

**ENVIRONMENT DATA**

**GROUNDWATER DEPTH LEVEL**

(October-2014 - March-2015 )

WELL	DEPTH TO WATER LEVEL DATA IN DIFFERENT SEASONS (in m)	
	October-2014	March-2015
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

**(October-2014 to March-2015)****PARTICULATE MATTER (PM<sub>10</sub>) : Limit : 100.00 microgram / m<sup>3</sup>**

Location	Oct-2014	Nov-2014	Dec-2014	Jan-2015	Feb-2015	Mar-2015
Khinda Village	60.5	62.5	58.2	63.4	64.5	64.5
Babu Khinda Village	48.8	45.5	45.3	43.3	48.5	45.6
Rest Shelter	78.3	75.8	79.6	78.8	81.6	75.3
R & R Colony	63.4	66.5	70.5	68.2	63.0	70.6

**PARTICULATE MATTER (PM<sub>2.5</sub>) : Limit : 60.00 microgram / m<sup>3</sup>**

Location	Oct-2014	Nov-2014	Dec-2014	Jan-2015	Feb-2015	Mar-2015
Khinda Village	34.7	35.2	31.0	36.8	36.1	38.2
Babu Khinda Village	27.7	26.0	22.5	25.1	28.0	23.4
Rest Shelter	45.0	42.3	47.2	43.1	47.0	45.0
R & R Colony	38.7	40.8	43.2	41.1	34.5	43.2

**SULPHUR DI-OXIDE (SO<sub>2</sub>) : Limit : 80.00 microgram / m<sup>3</sup>**

Location	Oct-2014	Nov-2014	Dec-2014	Jan-2015	Feb-2015	Mar-2015
Khinda Village	11.8	11.0	11.2	12.1	12.0	12.8
Babu Khinda Village	8.0	8.5	7.8	8.8	9.5	10.2
Rest Shelter	14.0	13.5	14.8	14.1	15.0	16.3
R & R Colony	11.5	12.4	11.8	12.6	12.5	12.8

**NITROGEN OXIDE (NO<sub>x</sub>) :**Limit : 80.00 microgram / m<sup>3</sup>

Location	Oct-2014	Nov-2014	Dec-2014	Jan-2015	Feb-2015	Mar-2015
Khinda Village	10.0	9.8	9.8	10.2	10.5	10.4
Babu Khinda Village	6.5	7.2	6.4	7.6	7.0	9.3
Rest Shelter	16.2	15.8	16.0	15.7	13.5	14.5
R & R Colony	10.0	11.2	10.3	11.5	11.5	11.2

**CARBON MONOXIDE (CO) :**Limit : 2000.00 microgram / m<sup>3</sup>

Location	Oct-2014	Nov-2014	Dec-2014	Jan-2015	Feb-2015	Mar-2015
Khinda Village	125.0	120.0	122.0	117.0	115.0	160.0
Babu Khinda Village	98.0	95.0	92.0	90.5	90.0	85.5
Rest Shelter	340.0	315.0	312.0	295.0	290.0	280.0
R & R Colony	268.0	280.0	252.0	270.0	295.0	230.0

**Annexure-III****Surface Water Analysis Report**

Date of sampling: 19.11.2014 Project: Hinldal Co. Ind Ltd.,  
Talabira-I, Coal Project

<b>Parameter</b>	<b>Unit</b>	<b>Standard</b>	<b>SW</b>
PH		5.5-9.0	6.96
Colour		Colourless	Colourless
Suspended Solid	mg/l	100	33.5
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.5
Total dissolved solids	mg/l	2100	320.15
Total Hardness as CaCO <sub>3</sub>	mg/l	---	115.4
Chlorides as Cl.	mg/l	1000	22.30
Sulphate as SO <sub>4</sub>	mg/l	1000	12.05
Free residual Chlorine	mg/l	---	ND
Total Alkalinity	mg/l	---	21.5
Iron as Fe	mg/l	3	0.45
Fluoride as F	mg/l	2	0.32
Calcium as Ca	mg/l	---	15.4
Manganese as Mn	mg/l	2.0	0.018
Oil & Grease	mg/l	10	1.0
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 <sub>3</sub>	mg/l	10.0	0.062
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	1.0	ND
Aluminium as Al	mg/l	---	0.12
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	2.0	ND
BOD 27 °C 3 days	mg/l	30	1.60
COD	mg/l	250	4.75
Mercury as Hg	mg/l	0.01	ND

**Location**

SW:- Mines Pond water

ND : - No limit has been specified.

Standards as per Government notification dt. 19<sup>th</sup> May' 93 for Inlet Surface Water

Sampling & testing has been done as per IS 3025.

## Ground Water Analysis Report

Date of sampling: 19.11.2014

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

Parameter	Unit	Standard	GW1
PH		6.5-8.5	7.5
Colour	Hazen	5	Colourless
Suspended Solid	mg/l	---	1.8
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	1.0	0.08
Total dissolved solids	mg/l	500	55.35
Total Hardness as CaCO <sub>3</sub>	mg/l	200	52.40
Chlorides as Cl.	mg/l	250	8.5
Sulphate as SO <sub>4</sub>	mg/l	200	1.2
Free residual Chlorine	mg/l	0.2	ND
Total Alkalinity	mg/l	200	61.40
Iron as Fe	mg/l	0.3	0.011
Fluoride as F	mg/l	1.0	0.22
Calcium as Ca	mg/l	75	6.85
Manganese as Mn	mg/l	0.1	ND
Oil & Grease	mg/l	0.5	0.23
Cadmium as Cd	mg/l	0.003	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.01	ND
Nitrate as NO <sub>3</sub>	mg/l	45	0.011
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	0.5	ND
BOD 27 °C 3 days	mg/l	---	1.30
COD	mg/l	---	3.8
Mercury as Hg	mg/l	0.001	ND

### Location

GW1:Office Site Bore-well

ND – Not Detectable.

Standards as per IS :10500 Sampling & testing has been done as per IS 3025.

## TOXICITY FOR PIT (MINES) SUMP WATER

**Date of sample collection : 19.11.2014**

Parameters	Units	Standard	Results
Arsenic (As)	mg/lit	0.05	0.007
Mercury (Hg)	mg/lit	0.001	0.00028
Lead(Pb)	mg/lit	0.05	0.012
Chromium(Cr)	mg/lit	0.05	0.015
Nickel(Ni)	mg/lit	0.02	0.00075
Zinc (Zn)	mg/lit	5.00	0.06
Selenium(Se)	mg/lit	0.01	ND*
Copper(Cu)	mg/lit	0.05	0.0043

### **\*Not detected**

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

**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: 19.11.2014

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

Parameter	Unit	Standard	GW2
PH		6.5-8.5	7.20
Colour	Hazen	5	Colourless
Suspended Solid	mg/l	---	9.0
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	1.0	2.20
Total dissolved solids	mg/l	500	195.25

Total Hardness as CaCO <sub>3</sub>	mg/l	200	86.45
Chlorides as Cl.	mg/l	250	13.95
Sulphate as SO <sub>4</sub>	mg/l	200	2.40
Free residual Chlorine	mg/l	0.2	ND
Total Alkalinity	mg/l	200	75.50
Iron as Fe	mg/l	0.3	0.19
Fluoride as F	mg/l	1.0	0.27
Calcium as Ca	mg/l	75	9.00
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	0.5	0.012
Cadmium as Cd	mg/l	0.003	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.01	ND
Nitrate as NO <sub>3</sub>	mg/l	45	0.16
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	0.5	ND
BOD 27 °C 3 days	mg/l	---	1.98
COD	mg/l	---	5.75
Mercury as Hg	mg/l	0.001	ND

**Location**

GW2: Khinda village Dug well

ND – Not Detectable.

Standards as per IS :10500 Sampling & testing has been done as per IS 3025.

## Surface Water Analysis Report

Date of sampling: 15.01.2015 Project: Hinldal Co. Ind Ltd.,  
Talabira-I, Coal Project

Parameter	Unit	Standard	SW
PH		5.5-9.0	6.85
Colour		Colourless	Colourless
Suspended Solid	mg/l	100	35.0
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.7
Total dissolved solids	mg/l	2100	370.25
Total Hardness as CaCO <sub>3</sub>	mg/l	---	120.3
Chlorides as Cl.	mg/l	1000	20.35
Sulphate as SO <sub>4</sub>	mg/l	1000	9.22
Free residual Chlorine	mg/l	---	ND
Total Alkalinity	mg/l	---	19.6
Iron as Fe	mg/l	3	0.39
Fluoride as F	mg/l	2	0.28
Calcium as Ca	mg/l	---	13.0
Manganese as Mn	mg/l	2.0	0.015
Oil & Grease	mg/l	10	0.95
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 <sub>3</sub>	mg/l	10.0	0.055
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	1.0	ND
Aluminium as Al	mg/l	---	0.14
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	2.0	ND
BOD 27 °C 3 days	mg/l	30	1.75
COD	mg/l	250	5.05
Mercury as Hg	mg/l	0.01	ND

### Location

SW:- Mines Pond water

ND : - No limit has been specified.

Standards as per Government notification dt. 19<sup>th</sup> May' 93 for Inlet Surface Water

Sampling & testing has been done as per IS 3025



## Ground Water Analysis Report

Date of sampling: 15.01.2015

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

Parameter	Unit	Standard	GW1
PH		6.5-8.5	7.25
Colour	Hazen	5	Colourless
Suspended Solid	mg/l	---	1.5
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	1.0	0.11
Total dissolved solids	mg/l	500	65.32
Total Hardness as CaCO <sub>3</sub>	mg/l	200	45.6
Chlorides as Cl.	mg/l	250	9.0
Sulphate as SO <sub>4</sub>	mg/l	200	1.1
Free residual Chlorine	mg/l	0.2	ND
Total Alkalinity	mg/l	200	56.3
Iron as Fe	mg/l	0.3	0.09
Fluoride as F	mg/l	1.0	0.17
Calcium as Ca	mg/l	75	5.65
Manganese as Mn	mg/l	0.1	ND
Oil & Grease	mg/l	0.5	0.18
Cadmium as Cd	mg/l	0.003	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.01	ND
Nitrate as NO <sub>3</sub>	mg/l	45	0.08
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	0.5	ND
BOD 27 °C 3 days	mg/l	---	1.1
COD	mg/l	---	3.25
Mercury as Hg	mg/l	0.001	ND

### Location

GW1:Office Site Bore-well

ND – Not Detectable.

Standards as per IS :10500 Sampling & testing has been done as per IS 3025.

## Surface Water Analysis Report

Date of sampling: 27.03.2015

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

Parameter	Unit	Standard	SW
PH		5.5-9.0	6.92
Colour		Colourless	Colourless
Suspended Solid	mg/l	100	37.0
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	5.0	3.85
Total dissolved solids	mg/l	2100	375.2
Total Hardness as CaCO <sub>3</sub>	mg/l	---	118.5
Chlorides as Cl.	mg/l	1000	22.0
Sulphate as SO <sub>4</sub>	mg/l	1000	9.15
Free residual Chlorine	mg/l	---	ND
Total Alkalinity	mg/l	---	18.5
Iron as Fe	mg/l	3	0.33
Fluoride as F	mg/l	2	0.24
Calcium as Ca	mg/l	---	15.0
Manganese as Mn	mg/l	2.0	0.022
Oil & Grease	mg/l	10	0.82
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 <sub>3</sub>	mg/l	10.0	0.065
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	1.0	ND
Aluminium as Al	mg/l	---	0.18
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	2.0	ND
BOD 27 °C 3 days	mg/l	30	1.80
COD	mg/l	250	5.65
Mercury as Hg	mg/l	0.01	ND

### Location

SW:- Mines Pond water

ND : - No limit has been specified.

Standards as per Government notification dt. 19<sup>th</sup> May' 93 for Inlet Surface Water

Sampling & testing has been done as per IS 3025.

## Ground Water Analysis Report

Date of sampling: 15.01.2015

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

Parameter	Unit	Standard	GW2
PH		6.5-8.5	7.15
Colour	Hazen	5	Colourless
Suspended Solid	mg/l	---	11.0
Odour		Agreeable	Odourless
Taste		Agreeable	Agreeable
Turbidity N.T.U (MAX)	N.T.U	1.0	1.95
Total dissolved solids	mg/l	500	125.55
Total Hardness as CaCO <sub>3</sub>	mg/l	200	65.3
Chlorides as Cl.	mg/l	250	11.2
Sulphate as SO <sub>4</sub>	mg/l	200	2.15
Free residual Chlorine	mg/l	0.2	ND
Total Alkalinity	mg/l	200	71.30
Iron as Fe	mg/l	0.3	0.16
Fluoride as F	mg/l	1.0	0.22
Calcium as Ca	mg/l	75	7.5
Manganese as Mn	mg/l	0.1	ND
Mineral oil	mg/l	0.5	0.008
Cadmium as Cd	mg/l	0.003	ND
Zinc as Zn	mg/l	5.0	ND
Selenium as Se	mg/l	0.01	ND
Nitrate as NO <sub>3</sub>	mg/l	45	0.20
Phenolic compound as C <sub>6</sub> H <sub>5</sub> OH	mg/l	0.001	ND
Aluminium as Al	mg/l	0.03	ND
Arsenic as As	mg/l	0.2	ND
Boron as B	mg/l	0.5	ND
BOD 27 <sup>0</sup> C 3 days	mg/l	---	1.8
COD	mg/l	---	5.45
Mercury as Hg	mg/l	0.001	ND

### Location

GW2: Khinda village Dug well

ND – Not Detectable.

Standards as per IS :10500 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>	<b>Unit</b>	<b>Standard</b>	<b>GW2</b>
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 <sub>3</sub>	mg/l	300	90.14
Chlorides as Cl.	mg/l	250	18.31
Sulphate as SO <sub>4</sub>	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 <sub>3</sub>	mg/l	50	0.13
Phenolic compound as C <sub>6</sub> H <sub>5</sub> 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. 19<sup>th</sup> May' 93 Sampling & testing has been done as per IS 3025.

## TOXICITY FOR PIT (MINES) SUMP WATER

**Date of sample collection : 21.02.2015**

<b>Parameters</b>	<b>Units</b>	<b>Standard</b>	<b>Results</b>
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 Data in dBA**

**Date of Monitoring: 18/19.11.2014**

<b>Time</b>	<b>Station: Khinda Village</b>	<b>Station: R &amp;R Colony</b>	<b>Station: Rest Selter</b>
06.00	41.4	43.2	45.1
07.00	42.8	45.4	48.7
08.00	45.9	48.7	51.2
09.00	47.1	50.9	52.6
10.00	52.2	54.8	55.3
11.00	54.8	55.5	61.6
12.00	55.4	58.8	65.5
13.00	56.5	60.2	70.1
14.00	58.1	62.3	73.4
15.00	55.2	58.2	63.1
16.00	53.5	56.7	60.5
17.00	51.7	54.2	56.2
18.00	50.4	52.6	52.4
19.00	49.4	48.2	47.6
20.00	43.5	44.8	45.0
21.00	40.4	43.5	50.7
22.00	38.5	41.4	50.3
23.00	36.5	40.3	48.9
00.00	34.2	40.7	47.2
01.00	34.5	38.3	43.5
02.00	33.2	38.5	41.8
03.00	33.5	36.3	38.4
04.00	33.7	35.6	38.7
05.00	33.1	35.3	37.9

Day Max:	58.1	62.3	73.4
Day Min:	41.4	43.2	45.1
Night Max:	40.4	43.5	50.7
Night Min:	33.1	35.3	37.9

## Noise Level Data in dBA

**Date of Monitoring: 26/27.03.2015**

<b>Time</b>	<b>Station: Khinda Village</b>	<b>Station: R &amp;R Colony</b>	<b>Station: Rest Selter</b>
06.00	40.1	44.4	45.8
07.00	40.9	45.8	47.3
08.00	44.2	48.7	51.4
09.00	46.4	52.7	53.4
10.00	50.4	54.9	55.8
11.00	52.8	56.8	63.8
12.00	54.3	59.3	64.9
13.00	55.5	60.2	66.4
14.00	55.3	59.6	66.1
15.00	54.9	59.1	63.8
16.00	52.5	57.5	61.7
17.00	50.7	53.6	55.7
18.00	49.4	52.3	53.5
19.00	48.8	48.2	47.8
20.00	46.5	44.3	44.5
21.00	43.1	42.6	44.2
22.00	40.5	42.3	43.6
23.00	37.9	40.1	41.9
00.00	36.7	39.5	41.5
01.00	36.1	38.2	39.7
02.00	35.4	37.3	39.5
03.00	35.0	36.0	39.3
04.00	34.9	35.5	38.7
05.00	34.2	34.8	38.3

Day Max:	55.5	60.2	66.4
Day Min:	40.1	44.4	45.8
Night Max:	40.5	42.3	43.6
Night Min:	34.2	34.8	38.3

## 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 w'hich 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 Hiraakud 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/Hiraakud 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 <sup>4</sup> 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. Chief representative of outsourcing agency
07. Security Officer

#### **EMERGENCY TELEPHONE NUMBERS**

Designation	Mobile No.
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-2014-15  
HINDALCO- HIRAKUD**

<b>Area of Intervention</b>	<b>Total Beneficiaries Covered</b>	<b>Amount Spent by unit (Rs. in Lakhs)</b>	<b>Amount spent by Govt &amp; other Sources (Rs. in Lakhs)</b>	<b>Total Expenses (Rs. in Lakhs)</b>
Education	2774	3.23	0.59	3.82
Health Care	73251	46.57	6.37	52.94
Sustainable Livelihood	7110	8.50	8.13	16.63
Infrastructure Dev.	90120	145.92	10.75	156.67
Social Causes	18640	12.66	3.4	16.06
<b>Total</b>	<b>191895</b>	<b>216.88</b>	<b>29.24</b>	<b>246.12</b>