

plant documents and first saw copies of them after November 15, 1985—almost a full year after the disaster—when Magistrate Dolinger ordered their production. Only 78,000 of the over 100,000 pages forwarded to Robins, Zelle were produced to our firm and no accounting has been given as to why the balance was not produced.*

In the last several weeks, we have briefly reviewed the copies we received and the nature and complexity of the seized documents graphically demonstrate why these cases must be tried in India. The documents also illustrate the vast number of areas which the CBI obviously believes are germane to its investigation into liability and they claim that such an investigation will be easy to conduct or that it can be conducted anywhere else than in India. They also clearly negate plaintiffs' claims that contractor, subcontractor or vendor liability for the tragedy is not an issue since over a quarter of the documents the CBI selected for copying (approximately 20,000 pages), directly relate to its investigation into these issues.

The nature of these documents is such that interpreting them will require very substantial testimony from the hundreds of UCIL plant employees who prepared them.

As set forth in greater detail below, use and understanding of the documents seized by the CBI will present numerous problems to any court anywhere and those problems will be vastly compounded if they were attempted to be used in a court 8,000 miles away from the plant where they were prepared and the people who prepared them (particularly in a context which the Bhopal plant has closed and most of its employees will have moved on to other employment in India). The overwhelming majority of the documents are technical, containing readings of instruments at the Bhopal plant, chemical formulae and numerical calculations. Most of the abbreviations appearing in the documents refer to equipment and activities specific to the UCIL Bhopal plant and can only be interpreted by people who worked there. Many significant documents are not in English. Thousands of pages are handwritten and illegible. A substantial number of pages are unreadable due to the poor quality of the copies. Other documents are incomplete.

Over 61,000 of the 78,000 pages of documents seized by the CBI are documents prepared in India by the Indian employees of UCIL for use in India in connection with the operation of UCIL's Bhopal plant. These include primarily records prepared by plant employees detailing, in both narrative and numerical terms, the events which occurred on each day and

* As will be seen below, of the 78,000 pages of documents, only eleven documents (336 pages) show any contact between the UCIL Bhopal plant and Union Carbide Corporation or Union Carbide Eastern, Inc. during the almost five years between the plant's start-up and the date of the tragedy.

shift of the plants operation—instrument readings, chemicals produced and stored, equipment repaired or in need of repairs, personnel present or absent, supplies used, equipment and replacement parts purchased, persons visiting the plant, and any accidents which occurred.

Although the documents produced to date contain gaps as to the time period they cover, the many types of documents produced show the ongoing and comprehensive nature of the records maintained at the UCIL Bhopal plant. Those documents, when obtained in their entirety, and when explained by and combined with the recollections of those who prepared and used them, may shed substantial light on the events which preceded the tragedy, including those which immediately preceded it as well as those historical plant operating conditions which may have a relationship to the tragedy. The seized documents also include operating manuals and personnel records which were prepared at the UCIL Bhopal plant, or by UCIL employees elsewhere in India, in connection with UCIL's operation of the plant.

An additional 12,000 pages of documents pertain to the design, construction and commissioning of the plant. Two-thirds of these were also prepared in India by UCIL employees or by employees of the Indian companies for whose services UCIL contracted.

Another 3,000 pages of documents seized by the CBI were prepared by and for Indian residents, both UCIL and government employees, in connection with UCIL's numerous dealings with Indian governmental entities. They demonstrate the all-pervasive quality of the Indian government's regulation of, and involvement with, the Bhopal plant.

Only eleven documents (336 pages) in the 78,000 pages of documents are documents which were sent from the plant in India to the Union Carbide Corporation or to Union Carbide Eastern, Inc. or from those companies to the plant, during the almost five years between the start-up of MIC unit in February, 1980 and the tragedy in December, 1984.

I. Records Prepared at the Bhopal Plant

A. Operating and Maintenance Records

Over 36,000, or nearly half of the 78,000 pages of documents seized by the CBI and provided to us pursuant to Magistrate Dolinger's direction, are the daily, weekly and monthly records of Bhopal plant operations. These documents include:

1. Over 14,000 pages of log sheets maintained by operators in the MIC and phosgene units giving readings for various equipment. There are ten types of log sheets, samples of which are annexed as exhibits*:

* The exhibits referenced in pages 87 through 92 of my affidavit are samples of the documents I refer to.

Control Room Front End Log Sheets (Defendant's Exhibit 29), Back End Control Room Log Sheets (Defendant's Exhibit 30), Haveg System Vent Scrubber & MIC Storage Control Room Log Sheets (Defendant's Exhibit 31), Chlorine and MMH Storage Log Sheets (Defendant's Exhibit 32), Unit Storage Field Log Sheets (Defendant's Exhibit 33), Vent Scrubber, Utilities and Flare Tower Log Sheets (Defendant's Exhibit 34), Phosgene Unit Field Log Sheets (Defendant's Exhibit 35), Phosgene Unit Control Room Log Sheets (Defendant's Exhibit 36), 30 TR Refrigeration Plant Log Sheets (Defendant's Exhibit 37) and Refrigeration—200TR Log Sheets (Defendant's Exhibit 38). These pages are signed by the shift operators in charge of this equipment. The log sheets generally cover the period 1980-1984, but not every log sheet is available for each day.

It will be necessary to interview these operators, their supervisors and the plant custodians of these documents to learn how the forms were prepared and used, what the readings contained in them mean, how the readings relate to particular equipment located at the plant and what the significance of particular readings is to the disaster or to historical operating conditions which may have caused, contributed to, or bear upon it. It will also be necessary to obtain a complete set of log sheets for some of the equipment, such as the refrigeration unit, which presently cover a shorter period than some of the other log sheets.

2. There are over 12,000 pages of handwritten log book entries detailing events by day and, in most cases, by shift. They cover the period 1979-1984 but not every day is included and in some cases only portions of a log book were furnished to us. Some of these log books are unlabelled. Others are marked as MIC Unit log books (Defendant's Exhibit 39) and SEVIN Unit log books (Defendant's Exhibit 40). They appear to reflect significant events which occurred on each shift. Other log books are labelled "Instrument Log Book-Gen. Shift." One such log book deals with the months of October and November 1984. (The cover and the pages dealing with November 24 to December 4, 1984 are enclosed as Defendant's Exhibit 41). The observations and recollection of the personnel who maintained this book are clearly relevant. These pages are typical of the seized documents in that they are handwritten, only partially legible, use abbreviations and shorthand references to plant equipment and activities specific to the plant, and include one page of such poor quality copy as to be totally unreadable. Another log book, labelled "Fireman Log Book" and covering the period from November 12 to December 2, 1984 is entirely in an Indian language. (The cover of this log book and the pages dealing with December 1 and 2, 1984 are enclosed as Defendant's Exhibit 42). Fireman Log Books for other months were not among the documents produced to this firm. The necessity for interviewing, and ultimately obtaining testimony from, the many UCIL employees who prepared all of these log books is evident.

3. There are over 2,300 pages of handwritten daily notes from day

staff supervisory personnel, such as A. Venugopal, V.V. Joshi, P.M. Pai, S. Khanna, M.V. Bhendare, and T.R. Raghuraman, to production assistants, operators and utility employees, specifying work to be done in their units during the shifts. These notes cover the period 1980-1984. (Copies of daily notes for November 25 to 30, 1984 are enclosed as Defendant's Exhibit 43.) As with the handwritten daily log sheets, there are problems with legibility and copy quality. It will be necessary to interview the authors of these notes both to interpret the documents and to obtain additional information about events and conditions in the plant in the months (and in some cases, the years) preceding the Bhopal tragedy.

4. Nearly 1700 pages of the CBI documents deal with maintenance work performed in the UCIL Bhopal plant in 1983 and 1984. These include MIC-SEVIN Maintenance Log Sheets maintained by the shift supervisor as a record of work done during his shift (Defendant's Exhibit 44), Ag-Chem Maintenance Log Sheets (Defendant's Exhibit 45) and Shop Orders and Sub-Shop Orders requesting repairs (Exhibit 46 and 47).

5. The CBI also seized over 100 pages of forms on which operators recorded their hourly monitoring of the pressure of MIC tanks and (MRS (NIC refining columns) during 1984 (Defendant's Exhibit 48).

6. The CBI also seized nearly 1,000 pages of forms dealing with the condition of equipment, including critical safety equipment, and with work performed to maintain or repair this equipment. These forms include weekly and monthly Check Lists of Safety Appliances in the CO Unit (Defendant's Exhibits 49 and 50), Safety Relief Device Record Forms (Defendant's Exhibit 51) and Safety Valve History Cards (Defendant's Exhibit 52), recording design details and repairs performed on this equipment, MIC Safety Unit Check Lists (the checklist for November 21, 1984 is enclosed as Defendant's Exhibit 53), Toxic Gas Alarm Checking Forms (Defendant's Exhibit 54), Control Valve Data Sheets (Defendant's Exhibit 55) and Safety Valve Check Sheets (Defendant's Exhibit 56) used to log valves into and out of the maintenance repair shop, Instrument Preventive Maintenance Cards (Defendant's Exhibit 57), Safety Valve Job Cards dealing with repairs to valves (Defendant's Exhibit 58), Master Cards dealing with equipment outages (Defendant's Exhibit 59), Loop History Sheets recording repairs to instrument systems (Exhibit 60), and Equipment History Cards (Defendant's Exhibit 61). The CBI also seized 1,800 Hazardous Work Permits (Defendant's Exhibit 62).

7. The CBI seized over 200 pages of Utilities Area forms used to record the hourly readings of equipment in the plant's air, water and nitrogen systems (Defendant's Exhibits 63, 64 and 65) as well as over 900 pages of daily log sheets summarizing the status of these and other systems (Defendant's Exhibit 66) for the 1984.

8. The CBI seized nearly 240 pages of Monthly Inventory and Efficiency Sheets for MIC which recorded MIC inventory and transfers to

the Carbamoylation Unit (Defendant's Exhibit 67), as well as 26 pages of Production Reports (Exhibit 68).

9. The CBI seized almost 900 pages of forms prepared by Carbamoylation Unit operators in 1984, including over 520 pages containing hourly readings of equipment in the unit (Defendant's Exhibit 69), over 130 pages of daily inventories of components of the unit (Defendant's Exhibit 70) and 240 pages of forms summarizing activities in the unit on a per shift basis (Defendant's Exhibit 71).

10. Almost 600 pages of sample entry register forms listing samples taken in the MIC unit (Defendant's Exhibit 72) for the period 1982-1984 were seized.

11 The CBI also seized over 50 pages of forms listing daily readings for components of the Waste Water Treatment Unit for 1984. (Defendant's Exhibit 73).

B. Purchase Orders

The CBI seized nearly 14,000 pages of purchase orders, receipts and related correspondence. Over 12,500 of these are from 1984 and they reflect the Bhopal plant's purchases of supplies, including instruments, temperature gauges, piping parts, gaskets and other spare parts and equipment from Indian companies located in Bhopal, Madras, Bombay and other places in India in the year preceding the Bhopal tragedy. (Copies of seven such purchase orders are enclosed as Defendant's Exhibit 74).

In this action, without offering a shred of evidence to support its contention, the Union of India is attempting to claim that the cause of the Bhopal tragedy was an unspecified design defect in the process design Union Carbide Corporation forwarded to UCIL over a decade prior to the tragedy. However, the seizure, selection for copying, and forwarding to the United States, by the Union of India's own investigative arm, of over 12,000 documents reflecting purchases of replacement parts and equipment in India in 1984 obviously tends to undercut that unsupported assertion. It will be necessary to investigate and interview the Indian suppliers of this equipment and the UCIL employees who requested, received and installed it to determine what was purchased, whether it was the correct equipment and in proper condition, and whether it was installed properly.*

C. Records of the Stores Department

The CBI seized nearly 700 stores issue forms for 1984 as well as

* Moreover, to the extent such an investigation indicates vendor liability, the Indian vendors are not subject to this Court's processes.

nearly 100 such forms for the period 1979-1983. (Defendant's Exhibit 75). These forms show the issuance of spare parts and raw materials from the Stores Department which maintained supplies for the plant. The CBI was apparently interested in the materials used in 1984. Because the materials issued are indicated only by code numbers, however, the forms are incomprehensible to anyone not employed at the UCIL Bhopal plant.

D. Safety and Accident Records

The CBI seized 285 pages of Safety Training Records showing the training received by plant employees during 1983 and 1984, nearly 700 pages of accident report forms used by plant employees during the period 1977-1984 to report all injuries, over 350 pages of UCIL internal reports and correspondence dealing with more serious accidents and over 100 pages of minutes of meetings of UCIL's Central Safety Committee. Almost 150 pages of the reports and correspondence are in an Indian language. (A Safety Training Record is attached as Defendant's Exhibit 76 and an accident report form as Defendant's Exhibit 77).

E. Visitors Passes

The CBI seized 376 pages of Visitors' Passes (Defendant's Exhibit 78) showing the individuals who visited the UCIL Bhopal plant during the period November 12, 1984—November 21, 1984. An examination of these documents, when compared to Union Carbide Corporation's interrogatory answers in this action, discloses that there were more Indian visitors to the UCIL Bhopal plant during this nine day period than there were American visitors from Union Carbide Corporation during the entire fifteen year period of the plant's operation as a formulating and manufacturing facility.

II. Bhopal Plant Manuals

The CBI seized over 3,300 pages of manuals prepared by UCIL for use by various units at the Bhopal plant. These manuals were prepared and later revised and updated by UCIL personnel. For example, the seized manuals include a Standard Operating Procedures Manual for the Methyl Isocyanate Unit, revised in April 1984, and a Job Safety Analysis Manual for the Methyl Isocyanate Unit, revised in May, 1984, as well as a Flare Tower Operating Manual and a Plant Emergency Procedures Manual issued in 1979. It will be necessary to determine from former employees the extent to which these manuals were followed and how adherence or non-adherence to procedures contained in them was involved in the tragedy. It will also be necessary to obtain additional manuals not included among those seized by the CBI.

III. Personnel Records

The CBI seized nearly 5,000 pages of documents pertaining to plant personnel. These include 4,500 pages of records maintained by the personnel department, including personnel files from the period 1975-1984 (some of which are in an Indian language), payroll records for the month preceding the Bhopal tragedy, and almost 150 pages of newspaper advertisements recruiting operators, maintenance engineers and medical personnel for the Bhopal plant during the period 1975—1982. (One such advertisement is enclosed as Defendant's Exhibit 79.) The CBI also seized almost 600 pages of correspondence, drafts and papers filed in connection with employee termination cases pending before the Bhopal Labour Court. From these documents it appears that the CBI considers the background of UCIL's Indian personnel to be relevant to its investigation.

IV. Other UCIL Documents

The CBI also seized documents relating generally to UCIL and its marketing of pesticides in India including 55 pages of 1974-1976 marketing plans and (presumably from New Delhi or Bombay) nearly 300 pages of meetings of UCIL's Board of Directors between 1975 and 1984.

V. Design and Construction of the Bhopal Plant

Over 12,000 pages of the documents seized by the CBI pertain to the design, engineering and construction of the Bhopal plant, and the commissioning of the MIC unit. Less than one-third of these pages are design reports prepared by Union Carbide's Central Engineering Unit in South Charleston, West Virginia. Over 2,000 pages are design reports prepared in India by UCIL, by Humphreys and Glasgow, or by other Indian contractors. There are 1,000 pages of process engineering calculations and at least 700 pages of blueprints and diagrams. Another 5,000 pages are contractor files including contracts, specifications, bills and correspondence with the Indian firms of Humphreys & Glasgow, Lloyds Insulation, Kalra Engineering, Larsen & Toubro, Frick India, Ltd. and other Indian companies. The seizure of these substantial contractor and subcontractor files is also significant since it demonstrates that the CBI believed that this area was pertinent to its inquiry, contrary to the Union of India's current claim that the issue of contractor or subcontractor liability is a "spurious" issue. The CBI obviously believed it was a serious possible issue. Moreover, none of these contractors and subcontractors who may be liable in connection with the tragedy are subject to this Court's jurisdiction.

The CBI also seized a 200 page commissioning manual prepared by UCIL engineers, V. K. Behl and S. Khanna.

It will be necessary to interview many of the hundreds of Indian engineers who worked on the design, engineering, construction and commissioning of the plant, and its MIC unit. It is not possible to determine from the documents whether the blueprints and specifications are complete or in final form and, as set forth in the accompanying Woomer affidavit, the technical team was told after the tragedy that even plant blueprints did not necessarily reflect the current configuration of equipment. It will also be necessary to obtain additional documents from the Indian firms who designed and constructed the UCIL Bhopal plant and its MIC Unit.

VI. Government Involvement

The CBI also seized over 3,000 pages of documents pertaining to the regulation and licensing of UCIL's operations with respect to the Bhopal plant from 1967-1984. These include licenses and applications for many purposes including importing materials and equipment, operating a factory, manufacturing MIC-based pesticides and even obtaining additional air conditioning units, proposals and approvals of proposals for foreign collaboration, leases from governmental entities for the land on which the plant is located, correspondence with the Ministry of Industry, Health and Safety regarding complaints by union members and reports of inspections and visits to the plant by government personnel. Among these documents is a copy of an inspection book containing handwritten inspection reports conducted at the plant from 1971 to 1984. A number of these documents, including several of the handwritten entries in the inspection book are in an Indian language. These documents reflect the pervasive involvement of federal, state and local Indian government in the Bhopal plant's operations which is discussed in detail in the accompanying affidavit of Ranjit Dutta. It will be clearly necessary to interview or depose the authors of these documents, including the government officials who regulated the plant's activities and the UCIL employees who dealt with them.

VII. Contact with Union Carbide

Perhaps most noteworthy in the context of the plaintiffs' current claim that Union Carbide Corporation controlled the Bhopal plant, is the fact that, of the almost 78,000 pages of UCIL documents seized, selected, and sent to this country by the CBI, only eleven documents (336 pages) were produced which show any contact between the plant and Union Carbide corporation or Union Carbide Eastern, Inc., or those companies and the plant, in the almost five years between the February, 1980 start-up of the MIC unit and the Bhopal tragedy. Moreover, *virtually all* of these eleven documents deal with the subjects of the 1981 fatality and the 1982 operational safety survey which are discussed at length in the "Statement of Facts" contained in Plaintiffs'

Executive Committee's Memorandum of Law. An examination of the seized documents make it clear that what the Memorandum of law has attempted to do is to take eleven documents out of 78,000 pages and wildly exaggerate their significance to suggest pervasive involvement and control by Union Carbide Corporation. What the seized UCIL records establish is exactly the opposite of plaintiffs' contention on this motion. They show that the plant was a totally Indian operation and that to understand how it operated and the impact of that operation on the tragedy, it will be necessary to interview and obtain testimony from the Indian supervisors and operators who ran it.

Mr. Munoz' Affidavit

Plaintiffs' Executive Committee's Memorandum of Law relies heavily on an affidavit of Edward A. Munoz, sworn to January 24, 1985, and submitted to the Judicial Panel on Multidistrict Litigation. As discussed in the accompanying affidavit of Ranjit Dutta, Mr. Munoz' affidavit is a gross distortion of the background of the Bhopal plant, and I wish to bring two facts to the Court's attention with respect to it. First, I am informed and believe that, at the time he executed the affidavit Mr. Munoz was a paid consultant to Mr. Chesley's firm, although plaintiffs' papers nowhere mention that fact. Secondly, Mr. Munoz was, in 1978, removed by Union Carbide Corporation from his position as a Division President of the Union Carbide Corporation and Mr. Rehfield testified at his deposition to both Mr. Munoz' reputation for truth and veracity and to some of the circumstances which preceded his removal. I would respectfully direct the Court's attention to that testimony (Defendant's Exhibit 80) for an understanding of how little credence should be put in what Mr. Munoz says about Union Carbide Corporation.

Sd/-

BUD G. HOLMAN

Sworn to before me this
19th day of December, 1985.

Sd/-

Notary Public

LISA E. Cleary

Notary Public, State of New York

No. 52-4840356

Qualified in Suffolk County

Certificate filed in New York County

Commission Expires March 30, 1987