

ANNUAL REPORT

1997-1998



**MEGHALAYA STATE POLLUTION CONTROL BOARD,
“ARDEN”, LUMPYNGNGAD,
SHILLONG – 793014**

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ANNUAL REPORT FOR THE PERIOD 1st APRIL 1997 – 31st MARCH 1998

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1. INTRODUCTION

The State Board for Prevention and Control of Water Pollution, Meghalaya was constituted by the Government of Meghalaya on the Sixteenth Day of November, Nineteen Eighty Three in pursuance of the Water (Prevention & Control of Pollution) Act, 1974. After the enactment of the Air (Prevention & Control of Pollution) Act, 1981, the enforcing responsibility of the Act was also entrusted to the Board. The Board was later renamed as Meghalaya State Pollution Control Board in 1988. The functions of the Board are as laid down under Section 17 of the Water (Prevention and Control of Pollution) Act, 1974 and Section 17 of the Air (Prevention and Control of Pollution) Act, 1981.

Besides the enforcement of the Water Act and the Air Act, the Board is also enforcing the following Acts, Rules and Notifications :-

- 1) The Water (Prevention and Control of Pollution) Cess Act, 1977, and as amended by Amendment Act in 1991.
- 2) The Water (Prevention and Control of Pollution) Cess Rules, 1978.
- 3) The Hazardous Waste (Management and Handling) Rules, 1989.
- 4) The Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
- 5) The Manufacture, Use, Import, Export & Storage of Hazardous Micro organism or Cells Rules, 1989.
- 6) The Public Liability Insurance Act, 1991.
- 7) The Environmental Impact Assessment Notification, 1994.
- 8) The Chemical Accidents (Emergency Planning, Preparedness & Response) Rules, 1996.

The Board has been functioning with 31 (Thirty- one) Staff as on 31-3-1998 against a sanctioned strength of 82 (Eighty two). The details of staff position are given in Annexure-I. The organization chart of the Board is given in Annexure-II.

The Central Office of the Board is located in Shillong. At present, the Board does not have any Regional or Divisional or District Offices. The Central Office is responsible for framing general policies relating to enforcement of the Acts and Rules. It also looks after the general administration and co-operation with other agencies. Besides, it takes up public awareness programmes on matters relating to environment pollution. The Central Laboratory is well-equipped and carries out analysis of samples of water, waste water, stack emission, ambient air, bacteriological, bio-assay tests etc.

The other activities of the Central office of the Board are: -

- (i) Inspection of industries and local bodies.
- (ii) Monitoring the quality of water and wastewater.
- (iii) Monitoring the quality of ambient air and stack emissions.
- (iv) Inspection of sites proposed for setting up of industries to verify the suitability of the same from environmental point of view.
- (v) Water bodies monitoring under MINARS (Monitoring of Indian National Aquatic Resources System) programme.
- (vi) Ambient Air Quality Monitoring under National Ambient Air Quality Monitoring (NAAQM) programme.
- (vii) Offering guidance to industries and local bodies on statutory provisions.
- (viii) Issue of Consents to Establish and Consents to Operate respect for industries and Municipal Boards.

2. CONSTITUTION OF THE BOARD AND CHANGES THEREIN

The State Government nominates the members of Meghalaya State Pollution Control Board. The Board was originally constituted under Section 4 of the Water (Prevention & Control of Pollution) Act, 1974 vide Notification No. PHE. 161/83/1 dt. 16.11.83. The last reconstitution was in January 1995 vide Notification No. PHE 161/83/114 dated 16th Jan.1995.

The Board consists of 20(twenty) members nominated by the State Government as per Provisions laid down in Sub-Section (2) of Section 4 of the Water (Prevention and Control of Pollution) Act 1974. Besides the Chairman and the Member Secretary, there are 6(six) official members representing various State Government Departments, 4(four) members representing local Authorities, 3(three) Members representing the Co-operatives and Corporations owned, managed or controlled by the State Government and 5(five) Non-official Members. The list of the Members of the Board is appended at Annexure-III.

Shri Kunal Sen served as Chairman of the Board till 11.08.97. Subsequently, Shri. B.M.Choudhury assumed charge of the post on 12.08.97 and continued as Chairman during the financial year.

Shri S.K. Blah who joined the Board on 13.11.96 continued in the post of Member Secretary during the financial year.

3. MEETINGS OF THE BOARD WITH MAJOR DECISIONS

During the year 1997-1998, the Board conducted the following Meetings:

SL. NO.	MEETING NO.	DATE	VENUE	NO. OF MEMBERS ATTENDED THE MEETING	REMARKS
1.	Twenty Fifth Board Meeting	10 th April, 1997	Conference Hall, MSPCB	11 (Eleven)	
2.	Twenty Sixth Meeting	18 th August, 1997	Conference Hall, MSPCB	8 (Eight)	

The following decisions were taken during the above Meetings: -

The 25th Board Meeting: -

- The revised rates for Water and Air sampling and analysis were approved by the Board.

The 26th Board Meeting: -

- Organizational set-up and common staffing pattern of the Board as per Belliapa Committee Recommendation Report was cleared for seeking necessary approval.

4. COMMITTEES CONSTITUTED BY THE BOARD AND THEIR ACTIVITIES

The Consent Committee and the Purchase Committee of the Board remain the same as constituted vide Government Notifications No.PHE: 346/87/Pt/73 Dtd 10th July1995 and No.PHE: 96 /95/3 Dtd 29th September1995 respectively.. The members are shown in Annexure -IV (A) and IV (B).

5. MONITORING NETWORK FOR THE QUALITY OF WATER AND AIR

5.1 MONITORING OF AIR QUALITY

5.1.1 NATIONAL AMBIENT AIR QUALITY MONITORING

There are 2(two) Nos. of Ambient Air Quality Monitoring Stations in the State. Both the Stations are located in Shillong City. One Station is located at Lumpyngngad within the Board's premises. The other Station, which was commissioned in March 1989, became non – operational since July 1996 due to the inability to conduct 24 hours sampling as per the norms and guidelines of the Central Pollution Control Board. The major pollutants monitored from these stations are suspended particulate matter (SPM), Sulfur Dioxide (SO₂) and oxides of Nitrogen (NO_x). Some meteorological parameters were also monitored during the ambient air quality sampling.

The following data were collected from the Station at the Board's Office at Lumpyngngad, Shillong:

TABLE-I

STATION – BOARD'S PREMISES, LUMPYNGNGAD, SHILLONG

<i>MONTH & YEAR</i>	<i>PARAMETERS TESTED</i>		
	<i>SPM ($\mu\text{g}/\text{m}^3$)</i>	<i>SO₂($\mu\text{g}/\text{m}^3$)</i>	<i>NO_x ($\mu\text{g}/\text{m}^3$)</i>
APRIL, 1997	28.9	BDL*	BDL*
MAY, 1997	38.3	4.5	9.0
JUNE, 1997	23.0	BDL*	BDL*
JULY, 1997	21	BDL*	BDL*
AUGUST, 1997	23.9	BDL*	BDL*
SEPTEMBER, 1997	23.7	BDL*	BDL*
OCTOBER, 1997	28.6	BDL*	BDL*
NOVEMBER, 1997	28.7	BDL*	BDL*
DECEMBER, 1997	46.4	3.3	5.1
JANUARY, 1998	40.0	BDL*	6.0
FEBRUARY, 1998	35.1	BDL*	4.7
MARCH, 1998	24.5	BDL*	BDL*

* BDL:Below Detectable Limits

5.1.2 ASSESSMENT OF VEHICULAR POLLUTION

Vehicular emissions constitute because the per capita density of vehicles is very high in Shillong and the other urban centers of the State. The Meghalaya State Pollution Control Board is coordinating with the Office of the Commissioner of Transport, Meghalaya in regard to the activities for reducing vehicular pollution. The Board operates a Vehicle emission-testing Center in its office premises at Lumpyngngad, Shillong-14, which has been in existence since January 1994. This testing Center caters exclusively to the test needs of the Commercial petrol - driven light vehicles only. During the year 1997-1998, the number of petrol-driven vehicles tested are as follows: -

<i>YEAR</i>	<i>TOTAL NO. OF VEHICLES TESTED FOR VEHICULAR EMISSION</i>	<i>NO. OF VEHICLES COMPLYING TO THE STANDARDS</i>	<i>NO. OF VEHICLES NOT COMPLYING TO THE STANDARDS</i>	<i>PERCENTAGE NOT COMPLYING TO EMISSION STANDARDS</i>
01.04.97 upto 31.03.98	814	606	208	25.6%

5.2 MONITORING OF WATER QUALITY IN THE STATE

One of the major objectives of the State Board as laid down in the Water (Prevention and Control of Pollution) Act 1974, is to promote cleanliness of Water bodies in the State. To achieve this objective, the Board monitors major rivers/lakes and springs of the state under the following Programmes:

5.2.1 MONITORING OF NATURAL WATER BODIES UNDER MINARS PROGRAMME

Under the MINARS programme sponsored by the Central pollution Control Board, the water quality monitoring was conducted at 5 (five) stations namely, Ward's Lake, Shillong, Umiam River, Umtrew River, Thadlaskein Lake and Kyrhohkhla River. The Water quality of these water bodies was monitored on quarterly basis since 1990. The analysis results obtained during 1997-98 are as shown in Table-1 to Table 5.

From the above-mentioned tables, it may be noted that River Umtrew and Thadlaskein Lake have more or less good water quality. River Kyrhuhkhla which flows through the coal mining areas of Jaintia Hills District show remarkably less pH values, which is indicative of water pollution by Coal mining activities. Wards Lake in Shillong which is not far away from Shillong receive most of the waste water and solid waste generated in the City; therefore the Water quality of these water bodies shows the presence of high content of total and faecal coliforms, which is a clear sign of organic pollution.

5.2.2 ANALYSIS OF WATER SAMPLES OF OTHER AGENCIES

The Board analyses the water samples collected by it and those received from various Govt., Semi-Govt organizations and private parties. During the year 1997-1998, the Board analysed 289 such water samples belonging to the following agencies:

- P.H.E. Deptt. Samples :: 168 Nos
 - Samples Collected Under MINARS programme :: 20 Nos
 - Samples collected & brought by other organizations :: 101 Nos
- Private individuals/groups

As most of these water samples are received from the Public Health Engineering Department, Meghalaya, the Board possesses the information about the drinking water quality of various water sources in the State.

6. PRESENT STATE OF ENVIRONMENT, ENVIRONMENTAL PROBLEMS AND COUNTER MEASURES.

Meghalaya is a hill State located in the Northeastern region of the Country. It covers an area of about 22,429 sq.kms. and its population as per 1991 census is 17,74,778. Due to certain factors, the industrial development in the State has been slow and as such, the environmental pollution from industrial sources is not that significant. In the recent past, the State has been experiencing rapid population growth and fast urbanization. It is estimated that about 80% of the pollution resulted from indiscriminate discharge or disposal of domestic sewage, trade effluents, urban solid wastes, bio-medical wastes, domestic fuel burning and vehicular exhaust emissions. However, exhaust emission from vehicles is a major contributor to air pollution since road transport is the only mean of transport in the State. The State is rich in mineral resources and the main minerals are coal and limestone which are found in almost the entire southern belt. Mining activities are mostly in private hands and minerals are being exploited in an unscientific and unplanned manner without any measures for reclamation of the already mined areas. This has been causing severe water pollution and environmental degradation.

As per information from the Directorate of Industries, Meghalaya there are 2,533 industrial units/establishments in the State. Many of these are small and tiny units, which are non-polluting in nature. However, around 250 of these are regarded as polluting units and one of them is a cement plant under large-scale industrial sector, which also falls under the 17 categories of highly polluting industries. The others are medium and small-scale cement plants, lime calcinations plants, stone crushing units, auto workshops and auto servicing units. Most of the lime calcinations units are coal - fired traditional lime kilns which do not have even hood and chimney for venting out the smoke. So far, no cost effective pollution control system could be suggested for such units due to peculiar nature of the kiln structures, type of coal used and the climatic conditions at the places where such lime kilns are mostly located.

The Board is regulating the discharge of effluents and air emissions from industries through the issuance of Consents under the Water Act & the Air Act. While issuing Consents, conditions are imposed with regard to the effluent standards and the emission standards to which industries have to comply with. Conditions are also stipulated for setting up of effluent treatment plants and/or installing air pollution control devices whenever they are required. The Officials of the Board are engaged in periodical collection and analysis of samples for verification of the industries' compliance to Consent conditions. The industrial firms are also instructed to ensure that pollution control systems, whenever necessary, are installed and commissioned within a stipulated time. In respect of new Projects, Consents to Establish

are issued only after examining the suitability of the sites and scrutiny of the pollution control proposals. Besides, the Board is encouraging the industries to adopt cleaner production techniques based on re-cycle, re-use, and recover concepts

The names of industries/firms which applied for Consent to Establish during the year 1997-1998 are as given at Annexure-V. These industries which were granted Consent to Establish during the year are as listed at Annexure-VI. The industries which were granted the Consent to Operate are as mentioned at Annexure VII. Further, the industries which were granted the Renewal of the Consent to Operate are as listed at Annexure-VIII.

7. ENVIRONMENTAL RESEARCH

Under the Programme for Prevention, Abatement and Control of Pollution sanctioned by the Ministry of Environment & Forests, G.O.I., a study project, viz. “ Water and Air Quality Monitoring in Specific areas of Meghalaya State.” was launched. As, per the requirement of the project, the water quality monitoring of selected water bodies and the ambient air quality monitoring at chosen stations / locations were carried out. The water and / monitoring stations are as follows: -

a. Water Quality Monitoring Stations:-

Sl.No.	Name of the River	Location
1.	Lubha River	Jaintia Hills District
2.	Kupli River	Jaintia Hills District
3.	Garampani River	Jaintia Hills District
4.	Ganol River	Garohills District
5.	Simsang River	Garohills District
6.	Rongrang River	Garohills District
7.	Kynshi River	Khasi Hills District
8.	Umshyrpi River	Khasi Hills District
9.	Umkhrah River	Khasi Hills District

b. Air Quality Monitoring Stations:

The Air Quality Monitoring Stations were classified into the following 3(three) categories:

- i) District Headquarters
- ii) Industrial Estates/Industrial Areas/Mining Areas
- iii) State Capital Shillong.

The following are the stations under each category:

District Headquarter

- 1. Nongpoh, Ri-Bhoi District
- 2. Nongstoin, West Khasi Hills District
- 3. Jowai, Jaintia Hills District
- 4. Tura, West Garo Hills District
- 5. Baghmara, South Garo Hills District

Industrial Estates/Industrial Areas/Mining Areas

- 1. Limestone mining area, Komarah, East Khasi Hills District.
- 2. Coal Mining Area, Khliehriat, Jaintia Hills District.
- 3. Industrial Estate, Mawroh, Shillong, East Khai Hills District.
- 4. Industrial Area, Barapani, Ribhoi District.

State Capital, Shillong.

- 1. Nongthymmai
- 2. Dhankheti
- 3. Barik Point
- 4. Police Bazaar,
- 5. Motphran
- 6. Mawlai.

Some of the Analytical results obtained during the year 1997-1998 are shown at Table-6 and Table7. As part of the study works on Umkhras river and Umshyrpi river, some of the water quality parameters were analysed and the findings are shown at Table- 8(A) and Table 8(B).

8. ENVIRONMENTAL TRAINING

The senior officials of the Board attended some important workshops and training courses held during the year. The list of the officials who attended the workshops and training Programmes is appended as Annexure-IX.

9. ENVIRONMENTAL AWARENESS AND PUBLIC PARTICIPATION

The Board Participated in a State Level Science Seminar in September 1997 organized by the Science Wing of the Directorate of Education, Meghalaya.

On the 2nd of September, 1997 the Board organized an Inter-School Exhibition (Models & Charts) on Environmental issues on the theme “For Life On Earth” at St. Anthony’s School Hall, Shillong. The schools which participated in the programme are: -

- i. St Edmund’s School
- ii. Laitumkhras Presbyterian High School
- iii. St Mary’s High School
- iv. St Anthony’s High School
- v. Loreto Convent
- vi. Pine Mount School
- vii. Seven Set School
- viii. All Saints Diocesan School
- ix. Govt. Boy’s High School
- x. Christian Academy
- xi. K.J.P.Synod School
- xii. St Joseph School
- xiii. Laban Bengalee Girls School
- xiv. Mawprem Modern High School
- xv. Lady Keane High School
- xvi. Laban Presbyterian high School
- xvii. Auxillium High School

10. ENVIRONMENTAL STANDARDS INCLUDING THE TIME SCHEDULE FOR THEIR ENFORCEMENT.

The Board adopted the Standards prescribed by the Central Pollution Control Board and the Ministry of Environment and Forests, New Delhi. In Case the Standards of the said organizations are not available, the Board follows the standards prescribed by the Indian Standards Institutions. The Board Maintains the enforcement Schedule prescribed by the Central pollution Control Board and the Ministry of Environment and Forests, New Delhi for the 17 (seventeen) Categories of Industries. However it has its own enforcement schedule for the other industries as specified at the time of granting of “Consent to Establish” and “Consent to Operate” Certificates.

11. PROSECUTION AND CONVICTIONS FOR ENVIRONMENTAL CONTROL

No Prosecutions were launched against any industry for non-Compliance of the Standards during the year 1997-1998

11.1 CLOSURE OF INDUSTRIAL POLLUTING UNIT.

The Board served two Closure Notices dt. the 30th September, 1997 to M/s. Meghalaya Calcinates & Chemicals and M/s. Umiam Calcinates (P) Ltd. directing the firms to stop operation of their Calcination plants at Lumshnong, Jaintia Hills District and Barapani Industrial Estate, Umiam, Ri - Bhoi District respectively.

12. FINANCE AND ACCOUNTS.

The receipts and payment accounts for the financial year 1997-1998 are appended as Annexure-X(A) and X(B).

ANNEXURE – I**STAFF POSITION OF THE MEGHALAYA STATE POLLUTION CONTROL BOARD****AS ON 31ST MARCH 1998**

SL. NO.	ADMINISTRATIVE & ACCOUNT STAFF	SANCTIONED STRENGTH	WORKING STRENGTH	VACANCY
1.	Administrative Officer	1	-	1
2.	Private Secretary to Chairman	1	-	1
3.	Scientist 'B' (Economics & Statistic)	1	-	1
4.	Legal Officer	1	-	1
5.	Senior Accountant	1	1	-
6.	Establishment officer	1	-	1
7.	Stenographer Grade II	1	-	1
8.	Statistical Assistant	1	-	1
9.	U.D.A	4	2	2
10.	L.D.A.	7	1	6
11.	L.D.A. Cum-Typist	5	4	1
12.	Typist	4	-	4
13.	Library Asstt.	1	-	1
14.	Driver	4	3	1
15.	Dufty	1	1	-
16.	Peon/Plumber/Mali	14	5	9
17.	Chowkidar	3	2	1
	TECHNICAL STAFF			
1.	Environmental Engineer	2	1	1
2.	Asstt.Environmental Engr.	4	1	3
3.	Senior Draftman	1	-	1
4.	Junior Draftman	2	-	2
5.	Tracer	2	-	2
	SCIENTIFIC STAFF			
1.	Chief Chemist	1	1	-
2.	Scientist "B"	3	2	1
3.	Senior Scientific Assistant	1	-	1
4.	Junior Scientific Asstt.	5	2	3
5.	Junior Laboratory Asstt.	2	-	2
6.	Store Keeper	1	1	-
7.	Sample Collector	5	2	3
8.	Laboratory Attendant (Peon)	2	2	-
	TOTAL	82	31	51

ANNEXURE-III**LIST OF MEMBERS FOR THE PERIOD 1997-1998**

- | | |
|----------------------------------------------------------------------------------------------|----------|
| 1. Chairman
Meghalaya state Pollution Control Board, Shillong | Chairman |
| 2. Chief Engineer
Public Health Engineering, Meghalaya or his nominee | Member |
| 3. Director General of Police, Meghalaya or his nominee | Member |
| 4. Director of Industries, Meghalaya or his nominee | Member |
| 5. Director of Health Services (Research, etc), Meghalaya or his nominee | Member |
| 6. Director, Urban Affairs, Meghalaya or his nominee | Member |
| 7. Chief Conservator of Forests
(Social Forestry & Environment), Meghalaya or his nominee | Member |
| 8. Chief Executive Member, Khasi Hills Autonomous District Council
Or his nominee | Member |
| 9. Chief Executive Member, Jaintia Hills Autonomous District Council
Or his nominee | Member |
| 10. Chief Executive Member, Garo Hills Autonomous District Council
Or his nominee | Member |
| 11. Chairman, Shillong Municipal Board or his nominee | Member |

12. Managing Director, Meghalaya Industrial Development Corporation or his nominee	Member
13. Managing Director, Meghalaya Mineral Development Corporation or his nominee	Member
14. Managing Director, Meghalaya Forest Development Corporation, or his nominee	Member
15. Shri Friday Lyngdoh, Ex-MLA, Mawkhair, Shillong*	Member
16. Shri Diverland Lyngdoh, Mawkyrwat, West Khasi Hills District	Member
17. Shri Winseng Sangma, MDC, Bajengdoba, East Garo Hills District	Member
18. Shri Robin Marak, Tura, West Garo Hills District	Member
19. Shri Herbert Suchiang, Ex-MLA, Risa Colony, Shillong	Member
20. Member Secretary, Meghalaya State Pollution Control Board	Member Secretary

* Shri Friday Lyngdoh resigned from the membership of the Meghalaya State Pollution Control Board with effect from the 21st January, 1998.

ANNEXURE-IV(A)**LIST OF THE CONSENT COMMITTEE MEMEBERS DURING 1997-1998**

- | | | |
|----|-----------------------------------------------------------------------------------|-----------------|
| 1 | Chief Conservator of Forests, Social Forestry
Environment, Meghalaya, Shillong | Chairman |
| 2. | Director, Forensic Science Laboratory,
Meghalaya, Shillong or his nominee | Member |
| 3. | Director, Mineral Resources, Meghalaya, Shillong
or his nominee1`` | Member |
| 4. | Director, Urban affairs, Meghalaya, Shillong or his
Nominee | Member |
| 5. | Director , Soil Conservation , Meghalaya
Shillong or his nominee | Member |
| 6. | Director of Industries, Meghalaya, Shillong
Or his nominee | Member |
| 7. | Zonal Officer, North Eastern Zonal Office,
CPCB, Shillong | Member |
| 8. | Shri. H.G.D.Sanderson | Member |
| 9. | Member Secretary, Meghalaya State Pollution control Board | Member Convener |

ANNEXURE-IV(B)**MEMBERS OF THE PURCHASE COMMITTEE DURING THE YEAR –1997-1998**

- | | |
|-----------------------------------------------------------------------------|------------|
| 1. Chairman, Meghalaya State Pollution Control Board | - Chairman |
| 2. Director, Regional Sophisticated Instrumentation Centre,
Shillong | - Member |
| 3. Chief Engineer, P.H.E., Meghalaya or his nominee | - Member |
| 4. Director of Industries, Meghalaya or his nominee | - Member |
| 5. Senior Scientist (PP), Indian Council of Agricultural Research,
Umiam | - Member |
| 6. Senior Accountant, Meghalaya State Pollution Control Board | - Member |
| 7. Member Secretary, Meghalaya State Pollution Control Board | - Convener |

**LIST OF INDUSTRIAL UNITS OR FIRMS WHICH HAVE APPLIED FOR
CONSENT TO ESTABLISH IN 1997-1998.**

1. M/s Hynniewta Offset Press, Mawkhar East Road, Shillong-2, East Khasi Hills District.
2. M/S L.Lyngdoh Lime & Chemicals, Lumshnong, Jaintia Hills District
3. M/S D.Basaiawmoit Bakery, Maraikaphon, Cherrapunjee, East Khasi Hills District
4. M/S Randers Motor Works, Pohkseh, Nongthymmai, Shillong-14, East Khasi Hills District
5. M/S Ramesh Lyngdoh Bakery, Them Mawrie, Khanapara, Meghalaya
6. M/S Me.S.E.B. Leska Project, Myntdu, Leska, Jaintia Hills District.
7. M/S Riwar Offset Press, 4th Mile, Upper Shillong, East Khasi Hills.
8. M/S Marbaniang Lime Kiln, Phlang Mawsyrpat, Mawsynram, East Khasi Hills, District
9. M/S K.K.Beverages (P)Ltd, Khanapara, Baridua, Ri-Bhoi District.
10. M/S. K.Lyngdoh Automobile Workshop, Kench' Trace. Laban, Shillong East Khasi Hills.
11. M/S.Pyngrope Stone Crusher, Umphyrnai, East Khasi Hills.
12. M/S Hynniewtrep Auto Workshop, Mawlai Nongpdeng, Shillong-8
13. M/S Shivam Ispat and Alloys (P)Ltd, Byrnihat, Ri-Bhoi District.
14. M/S S.D.Lyngdoh Coal Mining, Lum Wah ryndi West Khasi Hills.
15. M/S City Automobile & Servicing, Pynthorumkhrah, Shillong.
16. M/S Purbanchal Tubes (p) Ltd, Byrnihat, Ri-Bhoi District.
17. M/S Spring Side Auto Servicing Station, Nongthynmmmai, Shillong
18. M/S L.Suting Lime Kiln, Mawsmmai, Cherrapunjee, East Khasi Hills
19. M/S Laitphar Suting, Mawsmmai, Cherrapunjee, East Khasi Hills
20. M/S G.Lyngdoh Stone Crusher, Umroi Ri-Bhoi District.
21. M/S T.Passah Mechanical & Engg. Works, Mihmyntdu, Jowai, Jaintia Hills District.
22. M/S Prem Gayal Associated Agro Enterprise, Byrnihat, Ri-Bhoi District.
23. M/S B.Kurkalang, Greystone mine (P)Ltd, Byrnihat, Ri-Bhoi District

- 24. M/S S.Rymbai Feed Mill, Jowai, Jaintia Hills District
- 25. M/S Shandora Enterprise, Mawlyngad, East Khasi Hills.
- 26. M/S A.K.Mawlong Bone Mill, Golfling, Pynthorumkhrah, Shillong, East Khasi Hills.
- 27. M/S A.Rynjah, Maruti Workshop, Nongshilliang, Shillong.

**LIST OF INDUSTRIAL UNITS OR FIRMS, WHICH HAVE GRANTED CONSENT
TO ESTABLISH IN 1997-1998**

1. M/s Satyam Steel Alloys (P) Ltd., Byrnihat, Ri-Bhoi District.
2. M/S. Nongsiej Lime Industry, Mawlong, East khasi Hills
3. M/S Hotel Yalana Laitumkhrah, Shillong-3
4. M/S A.Roy Rangadkhew Lime, Balat, East Khasi Hills
5. M/S D.S.W. Khongsit Lime Kiln, Mawlong, East khasi Hills
6. M/S E.Suting Lime Kiln, Lower Cherrapunjee, East Khasi Hills
7. M/S Taston W.Sanglyne Lime Kiln, Mustoh, East Khasi Hills.
8. M/S Kupar Blah Lime Kiln, Umbang, Ri-Bhoi District.
9. M/S Hynniewta Offset press, Mawkhar East Rd. Shillong-2
10. M/S L.Lyngdoh Lime & Chemicals, Lumshnong, Jaintia Hills District
11. M/S W.K.Marbaniang Lime Kiln, Mawsynram, East Khasi Hills, District
12. M/S K.K.Beverages(P) Ltd., Baridua, Ri-Bhoi District
13. M/S Pyngrope Stone Crusher, Umphyrnai, East Khasi Hills.
14. M/S Shivam Ispat & Alloys (P)Ltd, Byrnihat, Ri-Bhoi District.
15. M/S Springside Auto Servicing, Nongthymmai, Shillong East Khasi Hills
16. M/S L.Suting Lime Kiln, Mawsmi, Cherrapunjee, East Khasi Hills
17. M/S Laitphar Suting Lime Kiln, Mawsmi, Cherrapunjee, East Khasi Hills
18. M/S Myllemngap Auto Engg. Kench' Trace, Laban Shillong-4 East Khasi Hills

ANNEXURE-VII**LIST OF INDUSTRIAL UNITS OR FIRMS WHICH HAVE GRANTED
CONSENT TO OPERATE IN 1997-1998.**

1. M/S Meghalaya Calcinate & Chemicals, Lumshnong, Jaintia Hills District
2. M/S Megha Alloys (P)Ltd. Byrnihat, Ri-Bhoi District.
3. M/S Kishondro Lime Kiln, sheila, East Khasi Hills, Meghalaya
4. M/S Me.S.E.B. (Stage I-II), Kyrdemkulai, Ri_bhoi District
5. M/S Nangroi floor Tiles Centre, Pynthorbah, Shillong, East Khasi Hills
6. M/S Nongbri Stone Crusher Umphyrnai, East Khasi Hills
7. M/S D.Lymba Bakery Dawki, Jaintia Hills District
8. M/S Ashok Engg Works, Kench' Trace, Shillong-2, East Khasi Hills
9. M/S Gemini feed Mill, Barapani Industrial Estate, Ri-Bhoi District
10. M/S B.Marbaniang Bakery, Mawsynram, East Khasi Hills
11. M/S L.E.Rynjah Bakery, Laban, Shillong, East Khasi Hills
12. M/S Strongwell Khongted Bakery, ;Pynursla, East Khasi Hills.
13. M/S Jee Motor Automobile, Kench's Trace, Laban Shillong, East Khasi Hills
14. M/S Mawlyngngad Stone Crusher, Mawlyngngad, East Khasi Hills
15. M/S Ri-War Offset Press, Upp Shillong, East Khasi Hills.
16. M/S K.Lyngdoh Automobile Workshop, Upper Laban Shillong, East Khasi Hills
17. M/S.Lyngdoh Diesel Generator, LIC Office, Dhankheti, Shillong, East Khasi Hills

ANNEXURE-VIII**LIST OF INDUSTRIAL UNITS OR FIRMS WHICH HAVE BEEN GRANTED
RENEWAL OF CONSENT TO ESTABLISH/OPERATE DURING 1997-1998.**

1. M/S Woodland Nursing Home, Dhankheti, Shillong, East Khasi Hills – OPERATE
2. M/S Indian Oil Corporation, Barapani, Ri-Bhoi District –OPERATE
3. M/S Associated Beverages (P) Ltd, Byrnihat, Ri-Bhoi District- OPERATE
4. M/S Kommorah Lime Stone Mning Co. Ltd, Mawlong, East Khasi Hills – OPERATE
5. M/S Shankar Atta Chaki Mills, Bara Bazar, Shillong, East Khasi Hills – OPERATE
6. M/S Mahabir Flour Mills, Lukier Rd. Shillong, East Khasi Hills – OPERATE
7. M/S Bethesda Nursing Home, Bishnupur, Shillong-4, East Khasi Hills – OPERATE
8. M/S Meghalaya Fusion (P)Ltd, Barapani Industrial Area, Ri-Bhoi District –
ESTABLISH
9. M/S Meghalaya Minerals Dev Corporation, Jarabad, Ri-Bhoi District – ESTABLISH
10. M/S Me.S.E.B. (Stage I-II), Kyrdemkulai, Ri-Bhoi District – OPERATE
11. M/S Sshree Sai Megha Alloys (P)Ltd, Byrnihat, Ri-Bhoi District – ESTABLISH
12. M/S A.M.S. Cement, Mawpdang, East Khasi Hills – ESTABLISH

ANNEXURE-IX

TRAINING/WORKSHOPS/SEMINARS ATTENDED BY
SCIENTIFIC/TECHNICAL STAFF DURING 1997-1998

SL.NO.	NAME & DESIGNATION	NAME & TRAINING	PLACE OF TRAINING	PERIOD OF TRAINING
1.	Shri B.M.Choudhury,Chairman	National Workshop on Environmental Public Hearing for Development Project	Hyderabad	19 th –20 th December,1997
2.	Mr.S.C.Katiyar, Chief Chemist	Rural Water Supply & Sanitation under HRD Programme	Kolkatta	20 th – 22 nd , April, 1998
3.	Ms. B.Nongbri, Scientist “B”	Rural Environment Management Programme	Kolkatta	27 th January – 4 th April, 1997
4.	Ms.B.Nongbri, Scientist “B”	Ninth Refresher Course in Education for College and University Teacher	NEHU, Shillong	20 th March, 1998

RECEIPTS AND PAYMENT ACCOUNT FOR THE YEAR 1997-1998**RECEIPTS****Opening Balances of :**

• Cash in hand	:	714.26	
• Cash at bank:			
In Savings bank Account			
With Indian Overseas Bank,			
Shillong,(3488)	:	(22123.36)	
Indian Overseas Bank,			
Shillong(6757)	:	1017231.83	
Indian Bank ,Shillong	:	(14076.40)	
Bank of India,			
Shillong on:			
Account No. 544	:	2274593.88	
Account No.1242	:	116637.00	
Account No.1090	:	104023.00	
• In Fixed Deposit:			
With Indian Overseas Bank,Shillong	:	2922837.45	
Bank of India, Shillong	:	<u>556149.00</u>	69,55,986.66
• Grant received from:			
Ministry of Environment and Forests, Govt. Of India,	:	674968.00	
Central Pollution Control Board	:	232900.00	
Department of Health Engineering,			
Govt. Of Meghalaya	:	<u>3257000.00</u>	41,64,868.00
• Fees	:	668718.60	
• Interest on investments	:	162371.00	
• Miscellaneous Receipts	:	30095.10	
• Miscellaneous advances	:	35870.36	
• Deposits	:	<u>62436.09</u>	9,59,491.15

TOTAL (Rupees)1,20,80,345.81*N.B: Receipts & Payments Accounts for the year 1997-1998 are unaudited.*

RECEIPTS AND PAYMENT ACCOUNT FOR THE YEAR 1997-1998

<u>EXPENDITURE</u>			
• Fixed Assets	:	NIL	
• Other Assets	:		
Scientific Instruments and			
Office Appliances	:	531226.46	
Tools and Plants	:	<u>2101.00</u>	5,33,327.46
• Revenue Expenditure:			
Administration:			
Pay & Allowances to Officers and Staff			
Contribution	:	2502985.00	
• Leave Salary and Pension	:	19656.00	
• Contingent Expenditure	:	1021780.20	35,44,421.20
• Board Laboratory	:		77,917.00
• Running and Maintenance of vehicles	:		1,28,779.40
• Consultancy fee	:		71,760.00
• Repairs and maintenance	:		32,623.00
• Legal Charges	:		----
• Advances	:		1,13,047.00
• Deposits	:		3000.00
Closing Balances:			
• Cash in hand	:	11171.26	
• Cash at Bank:			
In Savings Bank Account	:		
With Indian Overseas Bank,			
Shillong (3488)		(22123.36)	
Indian Overseas bank, Shillong(6757)	:	16080.63	
Indian Bank Shillong	:	(14076.40)	
Bank of India, Shillong on			
Account No.544	:	1371397.48	
Account No. 1242	:	69529.60	
Account No.1090	:	79910.00	
• In Fixed Deposit Account	:		
With Indian Overseas Bank, Shillong	:	3908032.45	
Bank of India, Shillong	:	<u>2156149.00</u>	75,76,070.66
TOTAL (Rupees)			<u>1,20,80,345.81</u>

N.B: Receipts & Payments Accounts for the year 1997-1998 are unaudited

TABLE – 1
WATER QUALITY OF WARDS LAKE

Sl. No.	PARAMETERS	JUNE '97	SEPT. ' 97	DEC. '97	MAR. '98
1.	pH	7.2	7.5	7.0	7.3
2.	Conductivity ($\mu\text{mho}/\text{cm}^2$)	150.0	330	175.0	170.0
3.	Turbidity (NTU)	19.0	26.0	18.0	2.0
4.	Total Dissolved Solids (mg/l)	107.5	200.6	150.0	121.7
5.	Chloride (mg/l)	22.0	17.0	30.0	30.0
6.	Hardness (mg/l)	20.0	86.0	32.0	30.0
7.	Alkalinity (mg / l)	38.0	60.0	25.0	20.0
8.	Calcium (mg/l)	13.0	30.0	15.0	20.0
9.	Sulphate (mg / l)	4.0	12.0	11.0	22.0
10.	Phosphate (mg/l)	1.4	0.9	2.0	2.0
11.	Nitrogen (Nitrite & Nitrate) (mg/l)	0.3	11.2	10.5	10.2
12.	Ammonical Nitrogen (mg/l)	0.7	3.0	3.0	2.8
13.	Kjeldahl Nitrogen (mg/l)	1.2	4.9	4.8	4.5
14.	Dissolved Oxygen (mg / l)	8.0	8.2	10.0	9.7
15.	Biochemical Oxygen Demand (mg / l)	12.0	13.5	15.0	10.0
16.	Chemical Oxygen Demand (mg / l)	15.7	20.0	16.5	16.2
17.	Total Coliform (MPN / 100 ml)	2400	3500	2800.0	5400
18.	Faecal Coliform (MPN/100 ml)	920	1100	1300	2800

TABLE - 2
WATER QUALITY OF UMIAM LAKE

Sl. No.	PARAMETERS	JUNE '97	SEPT. ' 97	DEC. '97	e MAR. '98
1.	pH	7.0	7.7	7.6	8.0
2.	Conductivity ($\mu\text{mho}/\text{cm}^2$)	142.0	138.0	180.0	169.0
3.	Turbidity (NTU)	20.0	4.0	16.0	5.2
4.	Total Dissolved Solids (mg/l)	120.0	115.4	135.0	122.0
5.	Chloride (mg/l)	13.0	12.0	25.0	6.0
6.	Hardness (mg/l)	32.0	24.0	28.0	22.0
7.	Alkalinity (mg / l)	38.0	24.0	40.0	24.0
8.	Calcium (mg/l)	8.0	12.0	10.0	14.2
9.	Sulphate (mg / l)	4.0	3.0	7.0	27.2
10.	Phosphate (mg/l)	1.0	0.0	1.2	0.8
11.	Nitrogen (Nitrite & Nitrate) (mg/l)	0.3	3.8	4.0	2.8
12.	Ammonical Nitrogen (mg/l)	2.8	2.5	2.5	2.7
13.	Kjeldahl Nitrogen (mg/l)	3.0	3.7	4.2	4.0
14.	Dissolved Oxygen (mg / l)	8.0	8.5	8.4	9.7
15.	Biochemical Oxygen Demand (mg / l)	9.0	4.7	9.2	5.8
16.	Chemical Oxygen Demand (mg / l)	14.2	8.4	10.0	10.0
17.	Total Coliform (MPN / 100 ml)	2400	1600	1800	2400
18.	Faecal Coliform (MPN/100 ml)	900	500	790	1400

TABLE – 3
WATER QUALITY OF UMTREW RIVER

Sl. No.	PARAMETERS	JUNE '97	SEPT. ' 97	DEC. '97	MAR. '98
1.	pH	7.2	7.4	7.5	7.9
2.	Conductivity ($\mu\text{mho}/\text{cm}^2$)	118.0	108.0	150.0	190.0
3.	Turbidity (NTU)	20.0	54.0	22.0	13.6
4.	Total Dissolved Solids (mg/l)	95.5	88.5	100.5	100.5
5.	Chloride (mg/l)	9.0	9.0	28.0	7.0
6.	Hardness (mg/l)	36.0	19.0	16.0	22.0
7.	Alkalinity (mg / l)	34.0	22.0	24.0	28.0
8.	Calcium (mg/l)	8.0	7.5	9.0	17.0
9.	Sulphate (mg / l)	10.0	7.0	11.0	32.0
10.	Phosphate (mg/l)	1.0	0.2	1.5	1.2
11.	Nitrogen (Nitrite & Nitrate) (mg/l)	0.4	3.2	3.6	3.1
12.	Ammonical Nitrogen (mg/l)	0.3	0.8	1.6	1.2
13.	Kjeldahl Nitrogen (mg/l)	1.0	1.9	3.0	2.6
14.	Dissolved Oxygen (mg / l)	8.8	9.2	10.5	10.2
15.	Biochemical Oxygen Demand (mg / l)	4.8	5.6	6.2	7.2
16.	Chemical Oxygen Demand (mg / l)	8.2	10.0	7.0	12.0
17.	Total Coliform (MPN / 100 ml)	26	90	63	79
18.	Faecal Coliform (MPN/100 ml)	11	40	22	31

TABLE - 4
WATER QUALITY OF THADLASKEIN LAKE

Sl. No.	PARAMETERS	JUNE '97	SEPT. ' 97	DEC. '97	MAR. '98
1.	pH	6.5	6.8	7.1	7.0
2.	Conductivity ($\mu\text{mho}/\text{cm}^2$)	90.0	115.0	110.0	98.0
3.	Turbidity (NTU)	36.0	8.0	7.0	10.0
4.	Total Dissolved Solids (mg/l)	60.0	72.5	90.0	78.0
5.	Chloride (mg/l)	6.0	8.0	24.0	20.0
6.	Hardness (mg/l)	10.0	16.0	10.0	18.0
7.	Alkalinity (mg / l)	12.0	24.0	19.0	14.0
8.	Calcium (mg/l)	3.0	7.0	5.0	11.4
9.	Sulphate (mg / l)	0.0	3.0	7.0	7.5
10.	Phosphate (mg/l)	0.8	0.0	1.0	1.0
11.	Nitrogen (Nitrite & Nitrate) (mg/l)	0.08	1.3	1.5	2.0
12.	Ammonical Nitrogen (mg/l)	0.7	0.8	1.0	0.9
13.	Kjeldahl Nitrogen (mg/l)	1.0	1.2	2.0	1.5
14.	Dissolved Oxygen (mg / l)	8.2	6.5	9.5	7.7
15.	Biochemical Oxygen Demand (mg / l)	4.2	6.0	5.0	6.5
16.	Chemical Oxygen Demand (mg / l)	6.5	3.2	5.8	10.0
17.	Total Coliform (MPN / 100 ml)	17	22	21	46
18.	Faecal Coliform (MPN/100 ml)	9	9	11	21

TABLE - 5
WATER QUALITY OF KYRHUHKHLA RIVER

Sl. No.	PARAMETERS	JUNE '97	SEPT. ' 97	DEC. '97	MAR. '98
1.	pH	2.6	3.4	3.2	2.7
2.	Conductivity ($\mu\text{mho}/\text{cm}^2$)	980.0	290.0	415.0	450.0
3.	Turbidity (NTU)	40.0	25.0	20.0	4.0
4.	Total Dissolved Solids (mg/l)	705.0	245.0	360.0	300.0
5.	Chloride (mg/l)	331.0	22.0	26.0	25.0
6.	Hardness (mg/l)	14.0	12.0	18.0	16.0
7.	Acidity (mg / l)	220.0	80.0	90.0	200.0
8.	Calcium (mg/l)	5.0	4.0	8.0	14.0
9.	Sulphate (mg / l)	150.0	131.0	160.0	140.0
10.	Phosphate (mg/l)	0.6	0.0	1.7	1.0
11.	Nitrogen (Nitrite & Nitrate) (mg/l)	0.1	0.7	0.9	1.2
12.	Ammonical Nitrogen (mg/l)	0.6	0.0	1.7	1.0
13.	Kjeldahl Nitrogen (mg/l)	1.5	2.0	2.2	1.5
14.	Dissolved Oxygen (mg / l)	9.0	7.0	7.8	7.7
15.	Biochemical Oxygen Demand (mg / l)	9.8	11.8	12.0	9.8
16.	Chemical Oxygen Demand (mg / l)	15.5	20.0	14.5	15.2
17.	Total Coliform (MPN / 100 ml)	9	7	4	2
18.	Faecal Coliform (MPN/100 ml)	0	2	0	0

TABLE-6(A)
AIR QUALITY SURVEY IN SOME AREAS IN THE STATE

SL.NO.	LOCATION	DATE OF SAMPLING	SPM ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NO _x ($\mu\text{g}/\text{m}^3$)
1.	M/s Anderson Minerals Limestone Mine Site, Borsora , West Khasi Hills	02.04.97	38.6	3.3	23.7
2.	M/s Anderson Minerals Coal Depot, Borsora , West Khasi Hills	03.04.97	89.8	3.4	31.8
3.	Upper Cherrapunjee, East Khasi Hills	05.05.97	55.6	NIL	NIL
4.	Thangkarang Park, East Khasi Hills	05.05.97	38.0	NIL	NIL

TABLE-6 (B)
AVERAGE WATER QUALITY DATA OF WATER BODIES UNDER THE
PROJECT “WATER & AIR QUALITY MONITORING IN SPECIFIC AREAS OF
MEGHALAYA”

Parameters	Unit	Lubha River	Kupli river	Kynshi river	Rongra river	Simsang river	Ganol river	Um-shyrpi river	Umkhrah river
Temperature	°C	26	22	23	26.8	29.0	26.5	18.3	19.5
pH	-	7.7	9.2	7.8	7.7	7.1	7.6	7.3	7.1
Conductivity	(µmho/cm ²)	172.0	150.0	85.6	100.0	126.5	109.0	260.2	287.5
Turbidity	N.T.U.	3.4	7.3	2.8	33.0	18.0	3.0	14.0	15.6
Chloride	mg/l	53.0	16.5	7.0	11.0	11.0	11.5	22.0	26.0
Hardness	mg/l	50.0	20.0	25.0	30.4	23.0	18.0	40.0	51.0
Alkalinity	mg/l	54.0	28.0	22.0	30.5	38.4	37.0	24.0	31.0
Phosphate	mg/l	Nil	Nil	Nil	0.58	0.18	Nil	0.33	0.40
Sulphate	mg/l	9.2	24.9	0.53	4.0	21.0	1.8	36.3	36.5
Nitrate Nitrogen	mg/l	3.6	5.7	0.54	4.8	3.7	3.9	9.8	12.8
Nitrite Nitrogen	mg/l	Nil	Nil	Nil	Nil	Nil	Nil	0.26	0.45
Ammoniacal Nitrogen	mg/l	0.13	0.25	0.14	0.39	0.9	0.1	3.2	4.6
C.O.D	mg/l	1.0	1.5	3.0	1.0	3.0	2.0	135.2	184.0
B.O.D	mg/l	0.55	0.19	0.2	0.39	1.70	0.4	82.2	95.2
D.O.	mg/l	10.2	9.3	9.5	7.2	7.1	8.3	4.6	2.8
T.D.S.	mg/l	140.4	124.3	68.0	79.5	98.3	88.4	123.2	215.3
T.C.	MPN/100ml	125	29	48	38	310	45	97,000	1,70,000
F.C.	MPN/100ml	71	11	27	21	125	24	52,000	1,12,000

TABLE-7

MONITORING OF INDUSTRIAL EFFLUENTS OF
SOME INDUSTRIAL/MINING AREAS

LOCATIONS → PARAMETERS ↓	M/s Mawmluh Cherra Cements Limited, East Khasi Hills	M/s Komorrah Limestone Intake Supply from River source (Myntri Nalla)	M/s Komorrah Limestone Upstream (Myntri Nalla)	M/s Komorrah Limestone Main Tank Water Supply
pH	7.5	8.5	8.5	8.4
Conductivity	330.0	210.0	200.0	210.0
Turbidity	66.0	2.0	5.2	10.0
C.O.D.	20.0	-	-	-
SO ₄	149.3	Nil	Nil	Nil
Total Hardness	168.0	140.0	84.0	130.0
Chloride	6.0	8.0	6.0	10.0
Alkalinity	165.0	122.0	120.0	120.0
Calcium	11.2	24.0	14.4	19.2
Magnesium	38.1	19.4	11.6	19.9
NO ₂	Nil	Nil	Nil	Nil
Dissolved Oxygen	--	10.5	10.6	11.0
Iron	0.01	0.04	0.03	0.03
Phosphate	---	Nil	0.08	(Trace)
Total Coliform	110	Nil	Nil	Nil

WATER QUALITY OF
RIVER UMSHYRPI, RIVER UMKHRAH AND UMIAM LAKE DURING 1997-1998

TABLE-8(A)
WATER QUALITY OF THE RIVER UMSHYRPI DURING 1997-98

Sampling Period	pH	DO mg/l	CON ($\mu\text{mho}/\text{cm}^2$)	TDS mg/l	NO ₂ Mg/l	NO ₃ mg/l	BOD mg/l	COD mg/l	TC MPN/100ml	FC MPN/100ml
Nov. 1997	7.0	5.0	258.0	180.5	0.20	9.60	79.5	130.0	94000	49000
March 98	7.6	4.3	262.4	185.8	0.30	10.00	84.7	140.0	100000	54000

TABLE-8(B)
WATER QUALITY OF THE RIVER UMKHRAH DURING 1997-98

Sampling Year	pH	DO mg/l	CON umho/cm	TDS mg/l	NO ₂ mg/l	NO ₃ mg/l	BOD mg/l	COD mg/l	TC MPN 100m	FCMPN 100m
Nov. 1997	7.0	3.0	290.0	220.5	0.50	12.50	94.5	178.5	160000	110000
March 1998	7.1	2.5	285.0	210.8	0.40	13.20	96.0	189.0	179000	115000

TABLE – 9**AIR QUALITY MONITORING UNDER PROJECT IN SOME DISTRICT****HEADQUARTERS OF THE STATE****FROM 1st APRIL '97 TO 31st MARCH '98****SUSPENDED PARTICULATE MATTER**

SL. NO	Sampling Location	SEP'97	OCT'97	DEC'97	JAN'98	MAR'98
1.	Nongstoin, West Khasi Hills District	40.3	-	-	80.1	-
2.	Nongpoh, Ri Bhoi District	323.3	-	-	-	347.6
3.	Jowai, Jaintia Hills District	-	-	108.1	-	-
4.	Tura, West Garo Hills District	-	103.0	-	-	-
5.	Baghmara, South Garo Hills District	-	23.7	-	-	-

OXIDES OF NITROGEN

SL. NO	Sampling Location	SEP'97	OCT'97	DEC'97	JAN'98	MAR'98
1.	Nongstoin, West Khasi Hills District	3.9	-	-	6.41	-
2.	Nongpoh, Ri Bhoi District	29.0	-	-	-	57.1
3.	Jowai, Jaintia Hills District	-	-	11.1	-	-
4.	Tura, West Garo Hills District	-	21.7	-	-	-
5.	Baghmara, South Garo Hills District	-	BDL*	-	-	-

SULPHUR DIOXIDE

SL. NO.	Sampling Location	SEP'97	OC'97	DEC'97	JAN'98	MAR'98
1.	Nongstoin, West Khasi Hills District	BDL*	-	-	BDL*	-
2.	Nongpoh, Ri Bhoi District	3.5	-	-	-	5.1
3.	Jowai, Jaintia Hills District	-	-	6.1	-	-
4.	Tura, West Garo Hills District	-	6.4	-	-	-
5.	Baghmara, South Garo Hills District	-	BDL*	-	-	-

* BDL: Below Detectable Limits

TABLE – 10
AIR QUALITY MONITORING IN THE STATE CAPITAL, SHILLONG
(UNDER PROJECT)
FROM 1st APRIL '97 TO 31st MARCH '98

SL. NO	Sampling Location	Suspended Particulate Matter		Oxides of Nitrogen		Sulphur Dioxide	
		NOV'97	MAR'98	NOV'97	MAR'98	NOV'97	MAR'98
1.	Nongthymmai	260.2	305.6	27.7	22.2	17.5	22.2
2.	Dhankheti	221.4	-	36.7	-	28.5	-
3.	Barik	224.5	-	32.8	-	11.0	-
4.	Police Bazar	182.0	-	23.6	-	7.1	-
5.	Bara Bazar	116.5	-	11.7	-	2.5	-
6.	Mawlai	71.6	-	15.7	-	BDL*	-

* BDL: Below Detectable Limits

TABLE – 11
AIR QUALITY MONITORING IN SOME INDUSTRIAL AREAS/ESTATES
(UNDER PROJECT)
FROM 1st APRIL '97 TO 31st MARCH '98

SI No.	Sampling Location	Suspended Particulate Matter		Oxides of Nitrogen		Sulphur Dioxide	
		NOV'97	DEC'97	NOV'97	DEC'97	NOV'97	DEC'97
1	Mawroh, Mawlai, Shillong, East Khasi Hills	60.6	-	7.4	-	BDL*	-
2	Barapani (Umiam), Ri-Bhoi District	-	157.6	-	15.4	-	3.2

* BDL: Below Detectable Limits

TABLE – 12
AIR QUALITY MONITORING IN A COAL MINING AREA
(UNDER PROJECT)
FROM 1st APRIL '97 TO 31st MARCH '98

SL. NO	Sampling Location	Suspended Particulate Matter	Oxides of Nitrogen	Sulphur Dioxide
		SEP'97	SEP'97	SEP'97
1.	Khliehriat, Jaintia Hills District	39.4	BDL*	BDL*

* BDL: Below Detectable Limits

TABLE – 13
AIR QUALITY MONITORING IN A LIMESTONE MINING AREA
(UNDER PROJECT)
FROM 1st APRIL '97 TO 31st MARCH '98

SL. NO	Sampling Location	Suspended Particulate Matter		Oxides of Nitrogen		Sulphur Dioxide	
		NOV'97	JAN'98	NOV'97	JAN'98	NOV'97	JAN'98
1.	Komorah Limestone Corporation, Bholaganj	122.2	126.3	6.4	14.5	BDL*	3.8

* BDL: Below Detectable Limits

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