

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                              |   |                              |                         |   |                                    |
|------------------------------|---|------------------------------|-------------------------|---|------------------------------------|
| Establishment -              |   | PERME<br>WALTHAM ABBEY ESSEX |                         | Building No. R601<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                          | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions          | Compatibility<br>Groups | PROPOSED  |                                    |
|                              |   |                              |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives weighing<br>house | T, Earth 9" brick<br>Slate roof   | 1.1                          | D                       | M3 N2   | 700                                |

If this is to replace an existing limit, please state date present limit approved. 18 11 68

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3    | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|------------------------------------|-------------|-----------------|---------------------|
|                     |   |                         |                                    |             | M & N<br>5      |                     |
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 47                      | R602 Storage of Wet Paste          | T           | M4N2            |                     |
| iv                  | B. Main Office  | 280                     | N505 Telephone Exchange/Offices    | U           | M 14            |                     |
| iv                  | C. Main Engineering Workshop  | 275                     | M331 Electricians Wkshop           | U           | M 12            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 55                      | R614 Cordite Rumbling & Graphiting | T           | M3N2            |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                    |             |                 |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                   |                                    |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | > 400                   |                                    |             |                 |                     |

Date 22 JUN 1981 Signature RH Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HQ 101D - 700 Kgp

Date 14-8-81 Chief Safety Officer NJ mikes

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |             |
|--|-------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>YES.</b> |
|--|-------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                 |                            |  |                  |  |                        |                                 |
|-----------------|----------------------------|--|------------------|--|------------------------|---------------------------------|
| Establishment - |                            | PERME Waltham Abbey  |                  | Building No. R 602<br>(If grouped with other rooms or buildings, give details) |                        |                                 |
| Use             | Storage of Dry Paste & NC. | Protective State - Traversed (T) or Untraversed (U) - State type of Traverse, and construction of building, walls and roof | Hazard Divisions | Compatibility Groups   | PROPOSED               |                                 |
|                 |                            |  |                  |  | Man Limit M&N (Note i) | Explosive Limit (Note ii) (Kgs) |
|                 | Storage of Dry Paste & NC. | T, earth 9" brick Zinc sheet coated timber roof  | 1.1.             | D  | M4 NO                  | 700                             |

If this is to replace an existing limit, please state date present limit approved. 14-8-81

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance In Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 47                      | R 601 Explosive Weighing        | T           | M3NO                       |                     |
| iv                  | B. Main Office  | 300                     | N505 Telephone Exch, Offices    | U           | M14                        |                     |
| iv                  | C. Main Engineering Workshop  | 265                     | M331 Electricians Workshop      | U           | M12                        |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 68                      | M 344 Shatter Test Proof Stand  | U           | M2N1                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 120                     | Nil                             |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 400                     | Grid                            |             |                            |                     |

Date 14-4-83 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 18-8-83 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present H & H | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R 601 occupied less than 4 hours per week.

3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification?

yes

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                         |                           |                                    |
|---|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>PERME, Waltham Abbey, Essex</b> |   | Building No. R603<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|   |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Storage of Dry<br>Paste                               | T, Earth<br>9" Brick<br>Zinc sheet coated<br>roof   | 1.1   | D                       | M4 NO                     | 1600                               |

If this is to replace an existing limit, please state date present limit approved. 18.11.68

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R602 Storage of Wet Paste       | T           | M4NO                       |                     |
| iv                 | B. Main Office  | 320                     | N505 Telephone Exch, Offices    | U           | M14                        |                     |
| iv                 | C. Main Engineering Workshop  | 260                     | M331 Electricians Workshop      | U           | M12                        |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 70                      | M350 Oblique Impact Facility    | T           | M3N2                       |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                 |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 335                     | Grid                            |             |                            |                     |

Date **2.2. JUN 1981** Signature *B.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HG 101D — 1600 Kgs

Date **14-8-81** Chief Safety Officer *N.J. Miles*

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |             |
|--|-------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>YES.</b> |
|--|-------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |  |                                    |
|---|---|---------------------|-------------------------|--|------------------------------------|
| Establishment -<br><b>PERME WALTHAM ABBEY ESSEX</b> |   |                     |                         | Building No. <b>R604</b><br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED   |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house                          | T, Earth<br>9" Brick<br>B&F Roof  | 1.1                 | D                       | M4 NO  | 2000                               |

If this is to replace an existing limit, please state date present limit approved. **3.7.72**

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R603 Storage of Dry Paste            | T           | M4NO                       |                     |
| iv                 | B. Main Office  | 355                     | N505 Telephone Exch, Offices         | U           | M14                        |                     |
| iv                 | C. Main Engineering Workshop  | 267                     | M331 Electricians Workshop           | U           | M12                        |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 82                      | M350 Oblique Impact Facility         | T           | M3N2                       |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 375                     | Lock keepers Cottage                 |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 313<br>362              | Grid (Centre Line)<br>Lea Navigation |             |                            |                     |

Date **22 JUN 1984** Signature **B.H. Newman** Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H/D 101D — 2000 Kgp

Date **14-8-81** Chief Safety Officer **N. J. Rees**

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |             |
|--|-------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes.</b> |
|--|-------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                            |   |                           |                         |   |                                    |
|----------------------------|---|---------------------------|-------------------------|---|------------------------------------|
| Establishment -            |   | PERME Waltham Abbey Essex |                         | Building No. R605<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                        | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions       | Compatibility<br>Groups | PROPOSED  |                                    |
|                            |   |                           |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house | T Earth<br>9" Brick<br>B&F roof   | 1.1                       | D                       | M4 NO   | 1800                               |

If this is to replace an existing limit, please state date present limit approved. 18.11.68

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--------------------------------------|-------------|-----------------|---------------------|
|                     |   |                         |                                      |             | M & N<br>5      |                     |
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R604 Explosives Storehouse           | T           | M4NO            |                     |
| iv                  | B. Main Office  | 390                     | N505 Telephone Exch, Offices         | U           | M14             |                     |
| iv                  | C. Main Engineering Workshop  | 282                     | M331 Electricians Workshop           | U           | M12             |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 125                     | M350 Oblique Impact Facility         | T           | M3N2            |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                      |             |                 |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 330                     | Lock keepers cottage                 |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 260<br>222<br>307       | Grid (Centre Line)<br>Lea Navigation |             |                 |                     |

Date 22 JUN 1981 Signature BH Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.1D — 1800Kp

Date 14-8-81 Chief Safety Officer NJmRees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                                   |
|-----------------------------------|
| Explosives stored in wooden boxes |
|-----------------------------------|

|   |     |
|---|-----|
| 3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|---|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br><b>PERME Waltham Abbey Essex</b> |   |                     |                         | Building No. R606<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Propellant Storage                                  | T, Earth<br>9" Brick<br>B&F roof  | 1.1                 | C                       | M4 NO   | 1400                               |

If this is to replace an existing limit, please state date present limit approved. 14.5.75

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 50                      | R607 Propellant Storage              | T           | M4NO                       |                     |
| iv                  | B. Main Office  | >400                    |                                      |             |                            |                     |
| iv                  | C. Main Engineering Workshop  | 312                     | M331 Electricians Workshop           | U           | M12                        |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 130                     | Proposed 3lb Firing Facility         | T           | M3N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 280                     | Lock keepers cottage                 |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 202<br>250              | Grid (Centre Line)<br>Lea Navigation |             |                            |                     |

Date ..... 2.2 JUN 1981 ..... Signature *R.H. Newman* ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H01.1C — 1400Kgp

Date 12-8-81 ..... Chief Safety Officer *N.J. King* .....

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                                   |
|-----------------------------------|
| Explosives stored in wooden boxes |
|-----------------------------------|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                    |   |                     |                         |   |                                    |
|--------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -    |   | ROF Waltham Abbey   |                         | Building No. R607<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                    |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Propellant Storage | T, Earth<br>9" Brick<br>B&F roof  | 1.3                 | C                       | M4 NO   | 4000                               |

If this is to replace an existing limit, please state date present limit approved. 12.8.81

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R606 Propellant Storage              | T           | M4 NO                      |                     |
| iv                 | B. Main Office  | >400                    |                                      |             |                            |                     |
| iv                 | C. Main Engineering Workshop  | 350                     | M331 Electricians Workshop           | U           | M12                        |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 160                     | Proposed 3lb Firing Facility         | T           | M3 N2                      |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 237                     | Lock keepers cottage                 |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 136<br>192              | Grid (Centre Line)<br>Lea Navigation |             |                            |                     |

Date .....16-4-84..... Signature..... *AJB et al pp*..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date .....23-7-85..... Chief Safety Officer ..... *NJm Rees*.....

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                         |   |                     |                         |   |                                    |
|-------------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -         |   | ROF Waltham Abbey   |                         | Building No. R608<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                     | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|                         |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive<br>Storehouse | T, Earth<br>Brick. board & felt<br>roof   | 1.1<br>or<br>1.3    | C & D<br><br>C          | M3  | 700<br>or<br>4000                  |

If this is to replace an existing limit, please state date present limit approved. 13.12.79

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R607 storage of propellant      | T<br>earth  | M3                         |                     |
| iv                  | B. Main Office  | 480                     | R663 Section Office             | U           |                            |                     |
| iv                  | C. Main Engineering Workshop  | 400                     | M331 Electricians Shop          | U           |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 200                     | R616                            | T<br>earth  | M3<br>N2                   |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                 |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 285                     | Lock Keepers cottage            |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 188<br>115              | Lea Navigation<br>Grid          |             |                            |                     |

Date 16-4-84 Signature AJ Bell pp. Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 24-7-85 Chief Safety Officer NJ in Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |  |                                    |
|---|---|---------------------|-------------------------|--|------------------------------------|
| Establishment -<br><b>PERME Waltham Abbey Essex</b> |   |                     |                         | Building No. <b>R610</b><br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED   |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house                          | T, Earth<br>9" Brick<br>B&F roof  | 1.1                 | D                       | M4NO   | 1600                               |

If this is to replace an existing limit, please state date present limit approved. **18.11.68**

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
|                    |   |                         |                                      |             |                            |                     |
| iv                 | B. Main Office  | >400                    |                                      |             |                            |                     |
| iv                 | C. Main Engineering Workshop  | 345                     | M331 Electricians Workshop           | U           | M12                        |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 95                      | R616 Propellant Processing Lab       | T           | M4N2                       |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 335                     | Lock keepers cottage                 |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 255<br>300              | Grid (Centre Line)<br>Lea Navigation |             |                            |                     |

Date **22 JUN 1981** Signature **B.H. Newman** Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1010 — 1600Kp

Date **12-8-81** Chief Safety Officer **N. J. Rees**

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                                   |
|-----------------------------------|
| Explosives stored in wooden boxes |
|-----------------------------------|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                             |   |                           |                         |   |                                    |
|-----------------------------|---|---------------------------|-------------------------|---|------------------------------------|
| Establishment -             |   | PERME WALTHAM ABBEY ESSEX |                         | Building No. R611<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                         | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions       | Compatibility<br>Groups | PROPOSED  |                                    |
|                             |   |                           |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Storage<br>house | T Earth<br>9" Brick<br>B&F roof   | 1.3                       | C                       | M4N0  | 4000                               |

If this is to replace an existing limit, please state date present limit approved. 3.7.72

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R610 Explosive Storehouse            | T           | M4N0                       |                     |
| iv                  | B. Main Office  | >400                    |                                      |             |                            |                     |
| iv                  | C. Main Engineering Workshop  | 330                     | M331 Electricians Workshop           | U           | M12                        |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 55                      | R616 Propellant Processing Lab       | T           | M4N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 395                     | Lockkeepers cottage                  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 312<br>360              | Grid (Centre Line)<br>Lea Navigation |             |                            |                     |

Date ..... 22 JUN 81 ..... Signature B.H. Newman ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H.D. 3C - 4000kg

Date ..... 12-8-81 ..... Chief Safety Officer NJM Rus .....

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                         |                           |                                    |
|---|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>PERME WALTHAM ABBEY ESSEX</b> |   | Building No. R612<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|   |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Store-<br>house                           | T, Earth<br>9" Brick<br>B&F roof  | 1.1   | C                       | M4 NO                     | 1000                               |

If this is to replace an existing limit, please state date present limit approved. **15.5.72**

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R611 Explosive Storehouse       | T           | M4NO                       |                     |
| iv                  | B. Main Office  | 380                     | N505 Telephone Exch, Offices    | U           | M14                        |                     |
| iv                  | C. Main Engineering Workshop  | 325                     | M331 Electricians Workshop      | U           | M12                        |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 55                      | R616 Propellant Processing Lab  | T           | M4N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                 |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                   |                                 |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 367                     | Grid (Centre Line)              |             |                            |                     |

Date **22 JUN 1981** Signature *D.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

Hd 101C - 1000 Kgs

Date **12-8-81** Chief Safety Officer *NJM Rees*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |             |
|--|-------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes.</b> |
|--|-------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -   |   | ROF Waltham Abbey   |                         | Building No. R613<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Water steeping of<br>propellant or<br>experimental<br>propellant processing | T, Earth<br><br>Brick, Board and<br>felt roof   | 1.1<br>or<br>1.3    | C                       | M4 N3   | 500                                |

If this is to replace an existing limit, please state date present limit approved. 20.12.79

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3  | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 47<br><br>250           | R612 Storage of casting powder<br><br>N573 Propellant storage                  | T<br><br>U  | M4 N2<br><br>M2            |                     |
| iv                 | B. Main Office  | 238                     | Proposed SE Offices  | U           | 10                         |                     |
| iv                 | C. Main Engineering Workshop  | 325                     | M331 Electricians Workshop   | U           |                            |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 60<br><br>237           | R614 Rumbling & Graphiting of Cordite<br>(1968?)<br>R608 Propellant exhibition | T<br><br>U  | M3<br><br>M6 N4            |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf | 95                      | R601   |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 495                     | Lock Keppers cottage   |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 475<br>400              | Lea Navigation<br>Power Grid   |             |                            |                     |

Date ..... 16-4-84 ..... Signature..... *AJBels* ..... pp. Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date ..... 24-7-85 ..... Chief Safety Officer ..... *NJM Rees* .....

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use  | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|--|--------------------|--------|-----------------------|---------|------------------------------|
| R601         | Dry NC weighing, only Occasionally occupied. | 84                 | T      | M3 N2                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Anticipated use 26 weeks per annum, mainly for drying of propellant. Man limits then M3 N2, occupied less than 10% of working day. For stepping, man limits M4 N3 and occupied well below 10% of working day.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |  |                         |                           |                                    |
|---|---|--|-------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>PERME WALTHAM ABBEY ESSEX</b> |   | Building No. <b>R614</b><br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | PROPOSED                  |                                    |
|   |   |  |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Rumbling and Graph-<br>iting of cordite             | T, Earth<br>9" Brick<br>B&F roof  | 1.1  | C                       | M3 NO                     | 300                                |

If this is to replace an existing limit, please state date present limit approved. **18.11.68**

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 55                      | P710 Propellant Storehouse      | T           | M3NO                       |                     |
| iv                  | B. Main Office  | 340                     | N505 Telephone Exch, Offices    | U           | M14                        |                     |
| iv                  | C. Main Engineering Workshop  | 340                     | M331 Electricians Workshop      | U           | M12                        |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 55                      | R601 Explosives Weighing Hse    | T           | M3N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf |                         |                                 |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | >400                    |                                 |             |                            |                     |

Date **22 JUN 1981** Signature *B.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

*HDIIC - 300 Kgs*

Date **12-8-81** Chief Safety Officer *N.J. Rice*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                            |
|----------------------------|
| Building used infrequently |
|----------------------------|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |                     |                         |   |                                    |
|--|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -                              |   |                     |                         | Building No. R615<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|  |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Combustible<br>Cartridge Case<br>Manufacture | T, earth.<br>9" Brick, zinc<br>sheet coated roof.   | 1.3                 | C                       | M5N4  | 50                                 |

If this is to replace an existing limit, please state date present limit approved. 12-8-81

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance in Metres 2 | Number and use of building 3   | T or U 4 | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|----------------------|--------------------------------|----------|-------------------------|------------------|
| iii                  | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 50                   | R628 Explosives Storehouse     | T        | M4N0                    |                  |
| iv                   | B. Main Office  | 375                  | R663 ISRG Office               | U        | 16                      |                  |
| iv                   | C. Main Engineering Workshop  | 380                  | M331 Electricians Workshop     | U        | M12                     |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 50                   | R616 Propellant Processing Lab | T        | M4N2                    |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 25                   | -                              |          |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                 |                                |          |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | >400                 |                                |          |                         |                  |

Date 20 OCT 1981 Signature R.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

Hg 1.32 — 50Kgp.

Date 12-11-81 Chief Safety Officer N.J. Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Starting material, Wet pyro NC (12.6% N<sub>2</sub>), products either 1.3, or Flammable solid.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Limit (Kgs) | Period |    | Signature                                |
|-----------------|-------------|--------|----|--|
|                 |             | From   | To |  |
|                 |             |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Limit (Kgs) | Period |    | Signature                                |
|-----------------|-------------|--------|----|--|
|                 |             | From   | To |  |
|                 |             |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br>ROF Waltham Abbey      |   |                     |                         | Building No. R616<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                       | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Propellant processing research laboratory | T, Earth. 13½" brick. Wooden roof   | 1.1 or 1.3          | C                       | M5, N3  | 1 Kg plus 4 Kg (Mag)               |

If this is to replace an existing limit, please state date present limit approved. 27.2.78

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                            | T or U<br>4       | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------------|----------------------------|---------------------|
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 47                      | R 627 Storage of wet N/C (less than 12.2% N <sub>2</sub> ) | T                 |                            |                     |
|                     |   | 51                      | R 615 Explosives Storehouse                                | T                 |                            |                     |
| iv                  | B. Main Office  | 325                     | Proposed E Branch Office                                   | U                 |                            |                     |
| iv                  | C. Main Engineering Workshop  | 387                     | M 331 Electricians Shop                                    | U                 |                            |                     |
| iv)                 | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 38                      | R 626 Combustible cartridge case manufacture               | U<br>13"<br>Brick | M5,<br>N3                  |                     |
|                     |   | 60                      | NIL All other buildings within OQD are storehouses         |                   |                            |                     |
|                     | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 455                     | Lock keepers Cottage                                       |                   |                            |                     |
|                     |   |                         |  |                   |                            |                     |
|                     | F. Nearest building (dwelling house, church, etc.)  | 325                     |  |                   |                            |                     |
|                     | G. Nearest road, railway, canal, river.   |                         |  |                   |                            |                     |

Date ..... 16-4-84 ..... Signature..... *D.B. de* ..... *P.P.* ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date ..... 24-7-85 ..... Chief Safety Officer ..... *N.J. McKee* .....

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Only 1 Kg inside building. 4 Kg in expense magazine (13" Brick, 6" concrete roof, wooden door) outside building, but inside traverse. Processes will involve 100 g in miniature incorporator and 100g in miniature extruder, both in separate bays constructed of 9 mm armoured steel plate.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment - <b>PERME Waltam Abbey</b> |   |                     |                         | Building No. <b>R 617</b><br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                       | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives<br>Storehouse                  | T(Earth), Brick<br>with Board & Felt<br>roof  | 1.1<br>or<br>1.3    | C or D<br><br>C         | M3 NO   | 900<br>or<br>3000                  |

If this is to replace an existing limit, please state date present limit approved. **6-18-80**

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance In Metres 2 | Number and use of building 3            | T or U 4 | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|----------------------|---|----------|-------------------------|------------------|
| iii                  | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 48                   | R618 Explosives Storehouse              | T        | M3NO                    |                  |
| iv                   | B. Main Office  | >400                 |   |          |                         |                  |
| iv                   | C. Main Engineering Workshop  | 400                  | M331 Electricians Workshop              | U        | M12                     |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 51                   | R616 Propellant Process Development     | T        | M3N2                    |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 140                  | Nil                                     |          |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                |   |          |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | 340<br>290           | River Lea Navigation Grid (Centre line) |          |                         |                  |

Date **14-4-83** Signature **D. Bets** pp... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date **18-8-83** Chief Safety Officer **N. J. King**

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present H & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Explosive stored in boxes except when used for storage of wet paste.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                       |   |                     |                         |   |                                    |
|-----------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -       |   |                     |                         | Building No. R618<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|                       |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Storehouse | T (Earth) Brick<br>with board & felt  | 1.1                 | C or D                  | M3 NO   | 1800                               |

If this is to replace an existing limit, please state date present limit approved. 19-11-79

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3            | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|-----------------|---------------------|
|                     |   |                         |  |             | M & N<br>5      |                     |
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 48                      | R617 Explosives Storehouse                 | T           | M3 NO           |                     |
| iv                  | B. Main Office  | 415                     | Proposed E Branch Offices                  | U           |                 |                     |
| iv                  | C. Main Engineering Workshop  | 420                     | M331 Electricians Wk Shop                  | U           |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 105                     | R616 Propellant Process Development        | T           | M3 N2           |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 225                     | -  |             |                 |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 380                     | Lock Keepers Cottages                      |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 279<br>235              | River Lea Navigation<br>Grid (Centre Line) |             |                 |                     |

Date 15/8/80 Signature *B.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HO 1.16 to D 1800Kgs

Date 6/11/80 Chief Safety Officer *W. Hunt-Rees*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R626 no longer process building. Explosives stored in wooden containers

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes</b> |
|--|------------|

4. Relaxation approved

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                          |   |                     |                         |   |                                    |
|--------------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -          |   | ROF Waltham Abbey   |                         | Building No. R619<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                      | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|                          |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives<br>Storehouse | T, Earth<br><br>Brick, board and<br>felt roof   | 1.1                 | C or D                  | M3  | 1100                               |

If this is to replace an existing limit, please state date present limit approved. 13.12.79

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                                | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 50                      | R623 Storage of Ammonium Picrate<br>R620 Storage of propellant | T<br>earth  | M3                         |                     |
| iv                  | B. Main Office  | 412                     | R663 Section Office  | U           |                            |                     |
| iv                  | C. Main Engineering Workshop  | 442                     | M331 Electricians Shop   | U           |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 162                     | R616   |             |                            |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 160                     | -  |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 350                     | Lock Keepers house   |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 225<br>157              | Lea Navigation<br>Grid   |             |                            |                     |

Date 16-4-84 Signature A. J. Bell Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

PLUS HD 1.4S TO CAPACITY

Date 24-7-85 Chief Safety Officer N. J. Rus

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

|    |  |     |
|----|--|-----|
| 3. | Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|----|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                        |                         |   |                                    |
|---|---|------------------------|-------------------------|---|------------------------------------|
| Establishment -<br><b>PERME WALTHAM ABBEY ESSEX</b> |   |                        |                         | Building No. R620<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions    | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                        |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house                          | T, Earth<br>13" Brick<br>B&F roof   | a) 1.1<br>or<br>b) 1.3 | D or C                  | M4 NO   | a) 700<br>or<br>b) 5000            |

If this is to replace an existing limit, please state date present limit approved. **27.1.78**

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance in Metres 2 | Number and use of building 3                              | T or U 4 | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|----------------------|---|----------|-------------------------|------------------|
| iii                  | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 47                   | R619 Explosives Storehouse<br>R622 Aluminium Powder Store | T<br>T   | M4NO<br>M4NO            |                  |
| iv                   | B. Main Office  | 439                  | R663 Office   | U        | M20                     |                  |
| iv                   | C. Main Engineering Workshop  | 470                  | M331 Electricians Workshop                                | U        | M14                     |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 170                  | R634 Fragment Attack                                      | T        | M4N2                    |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 120                  | Nil All buildings with OQD are storehouse                 |          |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 317                  | Lock keepers cottage                                      |          |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | 125<br>160           | Grid (Centre Line)<br>Lea Navigation                      |          |                         |                  |

Date **22 JUN 1981** Signature **P.H. Newman** Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H9101C0D — 700 Kgp  
OR  
H91.3c — 5000 Kgp

Date **12-8-81** Chief Safety Officer **N. Imrees**

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

700kg HD 1.1 limit applies to explosives in wooden boxes.  
If cased limit would be 300kg

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                        |                         |   |                                    |
|---|---|------------------------|-------------------------|---|------------------------------------|
| Establishment -<br><b>PERME WALTHAM ABBEY ESSEX</b> |   |                        |                         | Building No. R622<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions    | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                        |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house                          | T, Earth<br>9" Brick  | a) 1.1<br>or<br>b) 1.3 | a) G or D<br>or<br>b) C | M4 NO   | a) 850<br>b) 5000                  |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                    | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R623 Explosive Storehouse                          | T           | M4NO                       |                     |
| iv                  | B. Main Office  | 390                     | R663 ISRG Office                                   | U           | M16                        |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 135<br>b) 130        | R634 Fragment Attack<br>R638 Control room for R634 | T<br>U      | M4N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 130                     | -  |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 375                     | Lock Keepers Cottage                               |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 137<br>185              | Grid (Centre Line)<br>Lea Navigation               |             |                            |                     |

Date ..... **22 JUN 1981** ..... Signature..... *D.H. Newman* ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.1 CD — 850Keg  
OR  
HD 1.3C — 5000Keg

Date ..... **12-8-81** ..... Chief Safety Officer ..... *N. J. M. Rees* .....

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

**Explosive stored in wooden boxes**

3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? Yes

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |                     |                         |  |                                    |
|--|---|---------------------|-------------------------|--|------------------------------------|
| Establishment -<br>PERME Waltham Abbey |   |                     |                         | Building No. R 623<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                    | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED   |                                    |
|  |   |                     |                         | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive<br>Storehouse                | T, earth<br>Brickwalls<br>Board & Felt roof   | 1.1.                | D                       | M4 NO  | 1400                               |

If this is to replace an existing limit, please state date present limit approved. 2-4-81

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance In Metres<br>2 | Number and use of building<br>3                          | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | a) 50<br>b) 235         | R 622 Explosive Storehouse<br>R 688 Locker Magazine      | T<br>U      | M3NO<br>M2 NO              |                     |
| iv                  | B. Main Office  | 355                     | R 663 Office   |             | N16                        |                     |
| iv                  | C. Main Engineering Workshop  | > 400                   |  |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 87<br>b) 85          | R 634 Fragment Attack<br>R 638 Control room for<br>R 634 | T<br>U      | M4 N2                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 170                     | R 681  |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 400                     | Lock keepers cottage                                     |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 195<br>242              | Grid (Centre line )<br>Lea Navigation                    |             |                            |                     |

Date 7-12-82 Signature A. Bell Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 18-8-83 Chief Safety Officer N. J. R. ...

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use              | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R 681        | Office for R 634 | 125                | U      | M4 N2                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Li-it (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                             |   |   |                         |   |                                    |
|-----------------------------|---|---|-------------------------|---|------------------------------------|
| Establishment -             |   | P. E. R. M. E.<br>WALTHAM FOREY,<br>ESSEX EN9 1LP |                         | Building No. R624<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                         | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions                               | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                             |   |   |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store -<br>house | T, Earth<br>9" Brick<br>B&F roof  | a) 1.1<br>b) 1.3                                  | a) C or D<br>b) C       | M4 NO   | a) 250<br>ol. b) 3500              |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                    | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R623 Explosives Storehouse                         | T           | M4NO                       |                     |
| iv                  | B. Main Office  | 327                     | R663 ISRG Office                                   | U           | M16                        |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 50<br>b) 60          | R634 Fragment Attack<br>R638 Control room for R634 | T<br>U      | M4N2                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf | 50                      | -  |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 240<br>300              | Grid (Centre Line)<br>Lea Navigation               |             |                            |                     |

Date **22 JUN 1981** Signature *D.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD11CND — 250 Kgs  
OR  
HD13C — 3500 Kgs

Date **12-8-81** Chief Safety Officer *NJM Rees*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |      |
|--|------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes. |
|--|------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                             |   |   |                         |   |                                    |
|-----------------------------|---|---|-------------------------|---|------------------------------------|
| Establishment -             |   | <b>P. E. R. M. E.</b><br><b>WALTHAM ABBEY</b><br><b>ESSEX EN9 1BP</b> |                         | Building No. R625<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                         | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                             |   |   |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store -<br>house | T, Earth<br>9" Brick  | a) 1.1<br>or<br>b) 1.3  | a) C or D<br>or<br>b) C | M4 NO   | a) 250<br><br>b) 3500              |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes, | Factor influencing Explosives limit   | Distance in Metres | Number and use of building                         | T or U     | Workers present M & N | For C.S.O. use |
|--------------------|---|--------------------|--|------------|-----------------------|----------------|
|                    | 1   | 2                  | 3  | 4          | 5                     | 6              |
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                 | R624 Explosives Storehouse                         | T          | M4NO                  |                |
| iv                 | B. Main Office  | 312                | R663 ISRG Office                                   | U          | M16                   |                |
| iv                 | C. Main Engineering Workshop  | >400               |  |            |                       |                |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 50<br>b) 80     | R634 Fragment Attack<br>R638 Control room for R634 | T )<br>U ) | M4N2                  |                |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | -                  |  |            |                       |                |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400               |  |            |                       |                |
|                    | G. Nearest road, railway, canal, river.   | 307<br>355         | Grid (Centre Line)<br>Lea Navigation               |            |                       |                |

Date ..... **22 JUN 1981** ..... Signature..... *B.H. Newman* ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.1 C and D — 250Kgs  
OR  
HD 1.3 C — 3500Kgs

Date ..... **12-8-81** ..... Chief Safety Officer ..... *N.J. King* .....

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                            |   |  |                         |   |                                    |
|----------------------------|---|--|-------------------------|---|------------------------------------|
| Establishment -            |   | P. E. R. M. E.<br>WALTHAM ABBEY<br>ESSEX EN9 1BP |                         | Building No. R627<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                        | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions                              | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                            |   |  |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Store-<br>house | T. Earth<br>9" Brick<br>Zinc sheet roof   | 1.3  | C or D                  | M4 NO   | 3000                               |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|-----------------|---------------------|
|                     |   |                         |                                 |             | M & N<br>5      |                     |
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 50                      | R625 Explosives Storehouse      | T           | M4NO            |                     |
| iv                  | B. Main Office  | 305                     | R663 ISRG Office                | U           | M16             |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |                                 |             |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 50                      | R616 Propellant Processing Lab  | T           | M4N2            |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                 |             |                 |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 362                     | Grid (Centre Line)              |             |                 |                     |

Date 22 JUN 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H01.3C — 3000kg

Date 12-8-81 Chief Safety Officer NJmRees

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |      |
|--|------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES. |
|--|------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |  |                         |                           |                                    |
|--|---|--|-------------------------|---------------------------|------------------------------------|
| Establishment - <b>Royal Ordnance, Waltham Abbey</b>       |   | Building No. R 628<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | PROPOSED                  |                                    |
|  |   |  |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive<br>storehouse<br>OR<br>Repacking of<br>explosive | T, Earth<br>9" Brick<br>Zinc sheet coated<br>roof   | (a)1.1<br>(b)1.3   | C or D                  | M4 N0                     | (a) 900<br>(b) 3000                |

If this is to replace an existing limit, please state date present limit approved. 12-8-81

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                        | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R 627 Explosive Storehouse                             | T           | M4N0                       |                     |
| iv                 | B. Main Office  | 310                     | ISR D Office R 663                                     | U           | N 16                       |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 50                      | R 631 Control Room,<br>Composite Propellant Processing | T           | M3N2                       |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |  |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                   |  |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | > 400                   |  |             |                            |                     |

Date 10-10-85 Signature A. J. B. etc pp Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

|                |         |                |            |
|----------------|---------|----------------|------------|
| HD 1.1 CORD    | 900Kg   | } STORAGE ONLY | MAN LIMITS |
| OR HD 1.3 C    | 3,000Kg |                | M4 N0      |
| OR HD 1.1 CORD | 50Kg    | REPACKING      | M3 N2      |

Date 12-4-88 Chief Safety Officer N. J. Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R 631 is 9" brick building with no windows, B&F roof.  
 Alternative use for unpacking H.D. \*.\* & repacking in smaller boxes, limit to be 50kg.  
 M3N2

3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? **Yes**

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                         |                           |                                    |
|---|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment - <b>PERVIE</b><br><b>MOD(PE)</b><br><b>WALTHAM ABBEY</b> |   | Building No. R632<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use<br><b>Explosives</b>  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|   |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Plastic Propellant<br>Incorporation                                     | T, Earth<br>Brick walls, Board<br>& felt roof   | 1.3   | C                       | M4 N3                     | 450                                |

If this is to replace an existing limit, please state date present limit approved. 18-11-68

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                               | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|---|-------------|-----------------|---------------------|
|                    |   |                         |   |             | M & N<br>5      |                     |
| iii                | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | a) 110<br>b) 287        | R615 Magazine<br>R688 Locker Magazine                         | T<br>U      | M3 NO<br>M2 NO  |                     |
| iv                 | B. Main Office  | 255                     | R663 Office   | U           | 16              |                     |
| iv                 | C. Main Engineering Workshop  | > 400                   |   |             |                 |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 55<br>b) 80          | R648 Plastic Propellant Incorporation<br>R681 Office for R634 | T<br>U      | M4 N3<br>M4 N2  |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 50                      | -   |             |                 |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                   |   |             |                 |                     |
|                    | G. Nearest road, railway, canal, river.   | 380                     | Grid  |             |                 |                     |

Date 17/11/80 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.3C - 450 Kgs

Date 2-4-81 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <i>Yes</i> |
|--|------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |  |                         |                           |                                    |
|--|---|--|-------------------------|---------------------------|------------------------------------|
| Establishment - Royal Ordnance, Waltham Abbey.<br>For RAPDE use. |   | Building No. R 634<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | PROPOSED                  |                                    |
|  |   |  |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Fragment attack<br>on rocket motors.                             | U. 12" R/C walls<br>6" R/C roof.  | 1.3<br>+<br>† .1   | C                       | M4 N2                     | 30                                 |

If this is to replace an existing limit, please state date present limit approved. 28-8-80

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                                 | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|-----------------|---------------------|
|                     |   |                         |   |             | M & N<br>5      |                     |
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 40<br>200               | R 635 Climatic Trials<br>R 688 Locker Magazine.                 | T<br>U      | M4 NO<br>M2 NO  |                     |
| iv                  | B. Main Office  | 265                     | R 663 ISRD office   | U           | N 14            |                     |
| iv                  | C. Main Engineering Workshop  | 525                     | M 331 Electricians Shops  | U           | M 12            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 12<br>52                | Control room for facility.<br>R 646 Plastic propellant blending | U<br>T      | M4 N2<br>M4     |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 60                      | -   |             |                 |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 490                     | Lock keepers cottage  |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 260                     | Grid  |             |                 |                     |

Date 4-2-86 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 12-4-88 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

30kg. limit for filling 6x5kg.charges. When firing, require 3x5kg.and either 5kg. 1.3 or 1.5kg 1.1 propellant for filling cartridges. Cartridge propellant will be isolated from cased charges. Firing takes place remotely from R 638. *5kg of HD1.1 propellant for filling into 1.2kg target charges (one at a time only) and the filled charge to be removed to target area prior to filling a single 30mm Cartridge PDS 12-2-86*

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                 |   |  |                         |   |                                    |
|-----------------|---|--|-------------------------|---|------------------------------------|
| Establishment - |   | P. E. R. M. E.<br>WALTHAM ABBEY<br>ESSEX |                         | Building No. R635<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use             | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions                      | Compatibility<br>Groups | PROPOSED  |                                    |
|                 |   |  |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Climatic ovens  | T, Earth  | 1.3                                      | C                       | M3 NO   | 400                                |

If this is to replace an existing limit, please state date present limit approved. 18.11.68

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                    | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
|                    |   |                         |  |             |                            |                     |
| iv                 | B. Main Office  | 290                     | R663 ISRG Office                                   | U           | M16                        |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 40<br>b) 25          | R634 Fragment Attack<br>R638 Control room for R634 | T<br>U      | M4N2                       |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |  |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |  |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 212<br>285              | Grid (Centre Line)<br>Lea Navigation               |             |                            |                     |

Date 22 JUN 1981 Signature *D.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H) 1.3C - 400Kgs

Date 12-8-81 Chief Safety Officer *NimRees*

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>YES</b> |
|--|------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                           |                           |                                    |
|---|---|---|---------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>MOD PERME WALTHAM ABBEY</b> |   | Building No. R636<br>(If grouped with other rooms or buildings, give details) |                           |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups   | PROPOSED                  |                                    |
|   |   |   |                           | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive<br>Storehouse                           | T, Earth.<br>Brick, B&F roof  | (a) 1.1<br>or<br>(b) 1.3  | (a) C or<br>D or (b)<br>C | M4 NO                     | (a) 850 or<br>(b) 5000             |

If this is to replace an existing limit, please state date present limit approved. 25.3.70

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                    | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R622 Explosive Storehouse                          | T           | M4 NO                      |                     |
| iv                  | B. Main Office  | 325                     | R663 Office  | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | (a) 97<br>(b) 82        | R634 Fragment Attack<br>R638 Control room for R634 | T)<br>U)    | M4 N2                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 137                     | R681, R646   |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 227<br>137              | Lea Navigation Grid Centre                         |             |                            |                     |

Date 26 OCT 1981 Signature B Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD1.1CND - 850Kgp  
OR  
(b) HD1.3C - 5000Kgp

*No mixing permitted.*

Date 12-11-81 Chief Safety Officer N Jukes

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use   | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|---|--------------------|--------|-----------------------|---------|------------------------------|
| R681<br>R646 | Office for R634<br>Plastic Propellant<br>Blending | 135<br>137         |        | M4 N1<br>M6 N4        |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Explosives stored in Wooden Boxes.  
Personnel in R681 same as R634, R638.  
R646 only in occasional use.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                       |   |   |                         |                           |                                    |
|---------------------------------------|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment -<br>ROF, Waltham Abbey |   | Building No. R641<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use                                   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|                                       |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Primary Explosive<br>Magazine         | T. Earth filled<br>Braithwaite traverse<br>Brick, board and<br>felt roof.   | 1.1   | A                       | M2 NO                     | 25                                 |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3  | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--|-------------|-----------------|---------------------|
|                    |   |                         |  |             | M & N<br>5      |                     |
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 200<br>64m<br>42        | R657 Explosive Storehouse<br>R642<br>R690 Pyrotechnic Store                      | T<br>U      | M3 NO<br>M2 NO  |                     |
| iv                 | B. Main Office  | 135                     | R663 ISRG Office   | U           | N11             |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |  |             |                 |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 320<br>22               | R646 Blending House<br>R672 Primary explosive testing and pyrotechnic processing | T<br>U      | M4 NO<br>M6 N4  |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | -                       |  |             |                 |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 385                     | Bungalow at Hawes Lane Nursery   |             |                 |                     |
|                    | G. Nearest road, railway, canal, river.   | 300                     | Grid   |             |                 |                     |

Date 22 May 1984 Signature A. J. Selby Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 24-7-85 Chief Safety Officer N. J. R. [Signature]

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                    |   |                     |                         |   |                                     |
|------------------------------------|---|---------------------|-------------------------|---|-------------------------------------|
| Establishment - ROF, Waltham Abbey |   |                     |                         | Building No. R642<br>(If grouped with other rooms or buildings, give details) |                                     |
| Use                                | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                     |
|                                    |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs)  |
| Locker Magazine                    | U. Brick, board<br>and felt roof.   | 1.1                 | A                       | M2 NO   | 0.5 kg per<br>locker<br>(4 lockers) |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--------------------------------------|-------------|-----------------|---------------------|
|                     |   |                         |                                      |             | M & N<br>5      |                     |
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 65                      | R641 Primary explosive magazine      | T           | M2 NO           |                     |
|                     |   | 89                      | R690 Pyrotechnic Store               | U           | M2 NO           |                     |
| iv                  | B. Main Office  | 98                      | R663 ISRG Office                     | U           | N11             |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |                                      |             |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 320                     | R647 Composite Propellant Processing | T           | M4 N3           |                     |
|                     |   | 25                      | R673 Primary explosives              | U           | M8 N6           |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | -                       | labs and offices                     |             |                 |                     |
|                     | F. Nearest building (dwelling house, church, etc.)  | 330                     | Bungalow at Hawes Lane Nursery       |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 375                     | Grid                                 |             |                 |                     |

Date 22 May 1984 Signature A. Roberts Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 24-7-85 Chief Safety Officer N. J. M. Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                   |   |                     |                         |   |                                    |
|-----------------------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment - ROF WALTHAM ABBEY |   |                     |                         | Building No. R644<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                               | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|                                   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives<br>Storehouse          | T, Earth<br>Brick, board and<br>felt roof   | 1.1                 | D                       | M 3   | 1400                               |

If this is to replace an existing limit, please state date present limit approved. 13.12.79

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance in Metres 2         | Number and use of building 3                               | T or U 4   | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|------------------------------|--|------------|-------------------------|------------------|
| iii                  | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                           | R655 Explosives Storehouse                                 | T<br>Earth | M 3                     |                  |
| iv                   | B. Main Office  | 262                          | R663 Section Office  | U          |                         |                  |
| iv                   | C. Main Engineering Workshop  | 610                          | M332 Electricians Shop                                     | U          |                         |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 120                          | R656   | U          | M 6                     |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | <del>190</del><br>90m<br>PDS | R634, R646, R647<br><i>These are all process buildings</i> |            |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 372                          | Isolated cottage   |            |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | 170<br>193                   | Lea Navigation<br>Grid                                     |            |                         |                  |

Date ..... 16-4-84 ..... Signature..... A. J. Bell ..... pp ..... Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date ..... 24-7-85 ..... Chief Safety Officer ..... N. J. Russ .....

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                                  | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|--------------------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R634<br>PDS  | Under conversion for Fragment Attack | 90                 | T      | M4 N2                 |         |                              |
| R646         | Plastic propellant blending          | 106                | T      | M6 N4                 |         |                              |
| R647         | Plastic propellant mixing            | 163                | T      | M4 N2                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |  |
|--|--|
|  |  |
|--|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                         |                           |                                    |
|---|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment - PERME<br>MOD(PE)<br>WALTHAM ABBEY |   | Building No. R646<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use<br>Explosive                                  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|   |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Plastic Propellant<br>Blending                    | T, Earth<br>Brick walls<br>Board & felt roof  | 1.3   | C                       | M6 N4                     | 1000                               |

If this is to replace an existing limit, please state date present limit approved. 21-4-76

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance In Metres<br>2 | Number and use of building<br>3                  | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|-----------------|---------------------|
|                     |   |                         |  |             | M & N<br>5      |                     |
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | a) 45<br>b) 175         | R651 Propellant Magazine<br>R688 Locker Magazine | T<br>U      | M3 NO<br>M2 NO  |                     |
| iv                  | B. Main Office  | 200                     | R663 Office                                      | U           | 16              |                     |
| iv                  | C. Main Engineering Workshop  | 400                     |  |             |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 51<br>b) 45          | R634 Fragment Attack<br>R681 Office for R634     | T<br>U      | M4 N2           |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 64                      | R638, R647, R648, R632                           |             |                 |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 555                     | Lock Keepers Cottage                             |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 300<br>375              | Grid<br>Lea Navigation                           |             |                 |                     |

Date 17/4/80 Signature B. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.3 c - 1000 Kgs

Date 2-4-81 Chief Safety Officer N. J. Reeves

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No.         | Use                                   | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|----------------------|---------------------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R638                 | Control Room for R634                 | 57                 | U      | M4 N2                 |         |                              |
| R647<br>R648<br>R632 | } Plastic Propellant<br>Incorporating | } 50               | } T    | } M6 N2               |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R646 is only occasionally used for blending (ca 1 day per month). R647, 648, 632 are unlikely to be in use at same time as R646 as same people involved. Personnel (M4N2) in R634, 638, 681 are separate but overall limit applies to these 3 buildings as a group.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                     |   |                                 |                         |   |                                    |
|-------------------------------------|---|---------------------------------|-------------------------|---|------------------------------------|
| Establishment -                     |   | PERMIE<br>MOD(PE)<br>THAM ABBEY |                         | Building No. R647<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                 | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions             | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                                     |   |                                 |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Plastic Propellant<br>Incorporation | T, Earth<br>Brick walls<br>Board & felt roof  | 1.3                             | C                       | M4 N3   | 450                                |

If this is to replace an existing limit, please state date present limit approved. 18.11.68

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3       | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|---------------------------------------|-------------|-----------------|---------------------|
|                    |   |                         |                                       |             | M & N<br>5      |                     |
| iii                | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | a) 47                   | R650 Propellant Magazine              | T           | M4 NO           |                     |
|                    |   | b) 225                  | R688 Locker Magazine                  | U           | M2 NO           |                     |
| iv                 | B. Main Office  | 187                     | R663 Office                           | U           | 16              |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |                                       |             |                 |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 51                   | R648 Plastic Propellant Incorporation | T           | M4 N3           |                     |
|                    |   | b) 65                   | R681 Office for R634                  | U           | M4 N2           |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 50                      | -                                     |             |                 |                     |
|                    | F. Nearest building (dwelling house, church, etc.)  | >400                    |                                       |             |                 |                     |
|                    | G. Nearest road, railway, canal, river.   | 357                     | Grid                                  |             |                 |                     |

Date 17/11/80 Signature *B. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.3c - 450Kgs

Date 2-4-81 Chief Safety Officer *N. Imrey*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                     |   |  |                         |   |                                    |
|-------------------------------------|---|--|-------------------------|---|------------------------------------|
| Establishment -                     |   | PERMITS<br><b>MOD(PE)</b><br>WALTHAM ABBEY<br>Essex EN11 8BP |                         | Building No. R648<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                 | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | P R O P O S E D   |                                    |
|                                     |   |  |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Plastic Propellant<br>Incorporation | T, Earth<br>Brick walls<br>Board & felt roof  | 1.3  | C                       | M4 N3   | 450                                |

If this is to replace an existing limit, please state date present limit approved. 18.11.68

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                               | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|-----------------|---------------------|
|                     |   |                         |   |             | M & N<br>5      |                     |
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | a) 47<br>b) 277         | R649 Pyrotechnic Magazine<br>R688 Locker Magazine             | T<br>U      | M3N0<br>M2N0    |                     |
| iv                  | B. Main Office  | 181                     | R663 Office   | U           | 16              |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |   |             |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 51<br>b) 115         | R647 Plastic Propellant Incorporation<br>R681 Office for R634 | T<br>U      | M4N3<br>M4N2    |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf | 50                      | -   |             |                 |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | >400                    |   |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | >400                    |   |             |                 |                     |

Date 17/11/80 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.3C - 450 Kgs.

Date 2-4-81 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                      |   |  |                         |   |                                    |
|--------------------------------------|---|--|-------------------------|---|------------------------------------|
| Establishment -<br>ROF Waltham Abbey |   |  |                         | Building No. R649<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | UN<br>Hazard<br><del>Division</del><br>CLASS | Compatibility<br>Groups | PROPOSED  |                                    |
|                                      |   |  |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse                 | T, earth<br>Brick, board & felt<br>roof   | 1.1<br>or<br>1.3                             | D<br><br>C or G         | M4 N2   | 800<br>Or<br>4000                  |

If this is to replace an existing limit, please state date present limit approved. 24.4.78

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                        | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 50                      | R650 Explosives storehouse                             | T<br>earth  | M4<br>N2                   |                     |
| iv                  | B. Main Office  | 130                     | R663 ISRG Office                                       | U           |                            |                     |
| iv                  | C. Main Engineering Workshop  | 625                     | M331 Electricians shop                                 | U           | -                          |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 50                      | Not full time use<br>R648 Plastic propellant mixing    | T<br>earth  | M4<br>N2                   |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf |                         | R631, R632, R647<br><i>These are process buildings</i> |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 512                     | Bungalow at Hawes Lane                                 |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 500<br>425              | Lea Navigation canal<br>Grid                           |             |                            |                     |

Date 16-4-84 Signature A.P. Scott Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 24-7-85 Chief Safety Officer N. J. ...

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                                    | Distance in metres | T or U     | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|--|--------------------|------------|-----------------------|---------|------------------------------|
| R631         | Plastic Propellant mixing control room | 110                | T<br>earth | M4<br>N2              |         |                              |
| R632         | Plastic propellant mixing              | 110                | T<br>earth | M4<br>N2              |         |                              |
| R647         | Plastic propellant mixing              | 50                 | T<br>earth | M4<br>N2              |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R648 and R647 are controlled remotely from R631 and are only occupied briefly (1 hour per day at maximum when processing).

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                      |   |  |                         |   |                                    |
|----------------------|---|--|-------------------------|---|------------------------------------|
| Establishment -      |   | <b>MOD(PE)</b><br><b>WALTHAM ABBEY</b><br>E - ex 1BP |                         | Building No. R650<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions                                  | Compatibility<br>Groups | PROPOSED  |                                    |
|                      |   |  |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse | T, Earth<br>Brick walls<br>Board & felt roof  | 1.3  | C                       | M4N0  | 3000                               |

If this is to replace an existing limit, please state date present limit approved. 27.3.75

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                                | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | a) 50<br>50<br>b) 212   | R651 Explosives Storehouse<br>R649 " "<br>R688 Locker Magazine | T<br>T<br>U | M3 NO<br>M3NO<br>M2NO      |                     |
| iv                  | B. Main Office  | 130                     | R663 Office  | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 47<br>b) 115         | R647 Plastic Propellant Incorporation<br>R681 Office for R634  | T<br>U      | M6N4<br>M4N2               |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 93                      | R646, R648   |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 375<br>>400             | Grid<br>Lea Navigation   |             |                            |                     |

Date 17/11/80 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.3C - 3000kgs

Date 2-4-81 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                              | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|----------------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R646         | Plastic Propellant Blending      | 75                 | T      | M6, N4                |         |                              |
| R648         | Plastic Propellant Incorporation | 62                 | T      |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Personnel in R646, 647, 648 are the same people.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                       |   |                                    |                      |   |                                 |
|-----------------------|---|------------------------------------|----------------------|---|---------------------------------|
| Establishment -       |   | FBRIME<br>MOD(PE)<br>WALTHAM ABBEY |                      | Building No. R651<br>(If grouped with other rooms or buildings, give details) |                                 |
| Use                   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard Divisions                   | Compatibility Groups | PROPOSED  |                                 |
|                       |   |                                    |                      | Man Limit M&N (Note i)  | Explosive Limit (Note ii) (Kgs) |
| Explosives Storehouse | T, Earth<br>Brick walls<br>Board & felt roof  | 1.3                                | C                    | M4 NO   | 3000                            |

If this is to replace an existing limit, please state date present limit approved. 22.1.71

| Explanatory notes, | Factor influencing Explosives limit   | Distance in Metres | Number and use of building                                    | T or U      | Workers present M & N | For C.S.O. use |
|--------------------|---|--------------------|---|-------------|-----------------------|----------------|
|                    | 1   | 2                  | 3   | 4           | 5                     | 6              |
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | a) 50<br>b) 157    | R650 Explosive Storehouse<br>R654 " "<br>R688 Locker Magazine | T<br>T<br>U | M3NO<br>M3NO<br>M2NO  |                |
| iv                 | B. Main Office  | 160                | R663 Office   | U           | 16                    |                |
| iv                 | C. Main Engineering Workshop  | >400               |   |             |                       |                |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | a) 47<br>b) 100    | R646 Plastic Propellant Blending<br>R681 Office for R634      | T<br>U      | M6N4<br>M4N2          |                |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 93                 | R647  |             |                       |                |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400               |   |             |                       |                |
|                    | G. Nearest road, railway, canal, river.   | 325<br>400         | Grid<br>Lea Navigation  |             |                       |                |

Date 17/1/80 Signature *JH Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H) 1.3 C — 3000 Kgs

Date 2-4-81 Chief Safety Officer *N Jukes*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                              | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|----------------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R647         | Plastic Propellant Incorporation | 65                 | T      | M6N4                  |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                                    |
|------------------------------------|
| Personnel in R647 are same as R646 |
|------------------------------------|

|   |     |
|---|-----|
| 3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|---|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |  |                                    |
|---|---|---------------------|-------------------------|--|------------------------------------|
| Establishment -<br>Royal Ordnance, Waltham Abbey. |   |                     |                         | Building No. R 652<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED   |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| Primary Explosive Processing.                     | U. Inner cell of R/C construction with R/C roof. Blow out wall to south.  | 1.1.                | A, D & G                | M6N4   | 20<br>(10 unit risk)               |

If this is to replace an existing limit, please state date present limit approved. N/A

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3  | T or U<br>4 | Workers present<br>M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|--|-------------|-------------------------------|---------------------|
|                    |   |                         |  |             |                               |                     |
| iv                 | B. Main Office  | 78                      | R 663 ISRG Offices   | U           | N11                           |                     |
| iv                 | C. Main Engineering Workshop  | 400                     |  |             |                               |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 20<br>265               | R 672 Primary explosive testing and pyrotechnic proc.<br>R 647 Composite Prop. proc. | U<br>T      | M6N4<br>M4N3                  |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the ODD and give details at 1 overleaf | 180                     | R 662<br>R 665   |             |                               |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 365                     | Bungalow at Hawes Lane Nursery.  |             |                               |                     |
|                    | G. Nearest road, railway, canal, river.   | 335                     | Grid.  |             |                               |                     |

Date 27-3-85 Signature A. J. Bell Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

Date ..... Chief Safety Officer .....

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use              | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R 662        | Safety Offices   | 150                | U      | N4                    |         |                              |
| R 665        | Electronics Lab. | 65                 | U      | N3                    |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Compatibility Group D covers materials taken to process, Group G for delay compositions produced. Purpose designed building for process, with blow out panel to panel. 10kg. 1s max. batch size. Normally only 1 batch in process, but possible 1 batch precipitating whilst second batch in sieving/drying stage.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

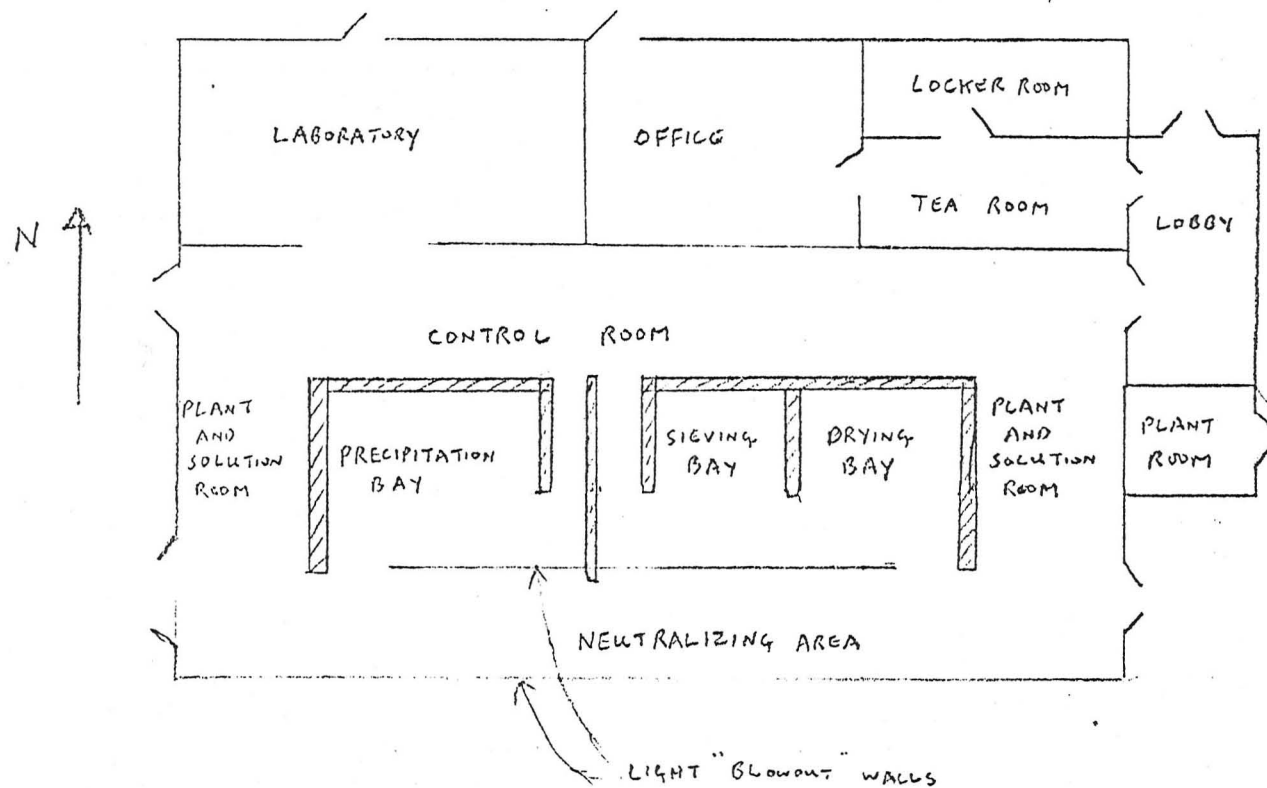
4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

R 652



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |  |                                    |
|---|---|---------------------|-------------------------|--|------------------------------------|
| Establishment -<br>Royal Ordnance, Waltham Abbey. |   |                     |                         | Building No. R 652<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED   |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| Primary Explosive Processing.                     | U. Inner cell of R/C construction with R/C roof. Blow out wall to south.  | 1.1.                | A, D & G                | M6N4   | 20<br>(10 unit risk)               |

If this is to replace an existing limit, please state date present limit approved. N/A

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                       | T or U<br>4 | Workers present | For C.S.O. use |
|--------------------|---|-------------------------|---|-------------|-----------------|----------------|
|                    |   |                         |   |             | M & N<br>5      | 6              |
| iii                | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | R 641                   | R 641 Primary explosive magazine                      | T           | M2N0            |                |
|                    |   | 30<br>34                | R 642 Locker magazine                                 | U           | M2N0            |                |
| iv                 | B. Main Office  | 78                      | R 663 ISRG Offices                                    | U           | N11             |                |
| iv                 | C. Main Engineering Workshop  | 400                     |   |             |                 |                |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(h) untraversed                        | 20                      | R 672 Primary explosive testing and pyrotechnic proc. | U           | M6N4            |                |
|                    |   | 265                     | R 647 Composite Prop. proc.                           | T           | M4N3            |                |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 180                     | R 662<br>R 665  |             |                 |                |
|                    | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 365                     | Bungalow at Hayes Lane Nursery.                       |             |                 |                |
|                    | G. Nearest road, railway, canal, river.   | 335                     | Grid.   |             |                 |                |

Date 27-3-85 Signature A. J. Betts Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

Date ..... Chief Safety Officer .....

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use              | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R 662        | Safety Offices   | 150                | U      | N4                    |         |                              |
| R 665        | Electronics Lab. | 65                 | U      | N3                    |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Compatibility Group D covers materials taken to process, Group G for delay compositions produced. Purpose designed building for process, with blow out panel to panel. 10kg. 1s max. batch size. Normally only 1 batch in process, but possible 1 batch precipitating whilst second batch in sieving/drying stage.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

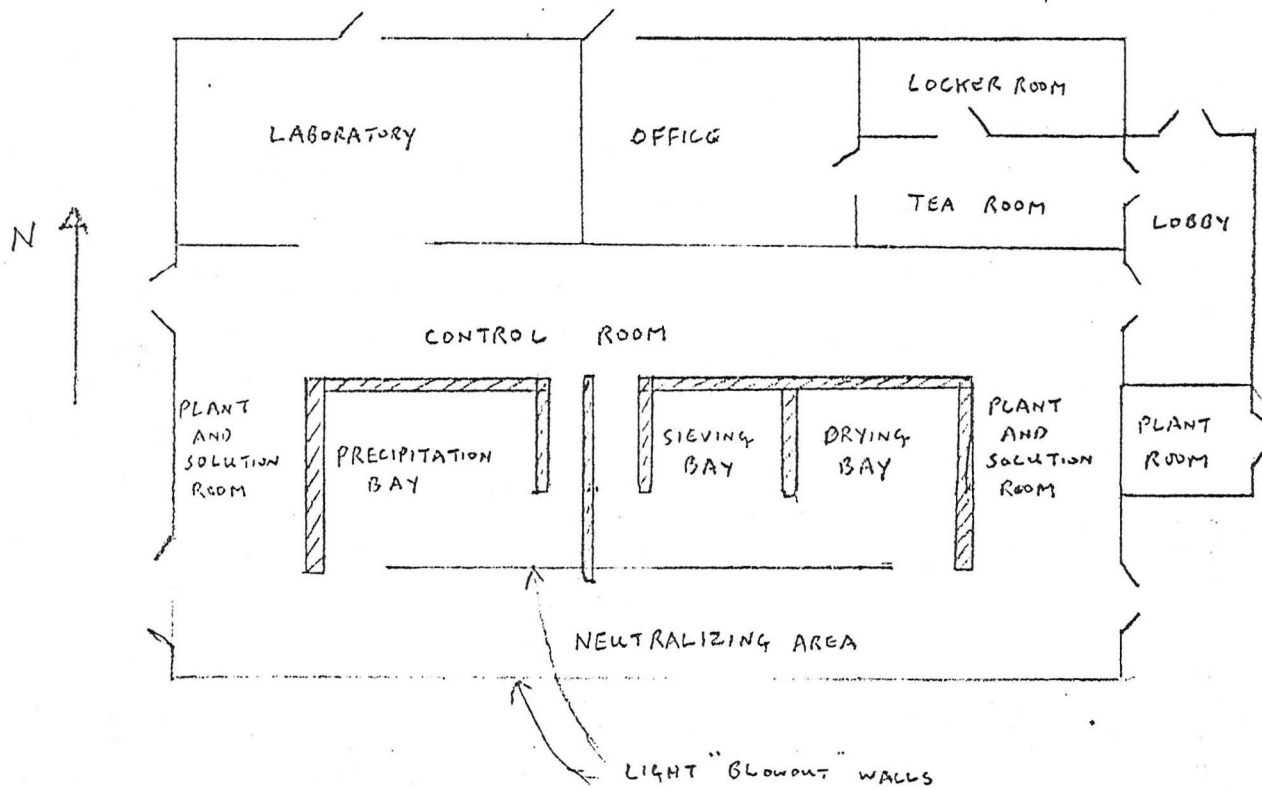
4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

R 652



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                           |                           |                                    |
|---|---|---|---------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>MOD PERME WALTHAM ABBEY</b> |   | Building No. R654<br>(If grouped with other rooms or buildings, give details) |                           |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups   | PROPOSED                  |                                    |
|   |   |   |                           | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse                              | T, Earth.<br>Brick, B&F roof.   | (a) 1.1<br>or<br>(b) 1.3  | (a) C or D<br>or<br>(b) C | M4 NO                     | (a) 1200 or<br>(b) 5000            |

If this is to replace an existing limit, please state date present limit approved. 12.3.74

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3    | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|------------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R655 Explosive Storehouse          | T           | M4 NO                      |                     |
| iv                  | B. Main Office  | 170                     | R663 Office                        | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |                                    |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 112                     | R656 Section Workshop/Offices      | U           | M8 N6                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 170                     | R634, R638, R681, R646, R647, R665 |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                    |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 272                     | Grid Centre                        |             |                            |                     |

Date 26 OCT 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1CND - 1200Kp  
OR  
(b) HD 1.3C - 5000Kp

Date 12-11-81 Chief Safety Officer NJumbres

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                            | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|--------------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R634         | Fragment Attack                | 112)               |        |                       |         |                              |
| R638         | Control room for R634          | 105)               |        | M4 N2                 |         |                              |
| R681         | Office for R634                | 115)               |        |                       |         |                              |
| R646         | Plastic Propellant Blending    | 65                 |        | M6 N4                 |         |                              |
| R647         | Plastic Propellant Manufacture | 110                |        | M4 N2                 |         |                              |
| R665         | Hazardous Chemicals Lab        | 130                |        | M5 N4                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Explosives in wooden boxes.  
R646 only in occasional use, R647 only rarely occupied.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                      |   |                          |                           |   |                                    |
|----------------------|---|--------------------------|---------------------------|---|------------------------------------|
| Establishment -      |   | MOD PERME WALTHAM ABBEY  |                           | Building No. R655<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions      | Compatibility<br>Groups   | PROPOSED  |                                    |
|                      |   |                          |                           | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse | T Earth.<br>Brick, B&F roof.  | (a) 1.1<br>or<br>(b) 1.3 | (a) C or D<br>or<br>(b) C | M4 N0   | (a) 1000 or<br>(b) 5000            |

If this is to replace an existing limit, please state date present limit approved. 7.1.72

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R654 Explosives Storehouse      |             |                            |                     |
| iv                 | B. Main Office  | 215                     | R663 Office                     | U           | 16                         |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |                                 |             |                            |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 57                      | R656 Section workshop/office    | U           | M8 N6                      |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 150                     | R634, R638                      |             |                            |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                            |                     |
|                    | G. Nearest road, railway, canal, river.   | 232                     | Grid Centre                     |             |                            |                     |

Date 26 OCT 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1CND — 1000Kp  
OR  
(b) HD 1.3C — 5000Kp

Date 12-11-81 Chief Safety Officer N. J. Reeves

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                                      | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|--|--------------------|--------|-----------------------|---------|------------------------------|
| R634<br>R638 | Fragment Attack<br>Control room for R634 | 130 )<br>112 )     |        | M4 N2                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Explosives in wooden boxes.

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



MINISTRY OF TECHNOLOGY EXPLOSIVES LIMITS

ESTABLISHMENT - ERDE

BUILDING No. R.656  
(STATE BUILDINGS WITH WHICH GROUPED - IF ANY)

(Where appropriate).

| Use                    | Protective State - Traversed (T) or Untraversed (U) - State type of Traverse, or, if (U), construction of building | Safety Distance Category | Explosives Group (s) | P R O P O S E D |  |
|------------------------|--|--------------------------|----------------------|-----------------|--|
|                        |  |                          |                      | MAN LIMIT       | EXPLOSIVES LIMIT (lbs)   |
|                        |  | TO ADD                   |                      |                 | State quantity of each Category separately. If separate limits cannot be quoted for Z and ZZ, show the sum of the two. |
| Pyrotechnic Laboratory | U<br>Brick, with Light Roof  | X<br>OR<br>Y             | -                    | -               | 100  |

If this is to replace an existing limit, please state date present limit approved - 29.11.1965

| Factor Influencing Explosives Limit                                    | Distance in feet | No. and use of building                                       | T or U                      | Man Limit | For C.S.O. use |
|--|------------------|---|-----------------------------|-----------|----------------|
| 1  | 2                | 3   | 4                           | 5         | 6              |
| <b>INSIDE PERIMETER FENCE</b>  |                  |   |                             |           |                |
| A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed | 225              | R.655 Magazine  | T<br>Earth                  | 3         |                |
| B. Main Office   | 740              | R.663 ISRG Offices  | U                           | -         |                |
| C. Main Engineering Workshop   | 1,030            | R.662 ISRG Workshop   | U                           | -         |                |
| D. Nearest Process Building<br>(If untraversed state construction)     | 250              | R.667 Explosives Laboratory                                   | U<br>Brick<br>Light<br>Roof | -         |                |
| E. Any other occupied building nearer than D                           | -                | -   | -                           | -         |                |
| <b>OUTSIDE PERIMETER FENCE</b>   |                  |   |                             |           |                |
| F. Nearest Building<br>(Dwelling house Church, etc.)                   | 65<br>2,080      | Outside Fence to flood relief channel.<br>Lock Keeper's House |                             |           |                |
| G. Nearest Road, Railway, Canal, River.<br>(Give details)              | 730              | Lea Navigation  |                             |           |                |

Date 25/10/68 Signature V.J. Brennan Head of Establishment

UNRELAXED EXPLOSIVES LIMITS

| Category        | X | Y   | Z | ZZ |
|-----------------|---|-----|---|----|
| (i) Limit (lbs) | - | 100 | - | -  |

(ii) Special Cases covered (without relaxation)

SEE OVERLEAF FOR RELAXATIONS (Where appropriate)  
Gen. Form 49 (Revised)

M. J. Brennan  
Chief Safety Officer  
18.11.68 (Date)

WHERE THE LIMIT REQUIRED EXCEEDS THE UNRELAXED LIMITS (OVERLEAF) THE FOLLOWING  
ADDITIONAL INFORMATION IS REQUIRED

(1) Charge/Weight Ratio of Category Z Items

| ITEM  | CHARGE/WT. RATIO |
|-------|------------------|
| _____ | _____ %          |
| _____ | _____ %          |
| _____ | _____ %          |

- (2) (i) Distance for Peak Pressure of 15 p.s.i. .... ft. (Cats. Z and ZZ only)  
(ii) Inside Storage Safety Distance ..... ft. (Per Explosives Regs. 1960)

(3) Buildings within either of the distances at (2)

| Building No. | Use | Distance (ft) | T or U | Man Limit | Remarks |
|--------------|-----|---------------|--------|-----------|---------|
|              |     |               |        |           |         |

(Include all buildings other than Latrines and Services Installations normally unattended)

(4) Any other Factors Influencing Relaxation

(e.g. Maximum Unit risk - nature of explosives (RDX/TNT, Neonite, S.R. .... etc.) - attach sketch showing distribution of explosive within building)

(5) RELAXATION APPROVED

| Category  | <u>X</u> | <u>Y</u> | <u>Z</u> | <u>ZZ</u> | Period |    | Signature                      |
|---|----------|----------|----------|-----------|--------|----|--------------------------------|
|   |          |          |          |           | From   | To |                                |
| <u>LIMIT</u><br>(lbs)                               |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |
| <u>RELAXATION EXTENDED</u><br><u>LIMIT</u><br>(lbs) |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |
| <u>LIMIT</u><br>(lbs)                               |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                          |                           |   |                                    |
|---|---|--------------------------|---------------------------|---|------------------------------------|
| Establishment - MOD PERME WALTHAM ABBEY |   |                          |                           | Building No. R657<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                     | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions      | Compatibility<br>Groups   | PROPOSED  |                                    |
|   |   |                          |                           | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse                    | T Earth.<br>Brick, B&F roof   | (a) 1.1<br>or<br>(b) 1.3 | (a) C or D<br>or<br>(b) C | M4 N0   | (a) 800 or<br>(b) 5000             |

If this is to replace an existing limit, please state date present limit approved. 12.3.74

| Explanatory notes | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|-------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
| iii               | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R654 Explosives Storehouse      | T           | M4 N0                      |                     |
| iv                | B. Main Office  | 130                     | R663 Office                     | U           | 16                         |                     |
| iv                | C. Main Engineering Workshop  | >400                    |                                 |             |                            |                     |
|                   | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 70                      | R665 Hazardous Chemicals Lab    | U           | M5 N4                      |                     |
| iv)               | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 130                     | R656                            |             |                            |                     |
|                   | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                            |                     |
|                   | G. Nearest road, railway, canal, river.   | 300                     | Grid Centre                     |             |                            |                     |

Date 26 OCT 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1C & D — 800Kgp  
OR  
(b) HD 1.3C — 5000Kgp  
OR  
(c) HD 1.1C & D PLUS HD 1.2E (50K<sub>g</sub> MAX 1.2E) PLUS HD 1.4 C+S TO CAPACITY

Date 12-11-81 Chief Safety Officer N.J.M. Rees

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use                     | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-------------------------|--------------------|--------|-----------------------|---------|------------------------------|
| R656         | Section workshop/office | 97                 |        | M8 N6                 |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                             |
|-----------------------------|
| Explosives in wooden boxes. |
|-----------------------------|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |   |                           |                           |                                    |
|---|---|---|---------------------------|---------------------------|------------------------------------|
| Establishment -<br><b>MOD PERME WALTHAM ABBEY</b> |   | Building No. R658<br>(If grouped with other rooms or buildings, give details) |                           |                           |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups   | PROPOSED                  |                                    |
|   |   |   |                           | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse                              | T Earth.<br>Brick, B&F roof.  | (a) 1.1<br>or<br>(b) 1.3  | (a) C or D<br>or<br>(b) C | M4 N0                     | (a) 500 or<br>(b) 4000             |

If this is to replace an existing limit, please state date present limit approved. 22.2.72

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance in Metres 2 | Number and use of building 3 | T or U 4 | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|----------------------|------------------------------|----------|-------------------------|------------------|
| iii                  | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                   | R658 Explosive Storehouse    | T        | M4 N0                   |                  |
| iv                   | B. Main Office  | 97                   | R663 Office                  | U        | 16                      |                  |
| iv                   | C. Main Engineering Workshop  | >400                 |                              |          |                         |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 70                   | R665 Hazardous Chemicals Lab | U        | M5 N4                   |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 95                   | None                         |          |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                 |                              |          |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | 350                  | Grid Centre                  |          |                         |                  |

Date 12-6-OCT-1984 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1 C&D — 500Kgs  
OR  
(b) HD 1.3 C — 4000Kgs  
OR  
(c) HD 1.1 C + D PLUS HD 1.2 E PLUS 1.4 B - TOTAL 500Kg  
(HD 1.2 E 50Kg MAX)

Date 12-11-81 Chief Safety Officer N. J. Reeves

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              | -   |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|   |
|---|
| - |
|---|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br><b>MOD PERME WALTHAM ABBEY</b> |   |                     |                         | Building No. R659 / <b>R697</b><br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Storehouse                              | T Earth.<br>Brick, B&F roof.  | 1.1                 | D                       | M3 NO   | 300                                |

If this is to replace an existing limit, please state date present limit approved. 28.2.72

| Explanatory notes, | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|--------------------|---|-------------------------|---------------------------------|-------------|-----------------|---------------------|
|                    |   |                         |                                 |             | M & N<br>5      |                     |
| iii                | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                      | R660 Explosive Storehouse       | T           | M3 NO           |                     |
| iv                 | B. Main Office  | 70                      | R663 Section Office             | U           | 16              |                     |
| iv                 | C. Main Engineering Workshop  | >400                    |                                 |             |                 |                     |
|                    | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 92                      | R665 Hazardous Chemicals Lab    | U           | M5 N4           |                     |
| iv)                | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | 68                      | None                            |             |                 |                     |
|                    | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |                                 |             |                 |                     |
|                    | G. Nearest road, railway, canal, river.   | 400                     | Grid Centre                     |             |                 |                     |

Date **26 OCT 1981** Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.1D - 300Keg OR  
300Kg TOTAL HD 1.1D PLUS HD 1.2\*D PLUS HD 1.4S + 1.4C  
(EXCLUDING HD 1.4)  
50Kg LIMIT FOR HD 1.2\*D

Date **12-11-81** Chief Safety Officer N.J. Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              | -   |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|   |
|---|
| - |
|---|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br>MOD, PERME WALTHAM ABBEY |   |                     |                         | Building No. R660<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosives Storehouse                       | T, Earth<br>Brick<br>B & F roof   | 1.1                 | D                       | M3 NO   | 350                                |

If this is to replace an existing limit, please state date present limit approved. 28 2 72

| Explanatory notes, 1 | Factor influencing Explosives limit 1   | Distance in Metres 2 | Number and use of building 3 | T or U 4 | Workers present M & N 5 | For C.S.O. use 6 |
|----------------------|---|----------------------|------------------------------|----------|-------------------------|------------------|
| iii                  | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 51                   | R659 Explosive Storehouse    | T        | M3 NO                   |                  |
| iv                   | B. Main Office  | 75                   | R663 Section Office          | U        | 16                      |                  |
| iv                   | C. Main Engineering Workshop  | >400                 |                              |          |                         |                  |
|                      | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 77                   | R662 Safety Section Office   | U        | N5                      |                  |
| iv)                  | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | 75                   | None                         |          |                         |                  |
|                      | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                 |                              |          |                         |                  |
|                      | G. Nearest road, railway, canal, river.   | 460m<br>>400         | super grid PDS               |          |                         |                  |

Date 2.6 OCT 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

HD 1.1) - 350Kgp OR  
 TOTAL QUANTITY NOT TO EXCEED 350Kg (EXCLUDING HD 1.4)  
 { BAY A HD 1.1F + 1.2F + 1.4S  
 { BAY B HD 1.1D + 1.1C + 1.2D + 1.3C + 1.4S  
 { BAY C HD 1.1B + 1.4B + 1.4S (MAX HD 1.1B 25Kg)

Date 12-11-81 Chief Safety Officer N.J. Rees

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              | -   |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|                                 |
|---------------------------------|
| Divided internally into 3 bays. |
|---------------------------------|

|   |     |
|---|-----|
| 3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|---|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |                     |                         |   |   |
|--|---|---------------------|-------------------------|---|---|
| Establishment -<br>Royal Ordnance, Waltham Abbey |   |                     |                         | Building No R 666<br>(If grouped with other rooms or buildings, give details) |   |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |   |
|  |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs)            |
| Explosive processing<br>and storage trials       | U, 13" Brick<br>Board & Felt roof   | 1.1<br>& 1.3        | D & G                   | M3N2  | 30kg. in<br>ovens<br><br>+ 5kg. in<br>process |

If this is to replace an existing limit, please state date present limit approved. 12-8-81

| Explanatory notes | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                          | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|-------------------|---|-------------------------|--|-------------|----------------------------|---------------------|
| iii               | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 80<br><br>50            | R 657 Explosive Storehouse.<br><br>R 691 Locker Magazine | T<br><br>U  | M4N0<br><br>M2N0           |                     |
| iv                | B. Main Office  | 157                     | R 663 ISRD Office  | U           | N 16                       |                     |
| iv                | C. Main Engineering Workshop  | >400                    |  |             |                            |                     |
|                   | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 67                      | Hazardous Chemicals Labs.                                | U           | M5N4                       |                     |
| iv)               | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf |                         |  |             |                            |                     |
|                   | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |  |             |                            |                     |
|                   | G. Nearest road, railway, canal, river.   | 365<br>245              | Lea Navigation Grid (centre line)                        |             |                            |                     |

Date 10-10-85 Signature *A. Belts* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

CONCESSIONARY LIMITS APPROVED FOR THE PERIOD UNTIL 1/1/90  
SUBJECT TO THE FOLLOWING ENDORSEMENTS :- ① BAY 1 Limits approved for storage only of 5kg in each of the five ovens on the east wall. No explosives to be held or handled elsewhere in the bay. Alternatively 5kg may be stored in the Humidity Cabinet PROVIDED that no other explosives are present in Bay 1 ② BAYS 3 & 4 Limits approved for a total of 5kg between Bays 3 and 4

Date 12-4-88 Chief Safety Officer *N. J. Reeves*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Building divided internally into 4 bays by 9" brick walls. Ovens in Bay 1 separated by 9" brick walls. Bay 2 inert storage. Only 1 piece of equipment in Bay 3 in use at a time. Bay 4 will only be used for 1 of D or G compatibility group at a time, and separate benches kept for each group.

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes</b> |
|--|------------|

4. Relaxation approved

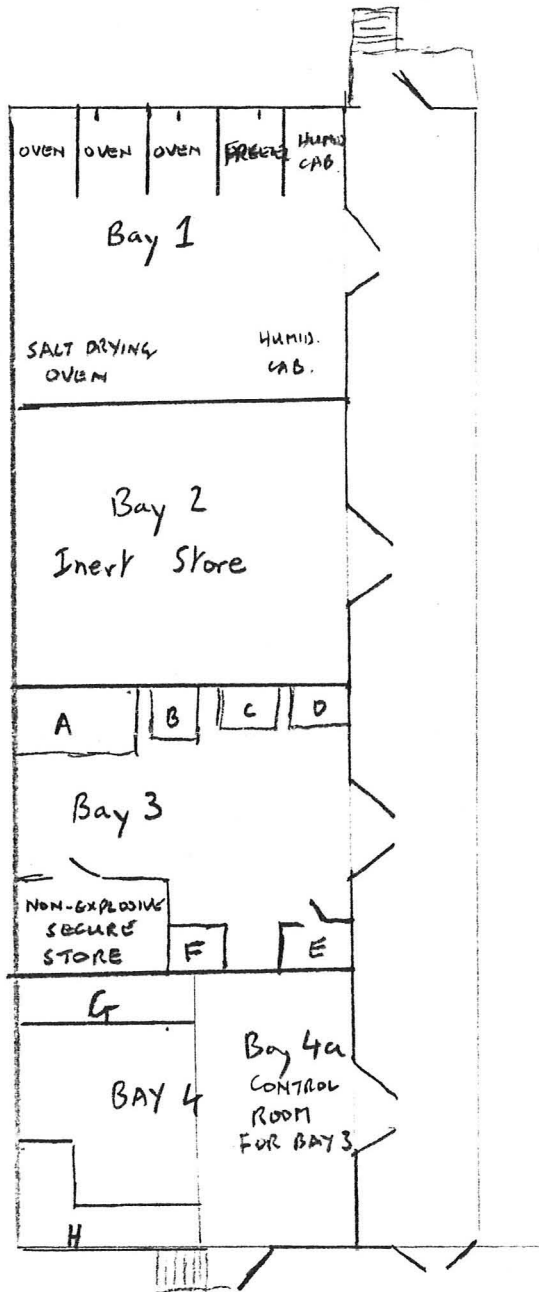
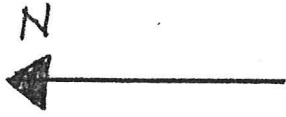
| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division |  | Period |    | Signature                                |
|-----------------|--|--------|----|--|
|                 |  | From   | To |  |
| Limit (Kgs)     |  |        |    | Chief Safety Officer _____<br>Date _____ |



R 666



Bay 1 Ovens, Freezer & Humidity Cabinet.  
5 Kg max each 1-1 or 1-3 C, D or G.  
Oven Bays at East End 9" block walls  
separating them.

- A = Armoured cupboard
- B = 5kg mixer
- C = Press
- D = Bench for 500g mixer or extruder (10kg)
- E = Salt granules in dust tight enclosure
- F = Press

G = Bench for unheating & packing  
HE (5kg)

H = Bench for handling salts and  
Compatibility Group G materials  
(5kg)

- N.B. (1) Only process in Bay 3 in use  
at a time.  
(2) Only activities on one bench in  
Bay 4 at a time

Duplicate

E1



DIRECTOR, SAFETY SERVICES ORGANISATION, MINISTRY OF DEFENCE (PE),  
STATION SQUARE HOUSE, ST MARY CRAY, ORPINGTON, KENT BR5 3RE  
TEL: 0689 77378 INT TELEX: 896866 FAX: 0689 78427

FACSIMILE MESSAGE

| <u>Precedence</u> | <u>Classification</u> | <u>Date</u> | <u>Number of Pages</u><br>(including this) |
|-------------------|-----------------------|-------------|--|
| ROUTINE           | U/C                   | 2/11/89     | ONE  |

TO: MR. A. T. BETTS <sup>6.12.89</sup> RO WALTHAM ABBEY -  
 COPY TO: DR. J. R. HUGHES ESO BARDE F/H

FROM: PETER STONE OUR REFERENCE: D/S/11/20/1  
 MESSAGE: FURTHER TO OUR TELEPHONE CONVERSATION

THE EXPLOSIVES LICENCE FOR BUILDING R666 ON THE SOUTH SITE AT R.O. WALTHAM ABBEY IS EXTENDED FOR A PERIOD OF A FURTHER 12 MONTHS. THE LICENCE WILL NOW EXPIRE ON 1/1/91

Peter Stone  
 for Director DSSO(PE)

COPY TO: LICENCE FOLDER.

2.11.89. 11.0am

MESSAGE TO RECIPIENT:

1. Please deliver this document to the addressee. If unable to do so please contact originator.

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of each category of explosive - separately if possible. Give charge to weight ratio of Z items and say if joined to Y items.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. Sub Offices or Auxiliary Workshops within the Outside Quantity Distance, (see Section 6, Appendix 6C of Av.P42 Revised 1975) will be entered at E and described in more detail at 1 overleaf.
- v. Mention should be made here of all other occupied buildings within the OQD except those in Classes A & D which have already been considered.  
An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- vi. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                                  |  |                                  |                       |  |                                    |
|----------------------------------|--|----------------------------------|-----------------------|--|------------------------------------|
| Establishment - <b>ERDE</b>      |  |                                  |                       | Building No. <b>R667</b><br>(if grouped with other rooms or buildings, give details) |                                    |
| Use                              | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse, or<br>if (U), construction of<br>building, walls and roof | Quantity<br>Distance<br>Category | Explosive<br>Group(s) | PROPOSED   |                                    |
|                                  |  |                                  |                       | Man Limit M&N<br>(Note i)  | Explosive Limit<br>(Note ii) (Kgs) |
| <b>Explosives<br/>Laboratory</b> | <b>U Brick<br/>Light Roof</b>  | <b>ANY</b>                       | <b>ANY</b>            | <b>M 3<br/>N 2</b>   | <b>235</b>                         |

If this is to replace an existing limit, please state date present limit approved. **1 1 1971**

| Explanatory notes | Factor influencing Explosives limit  | Distance in Metres | Number and use of building                                   | T or U     | Workers present M & N | For C.S.O. use |
|-------------------|--|--------------------|--|------------|-----------------------|----------------|
|                   | 1  | 2                  | 3  | 4          | 5                     | 6              |
| iii               | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed | 158                | R657 Magazine  | T<br>Earth | M 3<br>N 2            |                |
| iv                | B. Main Office   | 255                | R663 ISRG Offices  | U          | -                     |                |
| iv                | C. Main Engineering Workshop   | -                  | -  | -          | -                     |                |
|                   | D. Nearest Explosives Process Building<br>(a) traversed<br>(b) untraversed                       | 146                | R672 Preparation and storage of pyrotechnics etc             | U<br>Brick | M 3<br>N 2            |                |
| iv)<br>v)         | E. Give numbers of all other occupied buildings within the OQD and give details at 1 overleaf    | -                  | -  | -          | -                     |                |
|                   | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                    | 21<br>710          | Outside fence to flood relief channel.<br>Lock Keepers House | -<br>-     | -<br>-                |                |
|                   | G. Nearest road, railway, canal, river.  | 247                | Lea Navigation   | -          | -                     |                |

Date **18th December 1975** Signature **A. J. BELLAMY** Head of Establishment

Unrelaxed Explosive Limits

Category X Y Z ZZ  
Limit (Kgs)  
Date **18/12/75** Chief Safety Officer **[Signature]**

See overleaf for relaxations (where appropriate).

for C.S.O. use



1. Details of Buildings shown at E overleaf.

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3. Relaxation approved.

| Category    | X | Y | Z | ZZ | Period |    | Signature                                |
|-------------|---|---|---|----|--------|----|--|
|             |   |   |   |    | from   | to |  |
| Limit (Kgs) |   |   |   |    |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note vi).

| Category    | X | Y | Z | ZZ | Period |    | Signature                                |
|-------------|---|---|---|----|--------|----|--|
|             |   |   |   |    | from   | to |  |
| Limit (Kgs) |   |   |   |    |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note vi).

| Category    | X | Y | Z | ZZ | Period |    | Signature                                |
|-------------|---|---|---|----|--------|----|--|
|             |   |   |   |    | from   | to |  |
| Limit (Kgs) |   |   |   |    |        |    | Chief Safety Officer _____<br>Date _____ |



**Procurement Executive Ministry of Defence**  
SAFETY SERVICES ORGANISATION ROOM 602

Block A-B Station Square House St Mary Cray  
Orpington Kent BR5 3RE

Telex 896866

Telephone Orpington 32111 ext 16

---

The Director  
PERME  
Powdermill Lane  
Waltham Abbey  
Essex  
EN9 1BP.  
Attn: Mr A T Betts, Estab. SO

**Your reference**

**Our reference**

D/Safety/11/101/1B

**Date**

2 February 1983

---

RELAXED LICENCE FOR R667 FACILITIES

1. This licence is extended to June 30 1983 to allow refurbishing of this facility to be completed.
2. Please attach a copy of the memo to the licence you hold.

J WALKER  
for Chief Safety Officer

RS

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |   |                         |                           |                                    |
|--|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment -<br>ROF, Waltham Abbey                              |   | Building No. R672<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|  |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Primary Explosive<br>Testing Labs and<br>Pyrotechnic<br>Processing | U. Brick, board<br>and felt roof  | 1.1   | A,B                     | M6 N4                     | 2 kg                               |
|  |   | +   | G                       |                           | 2 kg                               |
|  |   | 1.1   |                         |                           |                                    |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3   | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|-----------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence  | 22                      | R641 Primary explosive magazine   | T           | M2 NO                      |                     |
|                     | A. Nearest Explosives Storage Unit  | 7                       | R690 Pyrotechnic Storehouse       | U           | M2 NO                      |                     |
|                     | (a) traversed<br>(b) untraversed  |                         |                                   |             |                            |                     |
| iv                  | B. Main Office  | 115                     | R663 ISRG Office                  | U           | N11                        |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |                                   |             |                            |                     |
|                     | D. Nearest Explosives Process Building  | 260                     | R646 Blending House               | T           | M4 NO                      |                     |
|                     | (a) traversed and<br>(b) untraversed  | 20                      | R651 Primary Explosive processing | U           | M6 N4                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | -                       |                                   |             |                            |                     |
|                     | Outside Perimeter Fence   |                         |                                   |             |                            |                     |
|                     | F. Nearest building (dwelling house, church, etc.)  | 400                     | Bungalow at Hawes Lane Nursery    |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 285                     | Grid                              |             |                            |                     |

Date 22nd May 1984 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**  
UNIT RISK TO BE NO MORE THAN 2Kg

Date 25-7-85 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

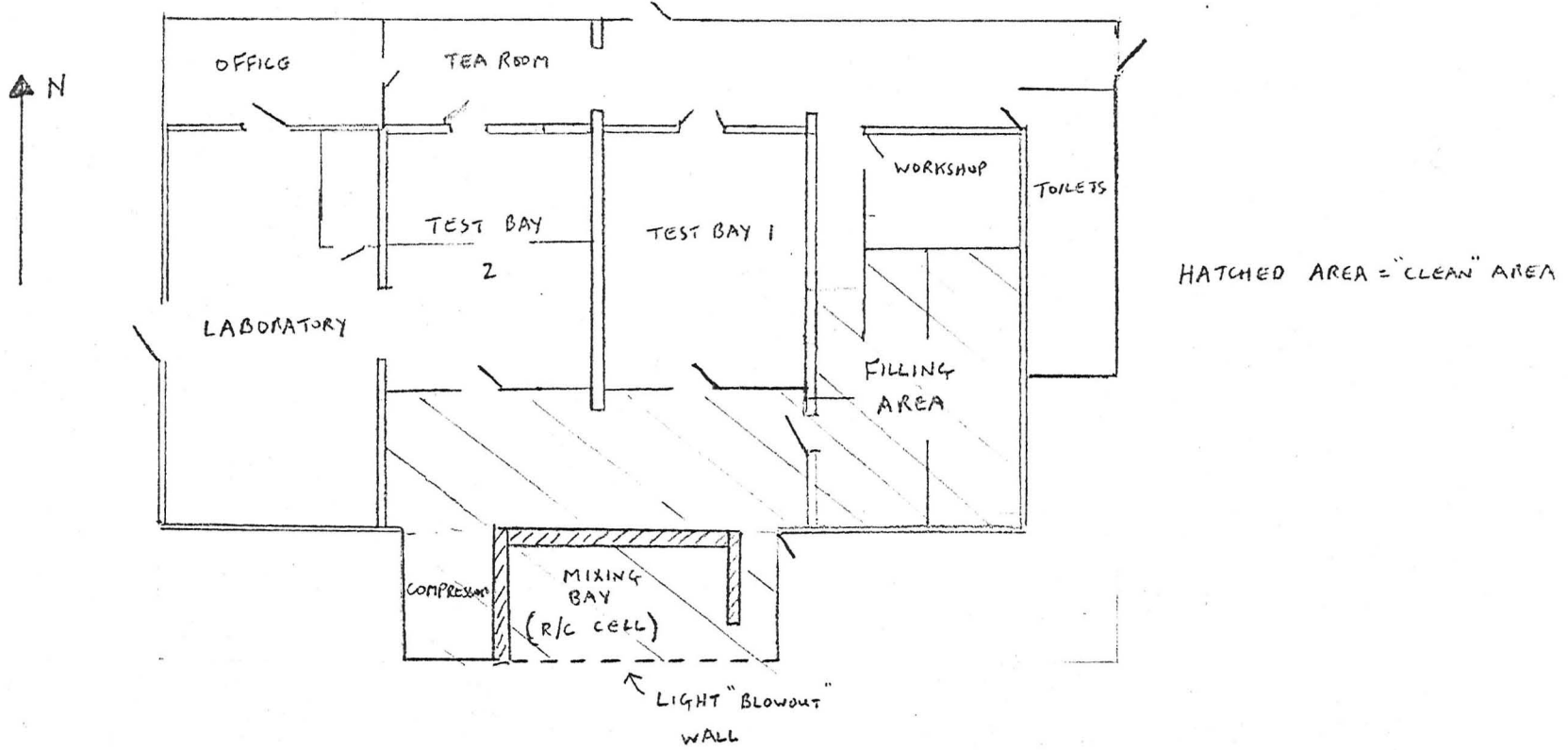
4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

R 672



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |   |                         |                           |                                    |
|--|---|---|-------------------------|---------------------------|------------------------------------|
| Establishment -<br>ROF, Waltham Abbey              |   | Building No. R673<br>(If grouped with other rooms or buildings, give details) |                         |                           |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions   | Compatibility<br>Groups | PROPOSED                  |                                    |
|  |   |   |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs) |
| Offices and<br>Laboratories,<br>Primary Explosives | U. Brick, board<br>and felt roof  | 1.1   | A                       | M8 N6                     | 0.3                                |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3   | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|----------------------------|---------------------|
| iii                 | A. Inside Perimeter Fence<br>Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 67<br>25                | R641 Primary explosive magazine<br>R642 Locker magazine                   | T<br>U      | M2 NO<br>M2 No             |                     |
| iv                  | B. Main Office  | 60                      | R663 ISRG Office  | U           | N11                        |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |   |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 265<br>20               | R647 Composite Propellant processing<br>R652 Primary Explosive processing | T<br>U      | M4 N3<br>M6 N4             |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf | -                       |   |             |                            |                     |
|                     | F. Outside Perimeter Fence<br>Nearest building (dwelling house, church, etc.)                         | 340                     | Bungalow at Hawes Lane Nursery  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 375                     | Grid  |             |                            |                     |

Date 22nd May 1984 Signature A/Bob Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 25-7-85 Chief Safety Officer N J Imrees

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Explosives handled in armoured cupboards, max unit risk 50 g, usually much smaller.

|   |     |
|---|-----|
| 3. Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|---|-----|

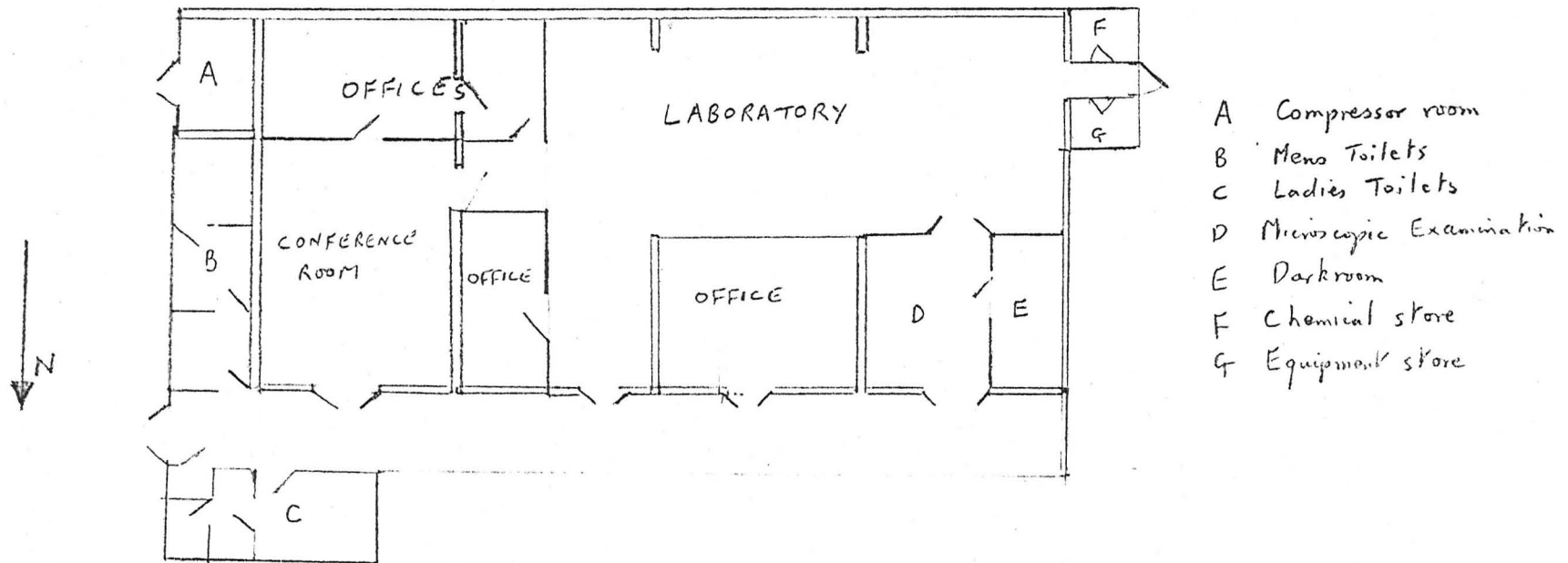
4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

R 673



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |  |                         |                           |                                     |
|--|---|--|-------------------------|---------------------------|-------------------------------------|
| Establishment - <b>PERME WALTHAM ABBEY ESSEX</b> |   | Building No. <b>R680</b><br>(If grouped with other rooms or buildings, give details) |                         |                           |                                     |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | PROPOSED                  |                                     |
|  |   |  |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs)  |
| <b>2 Locker Magazine</b>                         | <b>Standard ERDE Pattn</b>  | a) 1.1<br>or<br>b) 1.3   | <b>Any</b>              | <b>M2NO</b>               | a) 2kg or<br>b) 5kg (per<br>locker) |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                                   | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 4<br>135                | R691 Detonator Store<br>R657 Explosives Storehouse                | U<br>T      | M2NO<br>M3NO               |                     |
| iv                  | B. Main Office  | 240                     | R663 Office   | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | > 400                   |   |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 8<br>90                 | R667 Explosives Preparation<br>(Rarely used)<br>R668 Laboratories | U<br>U      | M3NO<br>M3NO               |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |   |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | >400                    |   |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 185                     | Grid(Centre Line)   |             |                            |                     |

Date 15/8/80 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1 - 2 kg } per locker  
OR (b) HD 1.3 - 5 kg }

Date 6/11/80 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes</b> |
|--|------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|   |   |                     |                         |   |                                    |
|---|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br><b>MOD PERME WALTHAM ABBEY</b> |   |                     |                         | Building No. R683<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use   | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|   |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Explosive Firing Pit                              | T Earth & Sleepers<br>Sleeper roof  | 1.1                 | D                       | M2 NO   | 1                                  |

If this is to replace an existing limit, please state date present limit approved. 4.3.69

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3             | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 70                      | Proposed Expense Magazine on Burning Ground |             |                            |                     |
| iv                  | B. Main Office  | 290                     | R663 Section Office                         | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |   |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 175                     | <b>R 672</b><br>Initiatory Explosive Lab    | U           | M6 N4                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OGD and give details at 1 overleaf | -                       |   |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 337                     | Bungalow at Hawes Lane Nursery              |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 257                     | Grid Centre                                 |             |                            |                     |

Date **26 OCT 1981** Signature *B.H. Newman* Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

AD 1.1D - 1Kg.

Date **12-11-81** Chief Safety Officer *N. ImRees*

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              | -   |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|   |
|---|
| Construction of pit is such that no fragments escape. |
|---|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |                     |                         |   |                                    |
|--|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -<br><p style="text-align: center;">MOD, PERME WALTHAM ABBEY</p> |   |                     |                         | Open range,<br>Building No. SW of R683<br>(If grouped with other rooms or<br>buildings, give details) |                                    |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | P R O P O S E D   |                                    |
|  |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Firing Trials  | Open ground   | 1.1                 | D                       | 2   | M3 N2                              |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3 | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---------------------------------|-------------|----------------------------|---------------------|
|                     |   |                         |                                 |             |                            |                     |
| iv                  | B. Main Office  | 350                     | R663 Section Office             | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |                                 |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 50                      | R683 Explosive Firing Pit       | T           | M2 NO                      |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OOD and give details at 1 overleaf | -                       |                                 |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 300                     | Bungalow at Hawes Lane Nursery  |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 272                     | Grid Centre                     |             |                            |                     |

Date 26 OCT 1981 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

H) 1.1 D - 2Kgs

Date 10-12-81 Chief Safety Officer W. M. P. ...

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

Open site used in conjunction with R683, ie both Facilities would not be firing at same time.  
 Firings do not give rise to large fragments.  
 Max charge 0.5 kg

|    |  |     |
|----|--|-----|
| 3. | Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|----|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



# Health & Safety Executive

Magdalen House  
Stanley Precinct  
Bootle L20 3QZ  
Merseyside

Telephone Direct line 051-951  
Switchboard 051-951 4000  
Telex 628235  
Facsimile 051-922 7918

---

Dr D J Hewkin  
Royal Ordnance  
Sewardstone Road  
WALTHAM ABBEY  
Essex  
EN9 1AY

Your reference RO/WA/6/6/3/1  
Our reference XI4111/R15/3  
Date 10 February 1987

---

Dear Dr Hewkin

I refer to your letter dated 16 December, about the proposed 12 m drop test facility, and the previous meeting with your consultant, Mr B Smith, on 26 November last.

At the meeting with Mr Smith, I agreed to license the facility for the testing of explosives substances only, provided the explosive limit would be 10 kg of Hazard Division 1.1, or 25 kg of Hazard Division 1.3. I suggested to Mr Smith that he should ask you to agree the reduced quantity for Hazard Division 1.1 in a letter to me. Am I right to assume that you accept this?

The so-called "Conditions for grant of HSE licence" are, in fact, Mr Smith's suggestions to be incorporated into your Working Instructions for the building. They are not conditions for the grant of a licence. Safe systems of work are a general requirement for all your work activities, and are not routinely vetted at all. No doubt you will wish to make additional arrangements. For example, you may well have decided that in order to ensure that the lower quantity limit proposed is not exceeded, all substances are submitted to a LSV test prior to the 12 m drop test.

Once I have drafted the necessary documents, I will send them to you. In the meantime, I have no objections to you using the facility, as described in Mr Betts' application dated 6/3/86, provided only substances are tested, and the quantity limitations above are adopted.

Yours sincerely

M H GOOSE  
HM Inspector of Explosives



# ROYAL ORDNANCE

Defence systems, sub-systems and components

Mr M H Goose  
HMIE - HSE  
Magdalen House  
Stanley Precinct  
BOOTLE  
Merseyside  
L20 3QZ

Explosives Division  
Research and  
Development Centre  
Sewardstone Road  
Waltham Abbey  
Essex  
EN9 1AY  
England  
Telephone 0992 713030  
Telex 267455

16 December 1986

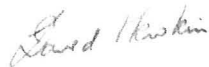
RO/WA/6/6/3/1

Dear Mr Goose

12 METRE DROP TEST - REVISED APPLICATION FOR  
R687 AT WALTHAM ABBEY

I have received a copy of conditions under which HSE consider that the site can be used. I am content to work with these conditions and will operate to them if the licence is granted. A copy of the conditions is attached for completeness.

Yours sincerely



D J HEWKIN  
Manager Hazard Assessment

*Copy Mr A Bell's ESO*

WALTHAM ABBEY - 12 METRE DROP TEST

Conditions for Grant of HSE Licence.

1. The Licence will be valid only for packaged explosives substances. No articles or cased explosives packaged or unpackaged will be tested on the rig.
2. When a new explosive composition or a variation of a previously tested composition is presented for test as HD 1.3, the packaged substance is to be certified at Superintendent level that there is no reason to suppose that an event would be worse than that expected from a packaged HD 1.3 substance in the amount to be tested and in the type of packaging used.
3. The packaging for the explosives to be tested will be either of wood or fibre board and so far as is reasonably practicable no metal fittings will be used.
4. The package containing the explosives will be slung from the release unit of the lifting equipment by means of a non-metallic rope or sling.
5. All metal objects will be removed as far as is practicable from the explosives when they are in effectively untraversed position. The time the packages under test are held at the top of the tower will be kept as short as possible and will never exceed five minutes.
6. No package will be dropped more than once.
7. All substances will have been subjected to a small bonfire test before similar substances are presented for drop test.
8. No tests will be carried when weather conditions are such that the effects of an event would be enhanced.
9. All personnel on site shall be under cover, in a safe place when the drop is made.

# ROYAL ORDNANCE

Defence systems, sub-systems and components

Mr M H Goose  
HM Inspector of Explosives  
Health and Safety Executive  
Magdalen House  
Stanley Precinct  
BOOTLE  
Merseyside  
L20 3QZ

**Explosives Division**  
Research and  
Development Centre  
Sewardstone Road  
Waltham Abbey  
Essex  
EN9 1AY  
England  
Telephone 0992 713030  
Telex 267455

18 February 1987

RO/WA/6/6/3/1

Dear Mr Goose

RE: XI 4111/R15/3

Thank you for your letter. I am content to operate within the limits you propose (ie 25 Kg HD 1.3 or 10 Kg HD 1.1 and explosive substances only) and look forward to receiving the documents in due course.

Yours sincerely

*D J Hewkin*

D J HEWKIN  
Manager Hazard Assessment



MINISTRY OF TECHNOLOGY EXPLOSIVES LIMITS

| ESTABLISHMENT - <u>E.R.D.E.</u> |  | BUILDING No. <u>R.687</u><br>(STATE BUILDINGS WITH WHICH GROUPED - IF ANY) |                      |                 |                        |
|---------------------------------|--|--|----------------------|-----------------|------------------------|
| (Where appropriate).            |  |  |                      |                 |                        |
| Use                             | Protective State - Traversed (T) or Untraversed (U) - State type of Traverse, or, if (U), construction of building | Safety Distance Category   | Explosives Group (s) | P R O P O S E D |                        |
|                                 |  |  |                      | MAN LIMIT       | EXPLOSIVES LIMIT (lbs) |
| Dropping Trials                 | Open   | ANY  | ANY                  | 3               | 15                     |

If this is to replace an existing limit, please state date present limit approved -

| Factor Influencing Explosives Limit<br>1                               | Distance in feet<br>2 | No. and use of building<br>3                     | T or U<br>4        | Man Limit<br>5 | For C.S.O. use<br>6 |
|--|-----------------------|--|--------------------|----------------|---------------------|
| <b>INSIDE PERIMETER FENCE</b>  |                       |  |                    |                |                     |
| A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed | 1,135                 | R.658 Magazine                                   | T Earth            | 3              |                     |
| B. Main Office   | 870                   | R.663 ISRG Offices                               | U                  | -              |                     |
| C. Main Engineering Workshop   | 970                   | R.662 ISRG Workshop                              | U                  | -              |                     |
| D. Nearest Process Building<br>(If untraversed state construction)     | 790                   | R.671 Packaging                                  | U Brick light Roof | 4              |                     |
| E. Any other occupied building nearer than D                           | 650<br>625            | R.672 Photography<br>R.673 Engineering Research. | U<br>U             | -              | QUERY USE.          |
| <b>OUTSIDE PERIMETER FENCE</b>   |                       |  |                    |                |                     |
| F. Nearest Building<br>(Dwelling house Church, etc.)                   | > 2,500               | House at end of Avey Lane                        |                    |                |                     |
| G. Nearest Road, Railway, Canal, River.<br>(Give details)              | 1,950                 | Lea Navigation                                   |                    |                |                     |

Date 23.1.69 Signature [Signature] Head of Establishment

UNRELAXED EXPLOSIVES LIMITS

|   |   |   |   |    |
|---|---|---|---|----|
| Category  | X | Y | Z | ZZ |
| (i) Limit (lbs)                                 |   |   |   |    |
| (ii) Special Cases covered (without relaxation) |   |   |   |    |

SEE OVERLEAF FOR RELAXATIONS (Where appropriate)  
Gen. Form 49 (Revised)

[Signature]  
Chief Safety Officer

4.3.69 (Date)

(1) Charge/Weight Ratio of Category Z Items

| ITEM  | CHARGE/WT. RATIO |
|-------|------------------|
| _____ | %                |
| _____ | %                |
| _____ | %                |

(2) (i) Distance for Peak Pressure of 15 p.s.i. .... ft. (Cats. Z and ZZ only)

(ii) Inside Storage Safety Distance\* ..... ft. (Per Explosives Regs.1960)

(3) Buildings within either of the distances at (2)

| Building No. | Use | Distance (ft) | T or U | Man Limit | Remarks |
|--------------|-----|---------------|--------|-----------|---------|
|              |     |               |        |           |         |

(Include all buildings other than Latrines and Services Installations normally unattended)

(4) Any other Factors Influencing Relaxation

(e.g. Maximum Unit risk - nature of explosives (RDX/TNT, Neonite, S.R. .... etc.) - attach sketch showing distribution of explosive within building)

(5) RELAXATION APPROVED

| Category  | <u>X</u> | <u>Y</u> | <u>Z</u> | <u>ZZ</u> | Period |    | Signature                      |
|---|----------|----------|----------|-----------|--------|----|--------------------------------|
|   |          |          |          |           | From   | To |                                |
| <u>LIMIT</u><br>(lbs)                               |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |
| <u>RELAXATION EXTENDED</u><br><u>LIMIT</u><br>(lbs) |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |
| <u>LIMIT</u><br>(lbs)                               |          |          |          |           |        |    | Chief Safety Officer<br>(Date) |



EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |  |                         |                           |                                     |
|--|---|--|-------------------------|---------------------------|-------------------------------------|
| Establishment - <b>PERME WALTHAM ABBEY ESSEX</b> |   | Building No. <b>R688</b><br>(If grouped with other rooms or buildings, give details) |                         |                           |                                     |
| Use  | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions  | Compatibility<br>Groups | PROPOSED                  |                                     |
|  |   |  |                         | Man Limit M&N<br>(Note i) | Explosive Limit<br>(Note ii) (Kgs)  |
| <b>2 Locker Magazine</b>                         | <b>Standard ERDE Pattn</b>  | a) 1.1<br>or<br>b) 1.3   | <b>Any</b>              | <b>M2N0</b>               | a) 2kg or<br>b) 5kg (per<br>locker) |

If this is to replace an existing limit, please state date present limit approved.

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3      | T or U<br>4 | Workers present M & N<br>5 | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|--------------------------------------|-------------|----------------------------|---------------------|
| iii                 | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 67                      | R655 Explosives Storehouse           | U           | M3N0                       |                     |
| iv                  | B. Main Office  | 225                     | R663 Offices                         | U           | 16                         |                     |
| iv                  | C. Main Engineering Workshop  | > 400                   |                                      |             |                            |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 6                       | R656 Explosives Hardware Preparation | U           | M5N4                       |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                         |                                      |             |                            |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400                   |                                      |             |                            |                     |
|                     | G. Nearest road, railway, canal, river.   | 180                     | Grid (Centre line)                   |             |                            |                     |

Date 15/8/80 Signature B.H. Newman Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

(a) HD 1.1 - 2kg } per locker  
OR (b) HD 1.3 - 5kg }

Date 6/11/80 Chief Safety Officer NJ on Rues

See overleaf for relaxations (where appropriate)



1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |            |
|--|------------|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | <b>Yes</b> |
|--|------------|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|                           |   |                     |                         |   |                                    |
|---------------------------|---|---------------------|-------------------------|---|------------------------------------|
| Establishment -           |   | ROF, Waltham Abbey  |                         | Building No. R690<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                       | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|                           |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Pyrotechnic<br>Storehouse | U. Brick<br>R/C Roof  | 1.3                 | G                       | M2 NO   | 25                                 |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes , | Factor influencing Explosives limit<br>1  | Distance in Metres<br>2 | Number and use of building<br>3                           | T or U<br>4 | Workers present | For C.S.O. use<br>6 |
|---------------------|---|-------------------------|---|-------------|-----------------|---------------------|
|                     |   |                         |   |             | M & N<br>5      |                     |
| iii                 | A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed                                | 42                      | R641 Primary explosive magazine                           | T           | M2 NO           |                     |
|                     |   | 89                      | R642 Locker Magazine                                      | U           | M2 NO           |                     |
| iv                  | B. Main Office  | 120                     | R663 ISRG Offices   | U           | N11             |                     |
| iv                  | C. Main Engineering Workshop  | >400                    |   |             |                 |                     |
|                     | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 260                     | R646 Blending House                                       | T           | M4 NO           |                     |
|                     |   | 7                       | R672 Primary explosive testing and pyrotechnic processing | U           | M6 N4           |                     |
| iv)                 | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf | -                       |   |             |                 |                     |
|                     | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | 415                     | Bungalow at Hawes Lane Nursery                            |             |                 |                     |
|                     | G. Nearest road, railway, canal, river.   | 360                     | Grid  |             |                 |                     |

Date 22nd May 1984 Signature A. B. Sells Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

**PROPOSED LIMITS APPROVED**

Date 25-7-85 Chief Safety Officer N. J. M. Rees

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & N | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

|  |
|--|
|  |
|--|

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | YES |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |



MINISTRY OF DEFENCE (PROCUREMENT EXECUTIVE) - EXPLOSIVES LIMITS

EXPLANATORY NOTES -

- i. Both the maximum permitted Man Limit (M) and the number normally present (N) are required.
- ii. State quantity of explosive in each Hazard Division.
- iii. The perimeter fence marks the boundary of the Establishment. It is not necessarily the "Danger Building" Fence.
- iv. An occupied building is one that is normally occupied during working hours, as distinct from one occasionally visited.
- v. The detail of buildings and distances shown below should be checked to ensure no change has taken place before requesting an extension to the period covered by existing relaxation.

|  |   |                     |                         |   |                                    |
|--|---|---------------------|-------------------------|---|------------------------------------|
| Establishment - PERME, Waltham Abbey     |   |                     |                         | Building No. R691<br>(If grouped with other rooms or buildings, give details) |                                    |
| Use                                      | Protective State -<br>Traversed (T) or<br>Untraversed (U) -<br>State type of Traverse,<br>and construction of<br>building, walls and roof | Hazard<br>Divisions | Compatibility<br>Groups | PROPOSED  |                                    |
|  |   |                     |                         | Man Limit M&N<br>(Note i)   | Explosive Limit<br>(Note ii) (Kgs) |
| Detonator and<br>Pyrotechnic<br>Storage. | U 9" Brick<br>6" R/C Roof   | 1.1                 | B                       | M 2 N 0   | 3                                  |
|  | 2 Bays divided by<br>9" Bricks Wall   | 1.1 or<br>1.3       | G                       |   | 5                                  |

If this is to replace an existing limit, please state date present limit approved. -

| Explanatory notes | Factor influencing Explosives limit   | Distance in Metres | Number and use of building  | T or U | Workers present M & N | For C.S.O. use |
|-------------------|---|--------------------|-----------------------------|--------|-----------------------|----------------|
|                   | 1   | 2                  | 3                           | 4      | 5                     | 6              |
| iii               | Inside Perimeter Fence<br>A. Nearest Explosives Storage Unit<br>(a) traversed<br>(b) untraversed      | 4                  | R680 Locker Magazine        | U      | M2 NO                 |                |
|                   |   | 130                | R657 Explosives Storehouse  | T      | M3 NO                 |                |
| iv                | B. Main Office  | 220                | R663 Office                 | U      | 16                    |                |
| iv                | C. Main Engineering Workshop  | > 400              |                             |        |                       |                |
|                   | D. Nearest Explosives Process Building<br>(a) traversed and<br>(b) untraversed                        | 25                 | R667 Explosives Preparation | U )    | M3 N2                 |                |
|                   |   | 55                 | R666 " "                    | U )    |                       |                |
| iv)               | E. Give numbers of all occupied non-explosive buildings within the OQD and give details at 1 overleaf |                    |                             |        |                       |                |
|                   | Outside Perimeter Fence<br>F. Nearest building (dwelling house, church, etc.)                         | > 400              |                             |        |                       |                |
|                   | G. Nearest road, railway, canal, river.   | 190                | Grid (centre line)          |        |                       |                |

Date 27-8-82 Signature [Signature] Head of Establishment

Unrelaxed Explosive Limits (leave blank for CSO's use)

PROPOSED LIMITS APPROVED

Date 22-8-83 Chief Safety Officer [Signature]

See overleaf for relaxations (where appropriate)

1. Details of Buildings shown at E overleaf. (A sketch of the area should be attached)

| Building No. | Use | Distance in metres | T or U | Workers present M & H | Remarks | Leave this column for C.S.O. |
|--------------|-----|--------------------|--------|-----------------------|---------|------------------------------|
|              |     |                    |        |                       |         |                              |

2. Brief reference to any factors influencing the relaxation such as special procedures or written instructions that counter the additional potential hazard of the building:-

R667 is due to be replaced by R666. North Bay used for detonator storage, South Bay currently used as pyrotechnic store, but may be used as extra detonator store in future (not mixed storage).

3.

|  |     |
|--|-----|
| Is the fire cover in accordance with the recommended Establishment Fire Risk Classification? | Yes |
|--|-----|

4. Relaxation approved

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

Relaxation Extended (See Note v).

| Hazard Division | Period |    | Signature                                |
|-----------------|--------|----|--|
|                 | From   | To |  |
| Limit (Kgs)     |        |    | Chief Safety Officer _____<br>Date _____ |

