

## **July 15, 1969**

### **German Nuclear Work**

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#### **Summary:**

Correspondence regarding French diplomatic reporting that West Germany was developing nuclear weapons capability. H.T. Morgan concludes that the French claims are baseless and an example of "flesh creeping" activities to discourage the United Kingdom from nuclear collaboration with West Germany

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(Sgd.) L. Sims

Date 6/10/70

YEAR STAMP 1968/9

OFFICE OF THE COMMONWEALTH OFFICER

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**WESTERN EUROPEAN**

FILE No. WRG 12/2 (Part     )

TITLE: GERMANY (WEST) : FUEL AND POWER :  
NUCLEAR WORK

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(7)

Mr. Bendall

Siv I. Paving/Jan 7/3 20/7/69.  
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Aug ~~12~~ DG. see over.  
German Nuclear Work

RECEIVED IN  
REGISTRY No. 13  
12 AUG 1969  
NRG 12/2.

Flag A

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I submit letters from Mr. Fielding in Paris and Mr. Hanbury-Tenison in Bonn (folios 2 and 4). This correspondence follows on from a discussion between the Counsellor (Scientific) in Paris and M. Bailly du Bois, General de Gaulle's adviser on scientific and technical affairs, last March, in the course of which M. du Bois suggested that the "Germans were aiming at a military nuclear capability". Disarmament Department drew Mr. Mulley's attention to this report.

2. The two recent letters from Paris and Bonn both come to the conclusion that M. Bailly du Bois got his facts wrong. We have failed to trace in FCO archives or in Bonn a report which the then Scientific Attaché in Bonn, Mr. Ashton, claims to have written in 1965 concluding that the Germans were working to put themselves in a position to "go nuclear" by 1970. There is in fact no evidence whatever to support this contention.

3. An interesting fact to emerge from this correspondence is that, according to a contact of the Civil Aviation Counsellor in Paris, instructions were circulated earlier this year to French officials to "play up the German threat" in conversations with British officials. Such an instruction would go a long way to explain M. du Bois's

/allegations

I have furnished Sir E. Park  
with a draft report for J.C.  
20/7/69

SECRET

Enter & p. 4.

SECRET

S E C R E T

- 2 -

allegations and it may well be that we shall see further examples of French "flesh creeping" activities, no doubt aimed partly at discouraging H.M.G. from pursuing nuclear collaboration with the Federal Republic (e.g. on centrifuges).

*H.T. Morgan*

(H.T. Morgan)  
15 July, 1969

*J. Williams*

25/7

Copied to: Mr. Williams  
Mr. Tait  
Mr. Hope Jones  
Mr. Newington  
E.I.D.  
W.C.D.

*Thomas Tait*  
20/7/69.

You may like to ask TIC, who will remit to DSTI, for a view on whether the Germans are or are not up to some secret nuclear activity.

PA

*Spinks*  
21/7

yes. There have been rumours of activity by the Germans outside their own territory

S E C R E T

DNB 23/7

SECRET

C.C. Mr. Hope-Jones (circled)  
Mr. Newington (S.T.D.)  
Enter soon present  
PA [unclear] [unclear]



BRITISH EMBASSY,

BONN.

7 July, 1969.

(S/1/2)

RECEIVED IN  
REGISTRY No. 13  
9 JUL 1969  
WRS 12/2  
Dear [unclear]

German Nuclear Work

(S)

Thank you for your letter WRS 12/2 of 23 June, about a supposed report by Ashton in about 1965, concluding that the Federal Republic was consciously preparing to "go nuclear", in a military sense, if the political decision to do so was ever taken.

2. An exhaustive search of the files for 1965 and 1966 has failed to turn up any report of Ashton's tending to this conclusion. The only slightly relevant report is dated November 1965 and concerned with "Supplies of Uranium". The conclusion of this paper, however, is that "it appears clear that it is the intention to erect a uranium enrichment plant and that by 1968-70, the Federal Government will be self-contained in the nuclear energy field, including plutonium production and later uranium enrichment". This is a very different thing to saying that the Germans are aiming to be ready to develop a military nuclear potential (although I suppose it could be said to be the essential first step) and neither Bill Drury, our present Scientific Adviser, nor I have any reason to believe that an ultimate military potential is in fact a deliberate or conscious end to any existing West German nuclear programme.

*John [unclear]*  
*Richard [unclear]*

(R. Hanbury-Tenison)

I. S. Winchester, Esq.,  
Western European Department,  
Foreign and Commonwealth Office.

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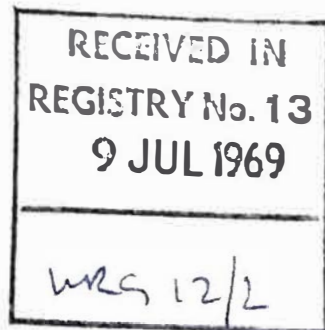
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Western European Department

(5)

(WRG 12/2)

23 June, 1969

German Nuclear Work (2)

Please refer to ~~correspondence resting with Leslie Fielding's letter (3/3) to me of 16 June about this.~~

2. We have been trying in this context to turn up a report by Ashton written in about 1965 when he was Scientific Attaché in Bonn about (forgive the phrase) German nuclear-weapons-oriented activities. Apparently the conclusions of this report were that the Germans were working to put themselves in a position in which they could manufacture their own nuclear weapons and means of delivery with the minimum delay if a decision was taken on to "go nuclear"; and that the German aim was to reach this position as regards both nuclear weapons and their means of delivery by 1970.

3. We have searched high and low for this report here but without success. I should be most grateful if you could put us on its track.

(I. S. Winchester)

R. Hanbury-Tenison, Esq.,  
Bonn.

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RECEIVED IN  
REGISTRY No. 13  
9 JUL 1969

WRG 12/2

BRITISH EMBASSY,

BOON.

13 June, 1969.

(3/1/2)

*Dear Sir,*

German Nuclear Work

Thank you for your letter (WRG 12/12) of 21 May about the talk which the Counsellor (Scientific) in Paris had with M. Bailly du Bois in March.

2. Our views on Bailly du Bois' description of German nuclear work coincides very much with yours. The Counsellor (Scientific) has commented that at the time that Bailly du Bois said he visited Karlsruhe, i.e. in 1962, the only reactor the Germans had there was the FR 2 research reactor, and even this was not on full power (12 MW Thermal) until 19 December 1962. The reactor is equipped with many experimental channels for a variety of purposes, and the "burn-up" of such a reactor in its early stages of operation is hardly likely to be significant.

3. The Counsellor (Scientific) has also pointed out that Karlsruhe had to be funded by Government money, exactly as nuclear activity in other countries is funded by Governments. So Bailly du Bois' point about Karlsruhe being wholly financed by the Federal Government (paragraph 3 of enclosure to Fielding's letter 3/12 of 28 March) is hardly a telling one. As for "conditions of some secrecy" (same paragraph), this might mean anything. The operation of all reactors is usually tightly controlled, and as far as is known from several visits by A.E.A. experts, Karlsruhe has never tried to hide anything. Indeed, when Dr. Hill (the A.E.A. chairman) and his team visited them in 1967, he was asked what he would like to see.

4. It is also well known that Karlsruhe has always been interested in plutonium

- (a) for the German fast breeder project;
- (b) because the European Institute of Transuranium Elements (a EURATOM organisation) is situated there.

5. The Counsellor (Scientific) finally comments that everyone is only too well aware of German interest in aircraft and rockets, but that it does not have to be sinister; and he suggests that on the evidence given, Bailly du Bois is making unwarrantable assumptions. In

I. S. Winchester, Esq.,  
Western European Department,  
Foreign and Commonwealth Office, S.W.1.

SECRET

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general, we share your own view that what Smith was given was a mixture of flesh-creeping phantasy and personal emotion. It had also struck us that Bailly du Bois was trying to carp at our centrifuge collaboration with the Germans without actually using the word.

6. As for the question in your paragraph 4, nobody in this Embassy knows of any German reactors which do not come under the EURATOM safeguards system.
7. Incidentally, we were a little surprised by the remarks which the Counsellor (Scientific) in Paris reportedly made himself about the Germans (paragraph 5 of his minute enclosed with Fielding's letter). If French officials like to talk in this way about our common Allies it is up to them, but we think we should be very careful not to appear to be in sympathy with such talk.
8. I am copying this letter to Leslie Fielding in Paris.

A handwritten signature in black ink, appearing to read 'R. Hanbury-Tenison', written in a cursive style.

(R. Hanbury-Tenison)

SECRET



CONFIDENTIAL

*Ente*  
*01/10/69*

~~(scribble)~~  
(3)

UNITED KINGDOM ATOMIC ENERGY AUTHORITY

Overseas Relations Branch

11, CHARLES II STREET  
LONDON S.W.1



TELEPHONE  
01-930 6262

P.O.  
-1 JUL 1969  
WRFG 3/30971  
12/2

26 June 1969

Our Ref. FR 1

I. S. Winchester, Esq.,  
Western European Department,  
Foreign and Commonwealth Office,  
Downing Street,  
London, S.W.1.

*I see Winchester*

Franco-German Relations

I have seen a copy of Fielding's letter to you of the 16th June.

It may interest you to know that in conversation yesterday with Koechlin (who is a reasonably senior technical member of the staff of the Commissariat active in Overseas Relations matters) he was at some pains to stress the fast growing strength and importance of the German civil nuclear energy effort. I had not seen Fielding's letter at the time but even then I was conscious that the remarks were brought into the conversation somewhat inconsequentially.

I am copying this to Diana Holden and Alan Smith.

*Y<sup>s</sup>*  
*Alex Prichard*

W. A. Prichard

~~Mr. Winchester~~  
*01/10/69*  
*p.a.*

*Quite interesting*

*Jusar*  
*3/7*

Reference..... W 2

Mr. WinchesterR. C. Hope-Jones  
Pl. June 18/69German Nuclear Work

Thank you for sending me a copy of Mr. Fielding's letter to you of 16 June.

2. Some weeks ago I ran into Mr. Ashton, who was responsible for Scientific Attachés when I was Head of the Scientific Relations Section of General Department and who subsequently became Scientific Attaché himself in Bonn when I was in Vienna, where he was also accredited. I asked him about German nuclear work and he told me that about 1965 he looked into the whole question of German nuclear-weapons-oriented activities, and wrote a paper on the subject. He said the conclusion of this paper was that the Germans were working to put themselves in a position in which they could manufacture their own nuclear weapons and means of delivery with the minimum delay if a decision was taken to "go nuclear". The conclusion of his report was that the German aim was to reach this position, as regards both nuclear weapons and their means of delivery, by 1970. I should like to see this report and should be grateful if it could be disinterred.

*R. C. Hope-Jones*

(R. C. Hope-Jones)  
17 June, 1969  
DISARMAMENT DEPARTMENT  
(Main 'A', X-457)

Copies to: Mr. Newington

SECRET

Original Scan

E. H. + ... v. ...

D. 17/4/69

BRITISH EMBASSY,

2



RECEIVED IN  
REGISTRY No. 13  
17 JUN 1969

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WRG12/2

PARIS.

16 June, 1969.

W. H. M. Hope Jones  
STD (M. ...)  
EMD  
WOD

Dear Winchester,

Franco-German Relations: German Nuclear Work

Thank you for sending us a copy of your letter WRG 12/2 of 21 May to Richard Hanbury-Tenison.

2. On the technical side, our Scientific Counsellor is inclined to agree with the Ministry of Defence that Bailly du Bois has got his facts wrong. In justice to the latter, however, Alan Smith thinks that paragraph 3 of his record of conversation enclosed with my letter of 28 March may have been slightly ambiguous. Bailly du Bois did not specifically say to him that he had seen the reactor at Karlsruhe actually operating in 1962. I enclose Alan Smith's observations on this point.

3. There may well have been, as you suggest, an element of "flesh creeping" in what was said. Since my last letter, the Civil Aviation Counsellor has been told in the strictest confidence by one of his French contacts that circular instructions had gone out earlier this year to French officials who have British contacts telling them that, in conversations with us, they should "play up the German threat".

4. We have not been able to secure any further details about this circular or separate confirmation that it exists. I have heard generally anti-German talk from various Quai d'Orsay officials who are not directly responsible for German affairs. But when I paid my first call last week on the Head of the German section in the Quai (Yves Pagniez) he gave me what I expected: an entirely orthodox and reassuring picture of Franco-German relations, the admirable working of the Franco-German Treaty and the modest and constructive rôle of Germany in Europe. He said rather tritely that the growing economic strength of Germany would be a political factor of increasing account in years to come but that the present leaders in Bonn had made it quite clear that they were aware of the danger of boastful talk and of seeking to throw their weight about. As to nuclear matters, it was a fact that Germany was acquiring from peaceful research and development more and more of the know-how and physical means necessary for the acquisition of a military weapon. (Pagniez mentioned the Gas Centrifuge agreement in this connection). But there was no reason to think, given the commitments and special political circumstances of Germany, that she would want to develop nuclear weapons in any presently conceivable future. (I should add that I was particularly careful in this conversation to avoid any comments which could be misunderstood if passed on by Pagniez to the Germans).

5. It could be that the circular instruction emanated from

I. S. Winchester, Esq.,  
Western European Department,  
F.C.O.

SECRET



elsewhere than the *Quai d'Orsay*. My guess is that, whoever drafted it, it was intended for use mainly in scientific and technological circles, where anti-German talk might be thought likely to engender Anglo-French complicities which would pay dividends to France.

6. Returning to Bailly du Bois, no doubt his motives were mixed and he spoke out of some genuine anxiety, as well as on the basis of any circular instructions and of a partly mistaken assessment of what the Germans were doing. He was certainly reflecting sentiments entertained in recent months by General de Gaulle himself, and which may well be entertained in some measure by the General's successor.

7. You will see from John Galworthy's letter of 11 June to Hugh Morgan, paragraph 7, that a certain mistrust of Germany has revealed itself publicly in the electoral presidential campaign following the General's departure. It was not by accident that Pompidou said in his Mulhouse speech on 6 June that he intended to maintain "une coopération non pas privilégiée mais exemplaire" with Germany. He repeated this on French television on 10 June, but with a somewhat revealing transposition of the word order. When asked what he thought about the special relationship between Paris and Bonn, he replied: "I said at Mulhouse ... that Franco-German reconciliation and cooperation ought to be exemplary, that is to say to serve as an example, but not privileged."

Yours Ever  
Leslie Fielding

(Leslie Fielding)

Copied to: R. Hanbury-Tenison, Esq.,  
BONN.

Chancery,  
UKDEL BRUSSELS.

German Nuclear Work

Mr. Winchester's letter of 21 May and the accompanying letter from the Ministry of Defence may do M. Bailly du Bois a slight injustice, because of an ambiguous "were in paragraph 3 of my note of his remarks to me on 19 March.

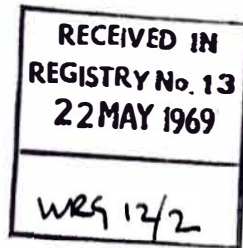
2. I wrote "At Karlsruhe he had been shown the plutonium-producing nuclear reactor which the Germans were operating in conditions of some secrecy ....".

3. To be fair to him, M. Bailly du Bois did not actually say to me that he had seen the reactor operating in 1962. If I had to reconstruct his remarks (at this distance it is not easy) as they were made, a translation of what he said would look something like this:

"They have their own plutonium-producing reactors already, you know, and their operation is surrounded in secrecy. But when you know a bit about this sort of thing you can tell what sort of régime a reactor is being worked on; I have been to Karlsruhe - I was there in 1962 - it is a research centre entirely financed by Federal Government funds, and I am sure there are things going on there which are directed at military applications. You know there are different kinds of plutonium you can produce in a reactor, and it all depends on the irradiation rates whether it is useful for civil purposes or not: well, they showed me their fuel-cycle studies and, believe me, they were aiming at irradiations of about 300 MW per tonne: which is obviously a way of obtaining military plutonium. Not only that, but in my own conversations with the Germans that I know, and from reading what their politicians and industrialists say - and what they do not say, but leave to be inferred in their own country - I can tell what they are really after, what is really in the back of their minds, is a national force de frappe. Look how keen they are on everything to do with military aircraft, and rockets - all the strategic sectors. It's all part of the same thing. Call it "gaullism", if you like but gaullism in somebody else's country isn't quite so pleasant, alas."

Alan Smith  
28 May, 1969

Western European Department,



21 May, 1969.

12/2)

German Nuclear Work

Please refer to paragraphs 2 and 3 of the enclosure to Fielding's letter (3/12) to Lush of 28 March about Franco/German relations.

2. Our first thought on seeing this was that although Bailly du Bois' fears might be genuine, they might equally well be part of a flesh-creeping exercise designed, for example, to put us off the centrifuge project. We consulted the Ministry of Defence and their comments are given in the enclosed letter. There is one comment they do not make, and that is to confirm that an irradiation level of 300 MW-days per tonne is a low one. However, this level need not be militarily significant if the reactor concerned were a research one.

3. From the Ministry of Defence letter it would appear that Bailly du Bois has his facts wrong. Whatever reactor he did see could not be all that secret if he were able not only to observe it but also to make deductions about its irradiation level. Nevertheless, we shall be interested to hear your comments both on the technical and political aspects of Bailly du Bois' remarks.

4. There is one further point which arises out of the conversation reported: do you know of any German reactors which do not come under the EURATOM safeguarding system? It has been suggested in the past that there is secret work being carried out at Karlsruhe and at Jülich.

5. I enclose a spare copy of this letter for Drury.

(I. S. Winchester)

R. Hanbury-Tenison, Esq.,  
 BONN.

Copied to:- (with encls.)

Chancery, PARIS.

Chancery, UKDel BRUSSELS, (with Fielding's letter)

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Reference.....

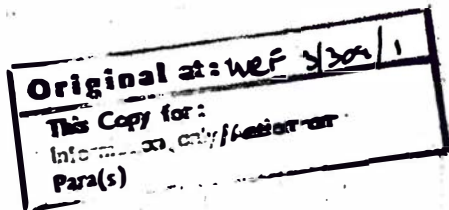
Mr Newington

Received a letter (from WFD)  
requested to take account of  
the comments made by Mr Hope  
Jones, Mr Medford Clark and  
Mr Stokely.

D Medford

16/5

Mr. Winchell



**CONFIDENTIAL****MINISTRY OF DEFENCE**

Metropole Buildings, Northumberland Avenue, LONDON W.C.2

Telephone: ~~Whitehall 3474~~, ext. 5508  
01 930 7022

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AL 13/1

and quote: 115A/65

Your Reference: SIMN 4/312/2

Original at: SIMN 4/312/2This Copy for:  
Information / Action on:  
Para(s)

13th May 1969

Dear *Dr Holden,*

I am sorry not to have replied before to your letter of 22nd April 1969.

First, your general query about different sorts of plutonium refers to the proportions of two isotopes of plutonium, Pu 239 and Pu 240. When U238 is irradiated, some of the atoms absorb neutrons and are transformed into atoms of Pu 239. The longer the irradiation, the more Pu 239 atoms are formed, and hence the higher the proportion of plutonium present in the irradiated fuel. But during longer term irradiation other neutrons meet the Pu 239 atoms, some of these are captured, and the Pu 239 atoms are transformed into Pu 240. This Pu 240 is spontaneously fissionable, and, for military purposes, the proportion of it which is present must be limited. So short term irradiation though giving a low proportion of Pu in the fuel, nevertheless gives a low proportion of Pu 240 in total plutonium, and also, of course, a high yield of plutonium per megawatt day of irradiation. The length of the fuel irradiation time in a reactor is, therefore, a guide to whether or not it is producing the grade of plutonium better suited for military purposes; and, the longer irradiated fuel produces plutonium which can be used for civil purposes.

Secondly, we have doubts on particular points about the reactor at Karlsruhe. The only reactors at the site capable of producing worthwhile quantities of plutonium are the MZFR (50 MWe), using natural uranium as fuel, and the sodium cooled KNK using medium enriched fuel, and not expected to reach full power until 1970. Your informant must therefore be referring to the MZFR, which incidentally is the reactor which gives Fuchs sleepless nights. But construction began on this reactor in December 1961, and it reached full power only in April 1966, whereas the date referred to in your letter is 1962, when the 'secret reactor' was said to be 'operating'. Moreover, it is to be expected that the uranium used in this reactor will be under safeguards and supervision, and it may well be that the reactor itself is under Euratom Stewardship. If the date, 1962, is correct, M. Bailey du Bois could not have been speaking from personal observation.

On the security aspect, it is worthwhile saying that measures are often imposed by countries engaged in developing the most economic reactor for civil purposes, so that good ideas are not stolen.

Dr. D. Holden,  
Science & Technology Dept.,  
Foreign & Commonwealth Office,  
LONDON, S.W.1.

*Yours ever,*  
*Dennis Arkell*

*350 MW Day  
100*

*3000-10000 MW Day  
1000*

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Reference.....

SECRET

Original at: <u>BMN 4/312/2</u>
This Copy for: <u>Action on</u>
Para(s)

German Nuclear Work

I have often heard that both at Karlsruhe and at Dillenburg the Germans are doing secret work to which the Euratom inspectors do not have access. Min/Tech and AEA may have information on this, and ~~if it were possible~~ ~~if S.T.D. would press~~ S.T.D. may wish to seek their ~~cases~~. UKI Dept at Brussels may also be in a position to ~~contact~~.

I should be grateful if W.E.D. would bear in mind our close interest in anything that sheds light on German capability of producing nuclear weapons.

R.C. Hope - Jones

29/4

D. Holden. P. See Mr. McAdam Clark's letter (below).

P. Tell Mr. Winchester that we are awaiting further comments before clearing his draft. We shall probably want to add quite a bit.

Spike to Mr Winchester  
- hold Dillenburg S/S

mfr  
2/5



Copy of  
WRF 3/30/1  
9 WRG 12/2.  
Spencer  
(i.s. wmm/estren)  
w.e.p.  
20/4

CR/139/03

25th April, 1969.

Original at: SW4/312/2  
This Copy for:  
Information only/Action on  
Para(s)

Dear Mr.,

I was interested in the letter of 28 March and its enclosure recounting a talk between Alan Smith and Bailly du Bois relating the latter's and the General's alleged fears of Germany.

The Karlsruhe reactor can hardly be called secret, though no doubt the details of its operation are not broadcast. If Monsieur Bailly du Bois was shown operating records which led him to his stated conclusions, the secrecy alleged seems still less. This, after all, is primarily a research reactor, or at least a small pilot project, assuming the date of 1962 is correct. It would be very peculiar if such a reactor were not used to irradiate fuel to a wide spectrum of durations, which would lead to the calculations of Pu production being checked by extraction and chemical and physical estimation. One cannot deny that low-irradiation produces the more militarily useful article. Equally, one need not leap to conclusions, when another explanation is equally feasible.

But what interests me more is the apparent psychological gap in the Elysée mind, which is, it seems on the one hand, almost pathologically distrustful of German nationalism, and on the other persists in the very policies likely not only to promote such nationalism - by example if in no other way - but also to prevent the obvious means of its containment, the pressure of Britain in a unified Western Europe.

If all his intimate minions are equally affected by the particular kind of mental blindness, it is less hard to understand why the obvious is never brought to the General's notice. It does not seem obvious to them either.

*Yours sincerely,*  
J. MCADAM CLARK

M.J. Newington, Esq.,  
Foreign & Commonwealth Office,  
London, S.W.1.