

137862

**U.S. Department of Justice
National Institute of Justice**

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this ~~copyrighted~~ material has been granted by

Public Domain/QJP/NIJ

U.S. Department of Justice

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the ~~copyright~~ owner.



NATIONAL INSTITUTE OF JUSTICE

Research in Brief

Charles B. DeWitt, Director

January 1993

Controlling Chemicals Used To Make Illegal Drugs: The Chemical Action Task Force and the Domestic Chemical Action Group

JAN 18 1993

ACQUISITIONS

The criminal justice system has become extremely sophisticated in its efforts to prevent and control drug trafficking. The method most visible to the public, and most often covered by the news media, is the seizure of illicit drugs such as cocaine and heroin. The Office of National Drug Control Policy (ONDCP) reported that in 1990 alone, 215,000 pounds of cocaine—with a street value of \$3 billion—were seized by the Drug Enforcement Administration (DEA), the U.S. Customs Service, the U.S. Coast Guard, and the U.S. Border Patrol.

The seizure of illicit drugs, however, is only one aspect of our national drug control strategy. Illicit drugs are the basis of an illegal, deadly, and worldwide "industry." Law enforcement agencies around the world are attacking this industry not only by interdiction of the drugs themselves, but also through such methods as disrupting

money laundering operations, breaking up drug distribution networks, and destroying crops.

Another part of this many-faceted attack on drug trafficking is the control of precursor and essential chemicals, which are necessary to produce cocaine and heroin, as well as LSD, PCP, and methamphetamine. In fact, during the last 2 years, the Group of Seven Industrialized Nations (the G-7), in cooperation with other countries where precursor and essential chemicals are produced, imported, or consumed, has launched a concerted effort to control these chemicals.

The United States is among the world's leading producers of precursor and essential chemicals. And most Americans don't realize that until 1989 much of the cocaine entering our country was produced using

essential chemicals manufactured in the United States. This *Research in Brief* discusses what has been done to radically curtail the diversion of chemicals for illicit drug production within our own borders. It also highlights U.S. involvement in international efforts to strengthen controls on the illicit diversion of precursor and essential chemicals.

The role of chemicals in illegal drug production

What are precursor and essential chemicals? All major illicit drugs except marijuana are either extracted or synthesized in a process requiring chemicals. Some drugs are extracted from plants. Cocaine, for example, is extracted from the coca leaf. Since cocaine already exists in the leaves of the coca plant, no precursors are

From the Director

Chemicals diverted from legitimate commerce are used in the production of illicit drugs such as cocaine, heroin, methamphetamine, PCP, and LSD. In fact, most of the cocaine smuggled into the United States is processed with chemicals exported by American and Western European companies, and nearly all methamphetamine, LSD, and PCP are illegally manufactured using chemicals from domestic and foreign suppliers. Controlling the illegal diversion and use of such chemicals is essential to limiting the production of illicit drugs.

The Chemical Diversion and Trafficking Act of 1988 has already proven effective in

limiting the illicit international diversion of so-called precursor chemicals. Just as money laundering can be traced through financial records, so can illicit drug production be traced through the records of manufacturers and dealers of raw materials used in drug production. The act has helped extend the awareness of law enforcement agencies about the role of essential and precursor chemicals in the illicit drug trade.

This *Research in Brief* discusses what has been done to curtail the diversion of chemicals for illicit drug production within the United States and outlines American involvement in strengthening international controls on the diversion of precursor and essential chemicals. This *Brief* also discusses a new problem con-

fronting police and prosecutors across the Nation: the control and disposition of clandestine drug laboratories, which are inexpensive to establish, easy to conceal, and highly profitable.

Much of the information in this *Brief* was first gathered by the international Chemical Action Task Force and the Domestic Chemical Action Group. The National Institute of Justice is pleased to have supported the activities of these groups, as well as to have distributed information on their proceedings to the law enforcement community.

Charles B. DeWitt
Director
National Institute of Justice

involved in its production. Chemicals used in the cocaine extraction process do not become part of the cocaine molecule, but because they are crucial to its manufacture, they are categorized as essential chemicals.

Other drugs, like LSD and PCP, are substances that do not occur in nature and, therefore, are synthesized in a clandestine laboratory from precursor chemicals, which do become part of the drug's molecular structure.

Synthetic drugs such as amphetamines and many hallucinogens can be produced in large or small laboratories. Cocaine, on the other hand, is present in the leaves of the coca plant in very small concentrations. Therefore, large amounts of leaves and solvents are required for the extraction process. The coca leaves are wet with water, and a base such as lime is added. Kerosene or some other organic solvent is then used to extract the cocaine from the macerated coca leaves. A dilute aqueous solution of an acid such as sulfuric acid separates the cocaine from the kerosene; ammonia water precipitates the cocaine, which is dried as coca paste. The coca paste is purified with an oxidizing agent such as potassium permanganate and additional processing. An acid such as hydrochloric acid produces the final product, cocaine hydrochloride.

Synthetic drugs such as methamphetamine are made by chemical processes involving precursor as well as essential chemicals. Precursors to methamphetamine include such substances as phenyl-2-propanone (P2P) or ephedrine. In the synthesis, the precursor is incorporated as part of the methamphetamine molecule. Essential chemicals such as solvents and compounds are used to adjust the reaction conditions.

The chemical diversion operation

Why should State and local law enforcement officials concern themselves about essential and precursor chemicals? If they could be kept out of the hands of illicit drug manufacturers, these chemicals could not be used to produce such drugs. If law enforcement agencies can follow the trail of precursor and essential chemicals from the chemical manufacturer to the illicit user, the illicit drug producers could be identified and apprehended. Thus, the control of precursors and essentials is a

potent strategy that, along with interdiction, intelligence, and financial investigation, can help identify drug criminals and interfere with their operations,

International diversion of essential chemicals. ONDCP has estimated that the world supply of cocaine in 1990 was 1,000 metric tons, or about 2.2 million pounds. To produce this amount of cocaine, millions of pounds of essential chemicals were required for processing. Yet, it is not easy to identify essential chemicals that are bound for illicit uses. Many essential chemicals such as hydrochloric acid, ether, and acetone also have hundreds of legitimate uses. They are produced in the United States by the thousands of tons, and many thousands of businesses use them daily.

Since most essential chemicals have a wide variety of uses, they are common substances in international trade. Thousands of tons are shipped annually to foreign ports for industrial purposes. Ironically, while cocaine destined for the United States often has come from Latin America, prior to 1988, many of the essential chemicals used in its production were manufactured here at home.

In 1988, the United States exported some 90,000 metric tons of essential chemicals to Latin America. Over 80 percent of the methyl ethyl ketone, 90 percent of the acetone, and 70 percent of the potassium permanganate imported into Latin America that year originated in the United States.² However, the Chemical Diversion and Trafficking Act of 1988, described below, has greatly decreased U.S. exports of these substances to Latin America.

Essential chemicals reach the drug producers in a variety of ways. (Exhibit 1 illustrates how these chemicals can be diverted to illegal use.) Criminals may obtain these substances from manufacturers through theft, bribery of employees, or even legal purchase, especially in areas that lack chemical control laws or do not enforce such laws. Tracing the diversion of these substances is difficult because of poor production and shipping records and poor identification of customers. Of course, poor plant security can always result in theft. Retailers and wholesalers of the chemicals can make direct cash sales to drug manufacturers; sometimes the retailers themselves are "front companies" set

up to disguise illicit drug trade. However, it should be noted that the majority of chemical manufacturers and dealers refuse to participate in these illegal and substandard industry practices.

The vast international network of freight forwarders, brokers, and agents can afford criminals access to these chemicals through multiple sales transactions, similar to money laundering operations. Multiple changes in ownership of the product as it goes from port to port also can be deceptive and confusing for customs officials, thus permitting diversion for illicit use. Of course, overseas shipments also are subject to theft because of the lack of physical control.

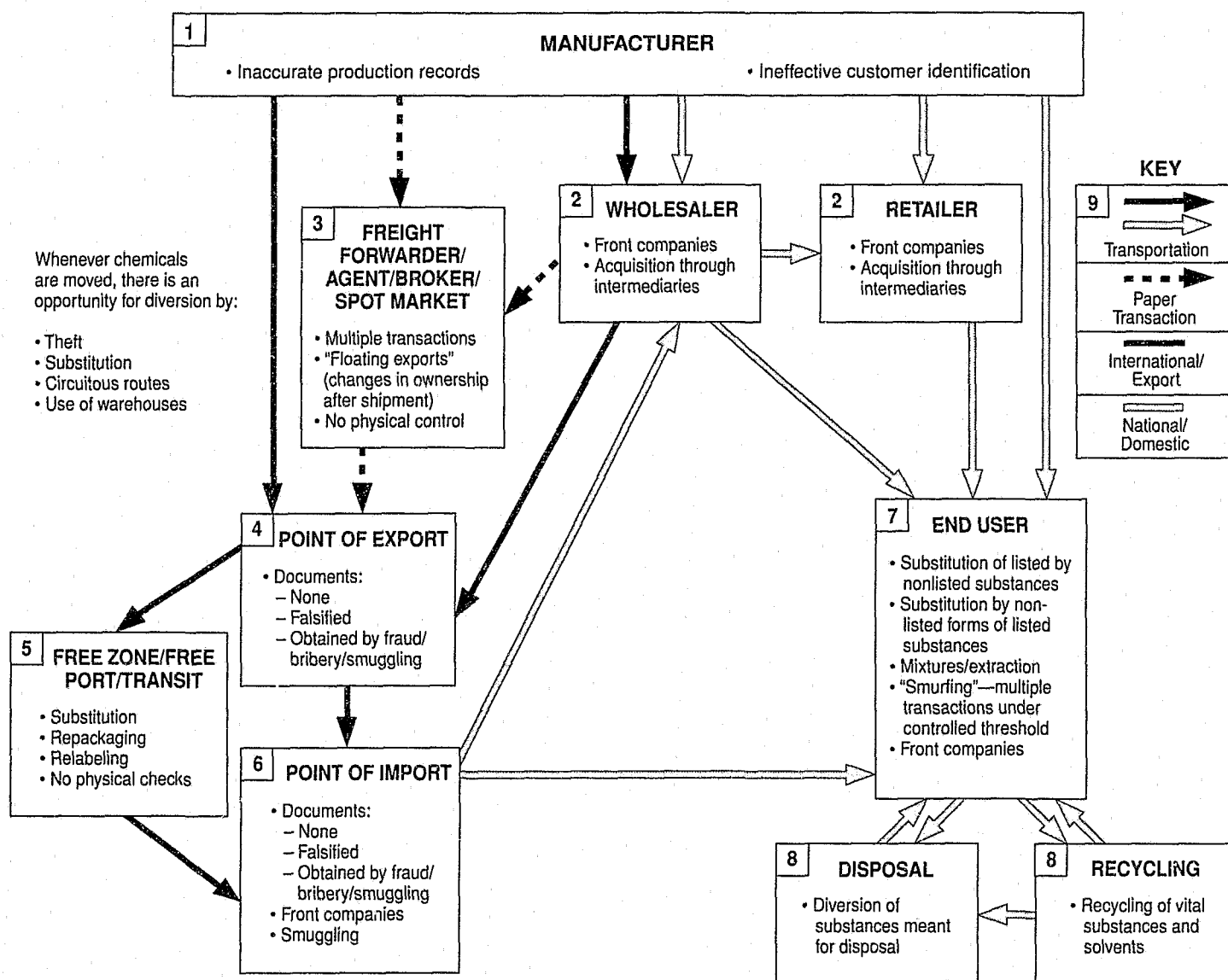
In ports and free trade zones, criminals can obtain essential and precursor chemicals through such subterfuges as repacking or relabeling of materials.

Finally, drug producers can conserve their stocks of essential chemicals by recycling them or recovering them from the disposal processes of legitimate sources.

As controls over the manufacturing and distribution processes improve worldwide, the illicit drug manufacturers still may have several options by which to continue drug production. The chemicals used in drug production can be substituted with other, nonlisted materials that have similar chemical properties. Also, criminals can buy the chemical raw materials and make the precursor and essential substances themselves. Front companies may make and sell these chemicals legally, while "backroom operations" concoct the illegal substances. "Smurfing"—buying quantities of each substance just under the level at which reporting is required—is also how criminals commonly obtain materials. However, these options greatly add to the criminals' costs, and proper regulation and recordkeeping requirements make it increasingly likely that even these diversion methods will result in detection of illicit operations.

Domestic clandestine labs and precursor chemicals. Although the processing of the coca leaf to make cocaine, for example, requires a large-scale operation, many synthetic drugs such as methamphetamine and PCP can be produced in someone's home (although venting of fumes is a problem) with readily available laboratory equipment. In fact, a criminal using

Exhibit 1. Diversion of Precursor Chemicals



equipment and precursor chemicals worth \$200 can in 18 hours produce a batch of methamphetamine with a street value of \$98,000.³

The problem of clandestine labs increased at an alarming rate throughout the 1980's. It peaked in 1989 with the implementation of the Chemical Diversion and Trafficking Act, which dramatically reversed this trend. While police seized 226 clandestine labs in 1983, by 1989 this number had increased to 807—or well over 2 per day.⁴ However, the number of clandestine lab

seizures decreased by 35 percent to 521 in 1990 and by 28 percent in 1991 to 375. The greater difficulty criminals had in obtaining precursor chemicals was clearly a major factor in the decline in seizures.

These seizures pose special problems for law enforcement officers. Many of the chemicals used in drug manufacturing are dangerous. Acids and solvents are corrosive and flammable; some are highly explosive. About one-fifth of clandestine lab seizures result from reports of fires caused by the chemical processes. According to a

study in California,⁵ one-tenth of seized labs have been boobytrapped with explosives, or worse, with disfiguring and poisonous chemical devices. Also, the corrosive nature of many precursor and essential chemicals can cause lung and eye damage, even upon exposure to vapors emanating from the lab.

At present, much clandestine lab activity is occurring in the west coast States of California, Oregon, and Washington. However, as law enforcement officials in these States have increased their efforts

against clandestine labs, the phenomenon has spread across the country. Texas also had a major clandestine lab problem, but increased enforcement resulted in the relocation of these labs to neighboring States like Oklahoma, Louisiana, and Arkansas.⁶ However, Oklahoma recently has reported a dramatic decline in clandestine lab activity, attributable to enforcement of a strict State chemical control law.

The problem is not just one for urban jurisdictions. In fact, illegal drug manufacturers often set up labs in rural areas where strong fumes, suspicious bottles, and drums of chemicals are less likely to be detected. Highway patrols often get involved in lab seizures because some criminals keep the labs in trucks or mobile homes which can be moved frequently to escape detection.

The diversion of precursor chemicals for use in clandestine labs is similar to the diversion of essential chemicals described earlier. As with essential chemicals, many precursors have legitimate applications in medicine, manufacturing, and other industries.

Anti-diversion legislation

The principal U.S. statute to control the diversion of precursor and essential chemicals is the Chemical Diversion and Trafficking Act, Subtitle A of the Anti-Drug Abuse Amendments of 1988 (Title VI, Public Law 100-670), which amended the Controlled Substances Act and the Controlled Substances Import and Export Act (21 U.S.C. 802 *et seq.*) The Chemical Diversion and Trafficking Act established recordkeeping requirements and enforcement activities for precursor and essential chemicals. It originally listed 12 precursor chemicals and 8 essential chemicals that must be controlled to prevent their use in illegal drug production; machines for tableting or encapsulating drugs are also controlled. State and Federal laws make the unauthorized trade in these substances equivalent to trafficking in the actual illegal drugs. In November 1990, 12 new chemicals were added to the list, and 1 was deleted. (Additional amendments to the Federal Chemical Diversion and Trafficking Act were proposed, but were not passed by Congress.)

The Federal anti-diversion act has three basic requirements for all manufacturers and distributors:

- To keep retrievable records of the distribution, receipt, sale, importation, or exportation of any of the chemicals or machines on the list (there are threshold limits for each chemical, below which records need not be kept).
- To report certain unusual or suspicious orders for these substances to the DEA.
- To obtain proof of identity for customers, whether individuals or companies.

The Chemical Diversion and Trafficking Act gives the DEA authority to stop the import or export of precursor and essential chemicals if their use cannot be shown to have legitimate medical, scientific, or commercial purposes. As the lead Federal agency for combating the manufacture and distribution of illegal drugs, the DEA also is responsible for preventing the diversion of licitly produced drugs and chemicals. All imports or exports of precursors and essentials over the threshold limit must be reported to the DEA through an Import/Export Declaration (DEA Form 486), and shipments of all listed chemicals through the United States must be reported to the DEA at least 15 days before the shipment. The DEA has 19 regional offices across the country with which manufacturers and distributors of listed chemicals must file reports under certain defined circumstances. The DEA also has the power to suspend shipments of chemicals when the agency has evidence that the shipment may be diverted for illicit purposes.

A total of 24 precursor and 7 essential chemicals are now on the list. Failure to comply with the more technical requirements of the law can result in up to 1 year in prison and a civil penalty of up to \$25,000 per violation. For distributing one of these substances knowing that it will be used for illicit purposes, the penalty is up to 10 years in prison and a fine of up to \$250,000 for individuals; up to \$500,000 for corporations. [See 21 U.S.C. 841(d) (2); 18 U.S.C. 3571.]

These regulations already have been successful in controlling the export of essential chemicals to Latin American cocaine factories. In 1988, 55 percent of the imports of essential chemicals to Colombia originated in the United States. In 1989, this amount had decreased to 33 percent of imports. Overall, the export of essential chemicals to Latin America from the United States dropped from 133 metric tons in 1984 to 40 metric tons in 1989.

Multinational Task Force Formed To Halt Diversion of Chemicals

The international Chemical Action Task Force (CATF) was formed to prevent the diversion of chemicals from legitimate commerce to the manufacture of illicit drugs. CATF members included the Group of Seven Industrialized Nations, known as the G-7 (Canada, France, Italy, Germany, Japan, the United Kingdom, United States, and the European Community), as well as Argentina, Australia, Belgium, Bolivia, Brazil, Chile, Colombia, Ecuador, Hungary, India, the Netherlands, Pakistan, Peru, Spain, Switzerland, and Thailand. The Organization of American States and the International Narcotics Control Board also participated.

The G-7 was first formed during the Ford administration so that the major industrial powers could discuss joint policy approaches toward critical world economic problems.

In addition to Federal legislation, 18 States have enacted their own laws on the control of these substances. There are, of course, some variations among those State laws in terms of the chemicals controlled and the method of regulation and recordkeeping. To foster uniformity among States, the National Institute of Justice, in coordination with the DEA and the U.S. Department of Justice's Criminal Division, launched an initiative with the American Prosecutors Research Institute (an affiliate of the National District Attorneys Association) to draft a model State statute for the control of precursor and essential chemicals.

The Chemical Action Task Force

Of course, the decrease in exports of these chemicals from the United States would be meaningless if other chemical-producing nations did not cooperate. Unfortunately, the effectiveness of the U.S. Chemical Diversion and Trafficking Act has been limited because other chemical-producing countries began to take up the slack in supplying South American countries with

essential chemicals. The United Nations addressed this important problem in Article 12 of the U.N. Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, signed in Vienna in 1988 by more than 80 nations. This convention initially applied only to the 12 chemicals, but the United Nations Commission on Narcotic Drugs recently recommended to the U.N. Secretary General that 10 chemicals be added. This addition is expected to be effective in the autumn of 1992. The convention imposed some requirements on countries to regulate the international commerce in chemicals. The United Nations also identified some regulatory measures that countries could take to control diversion within their borders.

Although the 1988 U.N. convention was a first step toward the control of these chemicals in international trade, countries must do more to control diversion. Recognizing this, the G-7, at its economic summit meeting in Houston in July 1990, called for the establishment of a multinational Chemical Action Task Force (CATF). At the Houston meeting, President George Bush and the prime ministers and other government officials from the G-7 members recognized the importance of curbing the illegal diversion and use of precursor and essential chemicals. The G-7 participants directed that the CATF make recommendations to prevent the diversion of these substances from legitimate commerce to the manufacture of illicit drugs.

The U.S. Government organized the CATF in 1990, and the U.S. Department of Justice chaired the task force, which met six times in Washington, D.C., between October 1990 and May 1992. During its first year, the chairman of the international group was William P. Barr, then the Deputy Attorney General, and currently the Attorney General of the United States; Deputy Attorney General George J. Terwilliger III assumed the chairmanship in the spring of 1992.

The Domestic Chemical Action Group

The Department of Justice sought to ensure that its delegates to the CATF remained informed about the views and concerns of State and local officials on this issue so they could accurately portray the status of U.S. law enforcement efforts. For this purpose, the National Institute of Jus-

Domestic Chemical Action Group Members

The National Institute of Justice convened a Domestic Chemical Action Group (DCAG) to assess U.S. law enforcement efforts to prevent illicit use of chemicals and accurately portray those efforts to the Chemical Action Task Force. The DCAG included leading experts on issues related to the diversion of chemicals and clandestine drug labs. Members included:

Association representatives

National Fraternal Order of Police
National Criminal Justice Association
International Association of Chiefs of Police
National Association of Attorneys General
U.S. Conference of Mayors
Chemical Manufacturers Association
National District Attorneys Association

States represented by practitioners

Washington
California
Pennsylvania
Texas
Colorado

Components of the U.S. Department of Justice

Federal Bureau of Investigation
Drug Enforcement Administration
Criminal Division
Office of Justice Programs,
including the National Institute of Justice

Attorney General Ken Eikenberry of Washington State, and Michael Scott, Commander of the Narcotics Service of the Texas Department of Public Safety, were named spokespersons for the group and joined the U.S. delegation at the 1990 and 1991 Chemical Action Task Force meetings.

tice invited approximately 30 experts in the area of chemical diversion from all over the country to form a Domestic Chemical Action Group (DCAG).

The DCAG met in late October 1990 to discuss the status of regulation of these chemicals and to develop information for use in the CATF. These experts discussed existing national controls on the diversion of precursor and essential chemicals. In comparison with other countries, the United States is very sophisticated in these efforts. Nevertheless, many problems remain, and the DCAG identified a number of issues and made suggestions for addressing some of them. These include:

Training. Every component of the law enforcement system requires training and information on diversion. Judges and prosecutors may not recognize the seriousness of the charges of diverting these substances and may treat them more lightly than standard drug possession or distribution cases. Also, prosecutors and police sometimes are not fully aware of appropriate methods for investigating and bringing to trial cases involving diversion. Such cases resemble

white-collar crimes and money laundering because investigation often entails finding and following complex trails of paper records.

Police are in particular need of training because of the dangers involved in searching for and seizing clandestine labs. The danger of explosions, as well as of burns and lung damage from caustic chemicals, requires special training in handling these substances. Officers also must be made more aware of ways to prevent the illegal movement of these substances on highways and by other means of transportation. In places where precursor and essential chemicals are manufactured, sold, transported, or taken across international boundaries, law enforcement officers also should be aware of the laws and regulations aimed at preventing diversion of these substances to illegal use.

The DCAG stressed that training must reach all areas of the law enforcement system since rural police agencies are just as likely to encounter clandestine labs as urban police. Special training may be necessary for highway patrols, as well as

other agencies in jurisdictions that have large railroad and other transportation hubs.

Environmental and occupational issues. In addition, the DCAG noted the need for law enforcement agencies to be aware of environmental and occupational laws and regulations associated with the seizure of clandestine labs.

Because of the toxicity of the chemicals, a law enforcement agency becomes liable for various cleanup and transporting operations, for any damage to natural resources, and for subsequent health risks that remain after the lab is dismantled. These requirements result from provisions of the Comprehensive Environmental Response, Compensation, and Liability Act⁷ and the Resource Conservation and Recovery Act.⁸ Also, the Superfund Amendments and Reauthorization Act makes owners of contaminated property responsible for decontamination before it is sold.⁹ Thus, if a property is confiscated by a local jurisdiction, seized through asset forfeiture laws, and subsequently sold, the jurisdiction may still be responsible for cleanup.

The DCAG also discussed the fact that law enforcement agencies are required by Occupational Safety and Health Administration regulations¹⁰ to provide medical monitoring, appropriate safety equipment, and training for employees who work with toxic substances. Jurisdictions must provide these services to police personnel who raid toxic clandestine lab sites, according to these regulations.

Additional legislation. The enactment of Federal legislation has improved our effectiveness in controlling the international movement of these substances. However, several DCAG members called for more potency in the Federal statutes. The DCAG suggested that legislation be strengthened by requiring licenses or permits for manufacturers of precursor and essential chemicals. In addition, longer waiting periods before shipment could increase the level of confidence that purchasers are legitimate users, and more followup and record-keeping could also ensure that substances are used for legitimate purposes. Finally, some group members sought to extend controls to chemical analogs and other substitutes for currently controlled precursor and essential substances.

The lack of legislation requiring record-keeping in 33 States has caused problems in domestic efforts to control diversion. Without adequate recordkeeping requirements, there are no paper trails of diverted chemicals. Criminals can camouflage diversion by shuffling shipments through States lacking controls.

Furthermore, even those States that have legislation sometimes are inconsistent in their regulatory requirements. Many DCAG members called for more States to adopt model legislation such as that developed by the American Prosecutors Research Institute. This model legislation is integrated with Federal laws and would add to the effectiveness of the system of controls that has already proved effective in reducing illicit international trade. Adoption of this model legislation by all States, the DCAG suggested, could provide the same sort of control for interstate diversion.

According to the DCAG, State legislation on chemical diversion and trafficking should include all federally listed substances and contain a clause that permits rapid inclusion of new substances to the Federal list without the need for a separate review process. The DCAG also suggested that State laws include requirements for recordkeeping and reporting, with all records to be preserved for at least 4 years. Members also saw a need for the legislation to provide assurances for keeping sensitive business information confidential, provide for subpoena power to obtain access to records, and make forfeitures and other penalties consistent with Federal legislation.

Information systems. The complex systems of diversion developed by criminal drug producers make it essential that law enforcement agencies work together to control this problem. The necessity for investigators to follow circuitous shipment routes, as well as the ever-present possibility that fraudulent documents will be used in diversion, make it essential that law enforcement agencies have access to up-to-date, accurate information about amounts being shipped, legitimate users, and lost or stolen materials. The DCAG noted that a nationwide information system, accessible by Federal, State, and local agencies, would help greatly in both preventing and investigating diversion. This system also

could be tied into an international system to help track imports and exports of these substances.

The group also saw a need for creating a uniform reporting method on clandestine lab statistics. Data on clandestine lab activities and the amounts of chemicals seized would give a better indication of the extent of these enforcement activities and their importance in halting the drug trade.

Chemical Action Task Force recommendations

The international Chemical Action Task Force met several times from 1990 to 1992 and created three working groups: Chemical Issues, Diversion Issues, and Legal and Regulatory Issues. Each working group gathered and analyzed information from the experiences of CATF member countries and the knowledge of expert participants. Each group then made recommendations to the entire task force. The reports of these groups, published in 1991,¹¹ are summarized below.

Chemical Issues Working Group. This working group identified the specific chemicals that should be regulated internationally. It examined chemicals used in the manufacture of illicit drugs, including heroin, cocaine, stimulant amphetamines, LSD, PCP, methamphetamine, and methaqualone. The working group recommended 10 additional substances for control, and these have already been approved for inclusion in the 1988 U.N. convention. Exhibit 2 is a list of precursor and essential chemicals controlled by the U.N. convention, suggested by the CATF, and currently controlled by the United States.

Diversion Issues Working Group. The second group examined existing methods for diverting chemicals and, in light of existing business practices and domestic and international laws and regulations, sought appropriate ways to prevent diversion. This group surveyed member countries to determine their greatest problems and concerns about diversion. Based on this survey, the group prepared a comprehensive list of diversion methods. (See exhibit 1.)

Legal and Regulatory Issues Working Group. The third group focused on legal and regulatory issues. It surveyed partici-

Exhibit 2. Precursor and Essential Chemicals Identified by CATF

Acetic anhydride*	Hydrochloric acid*
Acetone*	Isosafrole*
N-Acetylanthranilic acid*	Lysergic acid*
Ammonia (anhydrous)	Methyl alcohol
Ammonia in aqueous solution	Methylamine*
Ammonium hydroxide	3,4-Methylenedioxyphenyl-2-propanone*
Anthranilic acid*	N-Methylephedrine*
Benzene	N-Methylpseudoephedrine*
Benzyl chloride*	Norpseudoephedrine*
Benzyl cyanide*	Petroleum ether (petroleum benzene)
2-Butanone (MEK)*	Phenylacetic acid*
Butyl acetate	Phenylpropanolamine*
Butyl alcohol	1-Phenyl-2-propanone (phenylacetone)
Calcium carbonate	Piperidine*
Calcium hydroxide	Piperonal*
Chloroform (Trichloromethane)	Potassium permanganate*
Diacetone alcohol (pyranton)	Propionic anhydride*
Ephedrine*	Pseudoephedrine*
Ergometrine (Ergonovine)*	Safrole*
Ergotamine*	Sodium bicarbonate
Ethyl acetate	Sodium carbonate
Ethylamine*	Sodium hydroxide
N-Ethylephedrine*	Sulfuric acid*
Ethyl ether*	Toluene*
N-Ethylpseudoephedrine*	Xylenes (Xyloles)
Hexane	
Hydriotic acid*	

*Regulated by the United States

pating nations to determine their existing laws and regulations on these substances. The group also used the findings of the first two groups as the basis for its recommendations. These recommendations are directed toward all countries involved in the legal manufacture, sale, distribution, transit, or use of essential and precursor chemicals.

The working group recommended that the manufacture, sale, and distribution of chemical products with the aim of manufacturing narcotics and other illicit drugs should constitute a violation of narcotics legislation and should be prosecuted in the same manner as drug trafficking. The

group further recommended that all countries ratify the U.N. convention, but stated that no proposal to reform the U.N. convention or annex should hinder a country from improving its systems to control these substances.

The group stressed that new regulations should consider the need to preserve licit commerce and avoid making a control system so burdensome that it hinders commerce. Finally, the working group emphasized that international cooperation is indispensable. All parties must satisfy themselves about the legality and regularity of every shipment of precursor or essential chemicals.

General recommendations. Building upon the findings and recommendations of its working groups, the CATF adopted a final report in June 1991 that made general recommendations about the control and regulation of these substances. It suggested that all affected countries develop control programs with five key components:

- **Vigilance.** All commercial operators who deal with essential and precursor chemicals must remain alert for efforts to divert these substances for illicit purposes.
- **Administrative surveillance.** Accurate records must be kept of all production and transactions. These must be retained for a minimum of 2 years. [The United States already requires that records of transactions involving precursor chemicals be kept for 4 years and that records of transactions involving essential chemicals be kept for 2 years.]
- **Registration and authorization.** Manufacturers of certain substances, particularly precursors, should be licensed to make and sell them. This component is not necessary for essential chemicals such as acetone and ethyl ether that have wide industrial applications.
- **Export authorization.** Every country should control its exports of these materials to prevent them from falling into the hands of illicit enterprises.
- **Import authorization.** Every country also should be certain that imports of the substances are not diverted to illicit drug producers.

The task force made other recommendations about how to control this problem. It called for greater U.N. funding for the International Narcotics Control Board and suggested that the board give priority to providing resources for communications, equipment, and training. The task force also called for governments to monitor commerce to identify new substances used in illicit drug production, as well as new methods and patterns of diversion. It urged countries involved in the production, transit, transshipment, and use of precursor and essential chemicals to share information on legitimate and illegitimate users. It also suggested that all countries provide assistance in international law enforcement efforts.

The task force urged that each country develop regulatory measures for every stage of the distribution process (receipt, storage, handling, processing, and delivery) of the subject chemicals, particularly in free ports and free trade zones. Finally, it suggested that discrete international tariff codes be developed to track each of the chemicals more effectively.

Summary

If we are to control and defeat the drug problem, our Nation's law enforcement agencies must learn more about precursor and essential chemicals and the role they play in drug trafficking. Also, every jurisdiction must review and make certain that its laws and policies meet the objective of controlling the flow of these chemicals.

The regulation of precursor and essential chemicals is a crucial component of efforts to reduce the supply of illicit drugs. But it is not just a national endeavor. The activities of the Chemical Action Task Force and other international bodies demonstrate the worldwide scope of this effort. Furthermore, State and local law enforcement officials have an important role in making certain that their jurisdictions do not unwittingly become a source of chemicals for clandestine laboratories or a haven for manufacturers of illegal drugs.

Notes

1. Office of National Drug Control Policy, *National Drug Control Strategy*, (U.S. Govt. Print. Off.), February 1991, p. 94.
2. Drug Enforcement Administration, *Chemical Handler's Manual: An Informational Outline of the Chemical Diversion and Trafficking Act of 1988*, (U.S. Govt. Print. Off.), 1990, p. 1.
3. *Impact of Clandestine Drug Laboratories on Small Business, 1988: Hearing before the Subcommittee on Regulation and Business Opportunities of the House of Representatives Committee on Small Business*, 100th Congress, 2d Session, 1988 (Statement of David Frohnmayer, Attorney General of the State of Oregon).
4. Statement of Jim Brady, Operations Division, Dangerous Drugs Investigations Section, Drug Enforcement Administration, Summary of Meeting Notes, Domestic Chemical Action Group, October 29, 1990, meeting.
5. Anna T. Laszlo, "Clandestine Drug Laboratories: Confronting a Growing National Crisis," *National Sheriff*, Vol. 41(4), August-September 1989.
6. Domestic Chemical Action Group, Minutes of October 29, 1990, meeting.
7. 42 U.S.C. 9601-9657 (1982), amended by 42 U.S.C. 9601-9675 (1988).
8. 42 U.S.C. 6901-6992 (1988).

9. Superfund Amendments and Reauthorization Act [Public Law 99-499] is an amendment to the Comprehensive Environmental Response, Compensation, and Liability Act. Section 120(h) [42 U.S.C. 9620(h) (1988)] makes Federal agencies selling contaminated property agree to perform any future remedial action necessary after the transfer.

10. 29 C.F.R. Part 1910.120.

11. Chemical Action Task Force, *Chemical Action Task Force Working Group Reports and Chemical Action Task Force Final Report*, June 1991.

Findings and conclusions of the research reported here are those of the researchers and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

NCJ 137862

U.S. Department of Justice
Office of Justice Programs
National Institute of Justice

Washington, D.C. 20531

Official Business
Penalty for Private Use \$300

BULK RATE
POSTAGE & FEES PAID
DOJ/NIJ
Permit No. G-91