



Mrs. Lamborne

HOME OFFICE
Horseferry House, Dean Ryle Street, LONDON, SW1P 2AW
Telex: 24986
Telephone: ~~01 211 5812~~ 01 211 5812

Our reference: FIR/75 302/68/1
Your reference:

45794

To all Chief Fire Officers

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FIRE SERVICE COLLEGE
MORETON-IN-MARSH
GLOS. GL56 0RH

11 August 1976

Dear Chief Officer

USE OF LIQUID CARBON DIOXIDE FOR FIRE FIGHTING PURPOSES

52/76

The Home Office has had discussions with representatives of ICI Limited and the Distillers Company (Carbon Dioxide) Limited about some aspects of the agreements made with some brigades, following the issue of Fire Service Circular no 32/1967, for the attendance of CO₂ tankers for fire fighting at certain special risks.

The use of CO₂ for inerting tanks

The discussions were primarily about the problems of inerting tanks, following a recent incident involving a gas holder. The gas holder did not catch fire and a CO₂ tanker was called for under the agreement and used to inert the holder. The companies pointed out that the agreement applies only to the provision of CO₂ for fire fighting, where its use is straightforward, and they prefer not to extend its use to purging operations because they are concerned, as indeed we are, about the possible dangers from static electricity when liquid CO₂ is used to inert an atmosphere which might be explosive.

We understand from the British Gas Board that they recommend the use of nitrogen for inerting gas holders. They do not put an embargo on the use of CO₂ for inerting, although they issue a warning to the effect that if CO₂ is used then the utmost care must be exercised. However, in view of the possible hazards which might arise from the use of CO₂ for inerting, it is strongly recommended that at incidents where fire brigades decide to inert a tank with liquid gas only nitrogen should be used. Expert advice should always be sought on these occasions since, because of the very low temperature of the gas, there is a possibility of low temperature embrittlement of any pipework used to feed the gas into the tank and even of the tank itself.

The involvement of company drivers

The opportunity was also taken to discuss other aspects of the agreements. Both companies expressed some concern about the possible involvement of their drivers. It was pointed out however that no fire officer in charge of an incident would ask a driver to enter an area where there would be any immediate danger. A driver should not feel obliged to enter an area in which he would not feel safe and must feel completely free to decide where to hand over his vehicle to the fire service. The driver should then be asked to move to some safe point designated by the fire officer in charge of the incident in case further advice on the operation of the tanker is needed. The driver should not be asked to connect fire service hoses and equipment to the tanker nor should he be asked to operate the equipment on his tanker. It is essential therefore that a member of the fire service at the scene of the incident be briefed on the connections to be made and the valves to be operated before the vehicle moves into the operational area.

/These assurances

These assurances were accepted by the companies and they will instruct their drivers accordingly.

Training

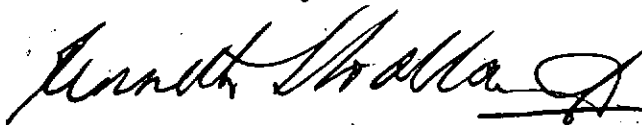
A further point discussed was the training of fire brigade personnel in the use of CO₂ tankers. The possibility of carrying out training at the companies' depots was considered but rejected as impracticable. The alternative of arranging for tankers to be delivered to a fire brigade for this purpose was also ruled out on the grounds of cost. The only practical solution appears to be a visual training aid and Mr Bruce (Chief Fire Officer, Cleveland Fire Brigade) has kindly undertaken to explore the possibility of making a suitable tape/slide presentation with the co-operation of the two companies. While on the subject of training, reference was made to the need to ensure regular inspection and maintenance of the hoses and other special equipment held by brigades for use with tankers and it is proposed to include this aspect in the tape/slide presentation.

List of company depots

The list of Distillers Company depots which act as contact points for supplying CO₂ tankers for fire fighting has been revised and a copy of the current list of depots is attached.

You will of course be kept informed of progress made with the proposed training aid.

Yours sincerely



No. 52/1976

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THE DISTILLERS COMPANY (CARBON DIOXIDE) LIMITED

Requests for the supply of tankers should be made to the nearest of the following factories. The contact is the Distribution Superintendent and if he is not available, the Shift Supervisor.

- Birmingham: The Distillers Company (Carbon Dioxide) Limited,
Station Road,
Coleshill,
Birmingham B46 1JY Telephone: Coleshill 62695
(STD code 0675)
- Dagenham: The Distillers Company (Carbon Dioxide) Limited,
Chequers Lane,
Dagenham Dock,
Essex RM9 6QH Telephone: 01-592-4411
- Glasgow: Scottish Grain Distillers Ltd.,
Port Dundas Distillery,
74 North Canal Bank Street,
Glasgow G4 9XL Telephone: 041-332-3102
- Treforest: The Distillers Company (Carbon Dioxide) Limited,
Treforest Industrial Estate,
Pontypridd,
Mid Glamorgan. CF37 5TE Telephone: Treforest 2141
(STD code 044 385)
- Manchester: The Distillers Company (Carbon Dioxide) Limited,
15 Pollard Street East,
Ancoats,
Manchester M10 7FT Telephone: 061-273-1551

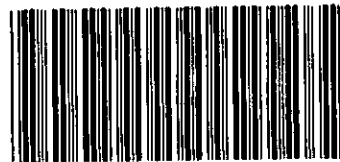
The above factories are manned on a 24 hour basis. They will be able to contact drivers outside normal working hours to arrange for deliveries to a fire. Tankers are also based at the following depots which are not manned outside the working day.

Alloa, Clackmannanshire.
Bath, Avon.
Birtley, Tyne & Wear.
Edinburgh.
Hammersmith, London.

Supplies of CO₂ are also held at the following locations and these would be available for refilling tankers.

Cameronbridge, Fife.
Staveley, Derbyshire.
Wandsworth, London.

**The Fire Service
College**



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