particular year would not lapse. It would instead be carried forward to the next year for utilization for CSR activities only.

4.0 Planning & Implementation

4.1 UPRVUNL shall undertake CSR projects/activities with a view to achieve improvement in living standard of communities. Accordingly plans will be made to achieve these goals and activities to be undertaken at each location shall be identified.

4.2 CSR projects/activities shall be generally formulated based on Need Assessment Surveys (NAS) and/or inputs from Panchayat, District Administration,

4.3 Every effort shall be made to ensure that approved activities are implemented within schedule. Once an activity is approved and funds are allocated, the activity is continued and is carried forward in subsequent years until completed.

4.4 CSR activities shall be implemented through specialised and experienced agencies such as Government /Semi-Govt. Organizations, Non Government Organizations (NGO), Professional Consultancy Organizations, Contracting Agencies etc.

5.0 Monitoring, Evaluation & Reporting

5.1 Monitoring

Monitoring is done to ensure timely completion of activities and to achieve deliverables. Regular reviews are done at Project Level, wherein bottlenecks are identified and remedial measures are taken. Periodic MIS on status and issues of CSR activities is put up to appropriate level and intervention is sought wherever required. Review of companywide CSR activities and budget utilization is done at Corporate level.

5.2 Evaluation:

Effectiveness of CSR programme is assessed through both internal & external evaluation. Internal audits are carried out to verify effectiveness of implementation.

5.3 Reporting

An Annual Report on CSR containing details about the CSR policy and programmes implemented by UPRVUNL shall be included in the Board of Directors' Report for



every FY, as per the format prescribed under the Rules to Section 135 of Companies Act, 2013. The same shall be displayed on the UPRVUNL web site also.

ANNEXURE – I

Indicative list of CSR & Sustainability projects/ programs/ activities

Item No	Schedule VII	CSR & Sustainability projects/programs/activities
i	Eradicating hunger, poverty and malnutrition, promoting preventive health care and sanitation and safe drinking water	<ul style="list-style-type: none"> • Mobile Health Clinics, Medical Camps, training/ awareness programs on health, sanitation etc. • Infrastructure/ assets for hospitals/ PHCs etc. • Support for tuberculosis (TB) Control Program/ malaria eradication and other such deceases. • Disability Rehabilitation Centre (DRC) • Community/individual toilets, drains etc. • Water supply systems like piped water, hand pumps/tube wells, bore wells, etc. • Supply of drinking water
ii	Promoting education, including special education and employment enhancing vocational skills especially among children, women, elderly and the differently abled and livelihood enhancement projects.	<ul style="list-style-type: none"> • Distribution of study materials, Scholarships/ financial assistance to meritorious students • Infrastructure/ assets in Govt./ Govt. funded and other schools that charge equivalent fees • Infrastructure for education, Skill Development Centers, Industrial Training Institutes etc. • Vocational trainings, Adult education, Skill Development Centers, Industrial Training Institutes etc. • Vocational training, Adult Education, Coaching classes, Awareness programs • Support for agriculture produce/business • Medical/ Veterinary camps for livestock
iii	Promoting gender equality, empowering women, setting up homes and hotels for women and orphans, setting up old age homes, day care centers and such other facilities for senior citizens and measures for reducing inequalities faced by socially and economically backward groups.	<ul style="list-style-type: none"> • Vocational Training • Adult Education/Awareness Programs, Workshops/ Seminars on Gender Equality • Distribution of Bicycle for women empowerment • Infrastructure development of homes/ hostels for women, orphans, old age etc. • Other measures for reducing inequalities faced by socially and economically backward groups • Activities for the benefit of armed forces veterans, war widows and their dependents.
iv	Ensuring environmental sustainability, ecological balance, protection of flora and fauna, animal welfare, agro-forestry, conservation of natural	<ul style="list-style-type: none"> • Activities for protecting & maintaining environment (Air, Soil and Water) • Initiate & support measures to conserve natural resources (by reduction, reuse and recycling), optimize usage of renewable energy, increase energy efficiency and reduce GHG emissions.

	resources and maintaining quality of soil, air and water	<ul style="list-style-type: none"> • Awareness of Energy Conservation and providing Solar lamps / LED for general awareness. • Activities for Biodiversity Conservation, protection Fauna & Flora restoring ecological balance. • Promoting Animal Welfare & Agro Forestry. • Awareness/ training programs/ workshops, seminars on sustainable development.
v	Social business projects	<ul style="list-style-type: none"> • Construction/ Renovation of Community Centres, Bus shelters Internal/ approach Roads, culverts etc. Ponds/ lakes etc. • Renewable energy projects • Strengthening Electrical infrastructure • Other Social infrastructure
vi	Slum area development	<ul style="list-style-type: none"> • Activities for slum area development

Note* Any other activities based on need & requirement could be taken up in-line with the provision of Companies Act 2013 subject to the approval of the CSR committee and the Board of UPRVUNL.






कार्यालय खण्ड विकास अधिकारी चोपन, सोनभद्र।

पत्रांक 1039 / का0सो0रि0 / 2015-16

दिनांक 04/02/2016

मुख्य महाप्रबन्धक,
ओबरा तापीय परियोजना
ओबरा, सोनभद्र।


विषय - कार्पोट सोशल रिसर्पोसविलिटी के अन्तर्गत कार्ययोजना।

कृपया अपने कार्यालय के पत्र सं0 4834 / मु0म0प्र0 / डब्लू-1 / 83 बी-16 का सन्दर्भ ग्रहण करने का कष्ट करें। इस सम्बन्ध में ओबरा ताप विद्युत गृह के आस-पास के क्षेत्रों में सी0एस0आर0 के अन्तर्गत कराये जाने वाले कार्य एवं उसकी अनुमानित लागत का विवरण निम्नवत् है:-

क्र0 सं0	कार्य का नाम	कार्यस्थल	यूनिट	मात्रा	दर (लाख रू0 में)	अनुमानित लागत (लाख रू0 में)
1	स्कूल शौचालय निर्माण बालक-बालिका हेतु अलग-अलग	ग्राम पंचायत सेमिया, जुगैल, टापू, घटिहटा आदि।	नग	50	6.00	300.00
2	सिलाई-कढ़ाई एवं मेंहदी प्रशिक्षण	ग्राम पंचायत सेमिया, विल्ली मारकुण्डी, जुगैल आदि।	नग	20 प्रशिक्षण सत्र नोट:- 01 प्रशिक्षण सत्र 03 माह का होगा जिसमें प्रति प्रशिक्षण सत्र में 200 पुरुष/महिलायें प्रशिक्षण लेंगे।	1.00	20.00
3	मध्याह्न भोजन शेड	ग्राम पंचायत बिल्लीमारकुण्डी, जुगैल, टापू, वर्दिया आदि।	नग	50	5.00	250.00
4	हैण्ड पम्प नरभूमत का प्रशिक्षण	ग्राम पंचायत बिल्लीमारकुण्डी, जुगैल, टापू, वर्दिया, घटिहटा आदि।	नग	20 प्रशिक्षण सत्र नोट:- 01 प्रशिक्षण सत्र 02 माह का होगा जिसमें प्रति प्रशिक्षण सत्र में 100 पुरुष प्रशिक्षण लेंगे।	1.00	20.00
5	सोलर स्ट्रीट लाईट	ग्राम पंचायत विल्ली मारकुण्डी, टापू, वर्दिया, सिन्दूरिया, गोठानी, बैरपुर आदि।	नग	500	1.00	500.00
6	हैण्ड पम्प स्थापना	ग्राम पंचायत विल्ली मारकुण्डी, टापू, वर्दिया, सिन्दूरिया, गोठानी, बैरपुर आदि।	नग	500	1.00	500.00
7	एल0ई0डी0 लाईट वितरण	कुरछा, घोरिया, पनारी, अगोरीखास, खरहरा, जुगैल, सिन्दूरिया, टापू आदि।	नग	6000 नोट:- प्रति घर 03 एल0ई0डी0 लाईट वितरित किये जायेंगे।	0.0075	45.00
8	विकलांग उपकरण वितरण	कुरछा, घोरिया, पनारी, अगोरीखास, खरहरा, जुगैल, टापू आदि।	नग	55 ट्राई साईकिल, 05 व्हील चेयर, 20 नग श्रवण यंत्र, 80 नग बैसाखी, 60 नग बाकिंग स्टीक (लगभग)		12.00
9	मेडिकल कैम्प/स्वास्थ्य	कुरछा, घोरिया, पनारी, अगोरीखास, खरहरा,	नग	50 मेडिकल कैम्प नोट:- प्रत्येक मेडिकल	2.00	100.00

खण्ड विकास अधिकारी
चोपन-सोनभद्र

	जाँच शिविर	जुगैल, टापू आदि।		कैम्प में 500 व्यक्तियों का ईलाज/परीक्षण किया जायेगा।		
10	पेयजल ओवर हैड टैंक, समरसेवल पम्प एवं सोलर सिस्टम	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, पनारी, आदि।	नग	15	15.00	225.00
11	आर0ओ0 प्लान्ट, बोरिंग पम्प एवं सोलर सिस्टम सहित (ग्राम पंचायत की जमीन पर)	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, चोपन, आदि।	नग	20	12.00	240.00
12	सोलर पम्प आधारित पेयजल	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, आदि।	नग	50	4.00	200.00
13	सार्वजनिक तालाब का निर्माण घाट सहित	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, चोपन, पटवध आदि।	नग	15	20.00	300.00
14	कम्प्यूटर प्रशिक्षण	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, चोपन, आदि।	-	20 प्रशिक्षण सत्र 03 माह का होगा जिसमें प्रति प्रशिक्षण सत्र में 50 पुरुष/महिलायें प्रशिक्षण लेंगे।	2.00	40.00
15	सायुदायिक शौचालय निर्माण	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, पटवध, चोपन आदि।	नग	25	12.00	300.00
16	कोचिंग क्लासेस	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, पटवध, चोपन आदि।	-	20 प्रशिक्षण सत्र 03 माह का होगा जिसमें प्रति प्रशिक्षण सत्र में 50 पुरुष/महिलायें प्रशिक्षण लेंगे।	1.00	20.00
17	बालिकायों का साईकिल वितरण	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, पटवध, चोपन आदि।	नग	700	0.05	35.00
18	सी0सी0 रोड एवं नाली निर्माण	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, पटवध, चोपन आदि।	किमी0	लगभग 8 किमी0	40.00 लगभग	320.00
19	विद्यालय में मेज, कुर्सी, बैच इत्याद	ग्राम पंचायत बिल्ली मारकुण्डी, वर्दिया, सिन्दूरिया, पटवध, चोपन आदि।	नग	50	1.00	50.00
-योग -						3477.00


 स्वच्छ इतिहास अधिकारी
 चोपन तालाब

कार्यालय जिलाधिकारी, सोनभद्र

पत्रांक 603-04 / सी.एस.आर./2015-16

दिनांक- 24-02-2016

मुख्य महा प्रबन्धक,
ओबरा तापीय परियोजना,
ओबरा, सोनभद्र

विषय - कार्पोरेट सोशल रिस्पॉन्सिबिलिटी के अन्तर्गत कार्य योजना

आज दिनांक-24.02.2016 को अपरान्ह 1:00 बजे अधोहस्ताक्षरी के कार्यालय में सी.एस.आर. के सम्बन्ध में जनपद के विभिन्न परियोजनाओं के प्रतिनिधियों से विचार-विमर्श किया गया, जिसमें आपके प्रतिष्ठान के प्रतिनिधि द्वारा अवगत कराया गया कि ओबरा तापीय परियोजना, ओबरा, सोनभद्र के परिसर में ओबरा-“सी” विस्तार 2 x 660 मे0वा0 परियोजना स्थापित किया जाना प्रस्तावित है, जिसकी पर्यावरण स्वीकृति पर्यावरण मन्त्रालय, भारत सरकार से प्रतीक्षित है। एम.ओ.ई.एफ.सी.सी. ने अपने “टर्मस् आफ रिफरेन्स” में ओबरा तापीय परियोजना के आस-पास के क्षेत्रों में सी.एस.आर. कार्यों को सम्पादित कराने हेतु कार्य योजना प्रस्तुत करने के निर्देश दिये हैं। तत्कम में एतद्द्वारा जनपद सोनभद्र में आगामी पाँच वर्षों में कराये जाने वाले कार्यों की स्वीकृति निम्न विवरणानुसार प्रदान की जाती है :-

क्र० सं०	कार्य विवरण	अनुमानित लागत (लाख रू० में)
1	बालक-बालिकाओं हेतु अलग-अलग स्कूल शौचालय निर्माण	300.00
2	सिलाई-कढ़ाई एवं मेंहदी प्रशिक्षण कार्यक्रम	20.00
3	मध्यान्ह भोजन शेड निर्माण	250.00
4	हैण्ड पम्प मरम्मत प्रशिक्षण कार्यक्रम	20.00
5	सोलर स्ट्रीट लाईट आपूर्ति एवं स्थापन का कार्य	500.00
6	हैण्ड पम्प स्थापन का कार्य	500.00
7	एल0ई0डी0 लाईट वितरण	45.00
8	दिव्यांग उपकरणों का वितरण	12.00
9	पेयजल आपूर्ति हेतु ओवरहेड टैंक, सबमर्सिबल पम्प एवं सोलर सिस्टम स्थापना का कार्य	225.00
10	शुद्ध पेय जल आपूर्ति हेतु बोरिंग पम्प एवं सोलर सिस्टम सहित आर0ओ0 प्लांट की स्थापना का कार्य	240.00
11	पेयजल की आपूर्ति हेतु सोलर पम्प की स्थापना का कार्य	200.00
12	घाट सहित सार्वजनिक तालाब का निर्माण का कार्य	100.00
13	कम्प्यूटर प्रशिक्षण कार्यक्रम	40.00
14	सामुदायिक शौचालय का निर्माण कार्य	100.00

क्रमशः...../2

(2)

क्र० सं०	कार्य विवरण	अनुमानित लागत (लाख रू० में)
15	कक्षा-12 तक के विद्यार्थियों हेतु कोचिंग क्लासेज का संचालन कार्य	20.00
16	गरीब बालिकाओं को साईकिल वितरण का कार्य	35.00
17	सी०सी० रोड एवं नाली निर्माण का कार्य	320.00
18	विद्यालयों में मेज, कुर्सी, बेंच इत्यादि उपलब्ध कराने का कार्य	50.00
19	ऑगन बाड़ी केन्द्रों के सुधार/नवीनीकरण का कार्य	250.00
20	विद्यालयों का सौंदर्यकरण का कार्य	250.00
21	पर्यटन विकास का कार्य	500.00
	कुल योग	3977

उपरोक्त कार्य विवरण एवं उसकी अनुमानित लागत अनन्तिम है, जिसमें कार्य की आवश्यकता के अनुरूप परिवर्तन किया जा सकता है। उपरोक्त कार्य विभाग द्वारा धन अवमुक्त किये जाने के उपरान्त जनपद के किसी भी क्षेत्र में आवश्यकतानुसार कराया जा सकता है।

(जी०एस० प्रियदर्शी)
जिलाधिकारी,
सोनभद्र

पृ० पत्रांक...../यथोक्त।

तददिनांकित।

प्रतिलिपि निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :-

85-2-16

1. मुख्य विकास अधिकारी, सोनभद्र
2. सहायक आयुक्त उद्योग, जिला उद्योग एवं उद्यम प्रोत्साहन केन्द्र, सोनभद्र

(जी०एस० प्रियदर्शी)
जिलाधिकारी,
सोनभद्र

CIN-U40101UP1980SGC005065

कार्यालय अधिशासी अभियन्ता
ओबरा 'सी' जानपद निर्माण खण्ड-11
उ०प्र०रा०वि०उत्पादन नि०लि०
(उ०प्र० सरकार का उपक्रम)
पो० आ० : ओबरा 231219
जिला : सोनभद्र (उ०प्र०)



OFFICE OF THE EXECUTIVE ENGINEER
OBRA 'C' CIVIL CONSTRUCTION DIVISION-II
U.P.R.VIDYUT UTPADAN NIGAM LTD.
(A U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)

No.: 69 /Obra 'C'/CCD-II/LOI

Date: 02/02/16

Sub: Order for the socio-economic study in radius of 10KM area from proposed 2x660MW Obra 'C' Thermal Power Project.

Department of Humanities & Social Science
I.I.T. Kanpur-208016

Kind Attention : Dr. Deep Mukherjee, Assistant Professor(Economics)

Dear Sir,

With reference to your offer received via E-mail No. Nil dt. 02.02.2016, an order is hereby placed with you for Rs.9,50,000.00 (Rs. Nine lacs fifty thousand) only inclusive of all taxes to carry out studies for socio-economic conditions in 10km radius from proposed 2x660MW Obra 'C' Thermal Power Project. The details of work are as under:-

- I. Detailed socio-economic study shall be carried out for the study area comprising of 10km from the proposed 2x660MW Obra 'C' Thermal Power Project.
- II. Action plan for identification of local employable youth for training in skills relevant to the project for eventual employment in the project itself shall be formulated.
- III. If the area has tribal population it shall be ensured that the right of tribals are well protected. The project proponent shall accordingly identify tribal issues under various provisions of the law of the land.
- IV. A detailed CSR plan along with activities wise break up of financial commitment shall be prepared. CSR component shall be identified considering need based assessment study. Sustainable income generating measures which can help in upliftment of poor section of society which is consistent with the traditional skills of the people shall be identified. The programme can include activities such as development of fodder farm, fruit bearing orchards, vocational training etc. Separate budget for community development activities and income generating programmes shall be specified.
- V. While formulating CSR schemes it shall be ensured that an in-built monitoring mechanism for the schemes identified are in place and mechanism for conducting annual social audit from the nearest government institute of repute in the region shall be prepared. The project proponent shall also provide action plan for the status of implementation of the scheme from time to time.

To carry out above mentioned work following terms & condition will be applicable:-

- 1- Charges for the study and project : 9.5 Lacs (Inclusive of all taxes)
- 2- Completion period : 2.5 Month

Data collection	One Month
Data Tabulation	One Month
Report preparation & submission	0.5 Month

- 3- Date of Start : 07.02.2016
- 4- Date of Completion : 22.04.2016
- 5- Preliminary report should be submitted in one month after start of the work in two copies alongwith soft copy for comments from project authority.
- 6- Final report should be submitted after completion of study in five copies alongwith soft copy to the office of undersigned.
- 7- The payment shall be made 100% in advance through Cheque/DD in favour of "Registrar, I.I.T.Kanpur."

Engineer-in-Charge for the subject work shall be Executive Engineer, Obra 'C' Civil Construction Division-II, Obra Thermal Power Station, Obra. You are requested to contract the undersigned for further instruction and execution of work.

Thanks.

Yours faithfully

(Signature)
02/02/16
(Diwakar Swaroop)
Executive Engineer

No.: /Obra 'C'/CCD-II/LOI/of dated-

Copy forwarded to the following for information:-

01. CGM, Obra Thermal Power Project, Obra-Sonebhadra (U.P.)
02. Chief Engineer (Civil New Project), UPRVUNL, 7th floor Shakti Bhawan Extn., 14-Ashok Marg, Lucknow.
03. SE, Obra 'C' Civil Construction Circle, Obra.
04. Dy. Chief Account Officer, Payment & Account Division, Obra.

(Diwakar Swaroop)
Executive Engineer

कार्यालय अधिशासी अभियन्ता
क्रेप तथा पर्यावरण एवं सुरक्षा खण्ड
ओबरा तापीय विद्युत परियोजना
उ०प्र०राज्य विद्युत उत्पादन नि०लि०
(उ०प्र० सरकार का उपक्रम)
प०० आ० : ओबरा 231219
जिला : सोनभद्र (उ०प्र०)



OFFICE OF THE EXECUTIVE ENGINEER
CREP & ENVIRONMENT & SAFETY DIVISION
OBRA THERMAL POWER PROJECT
U.P. RAJYA VIDYUT UTPADAN NIGAM LTD.
(A U.P. Govt. Undertaking)
P.O.: OBRA - 231219
DISTRICT: SONEBHADRA (UP)

No. /CESD/U-3/Vol-20

Dated: 16.02.2016

Subject: Monthly Environmental Report for the month of January-2016.

Chief Engineer
Central Electricity Authority
Conservation & Efficiency Division
Sewa Bhawan, R.K. Puram,
New Delhi-110066.

Kindly find enclosed herewith the monthly environmental report regarding ash generation/Utilization of Obra TPS, sampling & testing of polluted water, ambient air from stack of units in prescribed format for the month of January-2015 for your kind information and necessary action. The sampling and testing of water, air, noise etc. has been conducted by P.R. Lucknow.

Encl: As above.

(Diwakar Swaroop)
Executive Engineer

No. 388 /CESD/U-3/Vol-20/dated

Copy forwarded to the following for information and necessary action:-

01. Director, Central Electricity Authority, Conservation & Efficiency Division, Sewa Bhawan, R.K. Puram, New Delhi-110066 (with above enclosure).
02. Chief Engineer (Civil), 7th floor, Shakti Bhawan Extn., 14-Ashok Marg, Lucknow (with above enclosure).
03. Member Secretary, Central Pollution Control Board, Pick-up Bhawan, Gomati Nagar, Lucknow (with above enclosure).
04. Member Secretary, U.P. Pollution Control Board, Third floor, Pick-up Bhawan, Gomati Nagar, Lucknow (with above enclosure).
05. Regional officer, U.P. Pollution Control Board, Uttar Muhal, Robertsganj-Sonebhadra (with above enclosure).
06. Dy. Director, Ministry of Environment and Forest, Central Regional Office, Kendriya Bhawan, 5th road, sector-H, Aliganj, Lucknow-226024. (with above enclosure).
07. General Manager (Admn.), U.P.R.V.U.N.Ltd, Obra Thermal Power Station, Obra-Sonebhadra (with above enclosure).
- 08. Superintending Engineer, Obra 'C' Civil Construction Circle, Obra Thermal Power Station, Obra-Sonebhadra (with above enclosure).
09. Executive Engineer, Water Treatment Plant & Lab Division, BTPS, Obra-Sonebhadra (with above enclosure).
10. Executive Engineer, Boiler Maintenance Division-I, 2x50MW, 'A' Thermal Power Station, U.P.R.V.U.N.Ltd, Obra-Sonebhadra.
11. Executive Engineer, Ash Handling Division-I, 'B' Thermal Power Station, U.P.R.V.U.N.Ltd, Obra-Sonebhadra.

Encl: As above.

पर्यावरण (ओबरा 'C')
ए.ए.

(Diwakar Swaroop)
Executive Engineer

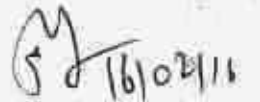
शुद्धी-शुद्धी

राख उत्सर्जन एवं उपयोग सम्बन्धी विवरण

परियोजना का नाम :- ओबरा ताप विद्युत गृह, ओबरा, जिला-सोनभद्र

माह : जनवरी-2016

क्र०सं०	विवरण	इकाई	मात्रा
1.	कोयले का खर्च	1000 मी०टन	306.808
2.	उत्सर्जित राख	1000 मी०टन	126.612
3.	ऐश पॉड में राख की मात्रा दिसम्बर-2015 तक	1000 मी०टन	34462.909
4.	राख की खपत सम्बन्धी विवरण		-
(क)	सीमेन्ट उत्पादन में	1000 मी०टन	27.365
(ख)	भराई हेतु	1000 मी०टन	-
(ग)	ईंट निर्माण में	1000 मी०टन	-
(घ)	कृषि कार्य हेतु	1000 मी०टन	-
(ङ.)	रोड एम्बैकमेन्ट	1000 मी०टन	-
(च)	अन्य कार्य	1000 मी०टन	-
5.	कुल राख की खपत	1000 मी०टन	27.365
6.	ऐश पॉड में राख की शेष मात्रा जनवरी-2016 तक	1000 मी०टन	34562.156



(दिवाकर स्वरूप)
अधिसासी अभियन्ता



CSIR-IITR

सी.एस.आई.आर - भारतीय विषविज्ञान अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
महात्मा गांधी मार्ग, पोस्ट बॉक्स नं० 80,
लखनऊ - 226 001 (भारत)

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
(Council of Scientific and Industrial Research)

MAHATMA GANDHI MARG, POST BOX NO. 80
LUCKNOW-226 001 (U.P.) INDIA

A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015
Date: 29th January 2016

NOISE MONITORING DATA OF OTPS

(Phase-V)

Site : M/s. Obra Thermal Power Station, Sonbhadra

Date of Monitoring : 20-01-2016 to 21-01-2016

S.No.	Location Name	Noise level dB(A)
a.	At crushers of 'A' TPS. Obra	74.8
b.	At crushers of 'B' TPS. Obra	79.4
c.	At Ball Mill / Bowl Mills area (Near Ball Mills) 'A' TPS. Obra	96.4
d.	At Ball Mill / Bowl Mills area (Near Ball Mills) 'B' TPS. Obra	88.9
e.	ID fan area of 'A' TPS. Obra	88.0
f.	ID fan area of 'B' TPS. Obra	91.8
g.	In Control Room of 'A' TPS. Machines	68.5
h.	In Control Room of 'B' TPS. Machines	70.8
i.	T.G. Hall near T.G. set of 'A' TPS. Obra	87.6
j.	T.G. Hall near T.G. set of 'B' TPS. Obra	97.8
k.	Office area at CGM Office (Administrative Building)	65.4
l.	Colony area at V.I.P.	58.6

A.H.Khan
(A.H.Khan)



CSIR-IITR

सी.एस.आई.आर - भारतीय विषविज्ञान अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्)

महात्मा गांधी मार्ग, पोस्ट बॉक्स नं० 80,

लखनऊ - 226 001 (भारत)

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

(Council of Scientific and Industrial Research)

MAHATMA GANDHI MARG, POST BOX NO. 80

LUCKNOW-226 001 (U.P.) INDIA

A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015

Date: 29th January, 2016

**ANALYTICAL REPORT ON MERCURY IN AMBIENT AIR
(Phase-V)**

Site : Around Obra Thermal Power Station Obra, Sonebhadra

Type of Sampling : 24 hourly basis

Season & Weather : Winter & Clear day

S.No	Location and Date	Parameter	Concentration($\mu\text{g}/\text{m}^3$)
1.	Plant Area-WTP 20 th January, 2016	Hg	ND
2.	Colony-VIP Guest House 20 th January, 2016	Hg	ND

A.H.Khan

(A.H. Khan)



सी.एस.आई.आर - भारतीय विषविज्ञान अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
महात्मा गांधी मार्ग, पोस्ट बॉक्स नं० 80,
लखनऊ - 226 001 (भारत)

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
(Council of Scientific and Industrial Research)

MAHATMA GANDHI MARG, POST BOX NO. 80
LUCKNOW-226 001 (U.P.) INDIA

CSIR-IITR

A.H.Khan
Principal Scientist,
Environmental Monitoring Division

IITR/RPBD/903/OBRA/2015

Date: 29th January, 2016

ANALYTICAL REPORT ON MERCURY IN COAL (Phase-V)

Site : Obra Thermal Power Station Obra, Sonbhadra

Type of Sampling : Coal dust

Season & Weather : Winter & Clear day

S.No.	Coal Sample No.	Date of Sampling	Concentration($\mu\text{g/g}$)
1.	1	21-01-2016	0.058
2.	2	21-01-2016	0.068

AH Khan

(A.H. Khan)



CSIR-IITR Report Code: SSP-299
Date of Preparation: 29th January, 2016
Total No. of pages: 08

**COLLECTION OF SAMPLES FROM DIFFERENT PLACES
OF OBRA THERMAL POWER STATION, SONEBHADRA
FOR TESTING OF VARIOUS PARAMETERS**

(Phase - V)

FINAL REPORT

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH
(Formerly: Industrial Toxicology Research Centre)
Vishvgyan Bhawan, 31, Mahatma Gandhi Marg,
Post Box No 80, Lucknow - 226001
Telefax: 2628227, 2611547
Email: rpbdiitr@yahoo.com

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4- P.I. Copy

Send to civil

[Signature]
12/1/16

Page 1 of 8

Test Report

1. Study Code No. : SSP- 299
2. Date of Sample Collection/ Monitoring : 20-01-2016 to 21-01-2016
3. Test Required by Sponsor

1. Stack Monitoring Parameters:

Units	Unit No.	Units Monitored*	Parameters
2 x 50 MW	1,2	1,2	Particulate Matter, SO ₂ , NO _x
1 x 200 MW	9	9	
2 x 200 MW	12,13	12,13	

*Note: Scope of work: Monthly 5 units

2. Ambient Air Quality Parameters:

S. No.	Locations	Parameters
1.	Plant Area-WTP	RSPM, SPM, SO ₂ , NO _x
2.	Colony- VIP Guest House	

3. Industrial Effluent Quality Parameters:

S. No.	Samples	Parameters
1.	Plant Effluent (Jharia Nala)	pH, TDS, TSS, Oil & Grease,
2.	Ash Pond Effluent	
3.	ETP Inlet	
4.	ETP Outlet	

4. Methodologies and reference standards used for testing

i. Stack Monitoring

- Flow Rate : IS: 11255 (Part 3): 2008
 SPM : IS: 11255 (Part 1): 1985, reaffirmed in 2003
 SO₂ : IS: 11255 (Part 2): 1985, reaffirmed in 2003
 NO_x : IS: 11255 (Part 7): 2005

ii. Ambient Air Quality Monitoring

- RSPM : IS: 5182 (Part 23): 2006
 SPM : IS: 5182 (Part-4): 1999
 SO₂ : IS: 5182 (Part-2): 2001
 NO_x : IS: 5182 (Part-6): 2006

iii. Effluent Sampling and Analysis

Grab sampling was done at the desired locations during plant in operation. The collected samples were preserved, stored and analyzed as per methods given in "Standard Methods for the Examination of Water and Wastewater (APHA-2012, AWWA-2012 & WEF-2005)".

5. Date study initiated : 20-01-2016

6. Date study completed : 29-01-2016

7. Test Results

STACK EMISSION DATA OF OTPS
(2x50 MW Units)

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit-1	Unit-2
1.	Date of sampling	21-01-2016	21-01-2016
2.	Stack attached to	ESP outlet	ESP outlet
3.	Stack height from ground (m)	Not Available	Not Available
4.	Type of stack	Circular	Circular
5.	Type of duct	Rectangle	Rectangle
6.	Material of duct	MS	MS
7.	Height of sampling port from ground (m)	3	3
8.	Diameter of sampling port (mm)	10	10
9.	Load during monitoring (MW)	28	26
10.	Type of fuel used	Coal	Coal
11.	Quantity of fuel used (t/hr)	50	50
12.	Ambient temperature (K)	293	289
13.	Duct temperature (K)	423	406
14.	Flue gas velocity (m/sec)	14.1	14.4
15.	Sampling period (min)	30	30
16.	Concentration of pollutants (mg/Nm ³)		
	Particulate Matter	801	835
	SO ₂	512	496
	NO _x	242	287

Note: Information from Sl. No.2 to 11 provided by the sponsor

Emission Standards for Coal base Thermal Power Plant:

Particulate matter – 100 mg/Nm³

SO₂ and NO_x – 600 mg/Nm³

**STACK EMISSION DATA OF OTPS
(1x200 MW Unit)**

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit 9*
1.	Date of sampling	21-01-2016
2.	Stack attached to	ESP Outlet
3.	Stack height from ground (m)	170
4.	Type of stack	Circular
5.	Type of duct	Rectangle
6.	Material of duct	Mild Steel
7.	Height of sampling port from ground (m)	15
8.	Diameter of sampling port (mm)	10
9.	Load during monitoring (MW)	149
10.	Type of fuel used	Coal
11.	Quantity of fuel used (t/hr)	132
12.	Ambient temperature (K)	288
13.	Duct temperature (K)	412
14.	Flue gas velocity (m/sec)	22.5
15.	Sampling period (min)	30
16.	Concentration of pollutants (mg/Nm ³)	
	Particulate Matter	97
	SO ₂	575
	NO _x	318

Note: Information from Sl. No.2 to 11 provided by the sponsor

**Unit- 9 (with new ESP operational since October, 2011)*

Emission Standards for Coal base Thermal Power Plant:

Particulate matter – 100 mg/Nm³

SO₂ and NO_x – 600 mg/Nm³

**STACK EMISSION DATA OF OTPS
(2x200 MW Units)**

Site: M/s. Obra Thermal Power Station, Sonebhadra

Sl. No.	Particulars	Unit 12	Unit 13
1.	Date of sampling	20-01-2016	20-01-2016
2.	Stack attached to	ESP Outlet	ESP Outlet
3.	Stack height from ground (m)	170	170
4.	Type of stack	Circular	Circular
5.	Type of duct	Rectangle	Rectangle
6.	Material of duct	Mild Steel	Mild Steel
7.	Height of sampling port from ground (m)	3	3
8.	Diameter of sampling port (mm)	10	10
9.	Load during monitoring (MW)	128	134
10.	Type of fuel used	Coal	Coal
11.	Quantity of fuel used (t/hr)	130	131
12.	Ambient temperature (K)	287	285
13.	Duct temperature (K)	409	413
14.	Flue gas velocity (m/sec)	21.2	21.8
15.	Sampling period (min)	30	30
16.	Concentration of pollutants (mg/Nm ³)		
	Particulate Matter	850	920
	SO ₂	573	595
	NO _x	330	308

Note: Information from Sl. No.2 to 11 provided by the sponsor

Emission Standards for Coal base Thermal Power Plant:

Particulate matter – 100 mg/Nm³

SO₂ and NO_x – 600 mg/Nm³

AMBIENT AIR QUALITY DATA OF OTPS

Site : M/s. Obra Thermal Power Station, Sonebhadra
Type of Sampling : Continuous on 24 hourly basis
Season & Weather : Winter & Clear day

Sl. No.	Location and Date	Parameter	Concentration ($\mu\text{g}/\text{m}^3$)	*NAAQS-2009 ($\mu\text{g}/\text{m}^3$)
1.	Plant Area-WTP 20 th January, 2016	RSPM	274	100
		SPM	476	500**
		SO ₂	20.2	80
		NO _x	36.3	80
2.	Colony- VIP Guest House 20 th January, 2016	RSPM	211	100
		SPM	450	500**
		SO ₂	14.5	80
		NO _x	26.7	80

* National Ambient Air Quality Standards 2009

** Old National Ambient Air Quality Standards

EFFLUENTS QUALITY DATA OF OTPS

Site : M/s. Obra Thermal Power Station, Sonebhadra
Source of Sample : Industrial Effluent
Type of Sample : Grab
Date of Sampling : January 21st, 2016
Season and Weather : Winter & Clear day

Physico-chemical Parameters

Sl. No	Parameters	Unit	Plant Effluent (Jharia Nala)	Ash Pond Effluent	ETP		Standard Tolerance Limits (max)
					Inlet	Outlet	
1.	pH	-	7.42	7.54	7.18	7.22	5.5-9.0
2.	TSS	mg/l	161	169	120	84	100
3.	TDS	mg/l	134	156	105	62	NA
4.	Oil & Grease	mg/l	2.4	2.6	2.2	2.0	10

Note: Sampling locations as suggested by the sponsor

NA- Not Available

* All values are in mg/l except pH

8. Conclusions

The results of stack emission monitoring were compared with the Thermal Power Emission Standards (Ministry of Environment, forest and Climate Change Notification, dated 07th December, 2015). Concentrations of particulate matters for Unit-1 Unit-2, Unit-12 and Unit-13 were higher than the prescribed limit of 100 mg/m³ and for Unit-9 was within the prescribed limit of 100 mg/m³. SO₂ and NO_x were within the prescribed limits (600 mg/Nm³ for both parameters) for all the Units.

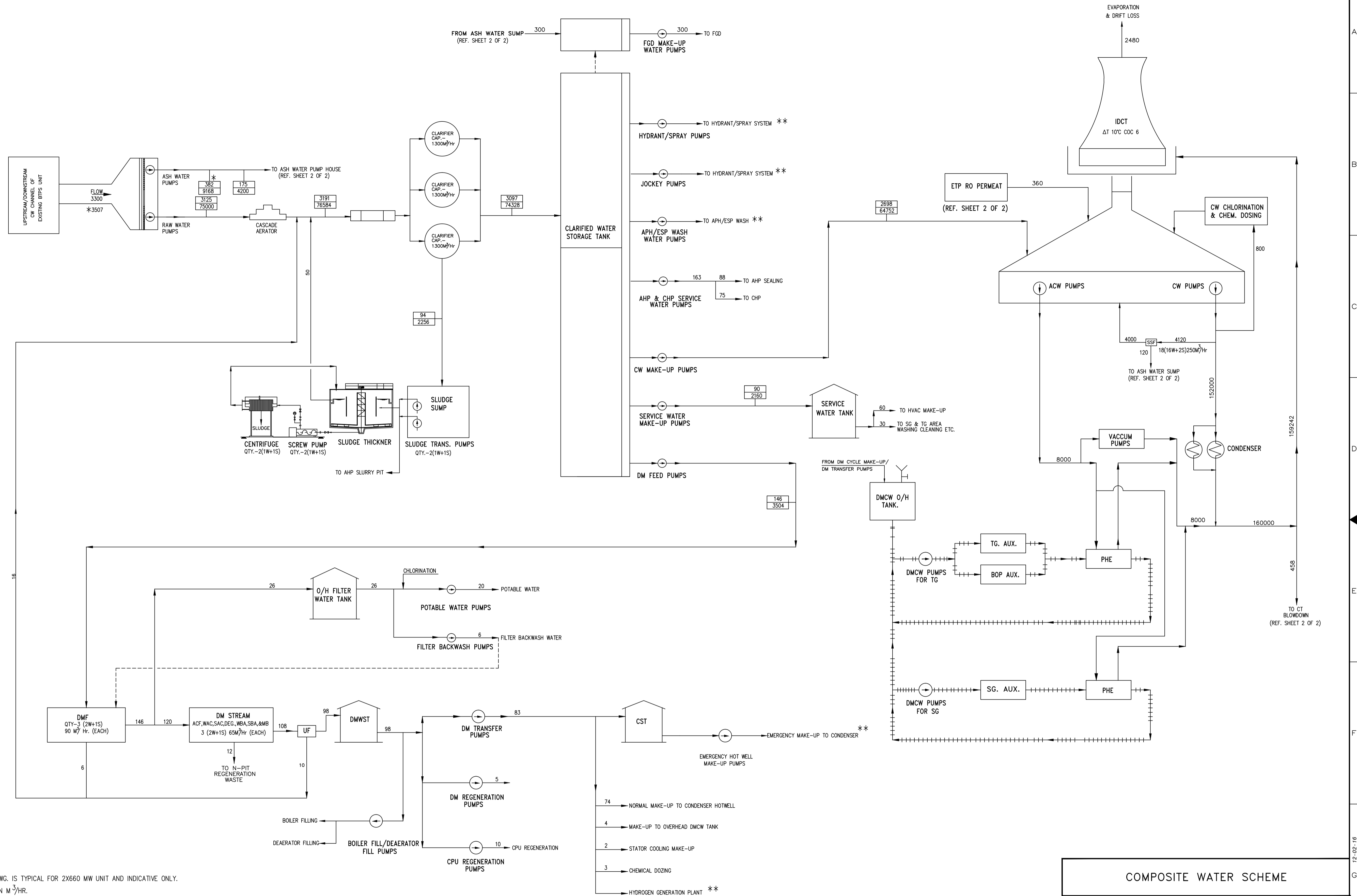
The results of ambient air quality monitoring were compared with the National Ambient Air Quality Standards (NAAQS-09) for industrial, residential, rural and other area. Values of RSPM (PM₁₀) at both the locations (Plant Area WTP and colony- VIP Guest House) were above the permissible limit of 100 µg/m³. The corresponding values of SPM were within the permissible limit of 500 µg/m³ at both the locations as per old NAAQS. SO₂ and NO_x were within the permissible limits of 80 µg/m³ at both the locations.

The results of effluent analysis were compared with the General Standards for Discharge of Environmental Pollutants, Part-A: Effluents, into Inland Surface Waters. The values were found within the permissible limits. (Source: GSR 801 (E), EPA, 1986, BIS IS 10500 dated December 24th, 2009) except for TSS in plant effluent, ash pond effluent and ETP inlet.

AH Khan
(A.H. Khan)
Principal Scientist

9. Notes:

- a. The above results relate only to the tests required by sponsor as indicated in item 3 (Page 3 of 8).
- b. The report shall not be reproduced in fragments without the written approval of Director, CSIR-IITR, Lucknow.
- c. This report shall not be used for any purpose other than environmental management related activities of the plant/ site by the sponsor.



- NOTES:-**
- THIS SCHEME SHOWN IN THIS DWG. IS TYPICAL FOR 2X660 MW UNIT AND INDICATIVE ONLY.
 - ALL THE FIGURES SHOWN ARE IN M³/HR.
 - CYCLE OF CONCENTRATION FOR CLOSED COOLING WATER SYSTEM IS 6.0
 - TEMPERATURE RISE ACROSS THE CONDENSER IS 10°C
 - HEAT CYCLE MAKE UP IS 1.5% OF STEAM FLOW AT BMCR
 - * * MARKED DATA ARE FOR NO ASH WATER RECOVERY.
 - * * * MARKED DATA ARE FOR OCCASIONAL USE.
 - ABOVE WATER BALANCE IS MADE CONSIDERING FLY ASH DISPOSAL THROUGH HCSO SYSTEM AND BOTTOM ASH IN LEAN SLURRY DISPOSAL SYSTEM.

NO.	DATE	REVISION	BY	CHECKED	DATE	DESCRIPTION
1	12.02.16	1	S.K.DE	D.B	12.02.16	GENERALLY REVISED
2	25.01.16	2	S.K.DE	D.B	25.01.16	REVISED AS PER MOEF NORMS

COMPOSITE WATER SCHEME

OBRA "C" EXTENSION THERMAL POWER PROJECT
2 x 660 MW UNIT
SONEBHADRA (UP)

UTTAR PRADESH RAJYA VIDYUT
UTPADAN NIGAM LIMITED

RELEASE STATUS	DATE	SIGNATURE
PRELIMINARY		
FOR TENDER ONLY		
FOR CONSTRUCTION		
ARCHITECTURAL		
CIVIL & STRUCTURAL		
ELECTRICAL		
INSTRUMENTATION		
MECHANICAL		

DRAWN : S.K.DE CHECKED : D.B SCALE : NIL
 REVIEWED : P.G DATE : 30.03.15
 APPROVED : D. DE JOB NO. : 14A22

DWG. NO. 14A22-DWG-M-014 (SHT. 1 OF 2) REV. 2