

ENVIRONMENT DATA**GROUNDWATER DEPTH LEVEL**

(October-2013 - March-2014)

WELL	DEPTH TO WATER LEVEL DATA IN DIFFERENT SEASONS (in m)	
	October-2013	March-2014
Dug well at Village Babu Khinda (500 m from mine site)	2.8	1.7
Dug well at Village Khinda (400 m from mine site)	5.8	4.2
Dug well - E of Village Khinda (100 m from mine site)	3.35	2.2
Dug well at village Bheramunda (50 m from mine site)	5.07	3.0
Dug well at Village Matulu Camp (150 m from mine site)	4.83	3.20
Dug well at Village Khinda (80 m from mine site)	7.8	4.5

Annexure-II

(October-2013 to March-2014)

PARTICULATE MATTER (PM₁₀) : Limit : 100.00 microgram / m³

Location	Oct-2013	Nov-2013	Dec-2013	Jan-2014	Feb-2014	Mar-2014
Khinda Village	60.2	58.9	61.3	62.5	56.1	66.1
Babu Khinda Village	44.1	43.2	45.3	48.6	46.8	49.8
Rest Shelter	85.3	88.3	88.5	87.4	88.2	78.5
R & R Colony	56.2	62.2	57.5	64.4	62.5	70.2

PARTICULATE MATTER (PM_{2.5}) : Limit : 60.00 microgram / m³

Location	Oct-2013	Nov-2013	Dec-2013	Jan-2014	Feb-2014	Mar-2014
Khinda Village	37.1	34.4	37.3	38.2	34.3	39.2
Babu Khinda Village	26.5	26.1	27.2	29.1	29.2	29.4
Rest Shelter	51.4	53.2	53.1	52.4	53.6	46.4
R & R Colony	34.2	31.8	34.8	39.2	38.4	42.3

SULPHUR DI-OXIDE (SO₂) : Limit : 80.00 microgram / m³

Location	Oct-2013	Nov-2013	Dec-2013	Jan-2014	Feb-2014	Mar-2014
Khinda Village	10.0	9.0	9.5	10.0	9.7	9.5
Babu Khinda Village	8.0	8.5	8.5	8.0	8.5	8.5
Rest Shelter	11.5	11.5	11.0	11.5	10.0	11.5
R & R Colony	9.0	9.5	10.0	9.5	9.5	10.5

NITROGEN OXIDE (NO_x) :Limit : 80.00 microgram / m³

Location	Oct-2013	Nov-2013	Dec-2013	Jan-2014	Feb-2014	Mar-2014
Khinda Village	6.5	6.0	7.5	6.5	7.0	7.5
Babu Khinda Village	5.0	6.5	6.5	5.0	6.5	7.0
Rest Shelter	6.5	6.5	8.5	7.5	7.5	8.5
R & R Colony	6.5	6.5	7.5	6.5	7.0	8.0

CARBON MONOXIDE (CO) :Limit : 2000.00 microgram / m³

Location	Oct-2013	Nov-2013	Dec-2013	Jan-2014	Feb-2014	Mar-2014
Khinda Village	<2000	<2000	<2000	950	146.0	120.0
Babu Khinda Village	<2000	<2000	<2000	900	120.0	101.0
Rest Shelter	<2000	<2000	<2000	1300	435.0	420.5
R & R Colony	<2000	<2000	<2000	1250	155.0	180.5

Surface Water Analysis Report

Date of sampling: 15.11.2013 Project: Hinldal Co. Ind Ltd.,
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	SW
PH		5.5-8.5	6.96
Colour		Colourless	Colourless
Suspended Solid	mg/l	100	38.9
Odour		Odourless	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.77
Total dissolved solids	mg/l	2100	288.6
Total Hardness as CaCO ₃	mg/l	\$	86.5
Chlorides as Cl.	mg/l	1000	21.2
Sulphate as SO ₄	mg/l	1000	14.19
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	28.3
Iron as Fe	mg/l	3	0.32
Fluoride as F	mg/l	2	0.44
Calcium as Ca	mg/l	-	18.5
Manganese as Mn	mg/l	\$	0.02
Mineral oil	mg/l	10	1.05
Cadmium as Cd	mg/l	2	ND
Zinc as Zn	mg/l	5	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.048
Phenolic compound as C ₆ H ₅ OH	mg/l	\$	ND
Aluminium as Al	mg/l	\$	0.09
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	20	ND
BOD 27 °C 3 days	mg/l	30	1.5
COD	mg/l	250	3.0
Mercury as Hg	mg/l	0.001	ND

Location

SW: Mines Pond water

\$ - No limit has been specified.

Standards as per MOEF notification dt. 19th May' 93 Sampling & testing has been done as per IS 3025.

Ground Water Analysis Report

Date of sampling: 15.11.2013

Project: Hinldal Co. Ind Ltd.
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	GW1
PH		6.5-8.5	7.22
Colour	Hazen	Colourless	Colourless
Suspended Solid	mg/l	\$	0.65
Odour		UO	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	1.01
Total dissolved solids	mg/l	500	34.8
Total Hardness as CaCO ₃	mg/l	300	21.11
Chlorides as Cl.	mg/l	250	5.32
Sulphate as SO ₄	mg/l	200	1.42
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	25.31
Iron as Fe	mg/l	0.3	0.18
Fluoride as F	mg/l	1.0	0.03
Calcium as Ca	mg/l	75	3.48
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	\$	0.01
Cadmium as Cd	mg/l	0.01	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.25
Phenolic compound as C ₆ H ₅ OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.05	ND
Boron as B	mg/l	1	ND
BOD 27 °C 3 days	mg/l	3.0	0.4
COD	mg/l	\$	1.0
Mercury as Hg	mg/l	0.001	ND

Location

GW1:Office Site Borewell

ND – Not Detectable.

Standards as per MOEF notification dt. 19th May' 93 Sampling & testing has been done as per IS 3025.

TOXICITY FOR PIT (MINES) SUMP WATER

Date of sample collection : 15.11.2013

Parameters	Units	Standard	Results
Arsenic (As)	mg/lit	0.05	0.00086
Mercury (Hg)	mg/lit	0.001	0.00040
Lead(Pb)	mg/lit	0.05	0.0180
Chromium(Cr)	mg/lit	0.05	0.0200
Nickel(Ni)	mg/lit	0.02	0.016
Zinc (Zn)	mg/lit	5.00	0.190
Selenium(Se)	mg/lit	0.01	ND*
Copper(Cu)	mg/lit	0.05	0.0085

***Not detected**

Remarks : The toxicity in respect of As, Hg, Pb, Cr, Ni, Zn, Se & Cu are within permissible limit.

Ground Water Analysis Report

Date of sampling: 15.11.2013

Project: Hindal Co. Ind Ltd.,
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	GW2
PH		6.5-8.5	7.11
Colour	Hazen	Colourless	Colourless
Suspended Solid	mg/l	\$	4.45
Odour		UO	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	2.11
Total dissolved	mg/l	500	165.2

solids			
Total Hardness as CaCO ₃	mg/l	300	20.14
Chlorides as Cl.	mg/l	250	12.34
Sulphate as SO ₄	mg/l	200	4.96
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	48.30
Iron as Fe	mg/l	0.3	0.16
Fluoride as F	mg/l	1.0	0.23
Calcium as Ca	mg/l	75	12.78
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	\$	1.25
Cadmium as Cd	mg/l	0.01	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.18
Phenolic compound as C ₆ H ₅ OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.05	ND
Boron as B	mg/l	1	ND
BOD 27 °C 3 days	mg/l	3.0	1.96
COD	mg/l	\$	3.64
Mercury as Hg	mg/l	0.001	ND

Location

GW2: Khinda village Dug well

ND – Not Detectable.

Standards as per MOEF notification dt. 19th May' 93 Sampling & testing has been done as per IS 3025.

Surface Water Analysis Report

Date of sampling: 16.02.2013 Project: Hinldal Co. Ind Ltd.,
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	SW
PH		5.5-8.5	6.98

Colour		Colourless	Colourless
Suspended Solid	mg/l	100	38.35
Odour		Odourless	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.16
Total dissolved solids	mg/l	2100	288.9
Total Hardness as CaCO ₃	mg/l	\$	92.5
Chlorides as Cl.	mg/l	1000	24.25
Sulphate as SO ₄	mg/l	1000	14.32
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	27.36
Iron as Fe	mg/l	3	0.93
Fluoride as F	mg/l	2	0.41
Calcium as Ca	mg/l	-	18.0
Manganese as Mn	mg/l	\$	0.011
Mineral oil	mg/l	10	1.63
Cadmium as Cd	mg/l	2	ND
Zinc as Zn	mg/l	5	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.091
Phenolic compound as C ₆ H ₅ OH	mg/l	\$	ND
Aluminium as Al	mg/l	\$	0.009
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	20	ND
BOD 27 °C 3 days	mg/l	30	2.03
COD	mg/l	250	1.15
Mercury as Hg	mg/l	0.001	ND

Location

SW: Mines Pond water

\$ - No limit has been specified.

Standards as per Government notification dt. 19th March' 93 Sampling & testing has been done as per IS 2448.

Ground Water Analysis Report

Date of sampling: 16.02.2013

Project: Hindal Co. Ind Ltd.
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	GW1
PH		6.5-8.5	7.03
Colour	Hazen	Colourless	Colourless
Suspended Solid	mg/l	\$	1.23
Odour		UO	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	1.74
Total dissolved solids	mg/l	500	68.21
Total Hardness as CaCO ₃	mg/l	300	60.93
Chlorides as Cl.	mg/l	250	6.03
Sulphate as SO ₄	mg/l	200	1.85
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	88.19
Iron as Fe	mg/l	0.3	0.013
Fluoride as F	mg/l	1.0	0.08
Calcium as Ca	mg/l	75	6.77
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	\$	0.35
Cadmium as Cd	mg/l	0.01	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.019
Phenolic compound as C ₆ H ₅ OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.05	ND
Boron as B	mg/l	1	ND
BOD 27 °C 3 days	mg/l	3.0	1.11
COD	mg/l	\$	0.96
Mercury as Hg	mg/l	0.001	ND

Location

GW1:Office Site Borewell

ND – Not Detectable.

Standards as per Government notification dt. 19th March' 93 Sampling & testing has been done as per IS 2448.

Surface Water Analysis Report

Date of sampling: 22.02.2014 Project: Hinldal Co. Ind Ltd.,

Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	SW
PH		5.5-8.5	6.9
Colour		Colourless	Colourless
Suspended Solid	mg/l	100	35.1
Odour		Odourless	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.55
Total dissolved solids	mg/l	2100	292.35
Total Hardness as CaCO ₃	mg/l	\$	95.1
Chlorides as Cl.	mg/l	1000	26.23
Sulphate as SO ₄	mg/l	1000	15.24
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	28.16
Iron as Fe	mg/l	3	0.86
Fluoride as F	mg/l	2	0.38
Calcium as Ca	mg/l	-	17.41
Manganese as Mn	mg/l	\$	0.009
Mineral oil	mg/l	10	1.25
Cadmium as Cd	mg/l	2	ND
Zinc as Zn	mg/l	5	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.085
Phenolic compound as C ₆ H ₅ OH	mg/l	\$	ND
Aluminium as Al	mg/l	\$	0.0078
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	20	ND
BOD 27 °C 3 days	mg/l	30	1.85
COD	mg/l	250	3.41
Mercury as Hg	mg/l	0.001	ND

Location

SW: Mines Pond water

\$ - No limit has been specified.

Standards as per Government notification dt. 19th May' 93 Sampling & testing has been done as per IS 3025.

Ground Water Analysis Report

Date of sampling: 22.02.2014

Project: Hinldal Co. Ind Ltd.
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	GW1
PH		6.5-8.5	7.25
Colour	Hazen	Colourless	Colourless
Suspended Solid	mg/l	\$	1.11
Odour		UO	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	1.62
Total dissolved solids	mg/l	500	70.23
Total Hardness as CaCO ₃	mg/l	300	58.83
Chlorides as Cl.	mg/l	250	5.05
Sulphate as SO ₄	mg/l	200	2.1
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	72.46
Iron as Fe	mg/l	0.3	0.011
Fluoride as F	mg/l	1.0	0.07
Calcium as Ca	mg/l	75	5.88
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	\$	0.30
Cadmium as Cd	mg/l	0.01	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.012
Phenolic compound as C ₆ H ₅ OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.05	ND
Boron as B	mg/l	1	ND
BOD 27 °C 3 days	mg/l	3.0	1.09
COD	mg/l	\$	2.97
Mercury as Hg	mg/l	0.001	ND

Location

GW1:Office Site Borewell

ND – Not Detectable.

Standards as per Government notification dt. 19th May' 93 Sampling & testing has been done as per IS 3025.

Ground Water Analysis Report

Date of sampling: 22.02.2014

Project: Hinldal Co. Ind Ltd.,
Talabira-I, Coal Project

<i>Parameter</i>	Unit	Standard	GW2
PH		6.5-8.5	7.02
Colour	Hazen	Colourless	Colourless
Suspended Solid	mg/l	\$	8.01
Odour		UO	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	2.35
Total dissolved solids	mg/l	500	201.09
Total Hardness as CaCO ₃	mg/l	300	90.14
Chlorides as Cl.	mg/l	250	18.31
Sulphate as SO ₄	mg/l	200	5.86
Free residual Chlorine	mg/l	\$	ND
Total Alkalinity	mg/l	\$	62.18
Iron as Fe	mg/l	0.3	0.41
Fluoride as F	mg/l	1.0	0.35
Calcium as Ca	mg/l	75	11.05
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	\$	0.015
Cadmium as Cd	mg/l	0.01	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.05	ND
Nitrate as NO ₃	mg/l	50	0.13
Phenolic compound as C ₆ H ₅ OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.05	ND
Boron as B	mg/l	1	ND
BOD 27 °C 3 days	mg/l	3.0	2.1
COD	mg/l	\$	5.6
Mercury as Hg	mg/l	0.001	ND

Location

GW2: Khinda village Dug well

ND – Not Detectable.

Standards as per Government notification dt. 19th May' 93 Sampling & testing has

been done as per IS 3025.

TOXICITY FOR PIT (MINES) SUMP WATER

Date of sample collection : 21.02.2014

Parameters	Units	Standard	Results
Arsenic (As)	mg/lit	0.05	0.00095
Mercury (Hg)	mg/lit	0.001	0.00032
Lead(Pb)	mg/lit	0.05	0.0168
Chromium(Cr)	mg/lit	0.05	0.015
Nickel(Ni)	mg/lit	0.02	0.0011
Zinc (Zn)	mg/lit	5.00	0.140
Selenium(Se)	mg/lit	0.01	ND*
Copper(Cu)	mg/lit	0.05	0.0081

***Not detected**

Remarks : The toxicity in respect of As, Hg, Pb, Cr, Ni, Zn, Se & Cu are within permissible limit.

Annexure-IV

NOISE LEVEL MONITORING RESULT IN dBA PROJECT: HINDALCO IND LTD., TALABIRA COAL MINES

Date of Monitoring: 14.11.2013 to 15.11.2013

TIME	Station		
	Khinda Village	R & R Colony	Rest Selter
06 a.m	42.1	43.2	45.1

07 a.m	44.3	45.6	48.2
08 a.m	46.6	48.9	53.8
09 a.m	50.2	52.4	56.4
10 a.m	52.3	54.8	60.2
11 a.m	54.6	58.2	61.5
12 p.m	55.8	58.8	63.3
13 p.m	56.7	59.2	63.8
14 p.m	55.2	59.1	62.4
15 p.m	55.4	58.3	61.2
16 p.m	52.6	58.2	60.1
17 p.m	51.4	57.4	59.3
18 p.m	48.4	55.3	59.1
19 p.m	43.6	50.1	58.8
20 p.m	42.1	45.4	58.4
21 p.m	40.8	40.3	57.2
22 p.m	40.3	39.6	55.4
23 p.m	39.6	37.3	51.2
00 a.m	39.1	36.7	50.6
01 a.m	38.6	36.1	49.2
02 a.m	38.2	35.6	49.0
03a.m	36.4	35.4	48.3
04 a.m	36.1	35.2	48.1
05 a.m	35.8	35.1	47.3

Day Max.- **56.7** **59.2** **63.8**
Day Min.- **42.1** **40.3** **45.1**
Night Max.- **40.8** **49.8** **55.4**
Night Min.- **35.8** **35.1** **47.3**
Instrument used: Lutron SL 4001

Noise Level Data in dBA

Date of Monitoring: 21/22.02.2014

Time	Station: Khinda Village	Station: R &R Colony	Station: Rest Selter
06.00	41.3	42.1	45.3
07.00	43.4	42.7	53.4
08.00	47.6	45.3	57.5
09.00	49.2	47.8	59.2

10.00	51.3	50.3	59.9
11.00	53.7	52.2	64.3
12.00	55.3	55.5	67.5
13.00	55.7	56.2	70.6
14.00	47.2	51.3	66.2
15.00	46.3	49.4	62.3
16.00	49.4	55.4	59.8
17.00	44.5	52.2	58.5
18.00	43.2	49.2	57.5
19.00	40.2	47.8	56.5
20.00	39.7	45.3	54.2
21.00	39.2	43.2	54.6
22.00	38.5	42.8	52.7
23.00	37.7	38.3	51.9
00.00	37.3	37.7	50.1
01.00	36.1	36.5	47.5
02.00	33.2	34.4	47.3
03.00	33.0	34.1	47.0
04.00	33.1	33.5	45.1
05.00	32.6	33.1	44.3

Day Max: 55.7 56.2 70.6

Day Min: 41.3 42.1 45.3

Night Max: 38.5 42.8 52.7

Night Min: 32.6 33.1 44.3

Annexure-V

DISASTER MANAGEMENT PLAN FOR TALABIRA-1 COAL MINE

APPLICABILITY

This Disaster Management plan will be applicable to Talabira-1 coal mine of M/s Hindalco Industries Ltd. situated in the Ib valley coalfield in the district of Sambalpur (Orissa).

PURPOSE

It is the sign of good governance and sound management practice to have emergency response plan in place so that in the event of any incident/accident/disaster, management personnel entrusted to undertake rescue and recovery work do not suffer panic and confusion and precious time is not lost in bringing the situation in order and rescue/recovery/rehabilitation work is started at the earliest without further loss of life and damage to the property.

OCCURRENCE

Any person present in the mine, if he notices any thing abnormal in relation to the mine operation like inrush of water, abnormal rise in the level of water in the reservoir, smoke, fire, or incident/accident/disaster which is likely to cause loss of life and damage to the property which is not normal in nature; will immediately inform the telephone operator of the mine office present at the duty at the surface. He will also inform the occurrence to the mine official like Asstt. Manager, overman, mining sirdar, engineer present in the duty in the mine.

DUTY OF OFFICIAL AT THE DUTY

The official present at the mine or district shall summon all the persons in the mine and apprise them about the emergency and arrange to bring them to collect at a safe place in the mine or outside of the mine. HE shall arrange to prevent any unauthorized entry of the person in the mine.

DUTY OF ATTENDANCE CLERK

On receiving information about a serious occurrence/ disaster in the mine and on having obtained authorization from the manager or in his absence from the senior most official present at the surface, the attendance clerk shall blow the siren/hooter of 12 blows thereby declaring STATE OF EMERGENCY at the mine. This standing order shall come into force when the manager / senior official present at the surface, after confirmation of the report of the emergency, orders the sounding of siren at various pitch for 12 blows. After hearing the warning siren every official shall post himself at this appointed place and shall discharge his duties as per his duty card. The colliery shall observe rehearsal once in every three month for prompt action in case of emergency and cause the official to be conversant about their duty. which shall be responsible for over all direction of all operation connected with emergency and shall have following members-

01. Agent and head of Hirakud Complex
02. Manager
03. Asstt. Manager
04. Safety officer
05. Director of mines safety/Dy. Director of mines safety
06. Colliery Engineer
07. Pit safety committee members/ trade union representatives

08. Colliery doctor
09. Security officer
10. Chief Representative of outsourcing agency.

All the above persons shall be summoned to the colliery under the emergency response scheme and they will sign a log book in the operation control room.

DUTSES OF THE OFFICIAL DESIGNATED TO CONTROL THE OPERATION

Colliery safety officer will be the official designated to control the operation. His principal duty will be to check the missing men if any. He will make earliest check to account for all the persons who were there in the mine prior to the occurrence and find out the details of casualty if any.

DUTY ROSTER

In order to provide adequate supervision and control at all the time he shall prepare a duty roster for 24 hours in order to ensure continuity of control room operation.

ADDITIONAL RESCUE TEAM

If it is felt necessary additional rescue team shall be called from nearby colliery of Mahanadi coalfield/Hirakud plant. The duty roster of the team so requisitioned shall be drawn for prolonged operation.

LIST OF OFFICIAL AND OTHER TO BE SUMMONED TO THE MINE IN CASE OF STATE OF EMERGENCY

Following officials shall be immediately called to the mine either by telephone or by special messenger so as to reach the mine site without delay in the event of emergency.

ON MESSAGE

When a siren is sounded at the surface declaring state of[^] emergency, the telephone attendant at the surface shall contact the manager or in his absence the senior most official present at the mine. After being advised he will flash the action message produced below to all the following personals.

AN EMERGENCY HAS OCCURRED AT TALABIRA-1 COAL MINE ON...AT... DUE TO INNUNDATION / (FIRE etc.).

The telephone attendant must give the above message clearly and precisely and

shall not spend time in unnecessary discussion and argument. He shall record all the phone calls in the telephone logbook supplied to him.

KEY PERSONNEL TO BE INFORMED

1. Agent.
2. Mine Manager/Asstt. Manager
3. Safety officer
4. Mines rescue station
5. Director of mine safety
6. Dy. Director of mines safety
7. Colliery Doctor
8. Head of outsourcing agency posted in the mine
9. Colliery engineer.
10. Local scientific laboratory
11. First aid personnel
12. Neighbouring mine official

Special messengers to be deployed for sending messages to those conveyed message over telephone.

OPERATION CONTROL ROOM

In an emergency it is necessary to bring together senior key officials to assist the manager in planning recovery operation. A surface control committee shall be established consisting of key personnel concerned. The manager or in his absence his senior most assistant shall act as executive official in carrying out decision made in surface control committee. The room from which all the activities in an emergency are being controlled and co-ordinated is called ⁴ 'control Room'. Pit top manager's office is most suited for this purpose. Surface control committee will be constituted

01. Mines manager
02. Safety officer
03. All the assistant managers
04. Colliery Engineer
05. Colliery doctor
06. Chiefrepresentative of outsourcing agency
07. Security Officer

EMERGENCY TELEPHONE NUMBERS

Designation	Mobile No.
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Manager-Mines	9437354669
Safety Officer	9937096450
Asst. Manager-Mining	9583405451
Surveyor	9583157347
Medical Officer	9090090091
DGM-Maint.	9437579513
Dy. Manager-HR	9090079519
Dy. Manager-HR	9437057388
Security Officer	9776420631
Director of Mines Safety	0674-2302561
Dy. Director General of Mines Safety	0651-2341407
Directorate General of Mines Safety	0326 2221002 0326 2221003

Annexure-VII

**EXPENSES OF CSR ACTIVITIES F:Y-2013-14
HINDALCO- HIRAKUD**

Area of	Total Beneficiaries	Amount Spent by unit	Amount spent by	Total Expenses
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Intervention	Covered	(Rs. in Lakhs)	Govt & other Sources (Rs. in Lakhs)	(Rs. in Lakhs)
Education	690	2.58	1.25	3.83
Health Care	60169	48.18	7.00	55.18
Sustainable Livelihood	3987	4.04	2.18	6.22
Infrastructure Dev.	74600	24.24	7.05	31.29
Social Causes	23913	9.79	26.98	36.77
Total	163359	88.83	44.46	133.29