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# IN THE HON'BLE SUPREME COURT OF INDIA

# IA No. of 2009

IN

# SLP (Civil) CC No. 292 of 2009

		1.			
	State of Gujarat	Petitioner(s)			
	Versus				
	Alok Pratap Singh	Respondent (s)			
	And				
	Bhopal Group for Information and Action, Bhopal Gas Peedit Mahila Stationary Karamchari Sangh & Bhopal Gas Peedit Mahila Purush Sangharsh Morcha.				
		Interveners			
APPLICATION FOR INTERVENTION					
To,					
The Hon'ble Chief Justice of India and					
His companion Justices of the					
Supreme Court of India.					
	the Application of the	e above-named applicant:			
MOST RESPECTFULLY SHOWETH:					
	1. The present application for in	ntervention arises from Writ			

Petition. No. 2802/2004 titled Alok Pratap Singh versus

UOI and Ors pending before the Hon'ble Madhya Pradesh

High Court at Jabalpur wherein vide order-dated 23.6.2005 the Applicant was invited to intervene in the said Writ Petition by the Hon'ble High Court, in order to assist the court in the present matter. Since the subject Special Leave Petition against an interim order, passed in the said Writ Petition therefore the Applicant is seeking vide the present application to be allowed to intervene in the present SLP.

- 2. The Applicant humbly submits that the said Petition was preferred, inter-alia, in order to seek an appropriate writ order or direction to the Respondents including the Union of India and the State of Madhya Pradesh to remove and destroy the highly hazardous and toxic waste lying in and around the Union Carbide Ltd factory site in Bhopal, that was owned and operated by the Union Carbide Corporation (UCC), USA which in turn is currently owned by The Dow Chemical Company (TDCC), USA, Respondent No.5 herein.
- 3. It is submitted that this highly toxic waste was generated during the normal course of the working of the Union

Carbide Factory. It is pertinent to mention that this toxic waste was neither created nor has any connection with the gas leak that occurred in this same factory in 1984, causing one of the greatest industrial disastrous. infamously known as the 'Bhopal Gas Tragedy'. However it does illustrate the fact that the said company was conducting its operations with complete disregard to safety standards taking advantage of the lax regulatory environment in India. It is pertinent to mention that the urgency of the clean up is on account of the fact that the Hazardous toxic wastes have been leaching into the groundwater for more than two decades and the contaminated groundwater is being used by communities in the neighbourhood of the abandoned Union Carbide factory. The said toxins are also spreading through the air as they are strewn around the factory premises and are a cause of serious ailments in the adjoining areas. This Honourable Court has already taken cognizance of the seriousness of the situation of ground water contamination in the vicinity of the abandoned Union Carbide Factory and directed the State Government to ensure the supply of

clean water in these communities as per order dated 7<sup>th</sup> May 2005 in WP (Civil) No 657/1995.

4. It is respectfully submitted further that Union Carbide was aware of the deleterious health effects of the toxic chemicals and waste that was being dumped in and around the plant at Bhopal and was leaching into the groundwater, but did not cease such activity, mitigate the damage or indeed make such studies public. The Union Carbide plant proposal of 1972 stated that the proposed MIC plant will lead to surface disposal of hazardous material likely to have significant environmental impact.

At the design stage in 1972 an internal telex stated as follows:

"Danger of polluting subsurface water supplies in the Bhopal area". To avoid this, "new ponds will have to be constructed at one to two-year intervals throughout the life of the project"

This prescription was ignored. Internal Telexes from 1982 show that Union Carbide Corporation headquarters was

made aware of leakage from the Solar Evaporation Ponds (SEP) over several months. For example:

Telex dated March 25, 1982: Phase II evaporation pond almost emptied. Reps of KR Datey at site and investigation of the leakage in progress. Unfortunately, emergency pond has also shown some signs of leakage. (UCC 01737).

and

Telex dated April 10, 1982: Continued leakage from evaporation pond causing great concern. (UCC 01736).

The Union Carbide report on the Site Rehabilitation

Project – Bhopal, dated June/July 1989 states inter-alia:

"All samples cause 100% mortality to fish in toxicity assessment studies and were to be diluted several fold to render them suitable for survival of fish"

True copies of the abovementioned internal memos dated 25.3.1982 and 10.4.1982 as well as extracts of the internal

memos in tabular form are attached herewith as Annexure

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the Union of India on a prior occasion that in the absence of suitable technological facilities with proven track record in India it is appropriate to dispose of toxic hazardous waste in an overseas facility. This route was adopted in the case of disposal of toxic mercury containing waste from Hindustan Lever Limited, a mercury thermometer factory at Kodaikanal, Tamilnadu. Hindustan Liver Limited now knows as Hindustan Unilever Limited is an Anglo Dutch multinational. Unilever owned 51% controlling stake in HLL now known as HUL. In this case over 200 tons of toxic waste were packaged and shipped to appropriate facilities in USA following standard protocols.

True copies of a letter from the Ministry of Environment and Forests, Government of India to HLL dated 26.12.2002; letter from the Tamil Nadu Pollution Control Board requesting HLL to export accumulated stocks of

mercury dated 12.3.2003; are attached herewith as Annexure A-2 Colly.

6. This soil and groundwater in and around the Union Carbide factory site has been found to contain; Hexachlorocyclohexanes (HCH) (depressant to the nervous system, can cause reproductive damage), Hexachlorobenzene (HCB) (carcinogen and can damage the developing foetus, liver, immune system, thyroid and kidneys and central nervous system), Napthalene (may damage or destroy human red blood, inhalation can cause headache, confusion, excitement, nausea, vomiting and sweating), and at least 20 other toxic compunds. The abovementioned chemicals have been found in studies done by the Citizen's Environmental Laboratory at Boston, MA, USA, Greenpeace Research Laboratories, the National Environmental Engineering Research Institute (NEERI), and the Madhya Pradesh Pollution Control Board (MPPCB). It is stated that the 350 MT of hazardous waste currently stored in the site warehouse, is not exposed to the elements and hence is not leaching into the groundwater and is thus the only part of the hazardous



population. It is stated the above secured waste is but a small fraction of the 8000-1000 MT of hazardous waste that has not been secured and that is having a continuing and serious effect on the health of surrounding communities.

A true copy of the report of the analysis of soil and ground water of Union Carbide premises carried out by the M.P. Pollution Control Board dated 18.5.2005 is annexed herewith; A true copy of a table summarizing the abovementioned reports i.e. a partial list of chemicals found to be present within the union carbide factory, bhopal and their health effects dated NIL; and a table showing data from government studies are attached herewith as Annexure A-3 Colly.

7. In view of the seriousness of the matter vide order-dated 23.6.2005 the Applicant was invited to intervene in the said Writ Petition by the Hon'ble High Court, in order to assist the court in the present matter, as:

"It is brought to the notice of the Court that a few NGOs who have been agitation for securing the rights of the victims of Bhopal Gas Disaster and for taking action against the persons responsible for the disaster, are apprehensive that the fourth respondent (DOW Chemicals Company) may escape liability if the entire remediation work is carried out by the Central/State Governments. It is also stated that some of these agencies have expertise for making suggestion for executing the third phase work. The State/Central Governments also have a doubt that the petitioner may be a person set up by DOW Chemicals Company to file the PIL so as to avoid responsibility for the clean up task. In view of the above, we feel that presence of those NGOs before us will assist us in taking appropriate decisions. Accordingly, we direct that notice be issued to the following organizations to intervene at their own cost and assist the Court"

A true copy of the order of the Hon'ble High Court of Madhya Pradesh dated 23.6.2005 is annexed herewith and marked as Annexure A 4.

- 8. Further, to obtain vital and indispensable technical expertise in the matter given the potential harm that could be cause in disposal of the hazardous toxic waste, the Hon'ble Madhya Pradesh High Court at Jabalpur vide order-dated 22.2.2006 set up a Task force consisting of representatives from Dept of Chemicals & Petrochemcials, Madhya Pradesh Pollution Control Board, Central Pollution Control Board, Indian Institute of Chemical Technology, National Environmental Engineering Research Institute, and Confederation Of Indian Industries. This task force was directed to advise the court, after deliberations, on the most scientific and safe method to destroy and dispose of the toxic wastes. To assist this task force a Technical sub-committee of scientific experts was set up to advice the task force in this regard.
- 9. It is further relevant to mention that on the recommendation of the Applicant herein, vide order dated 22.2.2006, the Hon'ble High Court was pleased to direct that, Padma Bhushan Dr. P.M. Bhargava, founder and former director of Centre for Cellular & Molecular

Biology, Hyderabad who is also member of the National Security Advisory Board and former Vice Chairman of The Knowledge Commission as well as Dr. J.P. Gupta, Professor of Chemical Engineering, IIT, Kanpur and currently director Rajiv Gandhi Institute of Petroleum Technology, Rae Bareli should also be co-opted in the Technical Sub-Committee. The Hon'ble High Court was further pleased to hold that, "We direct that the two representatives of the aforesaid NGO's present before this Court today to obtain the consent of the aforesaid two eminent scientists for being co-opted as Members of the Technical Sub Committee. In case such consent is obtained, we do not think that there should be any objection for co-opting them as Members of the Technical Sub Committee constituted by the Task Force. The idea of associating the aforesaid two scientists as Members of the Technical Sub Committee is to ensure consensus on the reports on this difficult subject before the Court passes any order."

10. The Applicant humbly submits that the Technical Sub Committee, as the first option with regard to the disposal

of the toxic waste, unanimously recommended that the Government must ask The Dow Chemical Company (TDCC) (who acquired Union Carbide Corporation, USA)- Respondent No. 5 herein to take all the waste out of the country (in a manner that no one is submitted to health hazard and all legitimate environmental concerns are addressed for disposal, at their expense).

A true copy of the minutes of the Technical Sub Committee dated 26.8.2006 are attached herewith as Annexure A 5.

- 11. It is relevant to mention that the consensus on the export and safe disposal of hazardous waste being the first option was arrived on by the Technical Sub Committee on the following practical and technical grounds;
  - a. Hazardous waste of this nature cannot be safely handled in Ankleshwar, Pithampur or indeed any other site in India. For instance, in March 2003, the Tamil Nadu Pollution Control Board, faced with a similar conundrum, without intervention of any

courts, ordered M/s Hindustan Lever Ltd. to export 256 MT of their mercury-contaminated waste to an overseas facility.

- b. Incineration of such highly toxic hazardous waste in India can only be considered a last resort. The hazards of incineration in a poorly regulated environment in the current state of the technology and infrastructure available for disposal of such waste in India, are well known and well documented.
- not clearly mentioned in the draft minutes of the 26
  August 2006 meeting of the Technical Sub Committee
  (TSC) as prepared by the Principal Secretary of Housing
  & Environment, Govt. of M.P. Accordingly the Task
  Force repeated the misrepresentation of the consensus of
  the TSC in the minutes of its meeting held on 16.10.2006.
  Paragraph 9 of the minutes stated that "[t]he task force
  examined the final recommendation of the TSC for

removal / disposal of toxic wastes, which were finalized in consultation with the two co-opted members representing the NGOs in compliance with the orders of the High Court of Madhya Pradesh." The statement is false, and misleading. The statement in paragraph 8 – "The two co-opted members had given their opinion, which was duly recorded in the minutes of the TSC meeting" is likewise false and misleading.

13. Dr. PM Bhargava also filed an affidavit before the Hon'ble High Court stating that the Technical Sub Committee had agreed as a first option to export the waste in an environmentally safe manner and filed an affidavit before the Hon'ble Court to that effect.

A true copy of an affidavit filed by Dr. PM Bhargava in WP No. 2802 of 2004 and dated 2.5.2007 is attached herewith as Annexure A 6.

14. It is in furtherance of this misconception that the Hon'ble

Madhya Pradesh High Court passed orders on 01.02.2007

directed thereby that, 40 MT of lime sludge is to be transported from Bhopal to TSDF at Pithampur and for treatment and the cost of such transportation and treatment of lime sludge will be approximately Rs. 65,520/-Remaining wastes like Sevin Napthol residues, Reactor residues, Semi processed pesticides, excavated wastes are to be transported from Bhopal to Ankleshwar (Gujarat) for incineration and the approximate cost would be Rs. 76,12,000/-. It is respectfully submitted that the said decision was made even though it has been recognised by the Union of India on a prior occasion that in the absence of suitable technological facilities with proven track record in India it is appropriate to dispose of such toxic hazardous waste in an overseas facility, as this route was adopted in the case of disposal of toxic mercury containing waste from the Hindustan Level Limited, mercury thermometer factory at Kodaikanal, Tamilnadu.

15. It is relevant to mention that the Gujarat Pollution Control

Board after being intimated of all these facts and
circumstances including the fact that the BEIL incinerator
is not in appropriate condition to safely incinerate the

toxic waste from the Union Carbide factory by locals and by NGO's in Gujarat, in exercise of its sole statutory power, withdrew its earlier NOC dated 4.1.2007 for the transportation and incineration of the said waste in Gujarat.

- 16. The Applicant herein brought the said fact to the attention of the Hon'ble Madhya Pradesh High Court, in view of the fact that the State of Gujarat was not a party in the said writ and sought the urgent recall of order dated 1.2.2007.
- 17. However vide its order dated 9.10.2007, the Hon'ble Madhya Pradesh High Court was pleased to observe that an application has been filed by the Applicant, intervener for restraining the movement of toxic wastes to Ankleshwar, and that it is taken on record and it is open to the intervener to raise this issue while the decision is taken.
- 18. Subsequently the matter came to be argued on 21.11.2007
  before the Hon'ble Madhya Pradesh High Court and the
  Hon'ble Court was pleased to hold vide order of said date

that since the Gujarat Pollution Control Board has withdrawn its no objection without putting the information before the court the decision to move the material to Ankleshwar will continue and will be complied with by all parties. It respectfully submitted that the said order of the Hon'ble Madhya Pradesh High Court is unsustainable and at variance to the Hazardous Waste (Management and Handling) Rules, 1989. Copies of order

(F21.11.2007, as well as a copy of the Hazardous Waste (Management and Handling) Rules, 1989 are annexed herewith and marked as Annexure 7 Colly.

19. The Applicant intervener would also like to bring to the attention of this Hon'ble Court that the Centre for Environment & Agrochemicals (CENTEGRO), who has been allowed to intervene as a party to the present SLP, purporting vide its intervention application to be a Registered Society engaged in poverty alleviation and environmental action is a front for BEIL Ankleshwar, to lobby for the transfer of hazardous wastes to the said incinerator.

Mr. Rajju Shroff, the Chairman and Managing director of BEIL, is a member of the intervener

society and on behalf of CENTEGRO has been lobbying for the hazardous waste to be disposed off in the BEIL incinerator inter alia, by his letter to Mr. Dominique Lapierre, a prominent writer, dated 9.5.2008. The Applicant submits that the said intervener ought to be put to strict terms for the said concealment and for interfering with the due process of law.

A true copy of the letter dated 26.5.2008 to the Ministry of Petrochemicals signed by Sh. Rajju Shroff as Chairman and Managing Director of BEIL is annexed herewith; and a true copy of letter dated 9.5.2008 written to a Mr. Dominique Lapierre on behalf of the Centre for Environment and Agro chemicals also signed by Sh. Rajju Shroff is annexed herewith and marked as Annexure A-8

20. It is relevant to mention that thereafter a fire occurred in the said BEIL Ankleshwar incinerator in 3<sup>rd</sup> April of 2008 in which 125 MT of hazardous waste caught fire and continued to burn for round 12 hours. The expert team from the Central Pollution Control Board visited the premises on 3,7.2008 and took a serious note of the fire

incident and gave specific directions to BEIL not to procure any additional incinerable hazardous wastes till 30.9.2008.

21.On 4.4.2008 the Member Secretary, Gujarat Pollution Control Board addressed a letter to Government of India, Joint Secretary Ministry of Chemicals and Fertilizers informing them that the NOC had been withdrawn since it had earlier been issued on the belief that only 51 MT of toxic lime sludge was to be incinerated and not 350 MT as was disclosed later. Further more because the BEIL facility was already over stressed and had 12,000 MT of wastes yet to be incinerate which would take nearly a year. It is pertinent to point out that if the NOC had not been withdrawn and the fire had occurred we may have seen a second episode of the gas tragedy played out in Gujarat.

22. The BEIL incinerator was visited by a team from the Central Pollution Control board on 3.7.2008 and under Section 5 of the Environmental Protection Act, 1986 instructions were issued by them directing the BEIL

ord until defruereis redified. 20

incinerator at Ankleshwar no to procure any additional incinerable hazardous waste till 30.9.2008. A true copy of the directions issued by the Central Pollution Control Board dated 8.7.2008 is annexed hereto and marked as Annexure A 9.

- 23. That the BEIL incinerator was against inspected under instructions from the Madhya Pradesh High Court on 7.11.2008 by the Central Pollution Control Board in which it was specifically stated that the facility will not procure any incinerable hazardous waste till further orders. In fact vide the said report, BEIL was put to notice that their Bank Guarantee would be forfeited if they fail to take the remedial action directed. A copy of the Direction u/s 5 of the Environmental Protection Act, 1986 dated 2.12.2008 are annexed herewith and marked as Annexure A-10.
- 24. Without taking into consideration the said relevant facts the Madhya Pradesh High Court was please to pass the impugned order dated 16.12.2008 under challenge vide the captioned SLP directing the transfer of Hazardous

Wastes to Ankleshwar and contemplating contempt action against the Gujarat Pollution Control Board.

- 25. It is respectfully submitted that in the above premises the said impugned order is unsustainable, and as such has been correctly challenged by the State of Gujarat.
- 26. The interveners herein are both a necessary and proper party to the SLP, in view of the fact that they are interveners in the writ petition before the High court and in view of the fact that they had been invited to intervene in the public interest.
- 27. The Applicant herein would like to urge this Hon'ble Court to ensure that the waste disposal from Bhopal is done with complete regard to statutory safety standards and the best available technology. The Applicant thus suggests several measures, which are described in the following paragraphs:
  - a. That the authorities should immediately fence and secure the entire Union Carbide factory site and the

Solar Evaporation Ponds (SEPs) so that there is no innocent or illegal access to the factory site and the SEPs by the residents and animals around the factory site and the SEPs.

That the repacking of hazardous material presently stored in the warehouse in secure containers must be one of the priority activities to ensure that these do not contribute to ongoing ground water contamination and are amenable to easy and safe short-term storage or transport offsite for treatment and disposal.

- c. That it needs to be recognized that given the manner in which the hazardous materials are currently stored, any movement (such as for purposes of inspection or transport) is likely to cause escape of hazardous dust into the immediate environment.
- d. That the shipping guidelines for hazardous cargo of the International Maritime Organisation (IMO) are the most appropriate guidelines for containing the stockpiled waste in the warehouse and for waste recovered subsequently if it is likely to be moved for treatment or disposal.

- e. That any contractor who undertakes any remediation work in the future should submit a detailed work plan with particular attention to details regarding Safety, Health and Environment. This plan would need to be publicised and adopted after public consultation, particularly with NGOs and survivor organisations involved in the matter.
- f. That a baseline study must be undertaken covering all directions around the factory to assess the background dust/air for chemicals of concern expected to be released during any remediation activity. The same spots must be used as monitoring stations for dust and odour emissions during future remediation activities.
  - g. The wastes (in and on land, and in stockpiles) containing organochlorines, organic compounds and heavy metals are not suitable for land disposal (landfills) or high-temperature incineration. Indeed, India does not have suitable facilities, monitoring standards or the enforcement or liability infrastructure to handle these highly toxic wastes. Further, no serious evaluation of treatment and disposal options has been conducted. The State Government and the MPSPCB

must be restrained from transporting the hazardous wastes in the warehouse for incineration in Gujarat or landfilling in Pithampur, Indore.

- h. That the Applicants submit that given the absence of suitable technological facilities with proven track record in India it would be strongly advisable to follow the path adopted in the case of disposal of toxic waste at Kodaikanal, Tamilnadu. In this case over 200 to.1s of toxic waste were packaged and shipped to appropriate facilities in USA following standard protocols. The Protocols for packing, loading and unloading of glass culets used in the Kodaikanal HLL mercury contamination case, are attached hereinbelow.
- i. It is pertinent to mention that the export of hazardous wastes for purposes of safe disposal was approved by and received assistance from the Ministry of Environment & Forests.

IN VIEW OF THE ABOVE IT IS HUMBLY PRAYED
THAT THIS HON'BLE COURT MAY BE PLEASED
TO;

- (a) Allow the Applicants to intervene before this

  Hon'ble Court in the present proceedings being

  Special Leave Petition (C) CC No. 292 of 2009;
- (b) Direct the waste at the site of the Union Carbide factory at Bhopal to be disposed off in an overseas facility in a manner in which no-one is submitted to any health hazard and legitimate environmental concerns are addressed.
- (c) Stay the transfer of any hazardous wastes from the

  Factory site during the disposal of the present

  Application
- (d) Any further or other orders that this Hon'ble Court
  may be pleased to pass in the interest of justice;

New Delhi

Filed by:

Dated 16-2-09

(Advocate on record for the

Interveners)

#### IN THE SUPREME COURT OF INDIA

#### SPECIAL LEAVE PETITION (C.) NO. CC 292 OF 2009

#### IN THE MATTER OF:

State of Gujarat

.....Petitioner(s)

Versus

Alok Pratap Singh

.....Respondent (s)

### **AFFIDAVIT**

I, Satinath Sarangi, aged about 53 years, son of Late P.B. Sarangi, resident of 44 Sant Kanwar Ram Nagar (First Floor), Berasia Road, Bhopal, MP-462001 do, from the organization Bhopal Group for Information And Action hereby solemnly affirm and state as under:

1. That I am the duly authorised representative and signatory of the Intervener Organisation in the above-mentioned matter and as such fully conversant with the facts and circumstances of the present case and competent to swear this affidavit.

That I have read over and understood the contents of the accompanying Intervention Application and I state that contents thereof are true and correct to the best of my knowledge.

3. That the Annexures to the said Intervention Application are true copies of their respective originals.

Satinath Sarangi Deponent

## **VERIFICATION:**

I, the deponent do hereby verify that the contents of this affidavit are true and correct to the best of my knowledge. It conceals nothing and no part thereof is false.

Verified at Bhopal on 13 day of February 2009.

Satirall Sarange

DEPONENT

Identified by ide

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# IN THE SUPPLEME COURT OF INDIA

# SPECIAL LEAVE PRITITION (C) NO. CC 292 OF 2009

#### IN THE MATTER OF:

State of Gujarat

.....Petitioner(s)

Versus

Alok Prauap Singh

.....Respondent (s)

### **AFFIDAVIT**

I. Reshids Reg aged about 53 years, wife of Abdul Wahid resident of House No.

12. Gali No 2. Bag Umreg Dulha. Behind Nasir Masiid. Bhopal. MP 462001do, from the organization Bhopal Gas Peedlt Mahile Stationery Karmehari Sanah hereby solemnly affirm and state as under:

A. That I am the duly authorised representative and algorithm of the Intervener Organisation in the above-mentioned matter and as such fully deriversant with the facts and vircomstances of the present case and UDHA population to swear this allidavit.

That I have read over and understood the contents of the accompanying

 That the Annexures to the said Intervention Application are true copies of their respective originals.

intervention Application and I state that contents thereof are true and

्रशीदार्ज Deponent

#### VERIFICATION:

I, the deponent tin hereby verify that the contents of this allidavit are true and correct to the best of my knowledge. It conceals nothing and no part thereof is false.

Verified at Bhopal on 13 day of February 2009.

correct to the best of my knowledge.

Identified by Me

WILEMANY AFOREMEN BLACKE MIS BY THE WITHIN NAMED 1212 TOUR ्रस्रीदेशका pergnent

### IN THE SUPREME COURT OF INDIA

# SPECIAL LEAVE PETITION (C.) NO. CC 292 OF 2009

#### IN THE MATTER OF:

State of Gujarat

.....Pedtioner(s)

Versus

Alok Pratap Singh

......Respondent (s)

## <u>AFFIDAVIT</u>

I, Sved M. Irfan, aged about 61 years, son of Late Sved Mohammed Usman resident of House No 7. Ingipura. Itwara. Bhopal. MP-462001 do, from the organization Bhopal Gas Peedit Mahila Purush Sangharah Moreha hereby solemnly affirm and state as under:

 That I am the duly authorised representative and signatory of the Intervener Organisation in the above-mentioned matter and as such fully

conversant with the facts and elecumstances of the present case and

competent to swear this affidavit.

That I have read over and understood the contents of the accompanying fuervention Application and I state that contents thereof are true and correct to the best of my knowledge.

 That the Annexures to the said Intervention Application are true copies of their respective originals.

Deponent

### <u>VERIFICATION:</u>

I, the deponent do hereby verify that the contents of this affidavit are true and correct to the best of my knowledge. It conceals nothing and no part thereof is false.

Verified at Bhonal on 13 day of February 2009.

Iventified by ide

SOLEMNLY APPRICAGE BUTORS

DEPONENT

ZCZC EHK BOM 1004 03/25/62

H. AYERS-UCE HK

AS TOMORROW IS HOLIDAY HERE IS UCIL HL FOR W/E MARCH 25:

APD-MTD PRODN SEVIN FLN 111T, SEVIDOL 165T AND TENIK
41T. FLN PRODN SUFFERED DUE NON-AVAILABILITY OF SEVIN
TECH.

CARBAMOYLATION UNITS COMPLETED AND MINOR DETAILS
BEING CORRECTED. EXPECTING RESTART UP IN NEXT 2/3
DAYS. CYCLE FLOW IN THE MIC UNIT NOW BEING
ESTABLISHED AND OPERATION OF CO UNIT WILL COMMENCE

PHASE-II EVAPORATION POND ALMOST EMPTIED. REPS OF KR
DATEY AT SITE AND INVESTIGATION OF THE LEAKAGE IN
PROGRESS. UNFORTUNATELY EMERGENCY POND HAD ALSO
SHOWN SOME SINGS OF LEAKAGE.

BPD-BATTERHYPRODN FOR THE MONTH IS EXPECTED TO BE 41.

4MM (104 PCT 5P).

UTTAR PRADESH TPT STRIKE WITHDRAWN FROM MARCH 22.

FIRST LOT OF 6.5M 2362 BATTERIES FOR UCAL SHIPPED AS

PER PLAN.

CMS- POWER SUPPLY DETERIORATED IN CALCUTTA AND WILL CAUSE A LOSS OF BOT IN METCO PRODN.

THE MARKET SURVEY ON ZINC PLATES HAS BEEN COMPLETED

AND CONFIRM THE FEELING WE HAVE THAT VOLUME GROWTH

IS RULED OUT IN THE SHORT TO MEDIUM TERM.

1.70T CALOTS FOR UCCL WILL BE INVOICED IN APRIL AGAINST FIRM ORDER IN HAND BRINING YTD TO 305T.

C AND P POLYOLEFINS OPERATIONS CONTINUE TO BE AT REDUCED THRUPUT DUE TO REPAIR WORK BEING DONE IN ONE COOLING TOWER CELL. OPERATIONS FURTHER AFFECTED DUE TO TOTAL POWER FAILURE ON MARCH 24, VOLTAGE DIPS AND LOAD SHEDDING DUE TO MAHARASHTRA STATE ELECTRICITY BOARD PROBLEMS. IN ORDER TO MAXIMIZE SALES BEFORE YEAR END, IPCL REDUCED THEIR AVERAGE PRICE TO RS. 1575/KG. FURTHER, EXCISE PROBLEM AFFECTING THE CONVERTORS' OPERATION REMAINS UNRESOLVED THEREBY

AFFECTING THE OVERALL SALE OF LDPE. ESTD SALE FOR THE MONTH IS 650T WHICH INCLUDES 120T OF W AND C GRADE.

CHEMICALS OPERATIONS NORMAL. ACID SALES CAME UNDER PRESSURE DUE LOWER PRICE FROM COMPETITION AT RS. 7.85/KG AGAINST UCIL'S RS.9.10/KG. CHEMICAL SALES FOR THE MONTH WILL BE AROUND 500T.

OLEFINS SALES WILL BE AROUND 350T BECAUSE OF LOWER AVAILABILITY DUE TO SHUTDOWN AND LOWER THRUPUT OF NAPHTHA.

MPD -KORT NOZZLE FABRICATION IS IN PROGRESS.

PROPELLER IS IN HAND. MDL TRAWLERS WILL MOVE TO

VIZAG BEGINNING APRIL.

True Coly

ZCZC EHK BOM 1004 04/10/82

H. AYERS-EHK UCIL HL FOR W/E APRIL 9

GENERAL

DESPITE ADVERSE BALANCE OF PAYMENT POSITION, GOI HAS ANNOUNCED BOLD AND PRAGMATIC IMPORT POLICY WHICH WILL ENSURE ADEQUATE AND EASY ACCESS TO IMPORTED INPUTS FOR INDUSTRIAL PRODN BOTH FOR DOMESTIC USE AS WELL AS FOR EXPORTS. THE POLICY CONTAINS SPECIFIC PROVISIONS FOR MEETING IMPORT REQUIREMENTS FOR UPGRADATION OF TECHNOLOGY, ENERGY CONSERVATION AND COST REDUCTION.

RBI HAS RELAXED ITS RULES IN REGARD TO COMPULSORY INVESTMENT OF FUNDS BY COMMERCIAL BANKS WITH RBI.

THIS WILL HELP COMMERCIAL BANKS' LIQUIDITY THEREBY MAKING IT POSSIBLE TO LEND ADDITIONAL FUNDS TO INDUSTRY.

### UCIL:

THE UNIT TRUST OF INDIA HAS APPROVED UCIL'S REQUEST FOR SHORT TERM LOAN OF RS. 10 MM (USD 1.1 MM) AT 17 PCT INTEREST P.A.

CERTIFICATE OF INCORPORATION OF NEPAL COMPANY HAS BEEN ISSUED AND FIRST BOARD MEETING SCHEDULE FOR APRIL 12.

## APD:

MIC UNIT WORKING SATISFACTORILY AFTER THE PROLONGED ANNUAL SHUTDOWN STOP CONTINUED LEAKAGE FROM EVAPORATION POND CAUSING GREAT CONCERN, REPAIRS BEING PLANNED WITH ASSISTANCE FROM CONSULTANTS.

STC SEVIN STOCK SALE FINALIZED AT RS. 50 M (USD 5.6M/T-100T TO PAUSHAK AND 50/75 T TO A NUMBER OF SMALL FORMULATORS.

## BPD:

UCNZ HAVE PLACED ORDER FOR 28,000 PCS 6-INCH BATTS FOR DELIVERY 4 QTR 82.

## CMG

CARBON PRODUCTS-UCC HAVE INDICATED WILLINGNESS TO NEGOTIATE PRICES ON GRAPHITE WHEEL MOULDS TO BRING

UCC PRICES CLOSER TO GREAT LAKE PRICES WHICH ARE 10 PCT LOWER.

EXPORT ORDERS FOR 100 T CALOTS TO US SRI LANKA AND 535,000 PCS OF ARC CARBONS TO STATE FILMS CORPN, COLOMBO UNDER PRODUCTION.

CARBCO SUB-STAFF LONG TERM AGREEMENT NEGOTIATIONS
IN PROGRESS. PREVIOUS AGREEMENT EXPIRED ON SEPT. 1981.
METCO SUB-STAFF AGREEMENT EXPIRED MARCH 1982 AND
CHARTER OF DEMANDS FROM CONGRESS UNION RECD.

CAND P:

POLYOLEFINS OPERATIONS ADVERSELY AFFECTED DUE INTERMITTENT LOAD SHEDDING. COOLING TOWER PERAIRS COMPLETED.

FAR IN EXCESS OF MARKET REQUIREMENT. THIS IS EXPECTED

TO ADVERSELY AFFECT UCIL APRIL SALES. CONTINUED

PRESSURE ON ACETIC ACID PRICE CAUSING CONCERN.

MPD: NIL REGARDS

CORREA BOM007 TEHO26 04100909

TRUE Coly

# INFORMATION ON CONTAMINATION FROM UNION CARBIDE'S INTERNAL FILES

Reference	Subject	Opinion	Remarks
Internal Telex	At design stage	"Danger of polluting subsurface	This prescription
	UCC warns of	water supplies in the Bhopal area".	was never
	danger of	To avoid this, "new ponds will have	implemented
	groundwater	to be constructed at one to two-year	
	contamination	intervals throughout the life of the	
		project"	
Internal Telex	High EIA Ratings	"The Bhopal facility has been given	No action was
		1.5 ratings because of expected	taken on Naphthol
1		Naphthol emissions from the solar	emissions
	•	ponds	
Internal Telex	Foreseeable	"Institute plant never had solar	
	Groundwater	ponds"	
	Contamination		
Internal Telex	Leakage in SEP	"Emergency pond has also shown	No action taken
		some signs of leakage"	
Internal Telex	Leakage in SEP	"Continued leakage from	No action taken
		evaporation causing great concerns."	
	Sum.mary of	"The polyfilm may have developed	
Internal Telex	Toxic Wastes	leaks resulting into [sic] permeation	
:		of the effluent into the soil."	
	SEP contaminate	"All samples cause 100% mortality	UC never n ade
Site	water toxicity in	to fish in toxicity assessment studies	this study public
Rehabilitation			
Project -			
Bhopal Plant		fish"	
	Internal Telex  Internal Telex  Internal Telex  Internal Telex  Site Rehabilitation Project —	UCC warns of danger of groundwater contamination  Internal Telex High EIA Ratings  Internal Telex Groundwater Contamination  Internal Telex Leakage in SEP  Internal Telex Leakage in SEP  Internal Telex Sum.mary of Toxic Wastes  Site SEP contaminate water toxicity in fish  Project —	UCC warns of danger of groundwater contamination intervals throughout the life of the project."  Internal Telex High EIA Ratings "The Bhopal facility has been given 1.5 ratings because of expected Naphthol emissions from the solar ponds "Contamination "Emergency pond has also shown some signs of leakage"  Internal Telex Leakage in SEP "Continued leakage from evaporation causing great concerns."  Internal Telex Sur.mary of Toxic Wastes "The polyfilm may have developed leaks resulting into [sic] permeation of the effluent into the soil."  SEP contaminate water toxicity in Rehabilitation Project—  Phocal Photal

TRUE COPY

# 36 ANNEXURE-A - 2(1)

# GOVERNMENT OF INDIA MINISTRY OF ENVIRONMENT & FORESTS

No. 23-13(10/2001-HSMD

Dated the 26<sup>th</sup> December, 2002

To,

M/s. Hindustan Lever Ltd.
Hindustan Lever House,
165/166, Backbay Reclamation
Mumbai-400020-25
(Attention: Shri Ashok Gupta, GM, HLL)

Sub: Export of glass cullets containing mercury, to the United States of America-permission regarding.

This has reference to M/s. Hindustan Lever Limited's application 31<sup>st</sup> dated August 2001 and **subsequent** communications/clarifications dated 30<sup>th</sup> September 2002, 27<sup>th</sup> October and 4<sup>th</sup> December 2002 seeking approval of this ministry for exporting mercury-contaminated wastes (2,56,200 Kg of glass cullets containing virgin mercury and 17.5 tonnes of ETP sludge) generated by the Mercury Thermometer Manufacturing Unit of M/s. Hindustan Lever Limited at Kodaikanal, Tamil Nadu from M/s. Bethlehem Apparatus Co., Inc., Indian to Pennysylvania, USA for the purpose of recovery of mercury.

- 2. The matter has been examined carefully under the provisions of the Hazardous Wastes (Management and Handling ) rules, 1989 as amended in January 2000 as well as the Basel Convention of the Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal. This transboundary movements of hazardous waste containing mercury has the necessary approval of the United States Environmental Protection Agency. An agreement has been signed between the Government of India and the Government of United States of America in this regard and the necessary bank guarantee has been furnished by M/s. Hindustan Lever Ltd.
- 3. Keeping the foregoing in view, the Ministry of Environment & Forests, hereby accords its permission for the export of mercury contaminated wastes as detailed at para 1 above subject to following terms and conditions.

This transboundary movement shall be governed by all the terms and conditions included in the Agreement referred to in para 2 above.

This movement will be governed by the provisions of the Hazardous Wastes (management and Handling) Rules, 2000 as well as the relevant articles of the Basel

Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal and shall be effected strictly as per the details submitted in Form 7 by M/s. Hindustan Lever Ltd.

This movement of the hazardous waste containing mercury shall be completed before 9<sup>th</sup> October, 2003.

Sd/-Judge

//true copy//

39 ANN-A: (1)

#### TAMIL NADU POLLUTION CONTROL BOARD

From

To

Smt. Sheela Rani Chunkath, I.A.S.
Chairperson,
Tamilnadu pollution Control Board,
76, Mount Salai Guindy,
Chennai-32.

Thiru R. John George, Factory Manager M/s. Hindustan Lever Limited, Thermometer Factory St. Marys Road, Kodaikanal -624101.

Lr. No. HWM/27566/95-1

dated 12.3.2003

Sir,

Sub: TNPC Board-Hazardous Waste Management Hindustan Lever Ltd. Thermometer Factorial Kodaikanal –Export of Mercury bearing waste M/s. Bethlehem Apparatus Coy, Pensylvenia reg.,

- Ref: 1. MOEP Govt. of India Lr. No. 23-13 (1)/2001-HSMD Dt. 26.12.2002.
  - 2. Minutes of the meeting held on 11.10.2002.
  - 3. Lr. Dt. 27.2.2003 received from Thiru Navroz Modi, committee Member.

I am to invite your kind attention to the reference cited and enclose herewith the copies of the reference II and III cited above. In this regard you are requested to export the accumulated stocks of mercury, mercury in unfinished filed thermometer Glass scrap stored on site, mercury containing

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effluent. Treatment Plant sludge to M/s. Bothleham Apparatus

Coy Inc, Pensylvania USA for the purpose of recovery of

Mercury in compliance conditions imposed in the reference cited.

The packaging and dispatch of the material to the designated

port of export shall be made in the presence of officials of

Tamilnadu Pollution Control Board and in the presence of the

member of the working committee who are willing to be

present.

The wastes shall be transported in compliance with the

provisions of the Hazardous waste (management and Handling)

Rules 1989 as amended in 2000 as well as the Environment

(Protection) Act 1986.

The receipts of this letter may be acknowledged.

Encl: as above

For member Secretary

//True Copy//

ANN-3(1)

# Report on the Analysis of soil and Ground Water of Union Carbide presmises carried out by M.P.POLLUTION CONTROL BOARD.

The M.P. Pollution Control Board took the Soil Sample from U.C.I.L. Premises on 12/04/2005 and 13/04/2005 from the following locations. These locations are opted from the report submitted by NEERI Assessment of contaminated areas due to past waste disposal practices at EIIL, Bhopal October, 1997.

#### SOIL SAMPLING

#### Date - 12/04/2005

- i. Seven Tar (Composite)
- ii. Napmai Tar (Composite)
- iii. Semi Processed Pesticides Mix, Yellow part, Black part
- iv. Excavated soil (mixed from dumps)

# Date - 13/04/2005

- v. Soil samples from 0 and 30 cms depth
- vi. Secured land fill (top soil)
- vii. Solar evaporation pond

These samples are analysed for presence of pesticides like, Alpha-BHC, Aldrin, Dialdrin, Lindane, 4,4-DDT, Beta-BHC, Endosulfan-1, Endosulfan-II, Endrin, Methoxychlor, 1,2-DCB, 1,3-DCB, 1,4-DCB, 1,2,3,4-DCB and heavy metals like Chromium (Cr.), Zinc (Zn.), Iron (Fe), Nickle (Ni), Cadmium (Cd.), Copper (Cu.), Mangnese (Mn.) and Lead (Pb.).

# Pesticides detected in soil samples collected from UCIL premises

S. No.	Parameters (Microgram/Kg)		Top Soil		Depth Soil	Riskbased
		Min	Max	Min	Max	soll criteria MiligrandKg
1	Alpha-BHC	ND	534.09	104.06	453.37	
2	Aldrin	JUD.	295.69	ND	370.6	
3	Dialdrin	CN	213.09	ND	135.77	
4	Lindane	2 57	543.73	ND	244.14	2.2
5	4,4-DDT	ND .	48.3	ND .	56.47	
6	Beta-BHC	ND	ND	ND	ND	
7	Endosulfan-l	ND	4 66	NU	ND	
}	Endosulfan-II	CIN	413.22	ND	472.23	
)	Endrin	ND	27.27	ND	9.31	
0   1	Methoxychlor	ND	31.03	ND	17.1,	
1   1	1,2-DC3	ND	ND	ND	ND	180000
2 1	1,3-DCB	ПО	GN	, ND	ND	
3   1	.4-DCB	ND	ND	ND	ND	
1	,2,3-DĆB	ND	ND	ND		,

# Metals detected in soil samples collected from UCIL premises

S. No.	S. Parameters No. (Microgram/Kg)	T	Top Soil		epth Soil	Riskbased
-		Min	Max	Min	Max	soll criteria Miligram/Kg
1	Cromium (Cr)	0 0284	0.311	-0.021	0.098	1000
2.	Iron (Fe).	1, 07	73.47	14.97	40.82	
3.	Nickle (Ni).	0 :067	0.0799	0.0304	0.0882	4100
4.	Zince (Zn)	0 ( 404	0.0.804	0.0301	0.0607	61000
5.	Lead (Pb)	NC	ND	ND	ND	NA.
6.	'Copper (Cu)	0.0204	0.664	0.0159	0.0933	3200
7.	Cadmium (Cd),	ND	0.001	0.0002	0.0011	1000
В.	Mangnese (Mn)	0.06.43	1.4065	0.0715	0.907	1000

ND.- Not detected, NA.- Not available., EBSC.- Rick Based Soil Criteria # for Industrial activity. #-Source - Region-III, 841 Chestnut Street, USEPA Phildelphia, Pennsylvania, 19107, Oct 201998

#### Findings :-

The concentration detected in soil samples, if compared with the Risk based soil criteria [Source - Region III, 841, Chesthut Street, USEPA, Phildelphia, Pennsylvania, 19107, Oct. 20, 1995 [Opt from report submitted by NEERI Assessment of Contaminated Areas Due to Past waste Disposal Practices at EIIL, Bhopal] Oct, 1997], the concentration of the metals viz., Cr, Ni, Zn, Cu, Cd, & Mn and pesticides Viz., 1,2 DCB & Lindane was found within the limits.

#### GROUND WATER QUALITY ANALYSIS

Ground water samples collected from premises and surrounding areas of UCIL from the following 14 locations on 18.05.2005:-

S.No.	Locations	Indicated as	Source of Water
01.	Arif Nagar	U2	Borewell
02.	New Arif Nagar	U3	Handpump
03.	Annu Nagar	U4	Handpump
04.	Kainchi Chhola	U5.	Borewell
05.	Near Dasehara Maidan	U6	Borewell
06.	Gareeb Nagar	U7	Handpump
07.	Kainchi Chhola Gili No.3	U8	Borewell
08.	Blue Moon Colon	U10	Handpump
09.	Shankar Nagar	U12	Handpump
10.	Preet Nagar	U13	Handpump
11.	J.P. Nagar	U14	Handpump
12.	Rajeev Nagar	U16	Handpump
13.	Vidisha Road	U17	Handpump
14.	Railway Coach Factory	U18	Borewell
	1		

# FINDINGS 18.05.2005

Ground Water samples collected from 14 locations on 18.05.2005 reveals that certain Physico Chemical Parameters viz., Colour, Turbidity, Chloride, Total hardness, Total alkalinity and Dissolved solids do exceed the prescribed limits as laid down by BIS 10500[1991]. Generally these are not harmful to human beings, but Bureo of Indian Standards specified some undesirable effect-of these parameters if exceeds the desirable limits:-

# 2

# COLOUR :-

Desirable limits as prescribed by Bureo of Indian Standards for colour is 5.0 Hazens. On analysis of water samples at 14 locations as mentioned above, water samples of 9 locations viz. Arif Nagar, Gareeb Nagar, Kainchi Chhola Gali No. 3, Shankar Nagar, Preet Nagar, J.P. Nagar, Rajeev Nagar, Vidisha Road and Railway Coach Factory exceeds the prescribed limit. This parameter causes adverse impact on acceptance of water.

# TURBIDITY :-

Desirable limits as prescribed by Bureo of Indian Standards for Turbidity is 5.0 Miligram/liter. On analysis of water samples at 14 locations as mentioned above, water samples of 7 locations viz. Arif Nagar, New Arif Nagar, Near Dashera Maidan, Kainchi Chhola Gali No. 3, Blue Moon Colony, Shankar Nagar and J. P. Nagar, exceeds the prescribed limit. This parameter also causes adverse impact on acceptance of water.

### CHLORIDES :-

Desirable limits as prescribed by Bureo of Indian Standards for



chlorides is 250 Miligram/liter. On analysis of water samples at 14-locations as mentioned above, water samples of 3 locations viz. Near Dashera Maidan, Garib Nagar and Blue Moon Colony, exceeds the prescribed limit. This parameter causes impact of taste, corrosion and palatibility of water.

### TOTAL HARDNESS :-

Desirable limits as prescribed by Bureo of Indian Standards for total hardness is 300 Miligram/liter. On analysis of water samples at 14 locations as mentioned above, water samples of all locations have been found exceeding the limit of total hardness, which causes adverse effect on domestic use of water.

### TOTAL ALKALINITY :-

Desirable limits as prescribed by Bureo of Indian Standards for total Alkalinity is 200 Miligram/liter. On analysis of water samples at 14 locations as mentioned above, water samples of all locations have been found exceeding the limit of total Alkalinity, which causes adverse effect on taste of water.

#### DISSOLVED SOLIDS :- .

Desirable limits as prescribed by Bureo of Indian Standards for Dissolved solids is 500 Miligram/liter. On analysis of water samples at 14 locations as mentioned above, water samples of all locations have been found exceeding the limit of dissolved solids, which decreases Palatability

#### FLOURIDE :-

Desirable limits as prescribed by Bureo of Indian Standards for Flouride is 1.0 Miligram/liter. On analysis of water samples at 14 locations as mentioned above, water sample of one location viz Shankar Nagar has been found exceeding the limit of flouride, which may cause decease of fluorosis.

#### METALS :-

On analysis of heavy metals Chromium and Zinc marginally exceeds the desirable limits of BIS 10500 [1991] at one station only i.e. Borewell of Arif Nagar. Chromium if exceeds the desirable limits may have carcinogenic effects and Zinc may cause corrosion of pipe fittings and utensils and have astringent taste if exceeds the limits. Other metals were found within the limits as laid down by BIS 10500.

# HALOGENATED HYDRO CARBONS :-

On analysis of the water samples Halogenated Hydro Carbons viz., Dichlorobenzene [DCB] and Trichlorobenzene [TCB] were found below the prescribed limits as laid down by WhO, 1993 and USEPA, 1999.

### WATER SAMPLING DONE ON 21.11.2005

Ground Water samples collected from 16 locations on 21.11.2005 and the samples are analysed for Physico Chemical Parameters viz., Colour, Turbidity, Chloride, Total hardness, Total

47

alkalinity and Dissolved solids, heavy metals and halogenated Hydrocarbons. The results are enclosed at Annexure-1:-

### FINE INGS 21.11.2005

#### COLOUR :-

Desirable limits as prescribed by Bureo of Indian Standards for colour is 5.0 Hazens. On analysis of water samples at 16 locations as mentioned above, water samples of 7 locations viz. Atal Ayyub Market, New Arif Nagar, Kainchi Chhola, Blue Moon Colony, Solar Pond Surface Water, Vidisha Road and Railway Coach Factory exceeds the prescribed limit. This parameter causes impact on acceptance of water.

#### TURBIDITY :- 1

Desirable limits as prescribed by Bureo of Indian Standards for Turbidity is 5.0 Miligram/liter. Cn analysis of water samples at 16 locations as mentioned above, water samples of 8 locations viz. Atal Ayyub Market, New Arif Nagar, Annu Nagar, Blue Moon Colony, Shankar Nagar, Solar Pond Surface Water, Vidisha Road and Railway Coach Factory exceeds the prescribed limit. This parameter causes impact on acceptance of water.

#### CHLORIDES :-

Desirable limits as prescribed by Bureo of Indian Standards for chlorides is 250 Miligram/liter. On analysis of water samples at 16 locations as mentioned above, water samples of 5 locations viz. Atal Ayyub Market, Kainchi Chhola, Kainchi Chhola Gali No. 3, Blue Moon Colony, Solar Pond Surface Water, exceeds the prescribed limit. This parameter causes impact of taste, corrosion and palatibility of water.

# TOTAL HARDNESS :-

Desirable limits as prescribed by Bureo of Indian Standards for total hardness is 300 Miligram/liter. On analysis of water samples at 16 locations as mentioned above, water samples of all locations have been found exceeding the limit of total hardness, which cause adverse effect on domestic use of water.

#### TOTAL ALKALINITY :-

Desirable limits as prescribed by Bureo of Indian Standards for total Alkalinity is 200 Miligram/liter. On analysis of water samples at 16 locations as mentioned above, water samples of all locations have been found exceeding the limit of total Alkalinity, which cause adverse effect on taste of water.

# **DISSOLVED SOLIDS:**

Desirable limits as prescribed by Bureo of Indian Standards for Dissolved solids is 500 Miligram/liter. On analysis of water samples at 16 locations as mentioned above, water samples of all locations have been found exceeding the limit of dissolved solids, which decreases Palatability and may cause gastro intestinal irritation.

### FLOURIDE :-

Desirable limits as prescribed by Bureo of Indian Standards for Flouride is 1.0 Miligram/liter. On analysis of water samples at 16 locations as mentioned above, water sample of one location viz Solar Pend Surface

Water has been found exceeding the limit of flouride, which may cause decease of fluorosis.

#### METALS :-

On analysis of heavy metals Iron (Fe) found marginally exceeds at three locations viz. New Arif Nagar, Gareeb Nagar and Preet Nagar and Mangnese (Mn) is marginally exceeds the desirable limits of BIS 10500 [1991] at Annu Nagar. Iron (Fe) and Mangnese (Mn) effects taste and appearance of water. It also cause adverse effect on domestic uses and water supply structures. Other metals were found within the jimits as laid down by BIS 10500.

#### HALOGENATED HYDRO CARBONS :-

On analysis of the water samples Halogenated Hydro Carbons viz., 1,2,3 - Trichlorobenzene [TCB] found more than prescribed limit as compared with the standards laidown by WHO at Gareeb Nagar and 1,4 - Dichlorobenzene [DCB] found more than the prescribed limits as laid down by USEPA, 1999 at two locations viz. Near Dasehara Maidan and Shankar Nagar.

# CONCLUSION

The above analysis reveals that pesticides and heavy metals detected in soil samples are found to be within the limits as prescribed by Risk based soil criteria (R.B.S.C.) for Industrial activity [Source - Region-III, 841 Chestnut Street, USEPA, Phildelphia, Pennsylvania, 19107, Oct, 20,1995].

The results of analysis of ground water reveals that the physicochemical parameters like Colour, Turbidity and Chlorides have been found to be more than prescribed limits at some locations whereas. Total hardness, Total Alkalinity and Dissolved solids are found to be more than prescribed limits at all locations. Flourides are found to be more than prescribed limits at two locations, Heavy metals are found to be more than prescribed limits at four locations and Helogenated Hydro Carbons is found to be more than prescribed limits at four locations. To conclude, ground water is found to be contaminated at some places, as stated above.

ANNEXULE-3(11)

# PARTIAL LIST OF CHEMICALS FOUND TO BE PRESENT WITHIN THE UNION CARBIDE FACTORY, BHOPAL AND THEIR HEALTH **EFFECTS**

#	CHEMICAL	FOUND IN	KNOWN HEALTH EFFECTS	
ī	Carbaryl	stockpiles4,	Can cause toxicity if breathed in, by	
	(Sevin) 4.5	disposal	oral intake and by passing through	
	NEED	sites <sup>5</sup>	skin. Exposure to carbaryl can cause	
	tebra		nausea, vomiting, diarrhea,	
	by Regarded		bronchoconstriction, blurred vision,	
	No.C.		excessive salivation, muscle twitching,	
	,		cyanosis, convulsions, coma and	- Merck to yeld actor of chancels, Drys & moly
			respiratory failure. Repeated exposures	Drugs & molin
			may affect the liver, kidney and	ω. <sub>δ</sub> . <sub>γ</sub> .
		-	nervous system. Vi Karolhock of Pesticial	le Tontrology, Pl
2	Chlorinated	stockpiles <sup>4</sup>	Shown to cause cancer, and to effect	Have:
	biphenyls	·	the immune system, the reproductive	
	(PCB's) <sup>4</sup>		system, the nervous system, the	
			endocrine system and to have other	
			health effects in animals. ii	

•			
3	Chlorinated	stockpiles4	symptoms include effects on skin,
	napthalenes4		liver, digestive tract and peripheral
			nervous system.
4	Chlorobenzene	stockpiles4	Human exposure causes CNS
	4		depression and respiratory tract
			irritation and animal studies have
			reported liver necrosis, renal toxicity
			and effects on the pancreas, blood and
	, <del>, , , , , , , , , , , , , , , , , , </del>		lymph and adrenal glands <sup>iv, v</sup>
5	Dichlorobenze	soil <sup>1</sup> , soil, <sup>2</sup>	Effects reported are anemia, skin
	ne, 1,2,4	stockpiles <sup>4</sup>	lesions, vomiting, headaches, eye and
			respiratory tract irritation, anorexia,
			weight loss, yellow atrophy of the
			liver, blood dyscrasias, porphyria. and
			chromosomal breaks in blood samples.
			Animal experiments recorded liver and
		• •	kidney damage to be the most frequent
			effects, though high doses caused CNS
		•	
	· .		perturbation and death through

			respiratory depression.
6	Hexachloroben	stockpiles <sup>4</sup>	Carcinogen. May damage the
	zene (HCB)		developing foetus, liver, immune
			system, thyroid and kidneys and
			central nervous system. Porphyria is a
	,		common symptom of HCB toxicity.
			Can cause irritability, difficulty with
			walking and co-ordination, muscle
			weakness, tremor and/or a feeling of
			pins and needles on the skin. Repeated
			exposure can lead to permanent skin
			changes, such as changes in
			pigmentation, tight, thickened skin,
			easy wrinkling, skin scarring, fragile
			skin and increased hair growth,
			especially on the face and
			forearms. viii.ix,iii
7	Hexachlorocyc	soil, <sup>2,3</sup>	Depressant of the nervous system xi,xii
	lohexanes	stockpiles,4	Different isomers present have caused

	(HCH - e.g.	disposal	in animals; tremors of the extremities
	Lindane) <sup>2,3,4,5</sup>	sites <sup>5</sup>	and inability of animals to make
			coordinated movements; lameness and
			a peculiar flaccidity in the entire
	·		musculature; prostration,
			motionlessness. They are anticipated
			carcinogens *with the potential for
			causing reproductive damage in
			humans.xiii,xiv Animal poisoning by
	,		lindane causes an increased respiratory
			rate, restlessness accompanied by
	: .		increased frequency of micturition,
			intermittent muscular spasms of the
	į	!	whole body, salivation, grinding of
	e gantisas		teeth and consequent bleeding from the
			mouth, backward movement with loss
			of balance and somersaulting,
			retraction of the head, convulsions,
			gasping and biting and collapse and
L		S.	

			•
			death usually within a day.*** Long
			term effects can last for months or
		•	years. Lindane has been shown to
			cause liver, lung, endocrine gland and
			other types of cancer in animals xii, xv
8	Fiexacholorobu	factory,2	toxic to humans and may cause
	tadine <sup>2,4</sup>	stockpiles4	damage to animals, birds, fish, and
		,	plants. <sup>iii. x</sup>
9	Lead 2,3,4	soil <sup>2.3</sup>	exposure to excessive levels of lead
		stockpiles 4	can cause brain damage; affect a
			child's growth; damage kidneys;
	;		impair hearing; cause vomiting,
			headaches, and appetite loss; and cause
			learning and behavioral problems. In
			adults, lead can increase blood pressure
			and can cause digestive problems,
			kidney damage, nerve disorders, sleep
			problems, muscle and joint pain, and
			mood changes. xvi

	•		
			56
1	Mercury <sup>2,3</sup>	soil,2	toxic to the nervous system - the brain
0	New Year	factory,3	and spinal cord - particularly the
İ	in the state of		developing nervous system of a fetus
			or young child. Adults who have been
			exposed to too much methyl mercury
	of execution of the second of		might begin to experience trembling
			hands and numbness or tingling in
	1 × × ×		their lips, tongues, fingers or toes.
			These effects can begin long after the
		e de la companya de l	exposure occurred. At higher
	*		exposures, walking could be affected,
		Marin James et	as well as vision, speech and hearing.
			In sufficient quantities, methylmercury
			can be fatal.xvii
1	Napthalene <sup>4,5</sup>	stockpiles,4	May damage or destroy human red
1		disposal	blood cells.iii Can cause skin
		sites <sup>5</sup>	irritation and in the case of a sensitized
			person, severe dermatitis. Inhalation
			can cause headache, confusion,

a,e			5
			excitement, nausea, vomiting and
			sweating. There may be dysuria,
	**************************************		haematuria and an acute haemolytic
			reaction.
Ļ	1-	dump, <sup>3</sup>	Been found to cause severe alterations
2	naphthalenol4	stockpiles <sup>4</sup>	in lysosomal system structure of the
	(alpha		common periwinkle Littoria littorea,
	naphthol <sup>5</sup> )	z .	even in extremely short periods of
			time.
	Fentachloroben	stockpiles4	Animal studies demonstrate weight
	zene <sup>4</sup>		loss and effects on the liver, thymus,
		. A	kidney, adrenal glands and digestive
			tract. Anaemia and maiformation of
			sperm also occurred. There is some
			indication of fetotoxicity and
			developmental toxicity. xviii
1	Pentachloroeth	stockpiles.4	It is a toxic compound and has a strong
	ane		narcotic effect, even greater than that
ļ			of chloroform. xix

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		to an action of the con-	
	Phenanthrene	stockpiles4	known to be a human skin
5			photosensitiser and mild allergen**
1	Temik	disposal	symptoms of inhalation include
6	(aldicarb) <sup>5</sup>	sites <sup>5</sup>	dizziness, sweating, laboured
	the state of		breathing, unconsciousness, vomiting
	e Salar		pupillary constriction, muscle cramp,
	in the state of th		excessive salivation; of ingestion
	·		include abdominal cramps, dianhous
		1	nausea.*xi
1	Tetrachloroben	soil 2	affect the liver, kidney, thyroid and
7	zene <sup>2.4</sup>	stockpiles,4	lungs. An increase in chromosomal
	: 	2 · · · · · · · · · · · · · · · · · · ·	aberrations was seen in workers
		r I'a	exposed to 1,2;4,5-tetrachlorobenzene
			at a pesticide manufacturing
			complex.xxii
	richlorobenze	soil <sup>1</sup> , soil, <sup>2</sup>	toxic to the liver, thyroid and kidney.
3   1	ne <sup>1,2,4</sup>	stockpiles <sup>4</sup>	Liver, kidney weights, porphyrin
-	· *		excretion increase. In some studies,
	f	[	

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П			occurred, including necrotic and non-
		ラケン (東) 日本人 D	necrotic degeneration. ************************************
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# DATA FROM GOVERNMENT STUDIES ON GROUND WATER AND SOIL

### CONTAMINATION

	Study	Location Sample	Nature	Main Chemical
			Sample	Identified
T	1990: Assessment of	Solar Evaporation	Water	carbaryl
	Pollution Damage	Ponds (SEPs)		alpha napthol
	due to Solar	SEPs	Water	lead
	Evaporation Ponds			
	at UCIL, Bhopal			<b>.</b>
	National			
	Environmental			·
	Engineering			
	Research Institute			
	(N.E.E.R.I.)			

					00
	2	1991: Report of	Well water from	Ground	The samples tested had
		Chemicals found in	communities close	Water	Chemical Oxygun Demand
		Water for	to the Union		(C.O.D.) values between 45
		Communities around	Carbide Factory		mg/l and 98 mg/l whereas
		UCIL premises,	(J.P. Nagar, Atal		the World Health
		Public Health	Ayub Nagar, Arif		Organization (W.H.O.) has
		Engineering	Nagar, Chhola and		fixed the standard value of
		Department	Kanchi Chhola)		C.O.D. for natural water at
					6mg/l. The ground water is
			,		contaminated with bacteria
					and heavy chemicals
3	3	1994: Executive	Disposal Area on	Soil,	Temik
		Summary, NEERI	Factory Grounds	Water	
			Disposal Area on	Soil,	Sevin
		; ; !	Factory Grounds	Water	
			Disposal Area on	Soil,	lindune
	i		Factory Grounds	Water	
			Disposal Area on	Soil,	methylene chloride
			Factory Grounds	Water	

ı	<b>1996:</b> Report of	Well water from	Ground	Same Results as 1991 study
		communities close	Water	
١	Chemicals found in		Water	
	Water for	to the Union		
	Communities around	Carbide Factory		
	UCIL premises,	(J.P. Nagar, Atal		
	Public Health	Ayub Nagar, Arif		
	Engineering	Nagar, Chhola and		
	Department, Bhopal	Kanchi Chhola)		
	•			
				<del>.,</del>
	•			
İ				
		Di anal Ama	Soil	Sevin
5	1997: Assessment of	Disposal Area on	3011	Sev
	Contaminated areas	Factory Grounds	Soil	alpha napthol
	due to past waste	Disposal Area on	3011	aipila liapilio.
		Factory Grounds		
	disposal practices at			•
	E!IL, Bhopal,		Í	
	NEERI			
	(sponsored by			
	Eveready Industries			
		Disposal Area on	Soil	Lindane
	India Limited)	Factory Grounds		
		Disposal Area on	Soil	manganese
		Factory Grounds		

Temik Soil Temik  Temik Water Temik  Neutralization Pond  6 1996-2007: Annu Nagar, New Ground Quarterly Arif Nagar, Annu Water & Monitoring Reports of ground water and soil samples Collected around UCIL premises, Madhya Pradesh Pollution Control Board (M.P.P.C.B.)  Temik  Water Temik  Water & Ground Ground Water & Moon Colony Water Kainchi Chhola, Ground Methoxychlor Atal Ayub Nagar, Ground Ayub Nagar, Ground Ayub Nagar, SEP soil Preet Nagar, Atal Ground Ayub Nagar, Bluc Water & Moon Colon , SEP soil SEPs Soil Lindane, Dialdrin			Disposal Area on	Soil	Sevin
Neutralization Pond  6 1996-2007: Annu Nagar, New Ground Lindane  Quarterly Arif Nagar, Annu Water &  Monitoring Reports of ground water and soil samples  collected around Water &  Moon Colony Water  Collected around Water &  Madhya Pradesh Pollution Control Board (M.P.P.C.B.)  Nagar, Atal Ayub Nagar, Ground Methoxychlor  Water &  Annu Nagar, Atal Water &  Ayub Nagar, Atal Water &  Ayub Nagar, Blue Ground Methoxychlor  Water &  Ayub Nagar, Ground Endosulfan I & II  Ayub Nagar, Blue Water &  Moon Colon , SEP soil  Moon Colon , SEP soil			Temik	Soil	Temik
Pond  Pond  Pond  Pond  Annu Nagar, New Ground Lindane  Quarterly Arif Nagar, Annu Water & Monitoring Reports  of ground water and soil samples  collected around Water & Moon Colony Kainchi Chhola, Ground Methoxychlor  UCIL premises, Madhya Pradesh  Pollution Control Board (M.P.P.C.B.)  Preet Nagar, Atal Ayub Nagar, SEP soil  Ayub Nagar, Blue Water & Moon Colon , SEP soil			Temik	Water	Temik
6 1996-2007: Annu Nagar, New Ground Lindane  Quarterly Arif Nagar, Annu Water &  Monitoring Reports Nagar, Atal Ayub SEP  of ground water and soil samples  Collected around Water &  Moon Colony Water (BHC)  Kainchi Chhola, Ground Methoxychlor  UCIL premises, Atal Ayub Nagar, Ground Ground Methoxychlor  Water &  Annu Nagar, Atal Water &  Annu Nagar, Atal Water &  Annu Nagar, Atal Water &  Ayub Nagar, SEP soil  Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon , SEP soil			Neutralization		
QuarterlyArif Nagar, AnnuWater &Monitoring ReportsNagar, Atal AyubSEPof ground water and soil samplesNagar, GareebGroundBenzene Hexa Chloridecollected aroundMoon ColonyWater(BHC)WaterKainchi Chhola,GroundMethoxychlorUCIL premises, Madhya PradeshAtal Ayub Nagar, Gareeb Nagar,GroundEndosulfan I & IIPollution Control Board (M.P.P.C.B.)Annu Nagar, Atal Ayub Nagar,Water &Preet Nagar, Atal Moon Colon ,SEP soil Moon Colon , SEP soil			Pond		
QuarterlyArif Nagar, AnnuWater &Monitoring ReportsNagar, Atal AyubSEPof ground water and soil samplesNagar, GareebGroundBenzene Hexa Chloridecollected aroundMoon ColonyWater(BHC)WaterKainchi Chhola,GroundMethoxychlorUCIL premises, Madhya PradeshAtal Ayub Nagar, Gareeb Nagar,GroundEndosulfan I & IIPollution Control Board (M.P.P.C.B.)Annu Nagar, Atal Ayub Nagar,Water &Preet Nagar, Atal Moon Colon ,SEP soil Moon Colon , SEP soil					
QuarterlyArif Nagar, AnnuWater &Monitoring ReportsNagar, Atal AyubSEPof ground water and soil samplesNagar, GareebGroundBenzene Hexa Chloridecollected aroundMoon ColonyWater(BHC)WaterKainchi Chhola,GroundMethoxychlorUCIL premises, Madhya PradeshAtal Ayub Nagar, Gareeb Nagar,GroundEndosulfan I & IIPollution Control Board (M.P.P.C.B.)Annu Nagar, Atal Ayub Nagar,Water &Preet Nagar, Atal Moon Colon ,SEP soil Moon Colon , SEP soil					
Monitoring Reports of ground water and soil samples collected around UCIL premises, Madhya Pradesh Pollution Control Board (M.P.P.C.B.) Nagar, Atal Ayub Nagar, Blue Moon Colony Kainchi Chhola, Ground Water (BHC) Water Ground Methoxychlor Water Ground Methoxychlor  Water Ground Findosulfan I & II  Ayub Nagar, SEP soil Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Moon Colon, SEP soil	6	1996-2007:	Annu Nagar, New	Ground	Lindane
of ground water and soil samples  Collected around  UCIL premises, Madhya Pradesh Pollution Control Board (M.P.P.C.B.)  Magar, Gareeb Annu Nagar, Blue Moon Colony Kainchi Chhola, Ground Water (BHC) Water Ground Methoxychlor  Water Ground Methoxychlor  Water Ground Water  Water  Ground Freet Nagar, Atal Water &  Ayub Nagar, Preet Nagar, Atal Ayub Nagar, Blue Water &  Moon Colon , SEP soil  Moon Colon , SEP soil		Quarterly	Arif Nagar, Annu	Water &	
Annu Nagar, Blue Ground Benzene Hexa Chloride  Moon Colony Water (BHC)  Kainchi Chhola, Ground Methoxychlor  UCIL premises, Atal Ayub Nagar, Ground Endosulfan I & II  Madhya Pradesh  Pollution Control Ayub Nagar, SEP soil  Board (M.P.P.C.B.) Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon , SEP soil		Monitoring Reports	Nagar, Atal Ayub	SEP	<del>"</del>
Moon Colony   Water   (BHC)		of ground water and	Nagar, Gareeb		
Collected around  Wainchi Chhola,  Ground  Water  Gareeb Nagar,  Madhya Pradesh  Pollution Control  Board (M.P.P.C.B.)  Ayub Nagar,  Preet Nagar, Atal  Ayub Nagar,  Preet Nagar, Atal  Ayub Nagar,  Ayub Nagar,  Blue  Moon Colon,  SEP soil  SEP soil		soil samples	Annu Nagar, Blue	Ground	Benzene Hexa Chloride
Water  Gareeb Nagar, Ground Endosulfan I & II  Madhya Pradesh  Pollution Control  Board (M.P.P.C.B.)  Annu Nagar, Atal Water &  Ayub Nagar, SEP soil  Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon, SEP soil			Moon Colony	Water	
Madhya Pradesh  Pollution Control  Board (M.P.P.C.B.)  Gareeb Nagar, Ground Endosulfan I & II  Water & SEP soil  Ayub Nagar, SEP soil  Ayub Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water & SEP soil			Kainchi Chhola,	Ground	Methoxychlor
Madhya Pradesh Pollution Control Board (M.P.P.C.B.)  Annu Nagar, Atal Ayub Nagar, Preet Nagar, Atal Ayub Nagar, Blue Water & Moon Colon, SEP soil					T 16 Y 0 YY
Pollution Control  Board (M.P.P.C.B.)  Ayub Nagar, SEP soil  Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon, SEP soil		Madhya Pradesh	Gareeb Nagar,	Ground	Endosulfan I & II
Board (M.P.P.C.B.) Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon, SEP soil		Pollution Control	Annu Nagar, Atal	Water &	· ·
Board (M.P.P.C.B.) Preet Nagar, Atal Ground Aldrin  Ayub Nagar, Blue Water &  Moon Colon, SEP soil	.	į	Ayub Nagar,	SEP soil	
Moon Colon, SEP soil		Board (M.P.P.C.B.)		Ground	Aldrin
			Ayub Nagar, Blue	Water &	
SEPs Soil Lindane, Dialdrin			Moon Colon,	SEP soil	
			SEPs	Soil	Lindane, Dialdrin
	ļ				

	Annu Nagar, Atal	Ground	1,2,3-Trichlorobenzene
	Ayub Nagar, Blue	Water	
	Moon Colony,		
1	Gareeb Nagar,		
	Kainchi Chhola	! !	
-	Atal Ayub Nagar,	Ground	1,3-dicholorobenzene
	Blue Moon Colony,	Water	
1	Gareeb Nagar,		
	Preet Nagar	·	<del>.</del>
	Arif Nagar, Atal	Ground	1,4-dicholorobenzene
	Ayub Nagar, Preet	Water	
	Nagar		
:	Annu Nagar, Arif	Ground	4,4 DDT
	Nagar, Atal Ayub	Water &	
	Nagar, Blue Moon	SEP	
	Colony, Preet	:	
	Nagar, Kainchi		
1	Chhola, J.P. Nagar,		
	Rajeev Nagar,		•
	Railway Coach		Miller Arch
:	Factory		
:			

		•	, , , , , , , , , , , , , , , , , , , ,
	Atal Ayub Nagar,	Ground	Alpha- BHC
•	Annu Nagar, Arif	Water	
	Nagar, Bluemoon		
	Colony, Kainchi		
	Chhola, Preet		
	Nagar	·	
	Gareeb Nagar,	Ground	Endrin
	Kainchi Chhola,	Water	
	Preet Nagar		<del>.,</del>
	Kainchi Chhola,	Ground	Heptachlor
	Annu Nagar, Arif	Water &	en en en en en en en en en en en en en e
:	Nagar, Atal Ayub	SEP	
:	Nagar, Kainchi		
	Chhola, New Arif		
1	Nagar, Prett Nagar		
	Annu Nagar, Arif	Ground	Sevin tiffeels on pg 51)
	Nagar, Atal Ayub	Water &	
	Nagar, J.P. Nagar,	SEP	
:	Preet nagar		

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#### **ORDER SHEET**

#### CASE NO. WP No 2802/2004

Alok Pratap Singh

Vs

Union of India & Others

W.P. No. 2802 of 2004

Date of Order: 23.6.2005

#### **ACTION TAKEN BY CENTRAL/STATE GOVERNMENT**

The Union Of India, first respondent, has filed an affidavit dated 20.6.2005 of Deputy Secretary, Department of Chemicals and Petro-Chemicals stating that the Task Force met on 31.5.2005 and in pursurance of decision taken therein the following action has been taken:

- The National Environmental Engineering Research Institute (NEERI) has been asked to undertake the study on pre-treatment and advise MPPCB on this issue and it has been asked to conduct studies of (i) soil samples for stabilization and immobilization and (ii) soil samples for ascertaining the extent of soil contamination.
- (b) The Ministry of Environment & Forests, Government of India, has been requeted to ask the Government of Gujarat to allow transportation of Tarry residuals to Gujarat and for incineration in their incinerators.
- (c) The National Geophysical Research Institute (NGRI) has been asked to assess the level of contamination of ground water and sub-soil in the adjoining areas of the plant site, and to suggest remedial measures.
- (d) The Engineers India Limited (EIL) has been asked to procure copies of the drawings/plans from the CJM Bhopal's Court and the CBI's office at Bhopal.

(e) The Indian Institute of Chemical Technology (IICT) has been asked to carry out survey of the Plant site for dismantling and decommissioning of the Plant and give a report to the Government of M.P. (Bhopal Gas Tragedy relief & Rehabilitation Department).

(f) The Institute of Pesticides Formulation Technology (IPFT) has also been asked to study the plant site and giver their suggestions.

The State Government has also filed an affidavit dated 22.6.2005 of the Secretary, Bhopal Gas Tragedy Relief & Rehabilitation Department, referring to the said first meeting of the Task Force on 31.5.2005. They have also stated that the First Phase of the work was entrusted to Ramky Enviro Engineer Ltd., Hyderabad and works at Item No. (i) and (ii) of the First Phase has been completed. That have also stated that in regard to Second Phase of the work, a secure land fill has been identified near Indore and the solid waste would be shifted to such land fill and the Tarry residues would be sent to Gujarat for incineration. In regard to Third Phase, it is stated that estimates of costs have been received form the IICT, Hyderabad an NEERI, Nagpur. It is stated that Coordiantor of the Task Force is corresponding with these agencies for getting clearer picture so that he can submit a status report regarding contaminated areas due to toxic waste lying at UCIL. It is stated that the Task Force is likely to meet in first week of July and take further decisions in the matter.

#### I.A. No. 4043 of 2005

Shri Shekhar Sharma, learned Standing Counsel for Union of India submitted that as the work has commenced, the application (I.A. No 4043 of 2005) filed by the Central Government seeking a direction to respondents 4 to 6 to deposit Rs. 100 crores for environmental remediation/restoration may be considered. In our order dated 15.5.2005, we have postponed consideration of the said application, as the respondent No. 5 was yet to be served. The petitioner is directed to take fresh steps for service on the fifth respondent. Shri Kishore Shrivastava, learned counsel appearing for fourth respondent

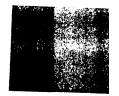
seeks time to file objections to the application (I.A. No 4043 of 2005) filed by the central Government. Finally, one week's time is granted for filing objections.

#### Securing assistance of NGOs

It is brought to the notice of the Court that a few NGOs who have been agitation for securing the rights of the victims of Bhopal Gas Disaster and for taking action against the persons responsible for the disaster, are apprehensive that the fourth respondent (DOW Chemicals Company) may escape liability if the entire remediation work is carried out by the Central/State Governments. It is also stated that some of these agencies have expertise for making suggestion for executing the third phase work. The

State/Central Governments also have a doubt that the petitioner may be a person set up by DOW Chemicals Company to file the PIL so as to avoid responsibility for the clean up task. In view of the above, we feel that presence of those NGOs before us will assist us in taking appropriate decisions. Accordingly, we direct that notice be issued to the following organizations to intervene at their own cost and assist the Court:

No. 3360, 13<sup>th</sup> B Main, HAL II Stage,
Bangalore 560038
And Delhi Office at No. B-1/66,
Safdarjung Enclave, New Delhi 110029



- International Campaign for Justice,
   Sambhavna Trust, Bhopai Group for Information and Action
   44 Sant Kanwar Ram Nagar, Berasia Road,
   Bhopal, M.P.
- (3) Bhopal Gas Peedit Mahila Udyog Sangathan

  51 Rajendra Nagar, Bhopal, M.P.

  Represented by its Sanyojak M.: Abdul Jabbar

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Rasedar Colony, Chhola Road,

Bhopal, represented by its secretary,

Mrs. Champa Devi Shukla

List the matter on 12.7.2005 for further report and for consideration of IA No. 4043 of 2005 and for further orders.

C.C. as per rules

R.V. Raveendran Chief Justice

A.K. Shrivastava Judge

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### 45 ANNEXURE-A 5

Madhya Pradesh Pollution Control Board

Parayawaran Parisar, E-5 Area Colony, Bhopal -462 016 MP

PH: 0755-4235484, 2446735 PBX : 2464428, 2466191

FAX: 0755-4235464 E-mail it <a href="mailto:mppcb@rediffmail.com">mppcb@rediffmail.com</a>

Web: www.mppcb.nic.in or www.mppcb.org

Bo. 355/HOPCB/2006

Bhopal, dt. 31.08.2006

To,

1.	Shri DD Basu	2.	Dr. K.P. Nyati, Head
	Senior Scientist		Env. Management New
	Division, CII		Delhi.
·	Central Pollution Control		
	Board Parivesh Bhawan,		
	East Arjun Nagar, Delhi-		
	32.		
			1
2.	Dr. Tapan Chakrabarty	4.	Dr. A. Krishna
1	Reddy		Deputy Director Indian
	Director Grade Scientist		Institute of Chemical,
	NEERI, Nehru Marg,		Hyderabad
	Technology, Nagpur		
5.	Dr. P.M. Bhargava (Centre	6.	Dr. J.P. Gupta Director
	for Cellular & Mclecular		General & management
	Gujarat Energy Research		Institute, 2 <sup>nd</sup> Floor,
	Biology) "Anveshna"		GSPC Bhawan
	Furqar Cottage, 12-13-		Bhawan, Sector-II,
	100, Lane-1 behind Udyog.		Gandhi Gujarat-382011.
	Street-3, Tarnaka Nagar		
	Hyderabad-500017		

Sub:- Minutes of the Meeting of the Technical Sub-committee of task force constituted for the disposal of waste lying in Union Carbide, Bhopal held at Deptt. of Chemicals & petrochemicals, New Delhi on 26<sup>th</sup> August, 2006.

- Ref :- 1. Order of Hon'ble High Court, M.P. on WP No.2802/2004 dated 22/02/2006.
  - Letter from deputy Secretary, GOI, Ministry of Chemical and fertilizer, Delhi DO No. 21/43/2004-B
     Cell dated 04/08/2006.
  - 3. This office letter No. 463 Dt. 17.08.2006

Please find enclosed herewith the minutes of the meeting of Technical Sub-Committee of Task Force for Removal of toxic Waste lying in Union Carbide. Bhopal, held at Department of Chemicals and Petrochemicals, Govt. of India, New Delhi on 26<sup>th</sup> August 2006.

(Approved by Chairman MP Pollution Control Board)
(B.K. Singh)
Member Secretary

Encl A/a

Minutes of the meeting of the Technical Sub-Committee of the Task Force constituted by the High Court of Madhya Pradesh for

the removal/disposal of the toxic wastes lying in the UCIL Plant site at Bhopal held on 26<sup>th</sup> August 2006 at 3.00 PM in Conference Room No. 220-A, 'A' Wing Shastri Bhawan, New Delhi.

The following members of the Technical Sub-Committee attended the meeting:-

- Shri PD Meena, Principal Secretary, Housing Secretary, Housing and Environment Deptt. and Chairman, MPPCB, Govt. of MP-Convenor.
- 2. Shri D.D. Basu, Senior Scientist, central Pollution Control
  Board (CPCB) Parivesh Bhawan, East Arjun Nagar, Delhi.
- 3. Dr. Tapan Chakrabarty, Director Grade Scientist, National Environmental Engineering Research Institute (NEERI) Nehru Marg, Nagpur.
- 4. Dr. A. Krishna Reddy, Deputy Director, Indian Institute of Chemical Technology, Hyderabad
- 5. Dr. K.P. Nyati, Head Environment Management Division, CII, New Delhi.

Two co-opted members invited in compliance with the order of High Court of MP dated 22<sup>nd</sup> February 2006 also attended.

- Dr. P.M. Bhargava, Centre for Cellular & Molecular Biology,
   Anveshna Furqan Cottge, 12-13-100. Lane-1 Street-3,
   Tarnaka Hyderabad.
- 2. Dr. J.P.Gupta Director General, Gujarat Energy Research and Management Institute 2<sup>nd</sup> Floor, GSPC Bhawan Behind Udyog Bhawan, Sector-II, Gandhi Nagar, Gujarat.

The following were the special invitees:

- Shri B.P.Pandey, Joint Secretary, Department of Chemical and Petrochemicals. New Delhi
- 2. Shri Yashvir Singh, Deputy Secretary, Department of Chemicals and petrochemicals, New Delhi.
- 3. Shri B.K. Singh, Member Secretary, MPPCB, Bhopal

The Technical Sub Committee (TSC) met on the instructions of the Chairperson of the Task Force to give clear recommendations for safe removal/disposal of the stored toxic wastes.

The TSC in its earlier meeting held on 10<sup>th</sup> July 2006 at CPCB, Delhi had recommended the course of action for disposal of stored toxic wastes, categorizing them into two categories, ie. Type I and Typle-II. Type-I included tar wastes such as Sevin, Napthol and Reactor Residue. Type-II included Semi-processed pesticides, contaminated Soil and Lime. Sludge. The TSC had discussion on both types of the toxic wastes and recommended their removal/ disposal as follows:

## Type-I

The Type-I category includes the Sevin residues, Napthol and Reactor residue and the recommendations for their removal and disposal are as follows.

(The Sevin and Napthol combined together weigh approximately 95 M.T.)

(i) **Sevin Residue**: The IICT and NEERI reported about Calorific value of 2252 K Cal/Kg and Sevin (Pesticide)

content as much as 2,40,000 mg/Kg. The TSC recommends incineration of Sevin residue, the CPCB submitted protocol for transportation and incineration.

- (ii) **Napthol Residue**: The IICT indicated that weight/weight of volatile solids of 70.04% indicating that Napthol residue is also amenable to incineration. And no further analysis is required, since the waste will be destroyed in dedicated incinerator.
- (iii) **Reactor Residue**: MPPCB will send sample of Reactor residue to NEERI for characterization and the report is expected within a fortnight.

#### Type-II

Semi Processed Pesticides: The amount of waste is (i) approximately 56 M.T. This waste contain Sevin Pesticides (55, 000 Mg/Kg) beta BHC (2.6 Mg/Kg) and gama BHC (8.46 mg/KG) with volatile solids of 23.18%. further as per letter dated 08/08/2006 from NEERI the concentration of absorbable holocarbons (Present as alpha BHC-10.93 Mg/Kg) in the leachate of semi processed pesticides exceeding the criteria limit of less than 3 mg/lit. is recommended Secured Lalfill. Hence, NEERI for

recommends semi processed pesticides for incineration with or without autxiliary fuel. the TSC also recommends the same.

- (ii) **Excavated Waste**: Dr. P.M. Bhargava was of the opinion that the term "contaminated soil" may be replaced with "excavated waste" which was agreed by TSC. The amount of excavated waste is approximately 165 MT. The NEERI indicated that the soil sample has high organic content (59.1% volatile solids) with calorific value 2832 K. cal/Kg. will be incinerated., However, if the excavated waste is in sizable quantity with calorific value less than 2500 K. cal/Kg. the waste will go to Secured landfill. The pre treatment protocol suggested by NEERI is to reduce the volatiles by suitable thermal destruction to be followed by land filling.
- (iii) Lime Sludge: The quantity of Lime Sludge is approximately 39.6 M.T. NEERI in its letter dated 08/08/2006 indicated that the Lime sludge should be sent for SLF after pre treatment. The treatment protocol as submitted as NEERI is as rollows:

MIX 40 tones of Lime Sludge with 50 cubic meter of water in small batches. To neutralize the entire matrix around 2 cubic meter of concentrated sulphuric acid is to be added which should

be carried out in small batches. The pH should be in the range of 7 to 9 and the temperature of the mixture is around 35 degree centigrade. The mixture required to be cooled and than subjected to vacuum drying. The final pH of the mixture is expected to increase to 11.5 at the end of the process and the pH of the leachate generated is expected to be below 12.

Dr. P.M. Bhargava suggested that the first option should be to apply the "Polluter pays" principle and hence, disposal of toxic waste should be undertaken by the polluter, viz. successors of Union Carbide Corporation, M/s. Dow Chemicals Co. The Dow Chemicals Co. may take responsibility of and bear the cost of its removal from UCIL, Bhopal and safe disposal in a suitable manner, wherever it is found suitable by them. He stated that the entire process an the treatments discussed by the TSC should be considered as the second option. The technical Sub-Committee agreed to this suggestion and decided that it should be placed before the Task Force. For consideration.

On the suggestion of Dr. P.M. Bhargava that during incineration of the toxic wastes at Ankleshwar, the representatives of NGOs/survivor groups should also be allowed to oversee the process s independent observes, the TSC decided that since the entire incineration would be carried out under the

supervision of the experts from Central Pollution Control Board, Madhya Pradesh Pollution Control Board, Gujarat State Pollution Control Board, and NEERI etc, therefore there was no need to involve more agencies. Dr. D.D. Basu allayed fear and apprehension of these groups, as expressed by Dr. Bhargava, and the TSC decided that a third party inspection by SCG of Germany would be arranged at the incineration site at Ankleshwar, who were the world renowned experts in this filed. Dr. Chakrabarty informed that the incineration would be carried out in batches and the entire material would not be incinerated in one go and that NEERI would ensure a safe disposal through a proper oversight mechanism.

Another point raised by Dr. P.M. Bhargava and Dr. J.P. Gupta was that in some of the developed countries incineration was got being considered as the best method for disposal of toxic wastes and there was alternatives/options available, which may also be considered by the TSC. Dr. Tapan Chakrabarty clarified that incineration was still being adopted by major industrialized countries like Japan, Germany and other European countries as there was very limited land available for landfilling and further, he clarified that the alternative technologies were at

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experimental stage and were yet to be established, whereas

incineration was a well-established and time tested method.

The meeting ended with a vote of thanks to the chair.

Prabhu Dayal Meena

Chairman MP Pollution Control Board

Principal Secretary

Housing & Environment

Govt. of Madhya Pradesh

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#### ANNEXURE-A6

# BEFORE THE HIGH COURT OF JUDICATURE OF MP AT JABALPUR

Writ Petition No. 2802/2004

#### IN THE MATTER OF :-

Alok Pratap Singh

- ...Petitioner

Versus

- Union of India
   Through, Ministry of Environment & Forest
   New Delhi.
- 2. State of Madhya Pradesh
  Through its Chief Secretary
  Vallabh Bhawan, Bhopal, MP
- MP State Pollution Control Board Through its Chairman Bhopal MP
- 4. DOW Chemical Company (Formerly Union Carbide Ltd) 2020, DOW Center, Michigan Midland, Pin No. 48674 USA
- 5. Union Carbide Corporation 400, W. Sam Houston Pkway TN 77042 USA
- 6. Eveready Industries (I) Ltd.
  Regd. Office: 1, Middleton Street
  Kolkata-770 071

#### **AFFIDAVIT**

I, P M Bhargava, son of Late Dr. R.C. Bhargava age 79 years,
Member of the Technical Sub Committee in the Task Force

appointed by this Honourable Court, do hereby solemnly affirm and state on oath as under:

- 1. That, in the above mentioned official capacity, I am well acquainted with the facts of the case, on the basis of information derived from scientific literature and from official records, and therefore, am competent to swear this affidavit.
- 2. That, the present submission is directed towards correcting certain misrepresentations made in the application submitted before this Hon'ble Court by the Madhya Pradesh government on 31.01.2007 and in the minutes of the ninth meeting of the Task Force held on 16.10.2006 also submitted to this Hon'ble Court.
- 3. That I have been unable to respond to the above-mentioned misrepresentation earlier because neither the finalized minutes of the Technical Sub-Committee meeting of 26.08.2006 nor the minutes of the meeting of the Task Force on 16.10.2006 were made available to me. I received them only after it was before this Hon'ble Court, and even that not from the official sources.
- 4. That, I am a scientist of international renown and have received the Padma Bhushan by the President of India in 1986

and the Legion de Honneur in 1994 by the French government for my scientific and social contributions.

- 5. That, I am currently the Vice-Chairman of the National Knowledge Commission, Government of India, and Member, National Security Advisory Board, Government of India
- 6. That, I along with Dr. J.P. Gupta, Professor of Chemistry, III, Kanpur, was co-opted in the Technical Sub-Committee vide order of 22.02.2006 of this Hon'ble Court.
- 7. That, in the opinion of this Hon'ble Court, the purpose of co-opting Dr. J.P. Gupta and myself was to ensure consensus on technical maters related to the problem of toxic contamination and recommended solutions to these problems.

The idea of associating the aforesaid two scientists as Member of the Technical Sub-Committee is to ensure consensus on the reports on this difficult subject before the court passes any order. "(Extract from Order of 22.02.2006 of this Hon'ble Court).

8. That, I participated in the first meeting of the Technical Sub-Committee (TSC) held on 26<sup>th</sup> August 2006 at Shastri Bhawan New Delhi.

- 9. That, in the aforesaid meeting of the Technical Sub-Committee, as the first option with regard to the disposal of the toxic waste, TSC members unanimously recommended that the Government must ask DOW Chemicals (who acquired union Carbide after the Bhopal gas tragedy) to take all the waste out of the country (in a manner that no one is submitted to any health hazard and all legitimate environmental concerns are addressed) for disposal, at their expense.
- 10. That, the consensus on export and safe disposal of hazardous waste being the first option was arrived on the following practical and technical grounds.
- Precedence exists where India has exported hazardous a. waste that could not be safely handled in the country. In March "2003, the Tamil Nadu Pollution Control Board ordered M/s. Hindustan Lever Ltd. to export 286 tonnes of their mercurycontaminated waste to an overseas facility. Further, faced with a similar problem of obsolete pesticides, Africa called for and constituted a Multi-stakeholder partnership called Africa programme (ASP) involving African countries, Stockpiles international donors and non-government organizations and pesticide manufacture associations. In 1995 the European Commission procured 230 tonnes of of-specifications fungicide

from Rwanda, Similarly, nearly 300 tonnes of obsolete pesticides were repackaged and exported to Britain with the assistance of FAO, the Netherland Government and Germany.

- b. The hazards of incineration are well known and well documented. Particularly in unregulated situations in developing countries such as in India. Incineration in India must only be considered as a last resort, and after all citier attempts to export it are exhausted.
- incorrectly represented in the draft minutes of the 26<sup>th</sup> August 2006 of the TSC. The option that was unanimously regarded as the first option was placed at the very end-on the third page of a 3 page document.
- 12. That, furthermore the technical and practical reasons to opt for the "Export and safely dispose" route with regard to disposal of the toxic waste in Bhopal were not mentioned in the draft minutes.
- 13. That the incorrect, representation of the consensus of the TSC meeting in the draft minutes was carried over to the meeting of the Task Force held on 16.10.2006.

- 14. That, in para 9 of the minutes of the meeting of the Task Force held on 16.10.06, it is stated. "The Task Force examined the final recommendation of the TSC for removal/disposal of Toxic wastes, which were finalized in consultation with the two co-opted members representing the NGOs in compliance with the orders of the High Court of Madhya Pradesh"
- 15. That the above statement is simply un true as neither were my letter acknowledge, nor were the corrections requested incorporated in the final minutes of the ISC.
- 16. That the Task Force's assertion in paragraph 8 of the minutes of the 16.10.06 meeting that "the two co-opted members had given their opinion, which was duly recorded in the minutes of the ISC meeting" is also incorrect.
- 17. That letters whether by one to conceive of Madhya Pradesh government in order to correct the misrepresentation mentioned above, have remained un answered.
- 18. That the 31.01.2007 application of the Madhya Pradesh government appears to be based on the incorrect assumption that the consensus of the TSC was a favour of incineration of the waste within India.

- 19. That, in view of what has been stated from para-8 to para 17 above, it is evident that while consensus has been reached in the TSC, the nature and spirit of consensus has been grossly and deliberately misrepresented in the submissions made before this Hon'ble Court including by the Madhya Pradesh government.
- 20. That, as a member of the Technical Sub-Committee invited by an order of this Hon'ble Court, I hold myself duty bound to record my dissent with the minutes of the Technical Sub-Committee meeting held on 26.8.2006, and certain sections and averments made in the minutes of the Task Force meeting of 16.10.06.

Deponent

### <u>VERIFICATION</u>

I, the above named deponent, do hereby verify that the contents of the above affidavit are true and correct to the best of my knowledge and information derived from scientific literature and officials records, no part of it is false and nothing material has been concealed there from.

Verified at Chennai on this 2<sup>nd</sup> day of May, 2007.

Deponent

92 ANNEXURE-4-7 COLY(1)

# BEFORE THE HIGH COURT OF JUDICATURE OF M.P. AT JABALPUR Writ Petition No.2802/2004

#### ORDER

21.11.2007

Heard Mr. Naman Nagrath, learned counsel for the Petitioner, Mr. Vivek Tankha alongwith Mr. Sheknar Sharma, learned counsel for the Union of India.

Mr. V.K. Shukla, learned Deputy Advocate General, for the State of Madhya Pradesh,

Mr. A.P. Shroti, learned counsel for the M.P. State Pollution Control Board.

Mr. A.M. Singhvi, Mr. Ravindra Shrivastava, Mr. Kishore Shrivastava, Learned senior counsel with Mr. Pankaj Singh, Mr. P. Sinha and Ms. Arusuiya Sadhu Sinha, learned counsel for the Respondent No.4 DOW Chemicals Company and Mr. Ajay Gupta, learned counsel for the Respondent No.6 Eveready Industries India Ltd.

In our order dated 8.8.2007 we had taken note of the decisions taken in the 11<sup>th</sup> meeting of the Task Force held on 27.7.2007 that the Government of Madhya Pradesh would invite tenders for removal/ transportation/ disposal of the

stored toxic wastes in the factory at Bhopal and complete the entire process of the tenders and awarding of contract by the end of August, 2007, and that such actual removal/ transportation of the stored toxic wastes would start by the end of September, 2007, and that the M.P. Pollution Control Board would supervise the removal/ disposal of the toxic wastes.

In our order dated 8.8.2007 we had further directed that the matter would be listed on 9.10.2007, by which date progress of work as directed by this Court by reported by both, the Union of India and the State of Madhya Pradesh.

When the matter was listed thereafter on 9.10.2007 it was submitted by the learned Government Advocate for the State of Madhya Pradesh that the tender has been floated on 29.9.2007 as per R-39 and the last date for opening the bid's is 27.10.2007. Mr. Shukla, learned Deputy Advocate General, states that he has not been able to obtain instructions on the parties. The by different tenders submitted Government may process the tender within a week, but the tender will not be finalized in favour of any party until the court hears and satisfies that the party selected for transportation of the toxic wastes is a suitable party.

An affidavit has been field by the Director in the Department of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, Government of India. Although the affidavit, the minutes of the 12th Meeting of the Task Force held on 16.10.2007 at New Delhi to review the progress of the removal/ remediation of toxic wastes from the factory at

Bhopal have been enclosed as Annexure-R-1 and from para 10 of the minutes we find that a letter has been received from the Principal Secretary, Department of Environment, Government of Gujarat, conveying that the Government of Gujarat has decided that the toxic wastes lying at the UCIL plant site at Bhopal may not be allowed to be incinerated at the incinerator installed at Ankleshwar and the Government of India and Government of Madhya Pradesh may expiore other alternative sites for incineration of the same. We are however informed by the learned counsel appearing for the different parties that objection to the transportation and incineration of toxic wastes at the plant at Gujarat has actually been taken by the Gujarat State Pollution Control Board.

We find from the records of this case that along with an affidavit filed by Shri Yashvir Singh, the then Deputy of Chemicals the Department Secretary in Petrochemicals, Ministry of Chemicals and Fertilizers, a copy of the letter dated 26.12.2006 of the Gujarat Pollution Control Board addressed to the Director (Environment), of Gujarat, Forest and Environment Government Department, has been enclosed, in which the Gujarat State Pollution Control Board has conveyed its 'no objection' to the revised quantity of toxic wastes weighing about 350 MT instead of 67 MT to be incinerated at the common incinerator of M/s BEIL, Ankleshwar, as per study conducted by NEERI, Nagpur. We also find from the minutes of the meeting of the Task Force held on 3.5.2007 at New Delhi to review the progress of the removal/ remediation of toxic wastes from the factory at Bhopal enclosed with the with the affidavit of

Shri Yashvir Singh that this letter dated 26.12.200% of the Gujarat State Pollution Control Board conveying its no objection to the revised quantity of toxic wastes weighing about 350 MT instead of 67 MT to be incinerated at the Incinerator at M/s. BEIL, Ankleshwar, has been taken note of by the Task Force.

We further find from the records of this case that the State of Madhya Pradesh filed an application in this court on or about 31.1.2007 reporting compliance of the orders passed by this Court on 9.11.2006 and 8.12.2006 and long with the said application copy of the letter dated 4.1.2007 of the Environment and Gujarat, Forests Government of Department, addressed to Smt. Satwant Reddy, IAS, Secretary, Ministry of Chemicals and Fertilizers Department of Chemicals and Petrochemicals, Government of India, is annexed in which the State Government of Gujarat in the Forest and Environment Department, has agreed to onetime transportation of 350 MT to tarry waste from the factory as Bhopal, to M/s BEIL, Ankleshwar for incineration.

It thus appears that both the Gujarat State Pollution Control Board and the Government of Gujarat had agreed to the transportation and incineration of 350 MT of toxic wastes from the factory at Bhopal to M/s BEIL, Ankleshwar, and on the basis of such no objections of the Gujarat State Pollution Control Board and the Government of Gujarat, decisions have been taken by the Task Force and by this court for transportation of the toxic wastes to Ankleshwar for incineration. If the Gujarat State Pollution Control Board or the State Government of Gujarat now had objections to such

transportation of toxic wastes to Ankleshwar for incineration on the basis of any fresh material which may have come to their knowledge, such material should have been placed before this Court. Since this has not been done, the earlier decisions taken by the Task Force as well as by this Court for removal and transportation of the toxic wastes to Ankleshwar and Gujarat will be complied with by all the concerned authorities.

The matter will be listed on 10th January, 2008.

A free copy of this order be furnished to Mr. V.K. Shukla, the learned Deputy Advocate General.

(A.K. Patnaik) · Chief Justice

(Ajit Singh) Judge

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ANNEXURE A- 8 Colly -03/29

# United Phosphorus Ltd.

UNIPHOS HOUSE MADHU PARK 11<sup>th</sup> ROAD, KHAR (W) MUMBAI 400052, INDIA Phone: (91-22)-26468000 26041010

Regd Office 3-11, GIDC, Vapi-396195 Gujarat

26th May 2008

Mr. V.S. Sampat

The Secretary

The Ministry of Chemical & Petrochemical

Shastri Bhavan

New Delhi

#### RE: Bhopal Waste

Dear Mr. Sampat,

Thank you very much for sparing your time and meeting us. We are sure with your help we will be able to solve the industry's problem.

You aware as a responsible industry we want to see there is no pollution and all the effluent are treated scientifically. All the solid waste is disposed off in internationally

designed landfilled site and all hazardous waste is incinerated in the State of Art incinerator. You will be glad to know that the industry is very conscious and we are doing everything possible to see that there is health industrial development.

Indian Industries are facing problem from environmental activists, most of them are anti progress, anit development and anti national, unless we handle them strictly Indian industrial development will be affected.

We would like to inform you that Bharuch Enviro Infrastructure Ltd (BEIL), Ankleshwar has one of the state of art incinerators. It has got capacity of 10000 ton. We find that 350 ton of Bhopal waste can be disposed off without any problem, whatsoever. Somehow the environmental activists do not want to solve he problem for their selfish motives. They should be handled strictly, if the Govt gives in to them they are going to harm the industrial development of our country.

We had convinced Gujarat govt and they have agreed that BEII can incinerate this 350 ton Bhopal waste. Somehow due to these environmental activists and interference of politicians the State Pollution Control Board is reluctant to take a firm decision.

Recently, I had a meeting with the Chairman of Gujarat Pollutior. Control Board (GPCB) and he suggested that we wait for sometime. However if you take up the matter directly with the Chairman of GPCB we will be able to sort out this problem once & for all. The

environmental activists have not reason to have the opportunity to 'Dharna' outside the Prime Minister's office.

MP Govt should take up this matter at highest level and as a responsible industry we feel 350 ton can be disposed off within a week. At present BEIL plant is being maintained and we will be able to start it soon in mid of June with enhanced capacity. We are also increasing our storage facility so that in future we do not have any minor or major accident.

We would like to inform you that though a fire took place at BEIL, there is not a single problem in the records health & safety of the workers & staff.

Thank you and assuring you our full cooperation.

Yours Sincerely

Rajju Shroff

Chairman and Managing Director

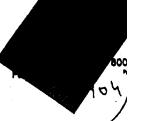
TRUE COPY.



## United Phosphorus Ltd.

<u>WNIPHOS HO</u>USE, MADHU PARK, 11TH ROAD, KHAR (W), MUMBAI • 400 052. INDIA.

Regd, Office: 3-11, GIDC, Vapi - 396 195. Gujerat.



26<sup>th</sup> May, 2008

Mr. V.S. Sampat
The Secretary
The Ministry of Chemical & Petrochemical
Shastri Bhavan
New Delhi

Dear Mr. Sampat,

RE: Bhopal Waste

Thank you very much for sparing your time and meeting us. We are sure with your help we will be able to solve the industry's problem.

You aware as a responsible industry we want to see that there is no pollution and all the efflutent are treated scientifically. All the solid waste is disposed off in internationally designed landfilled site and all hazardous waste is incinerated in the State of Art incinerator. You will be glad to know that the industry is very conscious and we are doing everything possible to see that there is healthy industrial development.

Indian industries are facing problem from environmental activists, most of them are antiprogress, anti-development and anti-national, unless we handle them strictly Indian industrial development will be affected.

We would like to inform you that Bharuch Enviro Infrastructure Ltd. (BEIL). Ankleshwar has one of the state of art incinerators. It has got capacity of 10000 ton. We find that 350 ton of Bhopal waste can be disposed off without any problem, whatsoever. Somehow the environmental activists do not want to solve the problem for their selfish motives. They should be handled strictly, if the Govt gives in to them they are going to harm the industrial development of our country.

We had convinced Gujarat govt and they have agreed that BEIL can incinerate this 350 ton Bhopal waste. Somehow due to these environmental activists and interference of politicians the State Pollution Control Board is reluctant to take a firm decision.

Recently, I had a meeting with the Chairman of Gujarat Pollution Control Board (GPCB) and he suggested that we wait for sometime. However if you take up the matter directly with the Chairman of GPCB we will be able to sove out this problem once & for all. The environmental activists have no reason to have the opportunity to 'Dharna' outside the Prime Minister's office.

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MP Govt should take up this matter at highest level and as a responsible industry we feel 350 ton can be disposed off within a week. At present BEIL plant is being maintained and we will be able to start it soon in mid of June with enhanced capacity. We are also increasing our storage facility so that in future we do not have any minor or major accident.

We would like to inform you that though a fire took place at BEIL, there is not a single problem in the records health & safety of the workers & staff.

Thanking you and assuring you our full cooperation.

Yours sincerely,

Rajju Shroff

Chairman & Managing Director

True Copy.

ANNEXURE A.8 COLLY-(ii) 134

### Center for Environment & Agrochemicals

**CENTEGRO** 

Ready Money Terrace, 4<sup>th</sup> Floor, 167, Dr. A.B. Road, Worli, Mumbai-400018, India Telephone: 91 22 24930681, Fax: 91 22 24938826, Email: centegro@gmail.com

9<sup>th</sup>May, 2008

Mr. Dominique Lapierre

Val de Rian - F - 83350 Ramatuelle.

France

Dear Mr. Lapierre,

We are happy and proud to know that Government of India has honored you with "Padma Bhushan". Our congratulations.

Many years ago I read your book 'Freedom at Midnight'; you really made a detailed study of Indian freedom struggle. Unfortunately I have not seen your recent book on Bhopal but in your discussion with Sreelata Menon of business Standard you mentioned that Union Carbide, at least should clean the toxic effluent lying at Union Carbide India Limited's old plant at Bhopal.

We are involved in chemical industry particularly in agrochemicals and environment.

Based on our long experience of handling agrochemicals and our state of art technology for waste management available in India, I would like to inform you that 23 years old waste can be easily removed and incinerated at our facility in Gujarat. However, it looks like that some of environment extremists do not want to allow anybody to clean the site

because if the site is cleaned they will not be able to make protest marches, shout and pursue their vested agendas.

Since you are good at investigative journalism, may we encourage you to find out why this decomposed waste has not been incinerated and site remediate after 23 years of the tragedy. The court has ordered and plans are ready to scientifically incinerate the waste. Not only it will clean the site but stop further risk to the environment. But these environmental extremists are worried as once the site is cleaned they will not be able make protest and make bogus claim.

I am sure it is not difficult for a person of your stature and knowledge to understand that criminal liabilities do not geed passed on to the new owner of the house where something wrong happened before. And Indian judicial system has not delegated powers to NGO's to run the courts.

Many of these environmentalists have one track mind, how to hinder the progress and development in the country for their selfish motive & cheap publicity.

We look forward to your objective support in advancement of science for larger benefit of the mankind in India.

Yours truly.

Rajju Shroff

True Cory,

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### Center for Environment & Agrochemicals

GRO Ready Money Terrace, 4th Floor, 167, Dr. A. S. Road, Worli, Mumbal - 400 018, India, May, 2008

Mr. Dominique Lapierre Val de Rian - F - 83350 Ramatuelle, France

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Yours truly.

Rajju Shrofi

TRUE Copy

# CENTRAL POLLUTIONCONTROL BOARD (Ministry of Environment &Forests, Govt. of India)

by Regd. Post

F. No. B-29016(SC)/1/08/HWMD/3229

July 08, 2008

To

M/s Bharuch Enviro Infrastructure Ltd. Plot No.9701-16, GIDC Estate Ankleshwar-2 Bharuch District, Gujarat

# DIRECTION UNDER SECTION 5 OF THE ENVIRONMENT (PROTECTION) ACT, 1986

WHEREAS, the Central Government als notified the Hazardous Waste (Management & Handling Rules, 1989, and amendments, thereof, (herein referred to as HWM Rules) under the Environment (Protection) Act, 1986, for collection, reception, treatment, transport, storage and disposal; and

WHEREAS, as per Rule 4(1) of the HWM Rules, the operator of a facility shall be responsible for proper collection, reception, treatment, storage and disposal of Hazardous waste; and

WHEREAS, as per Rule 4(3) of the HWM Rules, the operator of a facility shall be responsible to take all steps to ensure that the hazardous waste are properly handled, and disposed of without any adverse effects to the environment; and

WHEREAS, as per Rule 5 of the HWM Rules, to a facility shall be required to obtain authorization for the collection, reception, treatment, transport, storage and disposal of Hazardous wastes; and

WHEREAS, M/s Bharuch Enviro Infrastructure Limited, Plot No.9701-16, GIDC Estate, Post Box No.82, Ankaleshwar-393 002, Bharuch (Gujarat) (The Unit) was visited by the GPCB team on 3.7.2008 and the operations made for all the Q6 sheds, other than the shed No.07 where a recent fire incident occurred, are as under:-

- 1) The incinerable hazardous wastes are being stored in sheds in packed conditions;
- 2) The hazardous wastes are stored in drums many of which were co-roded and taking;
- 3) Incinerable hazardous wastes are accumulated every where causing leakages as well as pad odors;
- 4) Huge quantity of incinerable hazardous wastes of about 10,000 MNT has been kept untreated and at present stored in the six sheds;
- 5) The incinerable wastes stored in all six sheds do not have adequate space all around so as to prevent fire; and
- 6) Spillage of liquid incinerable hazardous wastes was observed in all the six sheds, and

WHEREAS, during the aforesaid visit on 3.7.2008, CPCB team observed that the shed or platform No.07 where fire incident took place on 3.4.2008 has been completely -

reconstructed with all precautionary measures including extended fire hydrant line, adequate space between the stacked drums containing incinerable hazardous wastes for proper ventilation. Besides a provision of 15 meters space between storage sheds have been provided and arrangements being made towards automatic water sprinkling arrangements, a laming systems and flame arresters; and

WHEREAS, during the aforesaid visit on 3.7.2008, it was also observed that three more storage sheds are under construction; and

WHEREAS the Central Government vide Notifications No.S.No.157 (E) of February 27, 1996 and S.O. 730 (E) dated July 10, 2002, has delegated the powers under Section 5 of the Environment (Protection) Act, 1986 to the Chairman, Central Pollution Control Board (hereinafter referred to as CPCB), to Issue directions to any industry or any local or any other authority for the violation of the standards and rules, notified under the Environment (Protection) Act, 1986 and amendments thereof.

NOW, THEREFORE, in exercise of the powers vested under the Section 5 of the Environment (Protection) Act, 1986, you are hereby directed to take all necessary steps for all the remaining six storage sheds as also for the new three storage sheds under construction, on the lines similar to precautions taken for the storage shed No.07 where fire incident occurred on 3.4.2007 by September 30, 2008 during which no additional inciderable hazardous wastes

shall be procured by the operator of the facility. You are also required to submit the time targeted action plans for proper storage of the incinerable hazardous wastes in all the sheds within fifteen (15) days from the date of issue of this direction failing which appropriate action would be initiated against all concerned with your facility under the Environment (Protection) Act, 1986 and amendments thereof.

(J.M.Mauskar) Chairman

#### Copy for information to:

- 1. Joint Secretary(RKV), HSM Division, Ministry of a Environment & Forests, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-3
- 2. Member Secretary, Guajrat State Pollution Control Board, Sector 10A, Gandhinagar-43
- 3. Zonal Officer, Central Pollution Control Board, Synergy House II, Gorwa Subhanpura Road, Subhanpura, VAdodara-23, Gujarat for follow- up
- 4. MS, CPCB, Delhi

(J.M.Mauskar) Chairman

///TRUE COPY//



# CENTRAL POLLUTIONCONTROL BOARD (Ministry of Environment &Forests, Govt. of India) by Speed Post

F. No. B-29016(SC)/1/08/HWMD/7074

December 02,2008

To

M/s Bharuch Enviro Infrastructure Ltd. Plot No.9701-16, GIDC Estate Ankleshwar-2 Bharuch District, Gujarat

Sub: MODIFIED DIRECTION UNDER SECTION 5 OF THE ENVIRONMENT (PROTECTION) ACT, 1986

This has reference to the compliance report received from our Zonal Office, Vadodara on their visit to your facility as on 11.2008 on the subject.

In this connection, I am directed to inform you that your facility is required to take necessary action so as to comply with the directions issued vide this office letters of even number dated July, 08, 2008 and October, 16, 2008. You are also urged to adhere to the following:

- The facility shall not procure any incinerable hazardous waste till further orders from CPCB;
- 2. To submit an action plan for utilization of accumulated incinerable hazardous wastes for use as on fuel in Cement klins;

during their visit on 7.11.2008 especial with respect to (i) inspection space in storage areas which is less than 1m; (ii) re-arrangement of drums as is not properly done in shed No.2; (iii) detoxification of drums still going on; (IV) consumption of wastes from corroded drums/old drums still going on; (v) odor prevailed near old sheds due to handling of wastes drums leakages of waste from some observed in some of the sheds.

You are requested to take necessary action to comply with the directions issued by CPCB including appropriate actions on the above cited aspects on or before December 15, 2008.

The action taken report in this regard may please be forwarded to CPCB on or before December 15, 2003, failing which further necessary action would be initiated including forfeiting of the Bank Guarantee submitted by your facility.

Yours faithfully, (H.K. Karforma) Sr. Env. Engineer & I/CHWMD

#### Copy to:-

- 1. Member Secretary, Gujarat State Pollution Control Board, Sector 10A, Gandhingar 43.
- 2. Zonal Officer, Central Pollution Control Board, Synergy House II, Gorwa Subhanpura Road, Subhanpura, Vadodara-23, Gujarat with a request

to keep a strict vigil on the aforesald facility towards compliance of the directions issued against the facility.

3. MS. CPCB, Delhi for information

(H.K. Karforma)

///TRUE COPY//

Appellate JURISDICTION

· In re:

State of Gujarat

.Petitioner(s)

Versus

Alok Pratap Singh

Respondent (s)

KNOW ALL to whom these present shall come that I, Satinath Sarangi, 44 Sant Kanwar Ram Nagar (First Floor), Berasia Road, Bhopal, MP-462001, Member of Bhopal Group for Information and Action; It Rashida Bee, House No 12, Gali No 2, Bag Umrao Dulha, Behind Naseer Masjid, Presesident of Bhopal Gas Peedit Mahila Stationery Karamchari Sangh & I, Syed M. Irfan, House No 7, Jogipura, Itwara. Bhopal, MP-462001, President of Bhopal Gas Peedit Mahila Purush Sangharsh Morcha do hereby appoint / retain:

mRT. mouile. (herein after called the advocate's) to be my/our advocate in the above-noted case authorize him/her:-

To act, appear and plead in the above-noted case in this Court or in any other court in which the same may be tried or heard and also in the appellate Court including High Court subject to payment of fees separately for each court by me/us.

To sign, file, verify and present pleadings, appeals cross-objections or petitions for executions review, revision, withdrawals, compromise or other petitions or affidavits or other documents as may be deemed necessary or proper for the prosecution of the said case in all its stages subjects to payment of fees for each stage.

To file and take back documents to admit and/or deny the documents of opposite party.

To withdraw or compromise the said case or submit to arbitration any differences or disputes that may arise touching or in any manner relating to the said case.

The deposit, draw and receive money, cheques, cash and grant receipts hereof and to do all other acts and things which may be necessary to be done for the progress and in the course of the prosecution of

To appoint and instruct any other Legal Practitioner authorizing him to exercise the power and authority hereby conferred upon the Advocate whenever she may think fit to do so and to sign, the power of attorney on our behalf.

And/we the undersigned do hereby agree to ratify and confirm all acts done by the Advocate or her substitute in the matter as my/our own acts, as if done by me/us to all intents and

And I/we undertake that I/we or my/our duly authorized agent would appear in Court on all hearings and will inform the Advocate or appearance when the case is called.

And I/we undersigned do hereby agree not to hold the advocate or her substitute responsible for the result of the said case. The adjournment costs whenever ordered by the Court shall be of the advocate which she shall receive and retain for herself.

And I/we the undersigned do hereby agree that in the event of the whole or part of the fee agreed by me/us to be paid to the Advocate remaining unpaid she shall be entitled to withdraw from the prosecution of the said case until the same is paid up. The fee settled is only for the above case and above Court. I/we hereby agree that once the fees is paid, I/we will not be entitled for the refund of the same in any case whatsoever and if the case prolongs for more than 3 years the original fee shall be paid again by me/us.

IN WITNESS WHERE OF I'we do hereunto set my/our hand to these presents the contents of which have been understood by me/us on this 13 day of February 2009

Accepted subject to the terms of the fees.

BHOPAL GAS PEEDIT MAHILA STATIONERY KARMCHARI SANGH

Client

BHOPAL GIAS PEENIT MAHILA PURUSH SANGHARSH MORCH