METROPOLITAN WATER SUPPLY, CHEMICAL TREATMENT

3057. Mrs C.L. Edwardes to the Minister representing the Minister for Government Enterprises

I refer the Minister to the chemical treatment of the metropolitan water supply, to maintain water quality and ask -

(a) what are the chemical names and common names of each of the chemicals added to the metropolitan water supply;

(b) what are the reasons given for the use of each chemical;

(c) for each month of 2001, 2002, 2003 and 2004, to date, what is the average quantity of each of the chemicals used to maintain water quality;

(d) on how many occasions were the average monthly quantity figures for the chemicals exceeded;

(e) what months were the average monthly quantity figures for the chemicals exceeded; and

(f) what were the reasons given for the need to exceed the monthly average chemical usage?

Mr E.S. RIPPER replied:

(a)

Chemical Name	Common Name
Calcium Hydroxide	Lime
Carbon Dioxide	Carbon Dioxide
Hydrochloric Acid	Hydrochloric Acid
Sulphuric Acid	Sulphuric Acid
Sodium Hydroxide	Caustic soda
Aluminium Sulphate	Alum
Anionic plyelectrolyte	Poly
MIEX Resin	MIEX Resin
Sodium Chloride	Salt
Sodium Hexametaphosphate	Calgon
Garnet	Garnet
Chlorine	Chlorine
Sodium hypochlorite	Chlorine
Aqueous Ammonia	Ammonia
Fluosilicic Acid	Fluoride

(b) Calcium Hydroxide - hardness (calcium and magnesium) removal. Conditioning the water to minimise degradation of the cement lining in water distribution mains.

Carbon Dioxide - Balancing the pH and alkalinity after the addition of lime.

Hydrochloric Acid - Balancing pH.

Sulphuric Acid - Balancing pH.

Sodium Hydroxide - Balancing pH.

Aluminium Sulphate - Coagulating suspended solids and colour to form fine flocs.

Anionic polyelectrolyte - Flocculating agent to bind the fine flocs to aid the settling and filtration process.

MIEX Resin - Removing dissolved organic material to improve disinfection efficiency and taste and odour.

Sodium Chloride - In conjunction with MIEX resin for removal of dissolved organic material.

Sodium Hexametaphosphate - Control of hardness (calcium and magnesium)

Garnet - Used to assist hardness removal.

Chlorine - Oxidation of iron and manganese in the treatment plant, and primary disinfection of treated water.

Sodium hypochlorite - Oxidation of iron and manganese in the treatment plant, and primary disinfection of treated water.

Aqueous Ammonia - Disinfection (in combination with chlorine) in extended pipeline supply networks.

Fluosilicic Acid - Addition to treated water for dental health. Only used when stipulated by the Department of Health.

(c) See attached table paper. [See paper No 2760.]

(d) The average monthly quantity figures for the chemicals used is dependent upon the water supply customer demand. This determines the quantity and therefore, there were no exceedances.

(e) Not applicable.

(f) Not applicable.