

Our Ref: FOI2019/08622

Ministry of Defence Main Building Whitehall London SW1A 2HB United Kingdom

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E-mail:

DNO-Secretariat Team (MULTIUSER)



16 December 2019

Dear

Thank you for your email requesting the following information:

File reference: AB 54/101

As confirmed previously, we have treated your correspondence as a request for information under the Freedom of Information Act 2000 and we can advise that the Ministry of Defence (MOD) holds information in scope of your request.

We attach the following document:

File AB 54/101 - Meteorological work at atomic energy establishments

If you wish to complain about the handling of your request, or the content of this response, you can request an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail CIO-FOI-IR@mod.gov.uk). Please note that any request for an internal review should be made within 40 working days of the date of this response.

If you remain dissatisfied following an internal review, you may raise your complaint directly to the Information Commissioner under the provisions of Section 50 of the Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. The Information Commissioner can be contacted at: Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website at https://ico.org.uk/.

Yours sincerely,

Defence Nuclear Organisation Secretariat

RP 15 4 2	FILE TITLE ATOMIC ENERGY RESEARCH ESTABLISHMENT HARWELL OFF METEOROLOGICAL WORK BY ESTABLISHMENTS. CLOSE 1 941 FILE BEGINS JAN. 68. FILE ENDS TAN 1970 INDEX HEADINGS							
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RP 16/4/2 RCH ESTABLISHI ivision, Building



ATOMIC ENERGY RESEARCH ESTABLISHMENT.

Health Physics and Medical Division, Building 364.

DIDCOT, BERKS.

Your reference:
Our reference:

telegrams: ATEN, ABINGDON telex: 83135 telephone: ABINGDON 4141 EXT 4604

2nd January, 1970.

Miss P. M. Bryant, R.P.D., Building 10.23.

Dear Pam,

There has been a rearrangement of some of the dials and recorders for wind speed and direction at A.E.R.E. as a consequence of the closure of B.E.P.O., and the transfer of the Site Emergency control room from Building 1 to Building 364.6. I have marked the changes in red on a Xerox copy of the form G16879/LG/8/68/70, which we originally returned as requested in your letter dated 23rd August, 1968.

Would you please take any necessary action on these amendments.

Yours sincerely,

Ted

J. E. Johnston.

Enc.

<u></u>	
Name of Atomic Energy Site with Lat. and Long.	ATOMIC ENERGY RESEARCH
Associated 24 hr Meteorological Office	UPAVON WILTS
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	THREE
Location of each set of dials	BUILDING DIALS AND RECORD 201 BUILDING (DIALS ONLY)
	BUILDING 220 (DIALS ONLY). 4 — MILE MELLEN.
From which set of dials are readings given to your 24 hr Met. Office?	BUILDING X 364.6
LOW LEVEL How many sets of dials are there recording wind speed and direction?	FOUR
Location of each set of dials	BUILDING & CDIALS AND AFCOM
	3 775 (DIALS ONLY) BUILDING 1 (DIALS ONLY)
From which set of dials are readings given to your 24 hr Met. Office?	\$ 501201NG X 364.6

· * O

THE RECORDERS INSTALLED IN BUILDING ARE CHECKED DAILY AND ANY OBVIOUS EFFORS ARE RECTIFIED WITH MINIMUM OF DELAY. THE

Any additional information should be entered below.

DIALS ARE

CHECKED MONTHLY

AND FAULTS ARE

REMEDIED AT ONCE

The data pant to the Meteorologizate Office for analysis were obtained from the my formal sthe meconder it shorts for the high level and the low level and memometers. The recorder charts were also sent to the Meteorological Office.

RP 15/4/2

2529

20th October 1969

Mr. G. Tyler, D.E.R.E., Thurso, Caithness.

Dear Graham.

Meteorological Data

For some time now you have been sending us copies of your wind data returns to the Met. Office, for which I thank you. We asked for them in connection with F. Morgan's investigations round Dounreay. Now that these have finished, we no longer require copies in this Division.

This change does not in any way affect your arrangement to supply data to the Met. Office.

Yours sincerely,

MS

Pamela M. Bryant

Tile_

RP 15/4/2

2529

18th February 1969

Mr. K. Bryant, Meteorological Office Met 0 6b, London Read, Bracknell, Berks.

Dear Mr. Bryant.

Meteorelegical Information in the Event of a Site Emergency

I am writing further to my letter of 24th January and our subsequent telephone conversation, regarding the desirability or otherwise of saving rainfall samples from collecting stations after an accidental radioactive release.

I understand from Dr. Johnston in Health Physics and Medical Division at Harwell that a BSI Panel on the Meteorelegical Aspects of Reactor Safety met in 1965 and discussed this topic. Mr. N. G. Stewart of UKAEA, Harwell, chaired the Panel, and I believe that yeurselves and the CEGB were represented. The Panel apparently decided that rainfall samples would not be required, although it seems that there was some pressure from outside the UK to make them a requirement.

Mr. Stewart and we in the Authority Health and Safety Branch currently endorse this decision as far as the UKAKA is concerned.

Yours sincerely,

7 m3

Pamela M. Bryank (Miss)

RP 15/4/2

2529

24th January 1969

Mr. K. Bryant, Meteorological Office Met 0 6b, London Road, Bracknell, Borks.

Dear Mr. Bryant,

Meteorological Information in the Event of a Site Emergency

I should be glad if you could provide me with some background information relevant to the following request, made by Mr. Kinshott of Upavon Meteorological Office to Harwell on 20th December 1968.

Mr. Kinshott asked within what radius around Harwell we required to know the rainfall collecting stations. He said that they had been asked to prepare such a list as part of the information they would be required to provide in the event of a site emergency.

Neither Dr. Johnston in Health Physics and Medical Division at Harwell, nor I know anything about this requirement, and we should be pleased to hear about it.

Yours sincerely,

Pamela M. Bryant (Miss)

RP15/42

HA/315/01.

Miss P. M. Bryant, R.P.D., Building 10.23.

- 1. Last Friday, 20th December, Mr. Kinshott, Meteorological Office, Upavon telephoned and asked within what radius around Harwell we required to know the rainfall collecting stations. He said they had been asked to prepare such a list as part of the information they would be required to provide in the event of a site emergency.
- 2. I can see no reference to this in the current agreement between the Authority and the Meteorological Office dated March, 1968. I would be grateful therefore if you would look into this and let me know the outcome.

JEJohnston.

J. E. Johnston

Health Physics and Medical Division, Building 364.

Ext: 4604

23rd December, 1968

/JE.



REACTOR GROUP

1

020

Risley, Warrington, Lancs.

TELEX: 62-301 ATOM, RISLEY.

Telegrams: 'ATEN' WARRINGTON TELEX

Tour Ref. RP 15/4/2

WARRINGTON 31244

Ext. 2292

11th November, 1968.

Mr. H. J. Dunster, A.H.S.B., Harwell.

Your letter of 30th October to Ian Hurley about the Risley anemometer has been passed to me. Hurley has not been in charge of the Reactor Engineering Laboratory for some considerable time now, and his replacement, Paul Evans, died suddenly about three weeks ago. In any case, this is part of my responsibilities and is normally dealt with by Stanley Wilson.

I have noted what you say and I assume that no action is required.

Yours sincerely,

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Please address any reply to THE DIRECTOR-GENERAL and quote: AF/M 368/66

Your reference: RP 15/4/2

METEOROLOGICAL OFFICE

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex: 84160)

Telephone: Bracknell 20242, ext. 320

1st November, 1968

Mr. H.J. Dunster,
Deputy Division Head,
Radiological Protection Division,
Authority Health and Safety Branch,
United Kingdom Atomic Energy Authority,
Harwell, Didcot,
Berks.

Dear Mr. Dunster,

Thank you for your letter of the 30th October, formally agreeing to the deletion of reference to Risley in the agreement between Establishments of the UKAEA and the Meteorological Office.

We will inform our meteorological offices of the amendment in the near future.

Yours sincerely,

T.N.S. HARROWER

Assistant Director (Defence Services)

30th October 1968

Mr. F. I. Rurley, Reacter Engineering Laboratory, Risley, Warrington, Lance.

Dear Harley,

Because the Meteerological Office were not eatisfied with the positioning of the Rieley anememeter, they have asked us to diete Risley from the formal agreement between the Authority and the Meteerological Office for emergency assistance. They have made no difficulties in arranging for all the necessary links between Risley and their Forecasting Office in Preston, and the remeval from the agreement is a matter of more formality. I have not been able to find out why they wanted to bother, but as you get all the services you need outside the formal agreement I can see no harm. The enclosed copy letter to Harrower formalises the position.

Yours sincerely,

H. J. Dunster

80th October 1968

Mr. T. N. S. Harrower, Assistant Director (DS), Moteorological Office, London Road, Bracknell, Borks,

Dear Mr. Harrewer,

Pollowing discussions between the Meteorological Office and our laboratories at Risley, and the relevant correspondence between K. Bryant and Miss P. M. Bryant. I should now formally like to amend the agreement between establishments of the UKAKA and the Meteorological Office which we both signed on 11th and 12th March 1968.

Since detailed arrangements have now been made for advice to be obtained by Risley from the Forecasting Office at Presten and since the meteorological data available from Risley will not be sufficiently reliable to be of value to the Forecasting Office, the reference to Risley in Appendices I and II of the Agreement should be deleted,

Yours sincerely,

H. J. Dunster Deputy Division Head

cc. Mr. F. I. Hurley

13/1368/66/Net 0 6.

252**9**

30th October, 1968

Mr. E. Bryant, Notecralogical Office Met 0 65, Lenden Road, Bracknell, Berks.

Dear Mr. Bryant,

Meteorological Information - Risley

Thank you for your letter of 10th October, 1968.

I have delayed acknowledgement pending informal acceptance by Risley of your suggested arrangements. This I have now received.

Mr. Dunster is now writing to Mr. Harrower to confirm this formally.

Yours sincerely,

17.

(Miss) Pamela M. Bryant.



UNITED KINGDOM ATOMIC ENERGY AUTHORITY REACTOR MATERIALS LABORATORY,

Wigshaw Lane, Culcheth, Warrington,

Lancs.

Telegrams: "ATEN" CULCHETH, WARRINGTON.

CULCHETH 3031

Your Ref. RP 15/4/2

Our Ref.

Ext.

23rd October, 1968.

Miss P. M. Bryant,
A.H.S.B.,
U.K.A.E.A.,
Radiological Protection Division,
B10.28,
Harwell,
Didcot,
Berks.

Dear Miss Bryant,

The arrangements made, as nominated in your recent letter are quite satisfactory for our requirements, and the formal arrangements can now be completed as you suggest.

Yours sincerely,

A. E. Shaw

H.P. & S.

15th October, 1968

Er. A. E. Shaw, U.K.A.E.A. Remeter Group, Health Physics and Safety Section, Building 8A16, Risley, Warrington, Lends.

Dear Mr. Shaw,

Motoorelogical Information - Rislay

Thank you for Mr. Haghes! letter, written in September 1968, giving details of your requirements for local emergency arrangements with Barton Hall. I discussed these with Mr. Bryant of the Met. Office and I think his letter to me (copy enclosed) covers them.

I hope that these arrangements are acceptable to you and to your management. I should be glad if you would let me knew, as seen as possible, if this is so. A formal notification of the deletion of Risley from Appendices I and II of the Agreement would then be sent to Mr. F. I. Hurley.

Yours sincerely.

(Miss) Pamela M. Bryant.



Please address any reply to THE DIRECTOR-GENERAL

and quote: AF/M368/66/Met Q 6b

Your reference: RP 5/4/2

METEOROLOGICAL OFFICE Not 0 6b

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex 84160)

Telephone: Bracknell 20242, ext.

October 1968

Dear Miss Bryant,

METEOROLOGICAL INFORMATION - RISLEY

Thank you for your letter of 10 September last regarding the supply of meteorological information to Risley.

We have given further consideration to the problem of leaving Risley, in the new agreement. But, as we (Bryant/Bryant) discussed last week, we feel that as Rieley will no longer be providing the satisfactory wind information, which was the "mutual" basis of the new agreement, they should be deleted from the agreement.

However we wish to assist Risley as much as possible during any emergency and the S Met O Preston has stated that the Main Meteorological Office, Preston, will provide Risley with forecasts of wind at the surface and 1500 ft, b. stability category and c. the possibility of precipitation for South Lancashire for 3 to 6 hours ahead, on request.

The request (by telephone) for forecast information should be made by a member of the Health Safety staff at Risley, who should introduce himself to the senior duty forecaster and state that the information is required for an emergency. As the forecast will take some minutes to prepare, the best arrangement would be for the Main Met Office, Preston, to call back to Risley when the information is ready.

There is no objection to communication exercises between Risley and the Main Met Office Preston provided that this only entails a very brief reply by the senior duty forecaster.

All forecasts issued to Risley will be charged for in accordance with the current Meteorological Office regulations.

I trust that the above arrangements will be acceptable to you but do not hesitate to inform me if any points have been overlooked.

I am copying this letter for information to S Met O Preston, and I hope that any details requiring attention can be settled direct between the Manager Risley and S Met O Preston.

tours suncerety,

K. BRYANT

Miss P. M. Bryant
Radiological Protection Division
Authority Health and Safety Branch
United Kingdom Atomic Energy Authority
Harwell
Didoot
Berks.

UNITED KINGDOM ATOMIC ENERGY AUTHORITY



REACTOR GROUP

Health Physics & Safety Section, Risley, Warrington, Lancs. Building 8A16

TELEX: 62-301 ATOM, RISLEY.

WARRINGTON 31244

Telegrams: 'ATEN' WARRINGTON TELEX

Ext. 2904

Your Ref. RP.15/4/2

Our Ref. HP&S.346

24 27 September, 1968

Mise P. M. Bryant, U.K.A.E.A., A.H.S.B., R.P.D., Harwell,

Didcot,

Berks.

Dear Miss Bryant,

Meteorological Information - Risley

Further to our telephone conversation of yesterday, we would be grateful if you could formalise and confirm with the Met. Office our local emergency arrangements with Barton Hall. In the event of a site release at Risley/Culcheth these are,

- 1. We ring either Broughton (Preston) 2671 or 2672 and ask for the Senior Forecaster or his deputy.
- Introduce ourselves as "Rieley Atomic Energy Authority site emergency please supply us with a six hour forecast". We then expect to be told the following.
 - (a) Six hour forecast of wind speed (metres per second) and direction for this immediate area (we appreciate that this will be the general flow at about 1500 feet).
 - (b) Stability category.
 - (c) Height of inversion (metres).
 - (d) Forecast precipitation.

In order to maintain the arrangements, we would like to keep in touch with Broughton Hall by means of the contact and communication exercises outlined in Paras. 3.1 and 3.2 of the main agreement.

You have of course already covered all these points in your letter to K. Bryant (RP.15/4/2 of the 10th September). If we are not to go in the general agreement we would like formal agreement from him for these local arrangements. Thank you for your help.

Yours sincerely,

Cuthyles

for Manager, Health Physics and Safety Section,

RISLEY

RP 15/4/2 AR/M 700/67

2529

30th September, 1968

Mr. D. W. Rhead, Meteorological Office Met 0 6, London Road, Bracknell, Berks.

Dear Mr. Rhead,

Wind records at Atomic Energy sites

I enclose the completed wind record forms from our establishments as promised in my letter of 23rd August, 1968.

Yours sincerely,

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(Miss) Pamela M. Bryant.

	Name of Atomic Energy Site with Lat. and Long.	CAPENHUAST 53°154' N 2°57' W
de la constante de la constant	Associated 24 hr Meteorological Office	PRESTON (LANCE)
	How many sets of dials are there recording wind speed and direction?	Two
•	Location of each set of dials	1 HEALTH PHYSICS BUILDING (40)—PEN LEW 2 BULDING 267 - THEICHTING DALSON 3 (Non Ascolding
•	From which set of dials are readings given to your 24 hr Met. Office?	Borraine 40.
•	How many sets of dials are there recording wind speed and direction?	
•	Location of each set of dials	1 2 3 4
•	From which set of dials are readings given to your 24 hr	

RECORDERS ARE CHARACTLY SUBJECT TO OCCASIONAL CHECKS & RECORDERS ARE RESET IF ELLUPS CASE AVED

Any additional information should be entered below.

Name of Atomic Energy Site with Lat. and Long.	A.W.R.E. Aldermaston, Reading, Berks. 51° 22° 00" N Lat. 01° 08° 51" W Long. The instrument is at 51° 21° 56" N Lat. 01° 09° 10" W Lo
Associated 24 hr Meteorological Office	RAF Upagon
. 5	Committee of the committee of the contraction of th
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	High Level . not applicable
Location of each set of dials	1.
	2
	3
	4-
From which set of dials are readings given to your 24 hr Met. Office?	
LOW LEVEL How many sets of dials are there recording wind speed and direction?	1 Recorder 2 sets of dials
Location of each set of dials	1 Recorder - Room 117 Building A6.1 (310yds to instrumen
	2 Dials - Room 123 Building A6.1 (48 ft. from (1))
	3 Dials - Room 1 Building F1.1 (1920yd from (1))
	Loop resistance <500hms.
From which set of dials are readings given to your 24 hr Met. Office?	Initially from (3) above. Later from (2) above, checked by reference to (1).

Inform Maintenance Section immediately so that equipment can be recalibrated. The defect is noted in HPB operations log.

Any additional information should be entered below.

- 1. Checks are weekly.
- 2. An error of about 20° in direction has been observed once.



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UNITED KINGDOM ATOMIC ENERGY AUTHORITY HPass Bulding 84/16. REACTOR GROUP

Risley, Warrington, Lancs.

TELEX: 62-301 ATOM, RISLEY.

Telegrams: 'ATEN' WARRINGTON TELEX

Your Ref.

Our Ref.

WARRINGTON 31244

Ext. 2904.

RP/15/4/2.

on huis Bryant.

Pleane final attached Completed form he wind heconon at Atomie Energy siles.

> your Suicely. C. Willigher.

Name of Atomic Energy Site with Lat. and Long. Associated 24 hr Meteorological Office	RISLEY LANCS. 58° 25' 2° 33' W. BARTON NALL PRESTON.
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	0~6
Location of each set of dials	1 SITE CONTROL BUILDING SA/16 RISLEY. 2 3
From which set of dials are readings given to your 24 hr Met. Office?	Readings not acceptable to met office non 8 tomotored Site. huet office letter AF/m368/66/met 068 and APAS 346 of 51/7/68 refe
LOW LEVEL How many sets of dials are there recording wind speed and direction?	NA
Location of each set of dials	1 2 3 4
From which set of dials are readings given to your 24 hr Met. Office?	~ /A.

M/ A

Any additional information should be entered below.

the orientation of the anomometer head has been chacked by an authority surveyor an a new of this letter.

f. as Huylan 8/9/68.

ENERGY UNITED KINGDOM ATOMIC

PRODUCTION GROUP



WINDSCALE & CALDER WORKS.

SELLAFIELD.

SEASCALE · CUMBERLAND

TELEGRAMS: "ATEN, CALDERBRIDGE. TELEX: 6437 ATOM. WINDSCALE. TELEPHONE: SEASCALE 333-4-5 EXT.

10th September, 1968.

Dear Pam,

As requested in your letter of 28th August, I enclose details of the windspeed and direction recorders at Windscale.

Yours sincerely,

Harry

H. LONGLEY

Health and Safety Department.

Miss P. M. Bryant, Radiological Protection Division, Authority Health and Safety Branch, U.K.A.E.A., Harwell, DIDCOT Berks.

Name of Atomic Energy Site with Lat. and Long.	Windscale and Calder Works
Associated 24 hr Meteorological Office	PRESTON, Lancashire.
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	One R.W. Numro Chart recorder Two Sets of Dials
Location of each set of dials	1 R.W. Munro Chart recorder - Room 28, B.423 2 One set of Dials - Room 28, B.423 3 One set of Dials - Standby Information Room B.2
From which set of dials are readings given to your 24 hr Met. Office?	As shown at 1 above
LOW LEVEL How many sets of dials are there recording wind speed and direction?	One R.W. Nunro Chart recorder Two sets of Dials
Location of each set of dials	1 Chart recorder - Room 28, B.423 2 One set of Dials - Room 28, B.423 3 One set of Dials - Standby Information Room B.2 4
From which set of dials are readings given to your 24 hr Met. Office?	As shown at 1 above

Checks are made normally on each working day Monday to Friday, any errors are reported to maintenance group and corrected as soon as possible.

Any additional information should be entered below.

On observation of errors, where possible the data is suitably amended before reporting to Met. Office, otherwise no data is reported, with an appropriate comment.

Orientation checks are normally carried out annually when the Met. Office carry out their formal check.



ATOMIC ENERGY RESEARCH ESTABLISHMENT, Health Physics & Medical Division, Building 364, HARWELL,

DIDCOT, BERKS.

Your reference:
Our reference:

RD 15/4/2

HA/315/01

telegrams: ATEN, ABINGDON telex: 83135

telephone: ABINGDON 4141 EXT. 4280

30th August, 1968.

Miss P. M. Bryant, Radiological Protection Division, Building 10.28, A.E.R.E. Harwell, Berks.

Dear Miss Bryant,

Wind records at atomic energy sites

I enclose completed, two copies of the forms you sent with your letter dated 23rd August, 1968.

Yours sincerely,

N. G. Stewart

i I	the state of the s
Name of Atomic Energy Site with Lat. and Long.	APONIC HURBY RESEARCH RETABLISHMENT, NAMPELL, BERKS. LAT. 51° 35° N, LONG. 1° 19° V
Associated 24 hr Meteorological Office	UPAVON, WILIB.
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	
Location of each set of dials	1 BUILDING 4 (DIALS AND RECORDER) 2 HANGAR 10 (DIALS COLY) 3 BUILDING 220 (DIALS COLY)
From which set of dials are readings given to your 24 hr Net. Office?	MATTER 4
LOW LEVEL How many sets of dials are there recording wind speed and direction?	PORR
Location of each set of dials	1 BUILDING 4 (DIALS AND ERCORDER) 2 BUILDING 443 (DIALS ONLY) 3 BUILDING 775 (DIALS ONLY)
From which set of dials are readings given to your 24 hr Met. Office?	BUTLDING 1

THE RECORDERS INSTALLED IN BUILDING 4 ARE CHECKED DAILY AND ANY OBVIOUS ERRORS ARE RECTIFIED WITH A MINIMUM OF DELAY. THE DIALS ARE CHECKED MONTHLY AND PAULIS ARE REMEDIED AT ONCE.

Any additional information should be entered below.

The data sent to the Meteorological Office for analysis were obtained from the recorder charts for the high level and the low level anemometers. The recorder charts were also sent to the Meteorological Office.

Name of Atomic Energy Site with Lat. and Long.	The Radiochemical Centre, Amersham 51 040N 0034.5W
Associated 24 hr Meteorological Office	Upavon
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	None
Location of each set of dials	1 2 - 3 4
From which set of dials are readings given to your 24 hr Met. Office?	-
LOW LEVEL How many sets of dials are there recording wind speed and direction?	None (dials) One 2-pen recorder (wind direction & whority)
Location of each set of dials	1 Not known by writer of hand-writter 2 entries (PM Bryan 3
From which set of dials are readings given to your 24 hr Met. Office?	From the recorder trace

A rough check of direction is carried out weakly (affrox). If necessary, adjustments are made an the spot,

Any additional information should be entered below.

Name of Atomic Energy Site with Lat. and Long.	CHAPELCROSS WORKS LAT: 55° 1/N LONG 3° 33'3/W
Associated 24 hr Meteorological Office	PRESTWICK
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	
Location of each set of dials	1 2 3 4
From which set of dials are readings given to your 24 hr Met. Office?	
LOW LEVEL How many sets of dials are there recording wind speed and direction?	THREE
Location of each set of dials	1 DISTRICT SURVEY ROOM. LABORATORY BUDG 2 SITE MONITORING LAB, TURBINE HALL BLDG 3 SHIFT MANNIGERS OFFICE, TURBINE HALL BLDG. 4
From which set of dials are readings given to your 24 hr Met. Office?	ANALYSIS OF ANEMOGRAPHS RELORDS FROM LOCATION I.

SMALL ERRORS REPORTED TO SITE INSTRUMENT MAINTENANCE DEPT.
MAJOR FAULTS REPORTED TO MR EMPTAGE
MET: OFFICE SERVICE DEPT
GLASGON

Any additional information should be entered below.

Name of Atomic Energy Site with Lat. and Long.	DOUNREAY, THURSO, CAITHNESS. LAT. 58°35'N. LONG. 3044'W
Associated 24 hr Meteorological Office	PITREAVIE, DUNFERLIME, FIFE BUT MONTHLY WIND DATA SENT TO M.O. EDINBURGH.
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	ONES GT OF DIAZS, ONE RECORDER
Location of each set of dials	1 CONTROL ROOM (DIALS AND RECORDER) 2 3
From which set of dials are readings given to your 24 hr Met. Office?) See 4 sbook	RECORDER CHART.
LOW LEVEL How many sets of dials are there recording wind speed and direction?	ONE SET OF JIALS, ONE RECORDER
Location of each set of dials	1 CONTROL ROOM (DIGKS AND REDERDER) 2 3
From which set of dials are readings given to your (24 hr Met. Office?) See 4 boy?	RECORDER CHART.

What action is taken when errors are noticed on the daily checks of the wind dials and recorders?

PAILY CHECK EXCEPT AT WEEKENDS AND
PUBLIC HOW DAYS INSCHMENT SECTION ARE
REQUESTED TO RECTIFYERROR CHART
MARKED AS DEFECTIVE UNTIL FAULT
CORRECTED

Any additional information should be entered below.

GR Syles Halos.

A. 2000年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年,1970年

Name of Atomic Energy Site with Lat. and Long.	Atomio Mongy Notobliohanni, Kinfrith. 50° 40½°X, 2° 15°T
Associated 24 hr Meteorological Office	Tparen
HIGH LEVEL How many sets of dials are there recording wind speed and direction?	These
Location of each set of dials	1 2 3 4
From which set of dials are readings given to your 24 hr Met. Office?	
LOW LEVEL How many sets of dials are there recording wind speed and direction?	the pot of dials the resertor
Location of each set of dials	(Male) Site Sentral Sentre (Recorder) Health Physics Building
From which set of dials are readings given to your 24 hr Met. Office?	All data sent to Not. Office in the part has been derived from recorder. This would also be used in event of emergency.

What action is taken when errors are noticed on the daily checks of the wind dials and recorders?

A daily shock is now made to establish whether there is a grees error on the recorder. If such an error is noticed, our instrument section is asked to rectify it. Such checks have not been made systematically in the past, only occasional checks having been made.

Any additional information should be entered below.

10th September, 1968

· Mr. K. Bryant, Meteorological Office (Not 0 6b), London Road, Brackwell, Berkshire

Dear Mr. Bayant,

Meteorological Information - Risley

Thank you for your letter of 5th September, 1968.

We should prefer not to delete Risley from Appendix I of the agreement between the UKAMA and the Net. Office as we think it desirable to maintain this formal link as well as the local link between Risley and Preston Net. Office. Risley still require the arrangements in pares. 3.1 and 3.3, and most of those in 3.7, i.e. they would not supply the Net. Office with the anemometer reading at the time of a release (due to the known unreliability of the reading), but they would require forecasts as specified in the last three sentences of pare. 3.7. Discussion with Preston Net. Office on the forecast items described in general terms in pare. 3.7 would clarify requirements in advance of the need for them and so cover the point in your third paragraph.

so should be glad if you would reconsider the question of deleting Risley from the general agreement.

Yours sincerely,

(Miss) Pamela M. Bryant.

c.c. Mr. G. W. Hughes, Risley (for information). Harwell C file.

Please address any reply to THE DIRECTOR-GENERAL and quote: AP/11368/66 Your reference: RP15/4/2

METEOROLOGICAL OFFICE Not 0 6b

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex 84160)

Telephone: Bracknell 20242, ext. 330

September 1968

Dear Miss Bryant,

METEOROLOGICAL INFORMATION - RISLEY

Thank you for your letter of the 6th August 1968 regarding the decision about the anemometer at Risley.

Whilst we do not agree with your comment regarding the "small improvement in accuracy such a change would make" we can well appreciate that there are many operational reasons why the Risley staff decided that such an expense could not be justified.

S Met 0 Preston has informed us that he will be pleased to supply general forecasts to Risley, in the event of an emergency, but emphasizes that the enquirer must specify the forecast items required. He also says that the Main Meteorological Office, Preston, will not require any wind readings from the Risley ansmometer as sited at present.

In view of the decision by the Risley staff and the comments above will you please confirm that Risley can now be deleted from Appendix I of the agreement between the UKARA and the Met. Office.

Yours sincerely.

(K. BRYART)

Miss P. M. Bryant
Radiological Protection Division
Authority Health and Safety Branch
United Kingdom Atomic Energy Authority
Harwell
Didoot
Berks.

28th August 1968

Dear

Wind records at Atomic Energy Sites

Subsequent to my letter of 28rd August 1968 enclosing forms requesting information required by the Meteorological Office, it has become apparent that some explanation of the questions might assist you in your reply.

In the course of investigations at non-Authority establishments, the Met. Office discovered that there were sometimes two or more sets of dials and recorders, e.g. one "master" set near the anemometer and a "slave" set in the control room. At times two sets of dials differed in their readings by as much as 40°. In addition, data transmitted to the Met. Office was sometimes read from dials but more usually from the recorder trace, although even then the data did not always agree with the trace when subsequent checks were made. It is to try to sort out such anomalies during examination of wind data that the Met. Office is asking for information.

Where the questions specify "dials", information on dials and recorders is required. In respect of the final question, if your establishment does not carry out daily checks, how often are the checks carried out, e.g. occasionally, monthly? Do you then just make a note of it or call the maintenance men in to rectify it?

The Met. Office, who have started examination of wind data sent in by Authority establishments, would be grateful for any relsvant information.

Yours sincerely,

```
To: Dr. S. M. B. Hill
Dr. J. H. Martin
Mr. J. W. Kennedy
Mr. H. Howells
Mr. S. G. Wilson
Mr. G. R. Newbery
Mr. N. G. Stewart
Mr. R. Pilgrim
Mr. G. H. Palmer
```

Mr. S. J. Dagg

23rd August 1968

Dear

Vind resords at Atomie Energy sites

I have been asked by the Meteorological Office to obtain details about the dials recording windspeed and direction at your establishment, as laid out on the attached form. This information is expected to help eliminate inconsistencies from wind records.

I enclose three copies of the form, one of which is for your retention. I should be grateful if you would complete and return the other two copies to me.

Yours sincerely,

Pamela M. Bryant (Miss)

To: Dr. S. M. B. Hill
Dr. J. H. Martin
Mr. J. V. Kennedy
Mr. H. Hewells
Mr. S. G. Wilson
Mr. G. R. Newbery
Mr. N. G. Stewart
Mr. R. Pilgrim
Mr. G. H. Palmer

Mr. S. J. Dagg Mr. L. D. G. Richings } for information RP 15/4/2 AF/MI700 /67

2529

23rd August 1968

Mr. D. W. Rhead. Meteorological Office Met 0 6, London Road. Bracknell. Berks.

Dear Mr. Rhead.

Wind records at Atomic Energy sites

Thank you for your letter of 22nd August and the enclosed forms.

I have requested our establishments to complete the forms and return them to me. I will send them to you in due course.

Yours sincerely.

Pamela M. Bryant (Miss)



Please address any reply to
THE DIRECTOR-GENERAL
and quote: AF/M1700/67

Your reference:

METEOROLOGICAL OFFICE Met 0 6

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex: 84160)

Telephone: Bracknell 20242, ext. 321

93-035

22 August 1968

Dear Miss Bryant,

Wind Records at Atomic Energy Sites

In order to help eliminate inconsistencies from wind records at Atomic Energy Sites, would you please ask each of your stations listed below to give details about the dials recording wind speed and direction on the attached form. Allowing one copy for retention at each station, one copy which you may like to retain yourselves and one copy to be sent on to us, 3 copies of the form are enclosed for each station.

Aldermaston

Capenhurst

Amersham Harwell

Risley

Winfrith

Windscale Chapeleross

Dounreay

Yours sincerely,

D. W. Rhead

Miss P. Bryant
United Kingdom Atomic Energy Authority
Authority Health & Safety Branch
Radiological Protection Division
Harwell
Didcot
Berks

UNITED KINGDOM ATOMIC ENERGY AUTHORITY

REACTOR GROUP

RP 15/4/2

Dounreay Experimental Reactor Establishment,

TELEGRAMS: ATEN, REAY, THURSO

Thurso,

Caithness. Scotland.

TELEX: 7597 ATOM DOUNREAY

Your Ref.

Our Ref.

THURSO 2121

Ext. 461

9th July, 1968.

Mr. H. J. Dunster, R.P.D., Harwell.

Dear

John,

Reading your memo. RP 2/43 relating to the Third Annual Health Physics Society Mid Year Symposium on Operational Monitoring it occurs to me that the monitoring of vacuum cleaner dust might have some bearing on the subject.

I enclose a copy of a note I asked Barry Holliday to prepare on the subject some time ago as this might be relevant to your requirements. The information did prove relevant to the discussions with the Factory Inspector on delineation of active areas and the declaration of some areas as inactive up to the faces of glove boxes.

In addition, we have recently mounted a programme of nose-blow samples at the end of each shift from operators in D1203 following static air sampler evidence of a hazard, not fully supported by personal air sampler results. The results have been revealing and elicit a better response from the operating management than conventional air sampling figures. If you are interested I will get Barry to describe the position for you.

Regarding the Agreement between the U.K.A.E.A. and the Meteorological Office, I have initiated a visit by a Meteorological Officer as recommended. (See enclosed letter). What surprises me is the cost of such a visit, e.g. in the case of Dounreay the minimum time involved including travelling will be two days at a cost of approximately £100 including travelling expenses and subsistence - see enclosed letter.

Finally, regarding the proposed extra mural contract between Dounreay and Imperial College I look forward to an answer to my last letter to you. Dr. Broadley has stated that he has no intention of sending any Pu to Imperial College unless he can be fully assured that no liability will devolve upon Dounreay.

Yours sincerely,

He.

(J. Brown)

Manager,

Health & Safety Division

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· 145 ~

7th August, 1968

Mr. G. W. Hughes, U.K.A.R.A., Reactor Group, Risley, Warrington, Lanes.

Dear Mr. Hughes,

...

Siting of Anemometer, Risley

Thank you for your letter of 31st July, 1968.

I enclose a copy of my letter to Rhead and notes of a telephone conversation with Bryant of the same department. You will see that the Met. Office is prepared to accept your decision to leave the anemometer where it is.

I will let you know the content of the written reply when it comes, probably in September.

Yours sincerely,

Panela M. Bryant.

NOTE FOR FILE RP 15/4/2

Telephone conversation with Mr. K. Bryant of Met. 0 6b on 7th August, 1968

Subject: Analysis of wind data - reply to my letter of 6th August, 1968

Mr. Bryant rang to say that his phrase "when the wind data proves acceptable" meant when the search of past records revealed acceptable data, not when future data proved acceptable. I admitted that my interpretation had been the latter one. He said that data from several establishments are currently being examined and promised to let me know the outcome.

Regarding the siting of the Risley anemometer (my letter to Rhead of 6th August, 1968), Mr. Bryant said they would accept the decision not to move it to a better position, although the present position could lead to errors of 40° and 15 knots with the wind in certain directions. In such a circumstance he thought it better to ignore the anemometer reading altogether and use data on the general flow at 1000 ft. if there was a release. (Written reply following in due course).

Generalising, Mr. Bryant said that the best forecast for the first 8 miles was obtainable from data on the surface or 30 ft. wind, i.e. using the anemometer data if the instrument was correctly sited. If not, the general flow at 1000 ft. was the next best indicator. It was usually too confusing to try to combine information from a badly sited anemometer (giving wrong answers in certain directions) with information on the general flow.

Mr. Bryant suggested that a round table discussion between himself, curselves and representatives of our establishments might benefit all by clearing the air and allowing a fresh start. I agreed.

PMB

Pamela M. Bryant.

7th August, 1968

2529

6th August, 1968

Mr. D. W. Rhead, Meteorological Office (Met 0 6b), London Road, Bracknell, Berkshire

Dear Mr. Rhead,

Siting of Anguanter - Rigley

Thank you for your letter of 17th May, 1968, and the map attached. I duly forwarded the copies to Mr. G. W. Hughes at Risley and I have now received his reply.

Staff at Rislay have considered your recommendation of a 35 foot lattice in a new position and have decided that they cannot recommend to the Reactor Group Management that funds be allocated for this purpose. Their reasons are the low probability of a significant discharge from the site and the small improvement in accuracy that such a change would make.

While they appreciate that as a result of this positioning, you may not be able to take any further interest in their wind data, they would still like access in the unlikely event of an emergency to a 6-bour forecast for South Lancashire as agreed with Mr. Holgate at Barton Hall,

Would you wish to continue receiving wind data in spite of the non-standard site of the anemometer?

I cannot disagree with the Risley decision and hope that you will find it acceptable in the event.

Yours sincerely,

(Miss) Pamela M. Bryant.

2529

6th August, 1968

Mr. K. Bryant, Neteorological Office (Net O 60), London Road, Bracknell, Berkshire

Dear Mr. Bryant,

Microseteorology at UKAFA Sites

Thank you for your letter of 26th July.

We are pleased to hear that you have begun the analysis of records for Harwell and intend to start on that for Windscale when the Harwell study is complete.

We are not entirely happy, however, regarding your proposal to deal with the other establishments "when the wind data proves acceptable." As far as we are aware, the data for Chapeloress since May 1963 are not suspect in any way, and the data for Dounreay for 1963 and 1964 are acceptable subject to a known correction (Mr. Dunster's letter to Mr. Jacobs, dated 21st September, 1966). We, therefore, wish to reiterate our request for analyses for these two establishments.

With regard to Amersham, Mr. Jacobs said he could not be sure of the accuracy of the records for 1966, and 1965 (letter to Mr. Dunster dated Mst October, 1966). During a recent discussion, however, Mr. G. Dancer of Amersham understood that your Mr. N.C. Helliwell felt that there were enough data for analysis. (These data could, in fact, be for years other than the two specified above). We should be grateful if you would look into this and add Amersham to the waiting list if at all possible.

Yours sincerely,

(Miss) Panela M. Bryant.

Summay at 5 Aug 1468 11/ind data Anceshan Jacobs said data not satisfactory In arrears Hallwell (Net o) told Dancar that syears data was purbably ok. it duta chapeleross No rafly from Met. O. as far as is known. Reporting data Not reporting full data No refly from Met. 0. - data showed be OK subject to known corrections Hanvell Being analysed By Met. O. (Kbyant-) Not reporting - Windocale Will be analysed by Het. O. when Hamele analysis complete (Khyant) Reporting data

Winfish of No refly from Met. o.

Not reporting Doubt regarding acceptability of data

UNITED KINGDOM ATOMIC ENERGY AUTHORITY



REACTOR GROUP

Risley, Warrington, Lancs.

TELEX: 62-301 ATOM, RISLEY.

WARRINGTON 31244

Telegrams: 'ATEN' WARRINGTON TELEX

Ext 2904

Your Ref.

Our Ref. HP&S346

31st July, 1968.

Miss P. Bryant, U.K.A.E.A., A.H.S.B., R.P.D., HARWELL, Didcot, Berks.

Dear Miss Bryant,

Siting of Anemometer, Risley

We have considered Mr. Rhead's recommendation (as letter to you of 17th May, as reference AF/M368/66MetO6b) that the Risley Anemometer should be sited on a 33 foot lattice in a new position.

Bearing in mind the low probability of a significant discharge from this site and the small improvement in accuracy such a change would make we cannot recommend to the Reactor Group Management that funds be allocated for this purpose.

While we appreciate the Met. Office as a result of this design may not be able to take any further interest in our wind ratings, in the event of emergency we should still like access to a six hour forecast for south Lancashire as agreed with Mr. Holgate at Barton Hall.

I would be grateful if you could inform Rhead of our decision as we agreed.

Yours sincerely,

G. W. HUGHES

for Manager, Health Physics and

Safety Section

Met 0 6b METEOROLOGICAL OFFICE

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex 84160)

Telephone: Bracknell 20242, ext. 330

Please address any reply to THE DIRECTOR-GENERAL

and quote:

AF/M368/66/Met 0 6b

Your reference: RH5/4/2

Dear Miss Bryant,

MICROMETEOROLOGY AT UKARA SITES

Please refer to your letter reference RF5/4/2 dated 10th April 1968 regarding the priorities for micrometeorological surveys at UKARA establishments.

Analysis of the records for Harwell for the years 1959 and 1960 is now in progress and we hope to be able to provide a preliminary report in about 2 months time.

We then intend to complete the work on Harwell and commence the analysis for Windscale as soon as possible and will deal with the other establishments subsequently when the wind data proves acceptable.

I regret the delay in replying to your letter but hope that the above arrangements meet with your approval.

Yours sincerely.

(K. BRYANT)

Miss P.M. Bryant United Kingdom Atomic Energy Authority Health and Safety Branch Radiological Protection Division Marwell Didoct Berks

cc. ir. a. Luncley ir. s. E. M. schnston

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex 84160)

Telephone: Bracknell 20242, ext. 330

Flease address any reply to THE DIRECTOR-GENERAL

and quote:

AF/M368/66/Met 0 6b

Your reference:

17 May 1968

Dear Miss Bryant,

SITING OF ANEMOMETER - RISLEY

With further reference to telecon Miss P. Bryant/Bryant of 20th March 1968, we now have an inspection report regarding this site. This confirms our earlier impression that the present site is non-standard and that it would be highly desirable to move this instrument to a more open situation further away from the main obstructions. We therefore recommend strongly that the instrument is moved from its present position at I on the attached map to a new position at II selected by our inspector, if it is at all possible. A normal lattice tower of 33 ft. would provide a reasonable exposure.

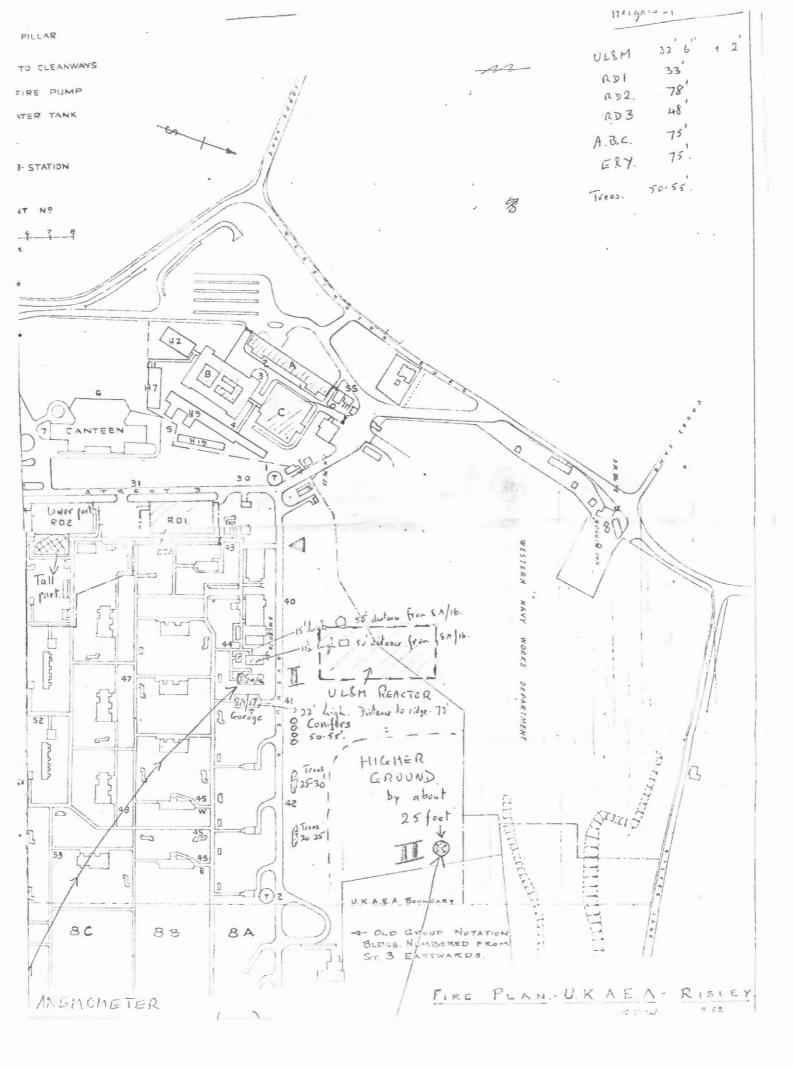
Would you please take this question up with Risley and let us know the outcome.

Yours sincerely,

(D. W. RHEAD)

Miss P. Bryant United Kingdom Atomic Energy Authority Authority Health and Safety Branch Radiological Protection Division Harwell Didcot Berks

Enol.



10 5/4/2

2523

10th april, 1968

Mr. A. Bryant, Met. D. 6, Meteorological office, London hoad, Brycknell, Berks.

bear Mr. bryant,

sicrometeorology at U.A.A.S.A. sites

In 1966, when it was agreed that an analysis of the micrometeorology at U.S.A.A.A. sites could be made on the basis of only 2 years' data, we conducted a survey of our establishments to discover whether reliable wind data were believed to have been supplied for the appropriate length of time. The position was summarised in it. Dunster's letter of 21st September, 1966, to it. Jacobs. In this, we requested analysis of the data for 6 establishments.

In ar. Jacobs' reply of 51st October, 1966, he said that on inspection of the records for Amersham he could not after all be sure of their accuracy for the years we listed (1964 and 1965). He promised to comment on the remaining establishments in due course but we have had no further communication on this subject.

I have been asked by Harwell and sindscale as to the position regarding the provision of micrometeorological reports for their sites. In the case of Harwell, year office (letter from Fr. Jacobs dated 3rd Movember, 1965, to Mr. N. G. Stewart) has accepted that the tabulations for the period January 1959 to June 1962 are reasonably complete, although certain reservations for 1961 led us to select 1959 and 1960 as the best two-year period for a alysis. Contrary to the Barwell paragraph in Mr. Dunster's letter of 21st September, the position regarding the third anemometer is not unresolved; it was dealt with in Fr. Stewart's letter dated 24th April, 1962, to Mr. Jacobs.

mindscale have returned data to your office over a considerable period of time, but the years 1963 and 1964 appeared to be the most reliable.

I should be griteful, therefore, if you would give priority in your analyses to these two establish ints, and deal with the rest subsequently.

Yours sincerely,

7,

delss, Pamela .. Pryant.

in Terms

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Er. .. C. Junster, Radio to fical Protection Division, Building 10.23.

Agreement with Meteorological Office

According to section 3.5 of the agreement with the Meteorological (frice "tabulations should be continued to enable at least two years satisfactory records to be obtained, so that the heteorological critice can resort on the micrometeorological factors of the site".

In past years Health Physics and Medical Division, Abdb., have supplied tabulations to the Meteorological Office for the two anemometers at Harwell. The Meteorological (ffice have accepted the tabulations for the period January, 1959 to Jone, 1962 as reasonably complete but we have not had a report on the micrometeorological factors of the site. If we wish to have such a report do we have to ask the Meteorological office for it, and if so, do we have to pay for it?

TEI maron

J. B. Johnston

Health Physics and edical Division, B.364

Ext: 4604

26th March, 1960

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we many west.

VIC you say we cape there , Us The T



Director's Office

25th March 1968

RP 19412

Dear Mr. Dunster,

Dr. Grove has asked me to acknowledge your letter of 21st March with which you sent him a copy of the final agreement between the Meteorological Office and the Authority. He is arranging for the necessary actions to be taken here at Amersham.

Yours sincerely,

G. h. Ray

Secretary to Dr. Grove

Mr. H.J. Dunster Deputy Division Head AHSB, Radiological Protection Division AERE, Harwell

United Kingdom Atomic Energy Authority

3110

21st March 1968

Dr. H. Rogan, General Manager, Springfields Works, Salwick, Preston, Lancs.

Dear

Although the arrangements with the Meteorological Office for information in the event of an emergency do not now apply to Springfields. I thought you would like to see a copy of the final agreement between the Anthority and the Meteorological Office. I have therefore enclosed one and copied this letter with the enclosure to Hugh Korris.

Yours sincerely,

H. J. Dunster

UNITED KINGDOM ATOMIC ENERGY AUTHORITY



AUTHORITY HEALTH AND SAFETY BRANCH

RADIOLOGICAL PROTECTION DIVISION

HARWELL, DIDCOT, BERKS

Your reference: Our reference:

RP 15/4/2

telephone: ABINGDON 4141 EXT. 3110

telegrams: ATEN, ABINGDON telex: 83135

21st March 1968

Dear

Following my earlier correspondence on the subject of an agreement with the Meteorological Office, I now enclose a copy of the final agreement which has been signed by me on behalf of the Authority and by T. N. S. Harrower on behalf of the Meteorological Office. The changes since the previous version you saw are trivial and mainly consist of the addition of the appropriate Met. Office branches to some of the paragraphs.

As most of the operating responsibilities fall on health and safety departments, I am sending a copy of this letter and an additional copy of the agreement to the Head of your Health and Safety Department.

Yours sincerely.

H. J. Dunster Deputy Division Head

Mr. E. F. Newley Mr. R. Pilgrim AWRE To: Mr. N. G. Stewart
Mr. G. H. Palmer
Dr. S. M. B. Hill
Mr. G. Newbery AERE Dr. R. Spence Mr. D. W. Fry
Mr. R. R. Matthews
Dr. W. P. Grove
Mr. W. R. A. Taylor AEE DERE RCC Mr. J. W. Kennedy Mr. D. H. Morris C'hurst Dr. H. Rogan S'fields REL Mr. F. I. Hurley Mr. S. G. Wilson Risley

For information:

Mr. S. J. Dagg, CEGB Mr. L. D. G. Richings, London



METEOROLOGICAL OFFICE

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex: 84160)

Telephone: Bracknell 20242, ext. 330

Please address any reply to THE DIRECTOR-GENERAL

and quote: AF/N368/66/Net 0 6

Your reference: RP / 15/4/2

Hu March 1968

Dear Mr. Dunster,

Thank you for your letter of 11th March enclosing the retyped and signed copies of the new agreement.

I am enclosing two copies of the agreement signed on behalf of the Meteorological Office, and have retained the other two copies.

We agree with your assumption that it may well be mid April before all the stations concerned are aware of the revised arrangements, and any information required prior to mid April will, most probably, be issued in accordance with the old agreement.

Yours sincerely

K. Bryant

Mr. H. J. Dunster
United Kingdom Atomic Energy Authority
Authority Health and Safety Branch
Radiological Protection Division
Harwell
Didcot
Berks.

AGREEMENT

BETWEEN ESTABLISHMENTS OF THE UNITED KINGDOM ATOMIC ENERGY AUTHORITY AND THE METEOROLOGICAL OFFICE REGARDING METEOROLOGICAL INFORMATION IN THE EVENT OF AN ACCIDENTAL RELEASE TO ATMOSPHERE

1. Introduction

This agreement summarises the arrangements by which the United Kingdom Atomic Energy Authority (UKAEA) would obtain information from the Meteorological Office to help in planning and executing the monitoring and counter measures following a major release of radioactive or toxic materials to the atmosphere. It replaces the agreement drawn up in 1958 and amended in 1961 (A299619/58/II issued by M.O.14, July 1961). Details of the establishment to which the agreement applies and the main forecasting offices are shown in Appendix I, while details of the anemograph sitings are shown in Appendix II.

2. Requirements

In the event of a substantial accidental release of gaseous or fine particulate radioactive and/or toxic material to the atmosphere, the establishment concerned will need a rapid assessment of the direction and speed of travel of the material. Such information will assist staff at the establishment in executing environmental surveys and/or counter measures which may be urgently necessary to prevent or reduce radiation exposure of members of the public. Indication of the initial direction and speed of the material will be obtained from the anemograph(s) at the establishments; this will be supplemented by knowledge, if available, of local wind peculiarities gained from assessment of tabulated wind data, and by information from a meteorological office on wind direction and speed at the time in the general area surrounding the establishment.

The execution of subsequent monitoring and counter measures will be aided by forecasts, each covering a period of a few hours, indicating the possibility and extent of changes in wind speed and direction near the surface, and also at about 1500 ft above ground level, and of changes in stability and precipitation. A series of such forecasts may be needed during the one or two days following the release.

3. Technical Arrangements

3.1 A Main Meteorological Office is nominated to serve each establishment, as indicated in Appendix I.

The head of each Health and Safety (or Health Physics) Department will make arrangements for the Senior Meteorological Officer of the associated Main Meteorological Office to pay any necessary visits to the establishment in order to discuss local features with health physics staff. 3.3 Exercises to test the communications between establishments and the nominated Main Meteorological Offices will be initiated by the Head of each Health and Safety Department in agreement with the associated Senior Meteorological Officer. Each establishment will ensure that anemographs are correctly orientated and maintained according to the appropriate detailed Meteorological Office Instrument Instructions. requested, a full inspection will be made annually by the Meteorological Office (Met 0 16), Bracknell, The Head of each Health and Safety Department will be responsible for deciding whether and for how long to send wind tabulations to the Meteorological Office (Met 0 3). Bracknell. If at all possible, these tabulations should be continued to enable at least two years' satisfactory records to be obtained. so that the Meteorological Office can report on the micrometeorological factors of the site. 3.6 Each establishment will notify the Meteorological Office (Met 0 6b), Bracknell, of any changes in anemograph siting, or in building siting or dimensions, where these might affect the anemograph exposure. In the event of an accidental release to the atmosphere. health physics staff will so inform the nominated Main Meteorological Office and will supply information on the current anemograph readings. The duty forecaster will thereupon supply information on wind direction and speed at the time, near the surface and at about 1500 ft above ground level, in the general area surrounding the establishment, drawing attention to any local peculiarities of which he is aware. He will also supply forecasts of changes in wind speed and direction, of changes in stability, including the heights of inversions, and of precipi-These forecasts will continue tation during the next few hours. to be supplied by the Main Meteorological Office, at appropriate intervals, for as long as necessary (probably not more than one or two days). 4. Financial Arrangements The Meteorological Office will charge for any services rendered under this agreement, in accordance with its current regulations. Under section 3.3 regarding communications exercises, no charge will be made unless forecasts are requested. - 2 -

4.3 Under section 3.4 regarding the annual (optional) inspection of anemographs by the Meteorological Office, the inspection will be charged to the UKAEA if wind tabulations are not currently sent to the Meteorological Office.

5. Administrative Arrangements

5.1 A.D. Met 0 (DS), Bracknell, is responsible for coordinating all the meteorological arrangements covered by this agreement.

Jan Dull

Radiological Protection Division UKAEA Health and Safety Branch Harwell, Didcot, Berks.

// March 1968

Meteorological Office London Road Bracknell, Berks

APPENDIX I

Main Meteorological Offices Serving Establishments

UKAEA Site

Main Meteorological Office

Aldermaston (Berks)
Tel: Tadley 4111
Newbury 1800
Basingstoke 3281

Amersham (Bucks)
Tel: Little Chalfont 2701

Harwell (Berks)
Tel: Abingdon 4141

Winfrith (near Wool, Dorset) Tel: Dorchester 1700

Capenhurst (near Chester)
Tel: Hooton 4101

Risley (near Warrington)
Tel: Warrington 31244

Windscale (and Calder Hall) (near Seascale, Cumberland) Tel: Seascale 333

Chapelcross (near Annan, Dumfriesshire) Tel: Annan 2835

Dounreay (near Thurso, Caithness) Tel: Thurso 2121 Reay 261 Upavon (Wilts)
Tel: Upavon 286
Upavon 351
Ext. 283 or 317

Preston (Lancs)

Tel: Preston (Lancs) 52628 Ext. 203 or 204

Prestwick (Ayrshire)

Tel: Prestwick 77256, Ext. 173 Prestwick 79822, Ext. 195

Pitreavie (Dunfermline, Fife) Tel: Inverkeithing 266

Anemograph Siting at Establishments

UKAEA Site	Latitude and	Approximate height of ground at low- level anemograph site above MSL	Approximate height of anemograph head above ground	
	Longitade		Low level (ft)	High level
Aldermaston	51° 22'N; 1° 09'W	340	41	_
Amersham	51° 40'N; 0° 341'W	450	50	-
Capenhurst	53° 15†'N; 2° 57'W	140	60	_
Chapeleross	55° 01'N; 3° 131'W	260	50	_
Risley	-	_	30	_
Dounreay	58° 35'N; 3° 45'W	50	30	187
Harwell	51° 35'N; 1° 18'W	400	50	120
Windscale	54° 25'N; 3° 30'W	43	40	440*
Winfrith	50° 40½ 'N; 2° 15 'W	112	50	_

^{*} Ground level 87 ft above MSL,

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United Kingdom Atomic Energy Authority,
Authority Health and Safety Branch,
Radiological Protection Division,
Harwell,
Didcot,

Berkshire.

Metform 1132

11th March 1968

Mr. K. Bryant, Meteorological Office, London Road, Bracknell, Berks.

Dear Mr. Bryant,

Thank you for your letter of 23rd February, accepting the final adjustments to the agreement between us. I have now had the agreement retyped in its final form and runn four copies to you, signed by myself. I would appreciate it if you could have two copies signed on behalf of the Meteorelogical Office and returned to me. The agreement will become effective from the date of signing but, in practice, I think we must assume that it will not penetrate down to the operating level until perhaps mid-April.

I dare say that you, like ourselves, will be glad to have this file put away.

Yours sincerely.

H. J. Dunster Deputy Division Head



Director's Office

5th March 1968

Dear Heus Lier.

Our consideration of your letter of 8th December about the proposed new agreement with the Meteorological Office seems to have been as leisurely as the negotiations themselves - for which we blush collectively!

The new arrangements seem to suit us well enough and we will act upon them as soon as we hear the agreement has been ratified.

m succeed

W.P. Grove

H.J. Dunster, Esq Radiological Protection Division Bldg 10.28 AERE Harwell



Please address any reply ta

THE DIRECTOR-GENERAL

and quote: AF/M 368/66/Met 0 6

Your reference: RP 15/4/2

METEOROLOGICAL OFFICE

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex: 84160)

Telephone: Bracknell 20242, ext. 330

23rd February, 1968

Dear Mr. Dunster,

Thank you for your letter of the 20th February regarding the new agreement between the UKAEA and the Meteorological Office. The changes which you propose making to the amended draft agreement are acceptable to us.

- 2. My Directorate consider that the agreement ought to be signed on behalf of both the Authority and the Meteorological Office and I hope that you will be able to treat this agreement as a "statement of intent" and not as a "legal contract" thereby eliminating most of the delays which you mentioned in our telephone conversation this morning.
- 3. If your Branch agree to this, will you please send us copies of the final agreement, incorporating your amendments, for formal ratification by the Meteorological Office.

K. Bryant.

Mr. H.J. Dunster, United Kingdom Atomic Energy Authority, Authority Health and Safety Branch, Radiological Protection Division, Harwell, Didcot, Berks.

20th February 1968

Mr. T. N. S. Harrower, Assistant Director (DS), Meteorological Office, Lendon Road, Bracknell, Berks.

Dear Mr. Harrower,

Thank you very much for your letter of 16th February, with the amended draft agreement on meteorological information in the event of an accidental release of radioactivity to atmosphere. We think your draft is an improvement on the previous one and, with one further suggestion, will be very happy to accept it. In line 5 of the introduction, we would like to add after establishments, "to which the agreement applies". During the reconsideration of our needs, we have some to the conclusion that Springfields, like some of our smaller establishments, does not need to participate in this scheme at all, and we therefore ask that this establishment should be deleted from Appendices I and II.

These changes are only formal, but it will probably be as well if you would confirm your agreement to them before I send the final version to our establishments for implementation.

Yours sincerely,

H. J. Dunster Deputy Division Head

METEOROLOGICAL OFFICE

London Road, BRACKNELL, Berkshire Telegrams: Metbrack London Telex

(Telex 84160)

Telephone: Bracknell 20242, ext. 320

Please address any reply to
THE DIRECTOR-GENERAL
ARD AT 200/00

and quote: AF/M 368/66/Met 0 6

Your reference: RP 15/4/2

16th February, 1968

Dear Mr. Dunster,

Arrangements within the Meteorological Office for supplying meteorological information to nuclear establishments in the event of accidental release have recently been reviewed and it has been decided that in future I shall assume overall responsibility for these arrangements. Mr. K. Bryant of my staff (Ext. 330) will undertake this for me on a day-to-day basis.

- 2. I am, therefore, replying to your letter reference RP 15/4/2 of 8th December 1967 on behalf of my Director General.
- 3. After studying the proposed agreement we feel that there ought to be a few changes in the text. These changes will clarify the Meteorological Office procedure but will in no way alter the basic agreement. A draft copy of the amended agreement is enclosed.
- 4. If you are able to accept this draft the Meteorological Office is prepared to formally ratify the agreement.

Yours sincerely,

T.N.S. Harrower Assistant Director (DS)

Mr. H.J. Dunster, United Kingdom Atomic Energy Authority, Authority Health and Safety Branch, Radiological Protection Division, Harwell, Didcot, Berks.

ACREEMENT BETWEEN ESTABLISHMENTS OF THE UKARA AND THE METEOROLOGICAL OFFICE REGARDING METEOROLOGICAL INFORMATION IN THE EVENT OF AN ACCIDENTAL RELEASE TO ATMOSPHERE

Introduction

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This agreement summarises the arrangements by which the UKAEA would obtain information from the Meteorological Office to help in planning and executing the monitoring and counter measures following a major release da August of radioactive or toxic materials to the atmosphere. It replaces the agreement drawn up in 1958 and amended in 1961 (A299619/58/II issued by M.O.14, July 1961). Details of the establishments/and the main forecasting offices are shown in Appendix I, while details of the amemograph sitings are shown in Appendix II.

2. Requirements

In the event of a substantial accidental release of gaseous or fine perticulate radioactive and/or toxic material to the atmosphere, the establishment concerned will need a rapid assessment of the direction and speed of travel of the material. Such information will assist staff at the establishment in executing environmental surveys and/or counter measures which may be urgently necessary to prevent or reduce radiation exposure of members of the public. Indication of the initial direction and speed of the material will be obtained from the anemograph(s) at the establishments: this will be supplemented by knowledge, if available, of local wind peculiarities gained from assessment of tabulated wind data, and by information from a meteorological office on wind direction and speed at the time in the general area surrounding the establishment.

The execution of subsequent monitoring and counter measures will be aided by forecasts, each covering a period of a few hours, indicating the possibility and extent of changes in wind speed and direction near the surface, and also at about 1500 ft above ground level, and of changes in stability and precipitation. A series of such forecasts may be needed during the one or two days following the release.

-3. Technical Arrangements

- 3.1 A Main Meteorological Office is nominated to serve each establishment, as indicated in Appendix 1.
- 3,2 The head of each Health and Safety (or Health Physics) Department will make arrangements for the Senior Meteorological Officer of the associated Main Meteorological Office to pay any necessary visits to the establishment in order to discuss local features with Health Physics Staff.

- 3.3 Exercises to test the communications between Establishments and the nominated Main Neteorological Offices will be initiated by the Head of each Health and Safety Department in agreement with the associated Senior Meteorological Officer.
 - 3.4 Each establishment will ensure that anemographs are correctly orientated and maintained according to the appropriate detailed Meteorological Office Instrument Instructions. If requested, a full inspection will be made annually by the Meteorological Office (Met 0 16) Bracknell.

3.5 The Head of each Health and Safety Department will be responsible for deciding whether and for how long to send wind tabulations to the Meteoroadded logical Office (Met 0 3) Bracknell. If at all possible, these tabulations should be continued to enable at least two years' satisfactory records to be obtained so that the Meteorological Office can report on the micrometeorological factors of the site.

3.6 Each establishment will notify the Meteorological Office (Met 0 6b), Bracknell, of any changes in anemograph siting, or in building siting or dimensions, where these might affect the anemograph exposure.

adod

3.7 In the event of an accidental release to the atmosphere, Health Physics staff will so inform the nominated Main Meteorological Office and will supply information on the current anemograph readings. The duty forecaster will thereupon supply information on wind direction and speed at the time, near the surface and at about 1500 ft above ground level, in the general area surrounding the establishment, drawing attention to any local peculiarities of which he is aware. He will also supply forecasts of changes in wind speed and direction, of changes in stability, including the heights of inversions.

4. Financial Arrangements

- 4.1 The Meteorological Office will charge for any services rendered under this agreement, in accordance with its current regulations.
- 4.2 Under section 3.3 regarding communications exercises, no charge will be made unless forecasts are requested.
- 4.3 Under section 3.4 regarding the annual (optional) inspection of anemographs by the Meteorological Office, the inspection will be charged to the UKAEA if wind tabulations are not currently sent to the Meteorological Office.
- 5. Administrative Arrangements

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5.1 A.D. Met 0 (DS), Bracknell, is responsible for co-ordinating all the meteorological arrangements covered by this agreement.

Radiological Protection Division UKAEA Health and Safety Branch Harwell, Didcot, Berks

February 1968

Meteorological Office London Road Bracknell, Berks

February 1968

APPENDIX I

Main Meteorological Offices Serving Establishments

	UKAEA Site	Main Meteorological Office
	Aldermaston (Berks) Tel: Tadley 4111 Newbury 1800 Basingstoke 3281))) Upavon (Wilts)
	Amersham (Bucks) Tel: Little Chalfont 2701) Tel: Upevon 286
	Harwell (Berks) Tel: Abingdon 4141) or Uperon 351) Ext. 283 or 317
be eloted	Winfrith (near Wool, Dorset) Tel: Dorchester 1700)
	Capenhurst (near Chester) Tel: Hooton 4101)
	Risley (near Warrington) Tel: Warrington 31244) Preston (Lancs)
	Springfields (near Preston, Lancs) Tel: Preston 29351) Tel: Preston (Lancs) 52628) Ext. 203 or 204
	Windscale (and Calder Hall) (near Seascale, Cumberland) Tel: Seascale 333	}
	Chapeleross (near Annan, Dumfriesshire) Tel: Annan 2835	Prestwick (Ayrshire) Tel: Prestwick 77256, Ext. 173 or Prestwick 79822, Ext. 195
•	Dounreay (near Thurso, Calthoess) Tel: Thurso 2121 Reay 261)) Pitreavie (Dunfermline, Fife)] Tel: Inverkeithing 266)

U.K.A.E.A. Site	Ļat. & Long.	Approximate Height of/Ground at Low-Level Anemograph site	Approximate Height of Anemograph Head Above Ground	
		above M.S.L.	low Lovel ft.	High Level ft,
Aldermaston	51° 22'N; 1° 00'W	340	41	-
Amereham	51° 40'n; 0° 34's'n	450	50	-
Capenhurst	55° 154'n; 2° 57'w	140	60	-
Chapelcross	55° 01'N; 3° 154'W	260	so so	· -
Risley	-	-	30	-
Douareay	58 ⁶ 35'N; 3 ⁶ 45'W	50	30	187
Harwell	51 ⁰ 35'N; 1 ⁰ 19'W	400	50 .	120
Springfields	55 ⁰ 401'N; 2 ⁰ 401'W		8	
Windscale	54 ⁰ 25'N; 3 ⁰ 30'W	43	40	440 [*]
Winfrith	50° 40½'N; 2° 15'W	112	50	-

ground level 87 ft. above M.S.L.

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CENTRAL ELECTRICITY GENERATING BOARD

Nuclear Health and Safety Department

Safeguards Branch



L. Jacobs, Esq., Assistant Director, Meteorological Office, London, Road, BRACKNELL, Berks.

Laud House 20 Newgate Street London EC1

Telephone CiTy 1202 Ext 3386 Telex 25741 Telegrams Megawatt London Telex

Our ref NH/SJD/3.7.5

Your ref

9 February 1968

Dear Mr. Jacobs,

Agreement between establishments of the CEGB and the Neteorological Office regarding meteorological information in the event of an accidental release to atmosphere

I refer to the recent agreement copied to the C.E.G.B. under Mr. Dunster's letter RP/15/4/2 of 8 December, and about which we have spoken on the telephone on several occasions.

This Department considers that the agreement represents a considerable improvement over the earlier, and still current, arrangements. As you are aware a release might last for a period varying from ten minutes to several hours. The C.B.G.B. needs information to cover two main aspects of emergency measures. The first is in ascertaining the path of the plume and local deposition up to distances of a mile or so, and the second is essentially establishing the deposition contours up to 15 or perhaps more miles. The first requirement is against the possibility that people might have to move temporarily out of the affected area and the second so that control could be exercised over the consumption of foodstuffs, notably milk. The first requirement involves very prompt information, initially coming entirely from the station instrumentation, the second requirement is less urgent but the time scale is one of hours. The new agreement meets these requirements.

I regret however that we remain unconvinced of the need for sending wind tabulations under paragraph 3.4. We are of course awars of the side benefits by way of functional and maintenance checks, but should be pleased to receive a technical justification showing how the wind tabulations, micrometeorological factors of the site and emergency observations and forecasts are related. The stations will wish to do all that is reasonably necessary to ensure getting the right information in an emergency, but I fear that unless the wind tabulations can be seen to be essential the stations are unlikely to undertake this not inconsiderable ohore.

I am copying this letter to Messrs. H. J. Dunster (U.K.A.E.A.)

and J. N. Tweedy (S.S.E.B.).

Yours sincerely,

S. J. Dagg

for G. C. Dale

Deputy Chief Nuclear Health and Safety Officer

Copies to:

Mr. H. J. Dunster Mr. J. N. Tweedy

UNITED KINGDOM ATOMIC ENERGY AUTHORITY



REACTOR GROUP

Our Ref.

Dounreay Experimental Reactor Establishment,

Thurso, Caithness, Scotland.

TELEGRAMS: ATEN, REAY, THURSO

TELEX: 7597 ATOM DOUNREAY

Your Ref. RP 15/4/2

THURSO 2121

Ext. 7222

January, 1968.

Mr. H. J. Dunster,
Deputy Division Head,
A.H.S.B.,
R.P.D.,
Harwell,
Didcot,
Berks.

Dear Dunsen

The terms of this agreement, the various drafts of which were considered by Health and Safety Division, are acceptable to this establishment. When the agreement is ratified the technical arrangements in paragraph 3 will be carried out.

In particular, a Senior Forecaster will be invited here at which time the details of a communications exercise will be arranged and the question of whether or not to continue to send high level wind tabulations will be considered. Data from the low level anemograph will continue to be processed here for the use of Chemistry Division in relation to liquid effluent disposal and since this information will be in the form required by Meteorological Office, there is no reason why we should discontinue sending it to them.

Under the latter arrangement Meteorological Office will inspect our low level instrument annually free of charge and we will pay what should only be a slight additional fee for the inspection at the same time of the high level instrument.

Yours sincerely,

R. R. Matthews
<u>Director</u>

ATOMIC ENERGY RESEARCH ESTABLISHMENT,

HARWELL,

DIDCOT, BERKS.

telephone: ABINGDON 4141 EXT. 2857Your reference: RP/15/4/2

Our reference: DR/Safety/9C

8th January, 1968

Mr. H.J. Dunster, R.P.D.

Dear Dunster,

Thank you for your letter dated 8th December. draft agreement which you kindly sent me is entirely acceptable so far as we are concerned and the proposed procedure will be brought into effect when the agreement is finally ratified.

Copies to: Mr. N.G. Stewart

Dr. T.A. Hall

9th January 1968

Mr. D. H. Morris, Health Physics and Safety Manager, Springfields Works, Salwick, Preston, Lancs.

Dear Rugh.

Ξ

Thank you for your letter of 20th December fellowing up our telephone conversation about meteorological arrangements.

Although I appreciated that you would not be calleng on the Meteorological Office for the sort of services we have in mind in this agreement, it seemed to me that the form of agreement was so flexible that there would be no need to leave any Authority establishment out of it, except of course for those which had never been included in the first place. However, I take year point that it might be simpler to divorce you completely from the proceedings, and I have asked Miss Bryant to delete all reference to Springfields in the final document. I will also make it clear that the document applies only to these establishments which are listed within it.

Yours sincerely,

H. J. Danster

RP File (Through Miss P. M. Bryant - for appropriate action)

UNITED KINGDOM ATOMIC ENERGY AUTHORITY



PRODUCTION GROUP

SPRINGFIELDS WORKS,
SALWICK,
PRESTON · LANCS. PR4 OXJ
TELEGRAMS: "Atom", SALWICK, PRESTON.
TELEX: 67-526 ATOM, SPRINGFIELDS.
TELEPHONE: PRESTON 29351 EXT.

.... RP 5/42

Mr. H. J. Dunster,
Deputy Division Head,
A.H.S.B.,
R.P.D.,
U.K.A.E.A.,
Harwell,
Didcot,
Berks.

Dear John,

20th December, 1967

Draft Agreement between U.K.A.E.A. and Meteorological Office

Further to Dr. Rogan's letter to you of 14th December, acknowledging receipt of your letter and the above enclosure, he has asked me to give you our observations.

As I explained in our telephone conversation, we considered the subject of assistance from the Met. Office some considerable time ago. We do not envisage any accidental release at Springfields of the type requiring the use of long distance wind forecasts. This was minuted at a meeting at London Office on 17.3.66, following prior information which we had given. You are probably aware that our own anemometer is considered adequate for local short range purposes.

A further comment on our position was made in a paper (ref. RP 15/4/2) by Pamela Bryant dated 19.9.66. We later telexed on 9.8.67 that we had no need for long-distance forecasting, and we repeated this in a memo dated 6.12.67 to Pam Bryant, following a sight of the previous draft agreement.

As we are included in Appendix I of the Draft Agreement one could infer that we are committed to all the arrangements specified in the text. In the circumstances it is clearly unnecessary for us to be involved in this formal arrangement, and it will save needless effort and time both by the Met. Office and ourselves if it is made clear that we do not place them under formal and specific obligation in respect of Springfields. This is what you and I agreed in telephone conversation.

Just for the record I might recall that we did, in fact, supply the Met. Office with copious data covering an extended period, but I put a stop to the detailed pre-calculation which they demanded of us in the early stages.

I think I am correct in assuming that we are still at liberty to ask the Met. Office for more general information at any time, in common with other organisations and indeed members of the public. At the same time we would not expect them to provide us with such details as would require continued and literal collaboration with this establishment.

With compliments of the Season,

Yours sincerely,

(D. H. MORRIS)

Health Physics and Safety Manager