Safety Notice

Health and Safety Warning Notice 98/11

Low voltage electricity distribution equipment: ABB Nitran Feeder Pillars

- access restriction on pre mid 1993 models

SUBJECT CONTACT POINT:
P D MEAKIN
AD Industrial Processes
Technical Standards Directorate
Sutton Coldfield Mil extn 2169

NOTICE AUTHORISED BY:
P D MEAKIN
AD Industrial Processes

DEFENCE ESTATE ORGANISATION
MINISTRY OF DEFENCE

Safety Notice
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Direct Dialling 0121 311 2169

Date:

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INTRODUCTION

1. THE CONTENTS OF THIS NOTICE ARE TO SECURE COMPLIANCE WITH THE HEALTH & SAFETY AT WORK ETC ACT 1974.

2. This Notice is for the attention of Commanding Officers, Chief Executives, Heads of Establishment, Property Managers, Defence Lands Agents, Establishment Works Consultants (EWCs), Works Services Managers (WSMs), Authorising Engineers, Authorised Persons and Contractors, involved in works for MOD.

3. This Notice is to be read by all persons involved with any works associated with the equipment that is the subject of this Notice.

4. No work involving expenditure on an MOD account is to be carried out without authority from the Property Manager or the appropriate MOD officer for that location or facility.

5. Any work required as a result of this Safety Notice must be carried out in accordance with MOD Safety Rules and Procedures as applicable.

6. The Co-ordinating Authorised Person, or other responsible person, is to notify the Property Manager:

   of the location of any equipment which exists on the Establishment and is the subject of this Notice as soon as it has been identified;

   and

   when the relevant modifications are completed, that the appropriate remedial action has been carried out.

7. Defects are to be immediately reported to the Property Manager and the applicable Authorising Engineer who must impose appropriate operating restrictions on the equipment that is the subject of this Notice, until remedial action is completed.

8. For MOD Establishments occupied by United States Visiting Forces (USVF), the responsibilities of Property Manager, EWC and WSM are jointly held by the USVF and DEO(USF). At base level this jointly managed organisation is to take appropriate action to implement the contents of this Notice. Where this Notice contains procedures which differ significantly from USVF practice, a DEO(USF) Code of Practice section will be issued.

REQUIREMENT
9. **ACTION ADDRESSEES ARE TO ENSURE THAT THIS INFORMATION IS PASSED TO THEIR PROPERTY MANAGERS OR OTHER RESPONSIBLE OFFICERS WITHOUT DELAY.**

10. No persons are to be permitted to open the doors on pre mid 1993 models of ABB Nitran feeder pillars whilst any part of it is live, until, an inspection of the ventilation screen has been carried out, any appropriate remedial action completed, and this operational restriction lifted.

11. ABB Nitran feeder pillars manufactured prior to mid 1993 are to be isolated from all sources of supply, opened and inspected. The persons carrying out this inspection are to examine the expanded metal ventilation screen at the top of the inside of the feeder pillar for signs of corrosion. If the screen is intact, an assessment is to be made of its condition and whether it should be replaced. If the screen is not intact, or is at an advanced state of corrosion, arrangements are to be made to ensure that any expanded metal debris is removed from the feeder pillar and the screen is to be replaced. Details regarding the provision of replacement screens can be obtained direct from the manufacturer.

12. Once the risk of falling metal from the expanded metal ventilation screen has been removed, arrangements can be made to have this operational restriction lifted by the Authorising Engineer or other responsible person.

**RECOMMENDATION**

13. It is strongly recommended that the following is drawn to ABB Nitran's attention when placing an order for remedial work:

   Regulation 6 of the Electricity at Work Regulations 1989

   Clause 32 of the former PSA Standard Specification No 105

14. This Regulation and this Clause are reproduced in their entirety in the background section below. Both support the argument that the construction of this part of the feeder pillar is not fit for the purpose for which it was designed.

**BACKGROUND**

15. An ABB Nitran feeder pillar on the MOD Estate has been identified as having excessive corrosion on its expanded metal ventilation screen. This is located at the top of the feeder pillar, just below the top cover. The problem was identified because fragments of rusty steel mesh were lying on the top of the fuse holders. The Authorised Person (Electrical) who reported the problem stated that falling rusting metal could easily come into contact with live conductors and cause a short circuit inside the feeder pillar.

Regulation 6 of the Electricity at Work Regulations 1989 states:

"Adverse or hazardous environments

_Electrical equipment which may reasonably foreseeably be exposed to_-_
(a) mechanical damage;
(b) the effects of the weather, natural hazards, temperature or pressure;
(c) the effects of wet, dirty, dusty or corrosive conditions; or
(d) any flammable or explosive substances including dusts, vapours or gases,

shall be of such construction or as necessary protected as to prevent, so far as is reasonably practicable, danger arising from such exposure.”

16. Most, if not all of these feeder pillars on the MOD Estate, will have been supplied against the former PSA Standard Specification No 105.

Clause 32 of this document states:

"Cast iron and steelwork shall be treated to remove all rust and scale, primed with anti-corrosive primer and finished smooth. This shall be followed by two coats of contrasting durable oil and weather resistant paint with final colour Dark Admiralty Grey BS381C colour no 632. Small steel components shall be zinc or cadmium plated and passivated."

17. The year of manufacture is printed on the rating plate fixed to the outside of the door. Furthermore, the doors on this particular range fit flush with the sides, the lintel and the apron plate of the feeder pillar.

18. ABB Nitran has advised that the expanded metal screen was changed from non-galvanised steel to plated or coated steel at the beginning of 1993. Consequently, all feeder pillars which were manufactured after mid 1993 will be fitted with plated or coated steel expanded metal ventilation screens. Those manufactured during the first six months of 1993 must be treated as suspect, as they may have the old style screens fitted.

19. ABB Nitran Ltd can be contacted at the following address:

   ABB Power T&D Ltd
   East Kingsway
   Dundee  DD4 7RP

   Tel: 01382 454500       Fax: 01382 457305

   Enquiries should be addressed to Neil Boath, Contracts Manager Distribution Products, quoting Reference NBOH - 3SUL4B.

END OF SAFETY NOTICE