



MAHANADI COALFIELDS LIMITED

(A subsidiary of Coal India Limited)

OFFICE OF THE PROJECT OFFICER

ANANTA OPENCAST PROJECT

P.O. DERA - 759 103, DIST: ANGUL (ORISSA)

Ref.MCL/Ananta/Envt/F-20/2014/ 7551

Date. 17/11/2014

To

The Chief Conservator of Forest,
Regional Office, Eastern Region,
Ministry of Environment & Forest
A-3, Chandrasekharpur,
Bhubaneswar- 751 023

Sub: Submission of half yearly progress report for the period from April 2014 to Septmeber '2014 on the compliance of the Environmental Clearance condition imposed by Ministry of Environment & Forest in respect of Ananta Expansion Project (12.00 MTY).

Dear Sir,

Enclosed please find herewith the half yearly Compliance Report for Environmental Conditions vide your letter No. No.J-11015/83/2005-IA.II(M) dated 14.07.2006 in respect Ananta Expansion Project (12.00 MTY) for the period from April 2014 to Septmeber2014 for your kind information.

Encl.: As above.

Yours faithfully,

Project Officer,
Ananta OC Project.

Copy to:

1. Sri P.B. Rastogi ,Director , I A Monitoring Cell, (BY REGD POST WITH A/D)
Ministry of Environmet & Forest ,
Paryavaran Bhawan , C.G.O. Complex
New Delhi-100003
2. The General Manager, Jagannath Area.
3. The Chief General Manager (Envt.), MCL, Burla.
4. The Staff Officer (Envt), Jagannath Area.
5. The Environment Officer, Ananta OC Project.
6. Office copy

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Project Officer,
Ananta OC Project.

10/11

COMPLIANCE STATUS OF THE CONDITIONS OF MOEF

Name of the Project : Ananta Expansion Project.
 No. Date of MOEF : No.J-11015/83/2005-IA.II(M) dated 14.07.2006
 Period : April 2014 to Sept. 2014

A. SPECIFIC CONDITIONS FOR 12.0 MTY

Sl. No	Conditions	Compliance
(i)	All Conditions stipulated in the NOC shall be strictly implemented	: All conditions stipulated in the NOC are implemented.
(ii)	Top Soil, if any, should be stacked with proper slope at earmarked site, should not be kept active, and shall be used for reclamation and development of green belt.	: Topsoil removed is concurrently spread over overburden dumps, which are ready for plantation and also topsoil is stacked and used for plantation.
(iii)	OB shall be simultaneously backfilled in the decoaled area. No new OB Dumps shall be created for the OB to be generated in the balance life of Mine.	: OB is back filled in de-coaled area . No external OB dump is created .However, the entire OB Dump, above the ground level shall be re-handled & use for Back
(iv)	Monitoring and Management of existing reclaimed dump sites should continue until the vegetation becomes self - sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on yearly basis.	It is being done and complied. Orissa Forest Development Corporation does the vegetation till it becomes self-functioning. Now at present plantation on OB Dump is done by CGRVVNL. Chhattisgarh.
(v)	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows form Soil, OB and Mineral dumps. The Water so collected should be utilised for watering the mine area, roads, green belt development etc. The drains should be regularly de-silted and maintained properly. Garland drains (Size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper setting of silt material.	: Catch drains and siltation pond of appropriate size should be constructed to arrest silt and sediment flows form soil, OB and Mineral dumps. The mines sump works as settling tank and only Mine water is used for dust suppression, fire fighting etc.The Mine is zero Discharge.
(vi)	Dimension of the retaining wall at the toe of the dumps and OB Benches within the	No need of providing retaining wall for the reasons stated above.

	mine to check run off and siltation should be based on the rainfall data	
(vii)	Crushers at the CHP should be operated with high efficiency bags filters, water sprinkling system should be provided to check fugitive emissions from crushing operation, conveyor system, haulage roads, transfer points etc.	: Crusher at CHP is operated with sufficient Nos. of Misters in all crushing Units and also misters are fitted in all transfer points. .the Proposal for fogging mist Dust suppression system is under process.

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(viii)	Drills should be wet operated	: All drills are fitted with wet drilling arrangements.
(viii)	Controlled blasting should be practiced with use of delay detonators and only day time. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.	: Controlled blasting is being practiced in the project.
(ix)	The total area brought under afforestation shall not be less than 243 Ha., shall include external OB dump (10.80)Ha., back filled area covering 202 Ha., along ML boundary, along roads safety zone and vacant area(31 Ha.) and area in township outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per Ha.	: Plantation/ afforestation. are being done and its density is 2500 plants per Ha.
(X)	A progressive closure plan shall be implemented and OB generated shall be simultaneously backfilled.	: Being done and all OB generated is simultaneously back filled.
(xi)	Regular monitoring of ground water level and quality should be carried out by establishing a network of exiting wells and construction of new peizometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), Monsoon (August), Post-monsoon (November) and Winter (January) Season and for quality in May. Data thus collected should be submitted to the ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.	: Being done fortnightly. Ground water level and quantity of nearby village wells are monitored in each season,i.e. four times a year, e.g. in Pre –monsoon (April –May),monsoon, (August), Post-monsoon (November) and Winter (January). The results are also sent to MoEF along with half yearly report. However ,for installation of New Peizo meters scope of work for the purpose has been awarded to CMPDIL.
(xii)	The Company shall put up artificial groundwater recharge measures for augmentation of ground water resource. The Project authorities should meet water requirement of nearby village(s) in case the village go dry due to dewatering of mine.	: At Colony rain water harvesting is practiced and Project authority are meet the requirement of Water to the nearby Villagers.
(xiii)	Sewage Treatment Plant Should be installed in the existing Colony. ETP should also be provided for Workshop and CHP Waste Water.	: Sewage Treatment Plant (0.51MLD) has been installed in the colony.Effluent Treatment Plant (ETP) of capacity 240m ³ has been installed in work shop of the project Also waste water from CHP being collected in settling tank /pond & Re-

		Circulated for use of water spraying for dust suppression and no discharge outside the mines
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(xiv)	Besides carrying out regular periodic health check up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check up for occupational diseases and hearing impairment, if any, through an agency such as NIOH, Ahmedabad within a period of one year and the result reported to this Ministry and to DGMS.	:	Periodical Medical Examination of the employees is done once in every five year and under OHC .However we have under process for health check up for occupational diseases and hearing impairment, 10% of workers engaged in active mining operation.
(xv)	Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring and use pattern and report submitted to MoEF and its Regional Office at Bhubaneswar.	:	Digital processing of entire lease area using remote sensing technique has been carried out by CMPDIL .
(xvi)	A Final Mine Closure Plan with details of Corpulence should be submitted to the Ministry of Environment & Forests 5 years advance if final mine closure for approval	:	Final Mine Closure Plan is prepared and process for Approval.
(xvii)	Consent to Operate shall be obtained before expanding mining Operation.	:	Consent to Operate of Ananta opencast project has been obtained.

A. GENERAL CONDITIONS FOR 12.0 MTY

Sl. No	Conditions		Compliance
(i)	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.	:	No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests.
(ii)	No change in the Calendar plan including excavation, quantum of mineral Coal and Waste should be made.	:	No change in the Calendar plan including excavation, quantum of mineral Coal and Waste should be made.
(iii)	Four ambient air quality-monitoring stations should be established in the core zone as well as the buffer zone for RPM, SPM, SO ² , NO _x ² and monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.	:	In consultation with the State Pollution Control Board, Angul, four new Ambient Air Quality Monitoring Stations is to be fixed and the data of the Ambient Air Quality is submitted to Regional Office, State Pollution Control Board and Central Pollution Control Board
(iv)	Data on ambient air quality (RPM, SPM, SO ₂ , NO _x and CO) should be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board/ Central Pollution Control Board once in six months	:	Analysis data for this period enclosed .
(v)	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumps, loading & unloading points should be provided and properly maintained	:	Fugitive dust emission is being monitored by personal Dust Sampler (every month). The reports are well within the norms. Mobile Tankers are deployed in Haul Roads and at other places misters and sprinklers are installed
(vi)	Adequate measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operations of HEMM, etc. should be provided with ear plugs/muffs.	:	Routine maintenance of Vehicles, Avenue plantation etc is done to control Noise levels, and Workers engaged in Noisy environment are provided with earmuffs .
(vii)	Industrial waste water (workshop and waste water from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents	:	Waste Water from Workshop is treated at Effluent Treatment Plant and re-used. Mine Water is collected in large sump where sediments settle and re-used for dust suppression.
(viii)	Vehicular emissions should be kept under control and regular monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.	:	All long distance transport vehicles plying on public road are being covered with tarpaulin to check air pollution.

(ix)	Environmental laboratory should be established with adequate number and copy of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board	:	Environmental laboratory has been established at South Balanda by CMPDIL.
(x)	Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to coal dust and take corrective measures, if needed.	:	Training on Safety & Health aspects is imparted regularly to the employees'. Apart from this 1/5 th of the employees are sent for refresher training once in every five years.
(xi)	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the Organization	:	GM (Envt) at Hqtr. report to CEO of the Company, Staff officer Envt. at area and Environment Officer at Project are well trained in the field of Environment. Also Environment Cell at Project level has been established.
(xii)	The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year wise expenditure should be reported to this Ministry and it's the Regional Office at Bhubaneswar.	:	Environmental expenditure incurred on plantation and others measures are enclosed .
(xiii)	A copy of the clearance letter will be marked to the concerned Panchayat /Local NGO, if any, from whom any suggestions/ representation has been received while processing the proposal	:	Complied
(xiv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/Tahsildar's Office for 30 days.	:	-----
(xv)	The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment and Forests at http://environnic.in .	:	Published in following two local news papers on 08/08/2006 . 1.The SAMBAD (Odia) 2.The DHARITRI (English)

REPORT- I
MINISTRY OF ENVIRONMENT & FOREST
REGIONAL OFFICE
MONITORING PROFORMA PART-I (DATA SHEET)

1. Project type: River-Valley/Mining : Mining
Industry/ Thermal/Nuclear/Other
(Specify)
2. Name of the Project : Ananta Expansion Project
3. Clearance letter(s) OM No.& Dated : No.J-11015/83/2005-IA.II(M) dated 14.07.2006
4. Location:
 - a) District(s), State(s) : Dist: Angul, State: Orissa.
5. a) Address of concerned Project Officer, (with Pin Code & Telephone /Telex/Fax Nos.) : Shri Munagala Shiv Shanker Reddy ,
Project Officer
Ananta Opencast Project,
Dist: Angul, Orissa,
Ph- 06760-269510 (O)
b) Address of Executive Project Engineer : -do-
Manager (with Pin Code and Telephone/
Telex /Fax Nos.).
4. Salient Features: (a) Of the Project : It is an Opencast Project, Coal is extracted by using Surface Miner. OB is extracted by drilling and blasting, blasted material is extracted by using shovel dumper combination. Coal is transported by contractual tipper.
- (b) Of the Environment Management plans : 12 MTY EMP Approved vide letter
No.J-11015/83/2005-IA.II(M) Dt.14.07.2006
7. Break up of the Project Area :
 - a) Submergence area (forest & non-forest) : Nil
 - b) Others :
8. Break up of the Project affected population : Only Hensmul Village is affected
with enumeration of those losing houses/
dwelling units only, agricultural land only,
both dwelling units and agricultural land
and less laborers/artisans.
 - a) SC/ST Adivasis :
 - b) Others :
9. Financial Details
 - a) Project cost as Originally planned and subsequent : Rs. 203.48 Crores as per
revised estimates and the years of price reference Expansion Project
 - b) Allocation made for environmental : Rs.2725.00 lakhs
Management Plans, with item wise and
year wise break-up.
 - c) Benefit cost ratio/internal rate of return :
and the year of assessment.
 - d) Whether(c) includes the cost of : Yes
Environmental Management as
shown in (b) above. : -
 - e) Actual expenditure incurred on the : 370.75 Crs.
Project so far as on30/09/2014
 - f) Actual expenditure incurred on the : 330 Lakhs
Envt. Management Plans

10. Forest land requirements:
- a) The status of approval for a diversion of forest land for non-forestry use. : Approval Obtained for use forest land for diversion to Non forestry Use Vide N0- N0-j-11015/4/94-IA-II(M) Dated 2nd May 2005
 - b) The status of clears felling in forest and non-forest lands. :
 - c) Comments on the viability and sustainability of compensatory afforestation programme in the light of actual field experience so far. :
11. Status of construction:
- a) Date of commencement (actual and / or planned). : 10th October 1988
 - b) Date of completion (actual and/or planned): On going project
12. Reason for the delay if the project is yet to start. : NA
13. Date of site visits:
- a) The dated on which the Project was monitored by the Regional Officer on Previous occasions if . : 13.03.2013 and 29.01.2014
 - b) Date of site visit for this monitoring Report. : 13.03.2013 and 29.01.2014
14. Details of correspondence with Project authorities for obtaining action plans, Information & status of compliance to safeguards. : NR

PROFORMA FOR PROVIDING INFORMATION ON REHABILITATION

1. No. of Village affected. : Only Baidya Sahi of Hensmul Village is affected by Ananta OCP. Other part of Hensmul Village is taken care by the neighboring Bhubaneswari OCP.
2. Families affected (PAF's) : Rehabilitation- 311 persons have been sponsored for employment.
3. Compensation package offered : As per the norms of Orissa Govt. & Land & structure compensation as per CBA Guide lines.

As per State Government R & R Policy.

4. Budget estimate for rehabilitation :
- a) Total Outlay : 216.52 Lakhs (As per 12MTY EMP includes cost estimate for resettlement and Re habilitation including land)
- b) Amount paid/used. : 146.60 Lakhs (Approx.)
5. Employment details. :
- a) Total employment to be provided : 311 (Only for Baidya sahi)
- b) Employment given so far : 311
6. Rehabilitation & Resettlement Details :
- a) No. families rehabilitated : 304
- i) Name of the Site : Baghamara Resettlement Site.
- ii) Families rehabilitated : 304
- b) Families yet to be rehabilitated : NIL
- i) Name of Sites(s) : NA
7. Any other information. : NA

**FORMAT FOR PROVIDING PARTICULARS ON GREEN BELT/
PLANTATION UNDER F(C) ACT 1980 AND E (P) ACT 1986.**

1. a) Name of the Organisation. : Mahanadi Coalfields Limited,
A Subsidiary of Coal India Limited.
b) Env't. /Forest clearance Order Nos. : No.J-11015/83/2005-IA.II (M) dt.14.07.2006
- 2 Location, Block/Sub Divn. /Dist/State : Dist: Angul, Block: Talcher, Orissa
3. Address for communication. : Ananta Opencast Project, Dist: Angul
4. Existing vegetation in the area/region. : Mango, Sal, Bamboo, Mahul
a) Species (trees/shrubs/grasses/ : Shrub-Kaiun etc, Grass; Local grass etc.
climbers)
b) Major prevalent species of each type: As above
5. Land coverage by the Project. :
a) Total area under the Project : 808.65 Ha.
b) Area covered for basic infrastructure: Infrastructure area-117.59Ha.
(Roads)/building /factory etc.)
6. Details about natural vegetation :
a) Name and number of tree/species : Felling of Trees is done by OFDC at
felled. present plantation is done by CGR VVNL
Chhatisgarh .
c) Name and number of plant species : Only Shrubs and tree are available
still available in the area.
c) By protecting the area will : -
Indigenous stock comes up?
d) Extent of green belt developed. : -
7. Plantations required to be carried out : -
as per.
a) Conditions of Environmental : 2500Nos./Ha.
Clearance / in Ha. / Nos.
b) A conditions of Forest(C) Act : Double the area of forest Land used for
Non forestry use
c) Voluntarily in ha. /nos. : 2500 Nos./ Ha.
8. Details about Plantation :
a) Total area available for plantation :
in each category.

Green Belt	Dumps (Ext.)	Backfilled Area	Road Sides	Block Plantation	Remarks
NIL	NIL	25.0 Ha	NIL	NIL	

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b) Plantation details. (Category wise and Methodology used):

Year of Plantation	Species planted	Spacing	Total area covered		Remarks
			In Ha	In RKM	
91-92	Acacia, Sisso etc	2X2 mtrs	8.11	-	5.08 Includes Ext. Dump

92-93	Jumman, Sisa, etc	2X2 mtrs	1.0	3 RKM	
93-94	Pijuli etc	2X2 mtrs	0.9	5 RKM	
95-96	Neem, Cassi etc	2X2 mtrs	5.0	-	5.0 Includes Ext. Dump
96-97	Babul, Bela, etc	2X2 mtrs	8.33	-	
97-98	Sal etc	2X2 mtrs	11.38	3 RKM	
98-99	Saguan, Sisso, etc	2X2 mtrs	4.44	5 RKM	
99-2000	Saguan, Sisso etc	2X2 mtrs	7.0	12 RKM	
2000-01	Mixed Plantation	2X2 mtrs	3.31	2.64RKM	
2001-2002	do	2X2 mtrs	3.5		
2002-2003	do	2X2 mtrs	3.0		
2004-2005	do	2X2 mtrs	3.0		
2005-2006	do	2X2 mtrs	8.0		
2006-2007	do	2X2 mtrs	6.0		
2007-2008	-	-	-		
2008-2009	Mixed Plantation	2X2 mtrs	1.0		Internal OB dump
2009-2010	do	2X2 mtrs	3.3		do
2010-2011	-	-	-		-
2011-2012	Mixed Plantation	2X2 mtrs	2.1		Internal OB dump
2012-2013	-	-	-		-
2013-2014	-	-	-		-
2014-2015	Mixed Plantation	2X2 mtrs	5.36		Internal OB dump

(c) Survival % of Plantation:

Sl.No.	Year	Total Plantation (Nos.)	Total Nos. of Survival (Approx)	Total % of Survival (Approx)
1 st year	1992-93	5667	4816	85
2 nd year	1993-94	20500	17000	83
3 rd year	1994-95	12500	10529	84
4 th year	1995-96	20834	18333	88
5 th year	1996-97	28700	24082	84
6 th year	1997-98	12432	10442	84
7 th year	1998-99	20692	15519	75
8 th year	1999-00	9877	8600	87
9 th year	2000-01	8750	7875	90
10 th year	2001-02	7500	6375	85
11 th year	2002-03	20000	17000	85
12 th year	2003-04	-	-	-
13 th year	2004-05	7500	6375	85
14 th year	2005-06	20,000	17000	85
15 th year	2006-07	15000	12750	85
16 th year	2007-08	-	-	-
17 th year	2008-09	2500	2001	80
18 th year	2009-10	8250	8047	97.53
19 th year	2010-11	-	-	-
20 th year	2011-12	5250	4004	76
21 st year	2012-13	-	-	-
22 nd year	2013-14	-	-	-
23 rd year	2014-15	10000		

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8. Agency carrying out Plantation and maintenance : Orissa Forest Development Corporation and CGRVNL Chhatisgarh

9. Financial details (year wise) :
Plantation wise and item wise.

Sl.	Year	Total Expenditure Made	Remarks
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No		(Rs.)	
1	1996-97	4,75,919.64	
2	1997-98	39,78,828.78	
3	1998-99	7,39,783.40	
4	1999-00	14,42,786.45	
5	2000-01	62,53,3935	
6	2001-02	4,11,788.50	
7	2002-03	2,57,928.00	
8	2004-05	8,49,261.60	Scheme not completed, 3 rd year continuing
9.	2005-06	8,93,930.52	Scheme not completed, 2 nd year continuing
10.	2006-07	2,07,719.00,	Scheme just started 40% of 1 st year cost released.
11	2008-09	97,787.84	
12	2009-10	735196.77	
13	2010-11	54902.00	On going scheme
14	2011-12	713597.55	On going scheme
15	2012-13	82897.00	Against 2011-12 plantation scheme
16	2014-15	475400.00	50 % of first year Adv.

10. Inspection of plantation by field experts and their comments and follow up action. : By OFDC and CGRVVNL
11. Remarks/any other information : NA

ENVIRONMENTAL EXPENDITURE AT ANANTA OC PROJECT

Sl.No	YEAR	Expenditure in Lakhs (Approx.)
1	2009-10	475.98
2	2010-11	959.98
3	2011-12	825.03
4	2012-13	907.54
5	2013-14	480.00
6	2014-15	375.00

AMBIENT AIR QUALITY DATA

Stn. No.	Monitoring Station	Concentration (ug/m ³)									
		SPM		RPM		SO ₂		NO _x		Pm 2.5	
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1	Ananta Vihar Colny	211	242	106	141	20	26	23	28	31	55
2	Hensmul Village	220	274	113	146	22	27	24	30	21	53

3	Field Canteen	273	324	123	161	22	30	24	32	39	58
4	Mine Sub-Station	230	289	113	153	21	27	23	30	21	58

EFFLUENT QUALITY DATA

St n. No.	Monitoring Station	All dimensions in mg/l unless otherwise stated except pH											
		pH		O&G		TSS		COD		BOD		NO ₃ N	
		Min.	Max	Min.	Max	Min.	Max	Min.	Max	Min.	Max	Min.	Max
1	Mine discharge Water	6.85	7.8	<2.0	<2.0	14	34	20	48	-	-	-	-
2	Outlet from Oil & Grease Trap	6.94	7.4	<2.0	<2.0	10	24	16	32	-	-	-	-
3	DETP-Ananta Clarifier Outlet	7.25	7.66	-	-	10	22	-	-	04	18	-	-

NOISE LEVEL MEASUREMENT IN dBA

Stn. No.	Monitoring Station	DAY		NIGHT	
		Min.	Max.	Min.	Max.
1	Ananta Vihar Colony	50.3	52.6	42.6	46.8
2	Hensmul Village	50.3	53.9	41.6	49.9
3	Field Canteen	52.9	62.6	42.7	58.4
4	Mine Sub-Station	59.4	62.7	46.7	59.5

WELL WATER LEVEL MONITORING DATA

Stn. No.	Monitoring Station	Depth to Water level (in Mtr., below ground level)
1.	Hensmul Village Well	0.36 – 5.27 Mtrs
2.	Dera Village Well	1.60 – 3.56 Mtrs