

裁军谈判会议

CD/1129
CD/CW/WP.386
20 February 1992

CHINESE
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澳大利亚

澳大利亚国家秘书处：化学工业调查

1. 导言

在1989年9月堪培拉政府与工业界禁止化学武器问题会议上,澳大利亚外交部长宣布外交和贸易部正在着手组建一个国家秘书处,作为以后成立化学武器公约国家主管当局的核心。部长表示,这个秘书处将与适当的联邦和州政府部门协商,负责审查与澳大利亚化学工业活动有关的现行法律和规章,设法采用未来化学武器公约的要求并使之与现行规章体制相适应。

秘书处的第一项任务是制订战略,为澳大利亚本国执行化学武器公约作好准备。战略包括一项方案,先进行征求意见和研究,由此拟出一套执行措施,由澳大利亚政府在适当时候审议。一份题为“为澳大利亚执行化学武器公约做好准备的战略”的文件已于1991年2月提交裁军谈判会议(CD/1055)。

从该文件可以看出,任何政府如要使本国能在化学武器生效时真诚予以执行,必须提前执行许多不同的任务。

上述战略文件着重指出的未来化学武器公约之下的重要要求之一是,收集关于生产、使用和交易的与化学武器公约有关的化学品的数据。澳大利亚的国家秘书处在考虑执行办法时面临的问题是不了解澳大利亚有关化学品的生产水平或用量。这是一个根本性的问题,对于任何国家都极为重要,不仅关系到确定国家主管当局规模和结构,而且关系到需在全国作出的执行努力。

同大多数其他国家一样,澳大利亚也对化学品定有大量规章。在规章之下确实存在各种有关化工生产的数据库,但情况表明这些数据库本身不能满足化学武器公约的所有要求。由于数据库结构不同,在以适合于化学武器公约的格式汇集这一资

料方面也遇到了困难。此外,鉴于这些数据库分别由澳大利亚各级政府掌握,可能还需要解决数据库查找权问题。因此,澳大利亚国家秘书处得出结论:有必要进行一次专门按化学武器公约要求安排的化学品调查。

2. 调查的设计

调查由澳大利亚统计局按国家秘书处提出的数据设计,该统计局是澳大利亚负责进行本国人口和住房普查及许多工业调查的政府机构。

此次调查的关键目标是收集化学武器公约生效后国际组织将要求澳大利亚提供的关于化学品产量、加工量和消耗量的资料。调查的另一个设计目标是收集关于澳大利亚出口管制之下的化学武器前体化学品的类似资料。

调查设计的第一步是分析要涵盖哪些组织。对可能使用附表化学品的和平用途所作分析表明,除化工生产厂商和工业化学品用户以外,还需包括联邦和州政府两级的政府机构和实验室、大学以及医院。

调查方法的主要特点是:

- 这是一次通信调查
- 自愿参加
- 针对公司而不是个别工厂。

有意识地未在调查对象中包括专事化学品分销或贸易的公司。原因是考虑到有可能造成贸易商和用户之间一定程度的重复计算,而且毕竟还有其他数据--或许更为可靠,这就是有可能得到政府提供的进口和出口数据。

由于这是一次通信调查,因此需有一份最新的通信录。编订这一通信录所依据的是化学工业名址录,并用企业电话簿作为补充。对于医院和第三级机构,则利用了政府关于这些组织的名址录。对于州和地区政府组织,则请州政府和地区政府提名编入通信录。同样,对于联邦政府级的有关机构,则请联邦各部提名。

通过这项工作收列了约2000个公司和组织,其中包括化工生产厂商、工业化学品用户、政府机构和实验室、医院和大学;调查问题表最终寄送给这些公司和组织。

3. 编拟调查问题表

为了向公司和组织了解化学品产量,需有一份内容适中的化学品清单。

化学武器公约将涵盖的化学品列在三个附表内。在这些附表中,有些化学品是单列的,有些则按“族类”列出,我们此间的谈判采取族类分列办法是为了涵盖一切有关化学品。然而,由于有些族类可包含许多种化学品,因而无法具体要求编一份完整的化学品清单,把澳大利亚执行化学武器公约的立法将要涵盖的化学品全部收列在内。

此次调查利用了澳大利亚化学物质清册(AICS)来区分澳大利亚生产或进口的、不同族类中的各种化学品。清册是在国家职业保健和安全立法之下编制的,据以区分已有化学品和新的化学品,以便评估新出现的化学品对健康和安全的影响。此次调查利用这一清册是作为一种替代办法,这样就不需要编拟一份收列数千种大多与澳大利亚无关的化学品的清单。

本文件附有一份调查问题表复制件。请注意,凡是与化学品族类有关的问题,表中先列出一个族类中的各种化学品,然后再列出关于同一族类中其他成员的问题。为进一步帮助填报,问题表中有一页提供了关于这些族类的化学资料。

除附表化学品以外,调查还涉及另外一些可用于生产附表化学品的化学品(C节第18至40项)。这些化学品均在澳大利亚出口管制之下。

问题表是澳大利亚统计局编制的,编制过程中得到了材料研究实验室、化学工业组织和一些化工公司的技术协助。

4. 调查的进行

调查于1991年12月进行。向调查对象寄送了问题表,第一页是国家秘书处的一份请调查对象给予合作的信件,列出了查询联系人姓名和电话号码,并提供了一个印有复信地址和邮资已付印戳的信封。对于未在指定时间寄回问题表的调查对象均发函提醒。对提醒再不作复者则在经过适当间隔后会接到提醒电话。

寄发之前在化工联合会的两种业务通信中作调查前宣传。在开始寄送问题表之前,提前两周由澳大利亚化学联合会负责人按通信录上的所有地址发出请求合作的函件。

数据输入和分析工作将在收到最后一份回复后尽快开始。待这项工作完成后,澳大利亚将能较好地确定执行要求,包括与国家主管当局有关的资源问题。此项工作还将提供宝贵经验,以此帮助研订澳大利亚执行化学武器公约立法之下将要实行的义务数据报告制度。

澳大利亚在取得调查结果后将把这种结果编入一份工作报告提交。

希望这一初步通报,特别是其中叙述的调查方法及所附的问题表能有助于其他国家为准备执行化学武器公约开展类似的工作。

DEPARTMENT OF FOREIGN AFFAIRS AND TRADE

Survey of Chemical Industry

November 1991

Confidentiality

Your completed form remains confidential to the Department of Foreign Affairs and Trade.

Due Date

Please complete this form and return it to the address below by
3 December 1991

Help Available

Chemicals marked with a * have a brief technical note on page 26.

If you have any other problems in completing this form or if you require additional copies, please contact Henry Fox on (06) 261 2431 or Sherree Minehan on (06) 261 2338.

Instructions

Please answer all questions carefully, even if you have not handled or produced any of the chemicals listed.

We are interested in your entire Australian operations, so please compile your information accordingly.

Careful estimates should be provided only when actual figures cannot be obtained.

This survey collects information about the 1990 calendar year.

Return Address

The Executive Officer
Chemical Industry Survey - CBS
D-3-N / DND
Department of Foreign Affairs and Trade
Canberra A.C.T. 2600

A. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in ANY amount:

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*Include - amounts imported and exported
- amounts processed without conversion*

- 1 a. O-isopropyl methylphosphonofluoridate
(Sarin CAS Number 107-44-8)?
- No ☐ 1
Yes ☐ 2
- b. O-pinacolyl methylphosphonofluoridate
(Soman CAS Number 96-64-0)?
- No ☐ 1
Yes ☐ 2
- c. Other O-Alkyl (SC₁₀ including cycloalkyl)
alkyl (Me, Et, n-Pr or i-Pr)-
phosphonofluoridates *?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2
- 2 a. O-ethyl N,N-dimethylphosphoramidocyanidate
(Tabun CAS Number 77-81-6)?
- No ☐ 1
Yes ☐ 2
- b. Other O-Alkyl (SC₁₀, including cycloalkyl)
N,N-dialkyl (Me, Et, n-Pr or i-Pr)-
phosphoramidocyanidates *?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2
- 3 a. O-ethyl S-2-diisopropylaminoethyl methyl
phosphonothiolate
(VX CAS Number 50782-69-9)?
- No ☐ 1
Yes ☐ 2
- b. Other O-Alkyl (H or SC₁₀, including cycloalkyl)
S-2-dialkyl (Me, Et, n-Pr or i-Pr)-
aminoethyl alkyl (Me, Et, n-Pr, or i-Pr)-
phosphonothiolates *
and corresponding alkylated and protonated salts?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2

- 4 a. Methylphosphonyldifluoride
(DF CAS Number 676-99-1)?
- No ☐ 1
Yes ☐ 2
- b. Other Alkyl (Me, Et, n-Pr or i-Pr)-
phosphonyldifluorides *?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2
- 5 a. O-ethyl O-2-diisopropylaminoethyl
methylphosphonite
(QL CAS Number 57856-11-8)?
- No ☐ 1
Yes ☐ 2
- b. Other O-Alkyl (H or SC₁₀ including cycloalkyl)
O-2-dialkyl (Me, Et, n-Pr or i-Pr)-
aminoethyl alkyl (Me, Et, n-Pr or i-Pr)-
phosphonites *,
and corresponding alkylated and protonated salts?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2
- 6 a. O-isopropyl methylphosphonochloridate
(Chloro Sarin CAS Number 1445-76-7)?
- No ☐ 1
Yes ☐ 2
- b. O-pinacolyl methylphosphonochloridate
(Chloro Soman, CAS Number 7040-57-5)?
- No ☐ 1
Yes ☐ 2
- c. Other O-Alkyl (SC₁₀, including cycloalkyl)
alkyl (Me, Et, n-Pr or i-Pr)-
phosphonochloridates *?
- No ☐ 1
Yes (Specify name(s) below) ☐ 2

Additional chemical names from above - if you need more space please use page 10.

[CAS Number]

A. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in ANY amount:

*Include - amounts imported and exported
- amounts processed without conversion*

- 7 a.** bis (2-chloroethyl) sulphide
(Mustard gas CAS Number 505-60-2)?
- No ☐ 1
- Yes ☐ 2
- b.** 1,2 bis (2-chloroethylthio)-ethane
(Sesquimustard CAS Number 3563-36-8)?
- No ☐ 1
- Yes ☐ 2
- c.** bis (2-chloroethylthioethyl) ether
(O-mustard CAS Number 63918-89-8)?
- No ☐ 1
- Yes ☐ 2
- d.** bis (2-chloroethylthio) methane
(CAS Number 63869-13-6)?
- No ☐ 1
- Yes ☐ 2
- e.** 1,3-bis (2-chloroethylthio)-n-propane
(CAS Number 63905-10-2)?
- No ☐ 1
- Yes ☐ 2
- f.** 1,4-bis (2-chloroethylthio)-n-butane
(CAS Number not available)?
- No ☐ 1
- Yes ☐ 2
- g.** 2-chloroethylchloromethylsulphide
(CAS Number 2625-76-5)?
- No ☐ 1
- Yes ☐ 2
- h.** 1,5-bis (2-chloroethylthio)-n-pentane
(CAS Number not available)?
- No ☐ 1
- Yes ☐ 2
- i.** bis-(2-chloroethylthiomethyl) ether
(CAS Number not available)?
- No ☐ 1
- Yes ☐ 2

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- 8 a.** 2-chlorovinylchloroarsine
(Lewisite 1, CAS Number 541-25-3)?
- No ☐ 1
- Yes ☐ 2
- b.** bis (2-chlorovinyl) chloroarsine
(Lewisite 2, CAS Number 40334-69-8)?
- No ☐ 1
- Yes ☐ 2
- c.** tris (2-chlorovinyl) arsine
(Lewisite 3, CAS Number 40334-70-1)?
- No ☐ 1
- Yes ☐ 2
- 9 a.** bis (2-chloroethyl) ethylamine
(HN1, CAS Number 538-07-8)?
- No ☐ 1
- Yes ☐ 2
- b.** bis (2-chloroethyl) methylamine
(HN2, CAS Number 51-75-2)?
- No ☐ 1
- Yes ☐ 2
- c.** tris (2-chloroethyl) amine
(HN3, CAS Number 555-77-1)?
- No ☐ 1
- Yes ☐ 2
- 10** 3-quinuclidinyl benzilate
(BZ, CAS Number 6581-06-2)?
- No ☐ 1
- Yes ☐ 2
- 11** Saxitoxin
(CAS Number 35523-89-8)?
- No ☐ 1
- Yes ☐ 2
- 12** Ricin
(CAS Number 9009-86-3)?
- No ☐ 1
- Yes ☐ 2
- 13** 3,3-Dimethylbutan-2-ol
(Pinacolyl alcohol, CAS Number 464-07-3)?
- No ☐ 1
- Yes ☐ 2

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1.3 N,N-dimethyl phosphoramidic dichloride
(CAS Number 677-43-0)

b Other N, N-Dialkyl (Me, Et, n-Pr or i-Pr) alkyl (Me Et n-Pr or i-Pr)-phosphoramidic dihalides?

2 a. Diethyl-N N-dimethylphosphoramidate
(CAS Number 2404-03-7)?

b Other Dialkyl (Me, Et, n-Pr, or i-Pr)
N, N-dialkyl (Me, Et, n-Pr, or i-Pr)
phosphoramidates?

3 Arsenic trichloride
(CAS Number 7784-34-1)?

4 2,2-Diphenyl-2-hydroxyacetic acid
(CAS Number 76-93-7)?

5 Quinuclidin-3-ol
(CAS Number 1619-34-7)

6 Bis (2-hydroxyethyl) sulphide (thiodiglycol)
(CAS Number 111-48-8)?

7 a. N, N-diethylaminoethyl-2-chloride, hydrochloride
(CAS Number 869-24-9)?

b Chlorocholine chloride
(CAS Number 999-81-5)?

c. N,N-diisopropyl-2-aminoethyl chloride
(CAS Number 96-70-7)?

d. N, N-diisopropyl-2-aminoethyl chloride hydrochloride
(CAS Number 4261-68-1)?

e. Other N, N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethyl-2-chlorides and corresponding alkylated and protonated salts?

Additional chemical names from above - if you need more space please use page 10.

[CAS Number]

[illegible]

B. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 10 kilograms:

*Include - amounts imported and exported
amounts processed without conversion*

8 a. 2-Dimethylaminoethanol
(CAS Number 108-01-4)?

No ☐ 1
Yes ☐ 2

b. 2-Diethylaminoethanol
(CAS Number 100-17-8)?

No ☐ 1
Yes ☐ 2

c. 2-Di-isopropylaminoethanol
(CAS Number 96-80-0)?

No ☐ 1
Yes ☐ 2

d. Choline
(CAS Number 62-49-7)?

No ☐ 1
Yes ☐ 2

e. Choline carbonate
(CAS Number 78-73-9)?

No ☐ 1
Yes ☐ 2

f. Choline chloride
(CAS Number 67-48-1)?

No ☐ 1
Yes ☐ 2

g. Choline hydroxide
(CAS Number 123-41-1)?

No ☐ 1
Yes ☐ 2

h. Choline methyl sulphate
(CAS Number 65151-62-4)?

No ☐ 1
Yes ☐ 2

i. Choline dihydrogen citrate
(CAS Number 77-91-8)?

No ☐ 1
Yes ☐ 2

j. Tricholine citrate
(CAS Number 546-63-4)?

No ☐ 1
Yes ☐ 2

k. Choline bitartrate
(CAS Number 87-67-2)?

No ☐ 1
Yes ☐ 2

l. Other N, N-Dialkyl (Me, Et, n-Pr or i-Pr)
aminoethane-2-ols
and corresponding alkylated and protonated salts?

No ☐ 1
Yes (Specify name(s) below) ☐ 2

9 a. N,N-diisopropyl-2-aminoethane thiol
(CAS Number 5842-07-9)?

No ☐ 1
Yes ☐ 2

b. Dimethylaminoethane-2-thiol hydrochloride
(CAS Number 13242-44-9)?

No ☐ 1
Yes ☐ 2

c. Other N, N-Dialkyl (Me, Et, n-Pr, or i-Pr)
aminoethane-2-thiols
and corresponding alkylated and protonated salts?

No ☐ 1
Yes (Specify name(s) below) ☐ 2

Additional chemical names from above - if you need more space please use page 10

[CAS Number]

B. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 10 kilograms:

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Include amounts imported and exported
amounts produced without conversion

10 a. O-ethyl S-phenyl ethylphosphonothiolothionate
(Fomufos, CAS Number 944-22-9)?

No ☐ 1
Yes ☐ 2

b. Diethyl ethyl phosphonate
(CAS Number 78-18-6)?

No ☐ 1
Yes ☐ 2

c. Methyl phosphonic acid
(CAS Number 993-13-5)?

No ☐ 1
Yes ☐ 2

d. Dimethyl methylphosphonate
(CAS Number 756-79-6)?

No ☐ 1
Yes ☐ 2

e. Diphenyl methylphosphonate
(CAS Number 7526-26-3)?

No ☐ 1
Yes ☐ 2

f. Phosphonic acid, methyl- methyl
3-(trimethoxysilyl)-propyl ester
(CAS Number 67812-17-3)?

No ☐ 1
Yes ☐ 2

g. Phosphonic acid, methyl-, monoammonium salt
(CAS Number 34255-87-3)?

No ☐ 1
Yes ☐ 2

h. Phosphonic acid, methyl-, monoethyl ester
(CAS Number 73750-69-3)?

No ☐ 1
Yes ☐ 2

i. Methyl phosphonyl dichloride
(CAS Number 676-97-1)?

No ☐ 1
Yes ☐ 2

j. Phosphonothione dichloride ethyl-
(CAS Number 993-43-1)?

No ☐ 1
Yes ☐ 2

k. Methyl phosphinyl dichloride
(CAS Number 676-83-3)?

No ☐ 1
Yes ☐ 2

l. Phosphonic acid, methyl-, bis(3-trimethoxysilyl)
propyl ester
(CAS Number 67812-18-4)?

No ☐ 1
Yes ☐ 2

m. Phosphonic acid, methyl-,
compounded with (aminoiminomethyl) urea (1:1)
(CAS Number 84402-58-4)?

No ☐ 1
Yes ☐ 2

n. Phosphonic acid, methyl-, (5-ethyl-2-methyl-
1,3,2-dioxaphosphorinan-5-yl) methyl methyl
ester, P, oxide)
(Annulaze 19, CAS Number 41203-81-0)?

No ☐ 1
Yes ☐ 2

o. Phosphonic acid, methyl-, bis[(5-ethyl-2-methyl-
1,3,2-dioxaphosphorinan-5-yl) methyl ester,
P, P' dioxide)]
(Annulaze 19, CAS Number 42595-45-9)?

No ☐ 1
Yes ☐ 2

p. 1,2-Oxaphospholan-5-one, 2-methyl-, 2-oxide
(Trevira 271, CAS Number 15171-48-9)?

No ☐ 1
Yes ☐ 2

q. Methyl phosphinyl difluoride
(CAS Number 753-59-3)?

No ☐ 1
Yes ☐ 2

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No ☐ 1

Yes ☐ 2

No ☐ 1

Yes ☐ 2

No ☐ 1

Yes ☐ 2

No ☐ 1

Yes (Specify name(s) below) ☐ 2

[CAS Number]

[illegible]

C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

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*Include amounts imported and exported
- amounts processed without conversion*

- 1 Phosgene
(Carbonic dichloride CAS Number 75-44-5)?
- No ☐ 1
- Yes ☐ 2
- 2 Cyanogen chloride
(CAS Number 506-77-4)?
- No ☐ 1
- Yes ☐ 2
- 3 Hydrogen cyanide
(Hydrocyanic acid CAS Number 74-90-8)?
- No ☐ 1
- Yes ☐ 2
- 4 Trichloronitromethane
(Chloropicrin, CAS Number 76-06-2)?
- No ☐ 1
- Yes ☐ 2
- 5 Phosphorus oxychloride
(Phosphoryl chloride, CAS Number 10025-87-3)?
- No ☐ 1
- Yes ☐ 2
- 6 Phosphorus trichloride
(CAS Number 7719-09-7)?
- No ☐ 1
- Yes ☐ 2
- 7 Phosphorus pentachloride
(CAS Number 10026-13-8)?
- No ☐ 1
- Yes ☐ 2
- 8 Trimethyl phosphite
(CAS Number 121-45-9)?
- No ☐ 1
- Yes ☐ 2

- 9 Trimethyl phosphite
(CAS Number 122-82-1)?
- No ☐ 1
- Yes ☐ 2
- 10 Dimethyl phosphite
(CAS Number 808-85-9)?
- No ☐ 1
- Yes ☐ 2
- 11 Diethyl phosphite
(CAS Number 762-04-9)?
- No ☐ 1
- Yes ☐ 2
- 12 Sulphur monochloride
(CAS Number 10025-67-9)?
- No ☐ 1
- Yes ☐ 2
- 13 Sulphur dichloride
(CAS Number 105-45-99-0)?
- No ☐ 1
- Yes ☐ 2
- 14 Thionyl chloride
(CAS Number 7719-09-7)?
- No ☐ 1
- Yes ☐ 2
- 15 Triethanolamine
(CAS Number 102-71-6)?
- No ☐ 1
- Yes ☐ 2
- 16 Ethyldiethanolamine
(CAS Number 139-87-7)?
- No ☐ 1
- Yes ☐ 2
- 17 Methyldiethanolamine
(CAS Number 105-59-9)?
- No ☐ 1
- Yes ☐ 2

C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

*Include: amounts imported and exported
- amounts processed without conversion*

- 18 Hydrogen fluoride
(Hydrofluoric acid CAS Number 7664-39-3)?
- No ☐ 1
- Yes ☐ 2
- 19 Ammonium bifluoride
(Ammonium hydrogen fluoride CAS Number 1341-49-7)?
- No ☐ 1
- Yes ☐ 2
- 20 Sodium bifluoride
(Sodium hydrogen fluoride CAS Number 1333-83-1)?
- No ☐ 1
- Yes ☐ 2
- 21 Sodium fluoride
(CAS Number 7681-49-4)?
- No ☐ 1
- Yes ☐ 2
- 22 Potassium fluoride
(CAS Number 7789-23-3)?
- No ☐ 1
- Yes ☐ 2
- 23 Potassium bifluoride
(Potassium hydrogen fluoride, CAS Number 7789-29-9)?
- No ☐ 1
- Yes ☐ 2
- 24 Sodium sulphide
(CAS Number 1313-82-2)?
- No ☐ 1
- Yes ☐ 2
- 25 Phosphorus pentasulphide
(CAS Number 1314-80-3)?
- No ☐ 1
- Yes ☐ 2
- 26 Sodium cyanide
(CAS Number 143-33-9)?
- No ☐ 1
- Yes ☐ 2

- 27 Potassium cyanide
(CAS Number 151-50-5)?
- No ☐ 1
- Yes ☐ 2
- 28 2-Chloroethanol
(CAS Number 107-07-1)?
- No ☐ 1
- Yes ☐ 2
- 29 3,3-Dimethyl-2-butanone
(Pinacolone CAS Number 75-97-8)?
- No ☐ 1
- Yes ☐ 2
- 30 Dimethylamine
(CAS Number 124-40-3)?
- No ☐ 1
- Yes ☐ 2
- 31 Dimethylamine hydrochloride
(CAS Number 506-59-2)?
- No ☐ 1
- Yes ☐ 2
- 32 Diisopropylamine
(CAS Number 108-18-9)?
- No ☐ 1
- Yes ☐ 2
- 33 3-Quinuclidone
(CAS Number 3731-38-2)?
- No ☐ 1
- Yes ☐ 2
- 34 Phosphorus sulfochloride
(Thiophosphoryl chloride, CAS Number 3982-91-0)?
- No ☐ 1
- Yes ☐ 2
- 35 Triethanolamine hydrochloride
(CAS Number 637-39-8)?
- No ☐ 1
- Yes ☐ 2
- 36 Oxalyl chloride
(CAS Number 79-37-8)?
- No ☐ 1
- Yes ☐ 2

C. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 100 kilograms:

*Include - amounts imported and exported
- amounts processed without conversion*

37. *n*-butylamine
(CAS Number 102-82-9)?

No ☐ 1
Yes ☐ 2

38. Sodium iodide
(CAS Number 7681-82-5)?

No ☐ 1
Yes ☐ 2

39. Morpholine
(CAS Number 110-91-8)?

No ☐ 1
Yes ☐ 2

40. Decalin
(CAS Number 91-17-8)?

No ☐ 1
Yes ☐ 2

D. Were the chemicals described below produced, synthesized, consumed or handled during 1990 in amounts which total at least 1 kilogram:

*Include - amounts imported and exported
- amounts processed without conversion*

1. a. O, O-Diethyl S- (2- (diethylamino) ethyl) phosphorothiolate
(Ammon CAS Number 78-53-5)?

No ☐ 1
Yes ☐ 2

b. Alkylated and/or protonated salts of
O, O-Diethyl S- (2- (diethylamino) ethyl) phosphorothiolate?

No ☐ 1
Yes (Please specify below) ☐ 2

Chemical name

(CAS Number)

2. 1,1,3,3,3-pentafluoro-2-(trifluoromethyl)-1-propene
(PFIB, CAS Number 382-21-8)?

No ☐ 1
Yes ☐ 2

E. Did you answer "Yes" to any chemical in Section A?

No (Go to Section F) ☐ 1
Yes ☐ 2

How many different chemicals from Section A were handled?

Number

Complete Section I for each such chemical

F. Did you answer "Yes" to any chemical in Section B?

No (Go to Section G) ☐ 1
Yes ☐ 2

How many different chemicals from Section B were handled?

Number

Complete Section J for each such chemical

G. Did you answer "Yes" to any chemical in Section C?

No (Go to section H) ☐ 1
Yes ☐ 2

How many different chemicals from Section C were handled?

Number

Complete Section K for each such chemical

H. Did you answer "Yes" to any chemical in Section D?

No (See note at bottom of page) ☐ 1
Yes ☐ 2

How many different chemicals from Section D were handled?

Number

Complete Section L for each such chemical

If you answered "No" to ALL of Questions E, F, G and H, please turn to the back page.

If you answered "Yes" to ANY of Questions E, F, G, or H, please turn to page 11.

Question number

Additional chemical names

[CAS Number]

I. If you answered "No" to Question E, go to page 13

If you answered "Yes" to Question E, complete the section below for each chemical handled in Section A

NOTE Please report all quantities to the nearest 0.1 gram. If a quantity is 'NIL', please write '0'

Report figures for your 1990 operations

If you require extra sheets for this section contact the Department or photocopy this page

CHEMICAL 1 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced

 grams

Quantity processed without
conversion

 grams

Quantity consumed

 grams

Quantity imported

 grams

Quantity exported

 grams

Quantity stored on 31/12/90

 grams

CHEMICAL 2 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced

 grams

Quantity processed without
conversion

 grams

Quantity consumed

 grams

Quantity imported

 grams

Quantity exported

 grams

Quantity stored on 31/12/90

 grams

- I. If you answered "No" to Question E, go to page 13
If you answered "Yes" to Question E, continue completing the section below for Section A chemicals

NOTE Please report all quantities to the nearest 0.1 gram. If a quantity is 'NIL', please write '0'.
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 3 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
grams	grams	grams
Quantity imported	Quantity exported	Quantity stored on 31/12/90
grams	grams	grams

CHEMICAL 4 (from Section A)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
grams	grams	grams
Quantity imported	Quantity exported	Quantity stored on 31/12/90
grams	grams	grams

J. If you answered "No" to Question F, go to page 17

If you answered "Yes" to Question F, complete the section below for each chemical handled in Section B

NOTE Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'

Report figures for your 1990 operations

If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 1 (from Section B)

Question number	Common or Trade Name	CAS Number
Chemical Name 		
Name and Address of Facility where chemical handled and/or stored 		

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

CHEMICAL 2 (from Section B)

Question number	Common or Trade Name	CAS Number
Chemical Name 		
Name and Address of facility where chemical handled and/or stored 		

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

- J If you answered "No" to Question F, go to page 17
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals

*NOTE Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations*

If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 3 (from Section B)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

CHEMICAL 4 (from Section B)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

- J. If you answered "No" to Question F, go to page 17
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals

NOTE Please report all quantities to the nearest 10 kilograms. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations
If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 5 (from Section B)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of Facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 6 (from Section B)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- J. If you answered "No" to Question F, go to page 17
If you answered "Yes" to Question F, continue completing the section below for Section B chemicals

*NOTE: Please report all quantities to the nearest 10 kilograms. If a quantity is NIL, please write '0'.
Report figures for your 1990 operations.
If you require extra sheets for this section, contact the Department or photocopy this page.*

CHEMICAL 7 (from Section B)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced kilograms	Quantity processed without conversion kilograms	Quantity consumed kilograms
Quantity imported kilograms	Quantity exported kilograms	Quantity stored on 31/12/90 kilograms

CHEMICAL 8 (from Section B)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced kilograms	Quantity processed without conversion kilograms	Quantity consumed kilograms
Quantity imported kilograms	Quantity exported kilograms	Quantity stored on 31/12/90 kilograms

K. If you answered "No" to Question G, go to page 25

If you answered "Yes" to Question G, complete the section below for each chemical handled in Section C

NOTE Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations

If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 1 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

CHEMICAL 2 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced 	kilograms	Quantity processed without conversion 	kilograms	Quantity consumed 	kilograms
Quantity imported 	kilograms	Quantity exported 	kilograms	Quantity stored on 31/12/90 	kilograms

- K. If you answered "No" to Question G, go to page 25
 If you answered "Yes" to Question G, continue completing the section below for Section C chemicals

*NOTE: Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.
 Report figures for your 1990 operations.*

If you require extra sheets for this section contact the Department or photocopy this page

CHEMICAL 3 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 4 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

K. If you answered "No" to Question G, go to page 25

If you answered "Yes" to Question G, continue completing the section below for Section C chemicals

NOTE. Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 5 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 6 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- K. If you answered "No" to Question G, go to page 25
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals

NOTE Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.
Report figures for your 1990 operations.
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 7 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name 		
Name and Address of Facility where chemical handled and/or stored 		
Quantity produced 	Quantity processed without conversion 	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported 	Quantity exported 	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 8 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name 		
Name and Address of facility where chemical handled and/or stored 		
Quantity produced 	Quantity processed without conversion 	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported 	Quantity exported 	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- K. If you answered "No" to Question G, go to page 25
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations
If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 9 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of Facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 10 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

K If you answered "No" to Question G, go to page 25

If you answered "Yes" to Question G, continue completing the section below for Section C chemicals

NOTE Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL' please write '0'

Report figures for your 1990 operations

If you require extra sheets for this section contact the Department or photocopy this page.

CHEMICAL 11 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced kilograms	Quantity processed without conversion kilograms	Quantity consumed kilograms
Quantity imported kilograms	Quantity exported kilograms	Quantity stored on 31/12/90 kilograms

CHEMICAL 12 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced kilograms	Quantity processed without conversion kilograms	Quantity consumed kilograms
Quantity imported kilograms	Quantity exported kilograms	Quantity stored on 31/12/90 kilograms

K. If you answered "No" to Question G, go to page 25

If you answered "Yes" to Question G, continue completing the section below for Section C chemicals.

NOTE. Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.
Report figures for your 1990 operations.

If you require extra sheets for this section, contact the Department or photocopy this page

CHEMICAL 13 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of Facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 14 (from Section C)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- K. If you answered "No" to Question G, go to page 25
If you answered "Yes" to Question G, continue completing the section below for Section C chemicals

*NOTE Please report all quantities to the nearest 100 kilograms. If a quantity is 'NIL', please write '0'.
Report figures for your 1990 operations.*

If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 15 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of Facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

CHEMICAL 16 (from Section C)

Question number	Common or Trade Name	CAS Number

Chemical Name

Name and Address of facility where chemical handled and/or stored

Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

- L. If you answered "No" to Question H, go to back page
If you answered "Yes" to Question H, complete the section below for each chemical handled in Section D

NOTE Please report all quantities to the nearest kilogram. If a quantity is 'NIL', please write '0'
Report figures for your 1990 operations
If you require extra sheets for this section, contact the Department or photocopy this page.

CHEMICAL 1 (from Section D)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of Facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

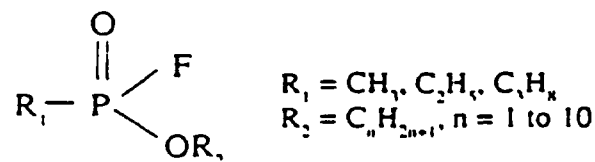
CHEMICAL 2 (from Section D)

Question number	Common or Trade Name	CAS Number
Chemical Name		
Name and Address of facility where chemical handled and/or stored		
Quantity produced	Quantity processed without conversion	Quantity consumed
kilograms	kilograms	kilograms
Quantity imported	Quantity exported	Quantity stored on 31/12/90
kilograms	kilograms	kilograms

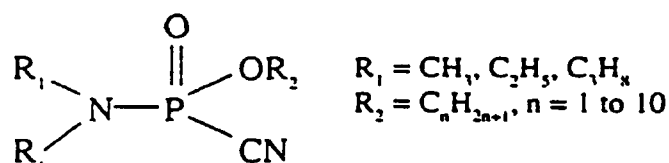
Notes on chemical groups from Sections A and B

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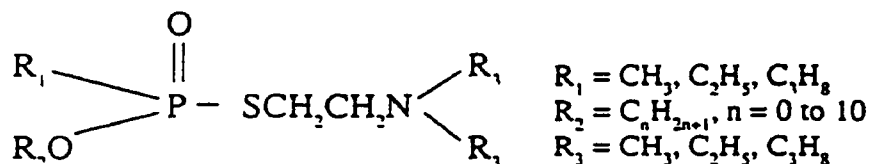
Question A 1 c: Other O-alkyl alkyl phosphonofluoridates



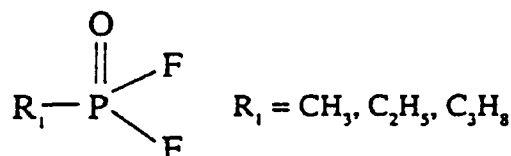
Question A 2 b: Other O-alkyl N,N-dialkyl phosphoramidocyanidates



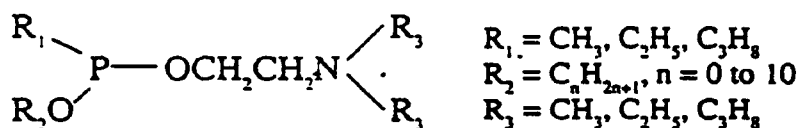
Question A 3 b: Other O-alkyl S-2-dialkyl aminoethyl alkyl phosphonothiolates



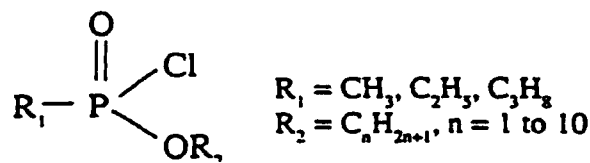
Question A 4 b: Other alkyl phosphonyldifluorides



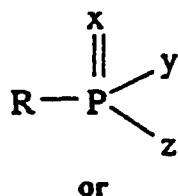
Question A 5 b: Other O-alkyl O-2-dialkyl aminoethyl alkyl phosphonites



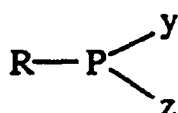
Question A 6 c: Other O-alkyl alkyl phosphonochloridates



Question B 10 x: Other chemicals containing a phosphorus atom to which is bonded an alkyl group but no other carbon atoms



or



x, y and z may be any functional group or heteroatom, provided that no other carbon atoms are directly bonded to this phosphorus.

All of the chemicals in Question B 10 are examples of the structure described.

M Did you answer yes to any of the chemicals or chemical groups listed inside the form?

No (Go to Question P)

☐ 1

Yes

☐ 2

N Did you need any extra sheets for Sections I, J, K or L?

No (Go to Question P)

☐ 1

Yes

☐ 2

O How many extra sheets did you need?

Number

P What is the name of the organization (company, facility, laboratory, etc.) covered by this questionnaire?

Name

Mailing Address

.....
.....
.....

Q If we have any queries about this form, who should we contact?

Name and title

Address

.....
.....
.....

Telephone Number

R Do you have any comments about this collection?

.....
.....
.....

S Please return this form by 3 December to:

The Executive Officer
Chemical Industry Survey - CBS
D-3-N/DND
Department of Foreign Affairs and Trade
Parkes A.C.T. 2600

THANK YOU FOR YOUR CO-OPERATION

XX XX XX XX XX