

[0785 4817665]
PONI

2 - Ref Pol 94-01 Admin Market SSP
K... - Dep Ass Sec Def Mand (OS) Mally SSP
Weth - Pol - I
'80 the adm

Linda Booth

- Helped UK interests in reentry -

8.37

Modern prog + TRI seeking dem
UK MDA responds on with MOD CSA - good
relationships with them
UK keeps us informed - so all agreement clear
Rec 06 exchange of letters
Johoc reports us .. UK - Robert Pittman (Wash)

19.00

In both US + UK real debates are internal rather than
in Congress (re coop)

27.18

We don't have a political or behavioral veto
There is agreement with the form (1983?)
Cold War NATO - shared risk + responsibility - variety of
arrangements though NATO NPG + UK's land army - but not
with MDA

~~36.41~~

27

Penetration that has long UK relations in Carter era
There is certain co-op on nuclear domain - but not
talk about details.

34

36.41

42.42

sealies

There is no conflict with NPT signed - UK are parties
rebuttal on this MDA part NPT, NPT only
says can't make work;

1.10.28

Internal procedure 'statutory determination' that public
info can be shared with UK. / SAS Engled - Political

1.11.17

Exchange of letters + 'some other dialogue that is
not in the public domain' (see 06)

1.11.50

There is disinclination to avoid situation where UK MS
is too big for FSM.

1.12.33

↓ gaps
sent

"While there are major policy decisions, whether we need to decide what to
do about the
There ~~was~~ ^{are} an exchange of letters in the public domain
+ some other dialogue that is not in the public domain
in order to make sure that we will shape our ~~policy~~ ^{program}
in a way that doesn't contradict the way that the B...

Steve Henry

9/16
6.38

~~look~~ at A6 subs of CEP - also deal'd with UK
- about their surveillance program + concerns -
- coop with UK look'g at CEP + sharing info for
Enhanced Surveillance prog. + more immediate ways
in production.

8.30

was part of NATO target's cell + liaised with UK
on type of Pol in 80s -

Q Co-op on type?

9.16

- In 80s fully integrated into type packages NATO
was develop'g - UK develop'g - had to be
deconflicted with US - was
'all this did go into the OJT planning considerations
& deconflictions'

10.50

NATO type, + what best system to engage those
type. There were a lot of people who have done
type plus + deconflict - (US + UK)

11.46

Q How much did UK inputs add? - was it rec!
UK system provided quite a bit - particularly range.
US - for v long range; UK - longer reach for NATO
than other systems - eg artillery / rockets / DCA (used to refer
- UK gave greater stand off.

~~11.27~~
11.23

5.20

" In the mid 1990s my involvement was with D.O.E. + we were
develop'g C.E.P.s for different weapon systems, (a new
approach) The real Q is how do you maintain
confidence in a weapon system that is going to last
longer than you are expected it to. (Wanted to look at L.
As part of that we also did analysis of UK to find out
kind of info they had thought their own surveillance
prog. + concerns that they had thought their own
unique weapon systems that would help us learn + to

Pu-240

even-^{more} Pu isotopes are non-fuel

58

6.50

- discuss as to what kind of contract we need to plan
+ in what terms we would need to get the
contract

- "We entered into a co-op. with the Coby at
C.E. itself for diff workloads, we entered into
a program for sharing info for the enhanced
Senedlar program and we also also looked
at more innovative ways of being able to do
production so that we could gain efficiencies"
- for Tri-duo

PON 1

4

Frank Miller 2

0.32 Q U.K. never wanted to operate a SSBN system which was unique!

2.29 - ~~But~~ Re Cher. Pol started to have 'unknown unknown' problem; U.K. had to get Pol re-manufactured.

6.00 Q - Why did U.K. need 12 warhead MIRV

- To strike a number of targets in Russia.

Q - but ours only ^{had} 10?

- But they had fewer subs - we had more warheads & they had few subs.

U.K. - 'courage city' denied in press

US - 'all elements of state power' talk about or allow

Initial deal with U.K. was for TRI 2 as at that time - ie no. of warheads/miss. (12).

9.19 for START wanted TRI 2 or 8 warheads & do you impose on U.K. -

- would have been re-negotiating on deal.

- only discussed later in START - C. Brook made Start in an annex to START - US helps U.K. to modernise & U.K. forces independent & not part of START

- states a first club with U.K.

- Pres knew U.K. system is independent.

13.39 'warhead is similar to one of our designs but it is a U.K. design'

14.15 Rebooting U.K. to 8 warheads ~~but~~ could have retained U.K. target. → didn't want START to restrict U.K.

15.00 Our ignorance of U.K. target policy & doctrine was enormous & vu - no dialogue at policy level - so moved to change (1980?)

The hope
of safety day
+ summer - summer

$$\begin{array}{r} 16 \\ 12 \\ \hline 32 \end{array}$$

$$\begin{array}{r} 16 \\ \hline 192 \end{array} \times 3 = 600+$$

F. Miller 2

16.57

You can't have a credible dec without real tgl.
 Neben Threats to elements of state para

- UK looked at this in a diff way - ie who ~~is~~ thought to be valuable
- UK also looked at effects civil fac, whereas US only looked at ^{impact} effects

22.30

1990 - As Soviet force withdrawn ^{in Europe} - adjacent tgl & politics
 - Care for US Ac in UK becomes nearer. ~~(F. Miller)~~

- ~~Was~~ ^{Was} they thought about + calculated (UK) → (US)
- US choice has been in context of Sol Belm
- (these things get in the way)

31.06

RNEP dead; RRL decision not subject to allied review;
 Jauch's view of Rev Com NPT + CD; ~~Prop~~ ^{Prop} ~~decisions~~
 - those involved are isolated from their govts.

RRL has become a cause celebre.

30.17

RNEP proposal was counter-productive (from Ramsfeld)

(37.13

and
 Fall

43.13

Issue with big deal in 1993 - Brit went off in an
 direction - when the Brit played game (CD5 + P45)
 - in real sense - went off track.
 (as it & forward)

[45.15

Q - Will the Bar be involved if these modernization initiatives go through. What sort of role will be suitable or are diplomats have in those, implement or moderate, R.R.V

"They will need a R.R.V. of their own - in fact they are working on one - It has a different name - It's got another acronym. But they are working on the same kind of a thing for their WTO variants"

→ I believe that are discussions ongoing now but I'm not sure on this.

Do the

~~is~~

→ Franklin Muller to BE 28/1/08

79-01 Personal affairs

Joined Dep Ass Sec of Def

2001 - Spca Ass for President + Sec Privy to Def Pot
+ Am Centre on Nat Security Council Staff

'The the stupid thing - when they
did it they were really to think
Knox - it's not well suited for the'
- the area 6.00

Chlorine water found to my capital
which could cause a deadly fall
due from the implosion characteristics
- they steel reinforced bars.
- a huge size

Alan Mora -

7.35

"enhanced collaboration - the latter chapter of collaboration"

36.0a the last (N.P.R.) ^{was in} 2002

+ born out of the last one we are on the principle of ~~revising~~ ^{enhanced cooperation} this ~~cooperation~~. It is clear that the last N.P.R. formal P.R. resulted in richer more ~~enhanced~~ collaboration sub of collaboration

39.46

"If the US decides to stay with the legacy strategy it is much more difficult for the UK to embark on a trumped strategy, ie go it alone. Because there are so many interdependencies just on the evolution of the ^{you} nuclear defence strategy. So those technical factors of that part of the policy decision which would be tied to strategy makes so much but more the character of the decisions in a large part I would expect the UK in many regard to follow the US"

Stan Oman -

"late we also derived a technique, again though (The) Charlie Martin of exploding a non-fissile plutonium isotope. Now because it was Pu the laws in the States would not allow you to explode this even. Though it was non-fissile because it was plutonium. So again this was another capability which the America Scientists would come across and we in our laboratories because they couldn't see theirs"

Stan Orma -

R SA Mary - Pol play MS RMA

39.30 "They are involved in our studies except the R.R. we approach.

39.40 "Their decision will lag ours but will be informed by ours"

Re the involvement in R.R.

40.25 "They are participating in the working groups as in fact they are observers on some of the work and chaired by the way for the R.R.

40.30 "We have sent to the shop & and the RMA nobody to expect it but to and to to other for a broader study of working the in the past + the have to do with the R.R. effort"

- We have to be open of co-op here we get a feedback into + direct one
- there are some agree

Sta Om

22.40

Uv - water reactor - used O_2 pressure \rightarrow in fully
worked with nitrogen - gave high rate of Uv - O_2 react
~~to~~ could produce - Uv - O_2 - produced H_2 which could
pressure worked with

- had we filed our patent with a (as US)
- patent would have stayed valid

- dissolved when labor had just returned to power
 \rightarrow US had done sim center

28

Q - ~~as~~ ^{as} 3rd Lab (Pete Parsons)

- very true

- design was always anglicised - never an exact copy.
MO + Uterahin

33

28.00

Q - AVE as 3rd Lab

- "this was very true

"the design was always, in simple terminology
anglicised, it was never a direct copy,
so there was an anglicisation and you
learned something from that"

28.50

Nevada tests -

"we did our own design but this always
had to be disclosed to the US side in
full detail because we were bringing a device
over and sinking it in the ground here"

- there was competition to be the lab which
worked with Uv a seal test - so did on (51
basis - Uv's test. - we brought new
concepts, new ideas + both (LANL + Uv) participated

Walbe Slooth

29.32

DCA - 'I think they are an acronym'

They are an acronym

- If the counter they are people that they are important then I would that it inputs to within

NATO debt doesn't depend on any Ac but on US + UK 55Bn + other USN.C.

30.

.. 'Yes, the Ruins - Let's be honest'

39

- Re R.R. ? - Uncertainty not so much if work but low much yield.

Frank Miller

18.00

80/81 - MPA/PSA but lack of Policy / operations co-op with NATO; was plan worked at STARTS but no US-UK dialogue on debt.

→ ^{at} Confing requires for TRIZ led to write position

- having bought TRIZ - UK ran into START

- ~~the other~~ ^{to} offset to UK at 12 warheads

- to fix UK debt requirements

1945

→ US cabinet ~~had~~ debate on whether to engage to UK with 12 warheads → led to dialogue on cables.

Mid 80's - FM ~~was~~ encouraged US/UK liaison on SLOP + find UK plan → true yearly nuclear policy 5000 Oaks what continues to this day.

21.58

- technical discussion - by nuclear risks,

US-only blast; UK efforts included fire.

23.40

- when faced with cost of large parts at Corp - US proposed treaty missile for post.

Fish Rider

- 24.50 - How do the Brits get to handle the TR12
footprint model which they had ~~got~~ bought +
how do you want the interests of up to 16 mixed
that can carry up to 12 valves we decided that
one of the ways to do that was to establish the
post of a UK Liaison Officer at US STRAT. COM
at the on SAC + JSTPs at Omaha. In the
mid 80, as the SHAPPO target ^{was in SHAPPO} U.S. was down
because of man power constraints from the other allies
It stood up ⁱⁿ the new form out in Omaha
with the UK C.O. who also, because he was
being obligated with the folks at J.S.T.P. Staff,
who knew they were doing it of our side plus,
begin to identify ~~all the intricacies of~~ ~~shaping~~
the variances + the combination of multiple hardware
targeting. By the late 80, we had a 3 legged
stool where there had been a one-legged stool
- not technical / policy / + operations Co-ops
- 26.27 Number staff talk had been 213 people for
US + sin for UK → give + give - more + more
people in nuclear dining; guys not to give / ^{Also phrase} contracts
Talked about hypothetical + nuclear exercises.
- 27.30 Meeting Brits when they wanted to learn frequency
range of our naval com stations when they
had to take some of theirs down for repair.
- 29.30 Chen shown to SOI - not previously seen in US.
- 30.40 We talked about what the Br national plan
was + what the SIO P was but we never really
talked specifics aim part - we were here when
they were firing out - C.D.R.
- we exchanged ideas

F/20/1

31.30 Started in START & UK relationship outside START + independent.

32.50 In many instances closer than idea - agency co-op.
Diff's - ways of modifying NATO def - in late 80s
→ 1990 - US to deploy F15Es to UK - to 3rd base
→ polit options discussed in context of close friend.
post 91 - what should NATO pattern be - diff of view betw US & UK → till both happy with end product.

39:16 'Even on standards, particularly at times when the anti-nuclear sentiment is higher than normal, it is very helpful to have another country that is NATO 2nd & 3rd nuclear power. Because we don't have to bear the sole burden ourselves, we don't have to bear the burden of their abroad as well. Tally about it + carry the public burden as it.

40.53 '2 cents of decision making' doesn't exist now because there is no nuclear state threat & the existence of UK & US & UK -

→ if there were it could come back into play.
→ for - totally removed from discussion with agency etc

42.15 3 plans - NATO, UK, US + then a 4th - for - for anyone involved in this plan - major problem (for) - FM shared NATO High Level Group

NPG - US, UK + 1 ally for N, S, C etc. (Timing at the time)

79 → expanded to all NATO members

77 → HLG found for debate

→ one time NPG decision + HLG involved in inputs

44.50 HLG handles nuclear specific issues.

HLG - 29/26? Nally representative.

- Debate - say can't be taken anti-nuclear line

→ NATO decision by consensus

FM 1

46.05

US + UK worked more closely than with other allies
 - There was never any daylight between us + the
 command - always talked extremely in advance
 - Some times people are under instruction from
 Congress → then say - do you really want to
 take this to mission,

48.

In early 80s, the kind of work we had (but FM 1 ^{on HCV})
 Modernize nuclear ability in NATO - heads for train work
 → but that came down - arms crisis

51.00

→ also SRAMT - NATO nations not willing to sign up to
 why does NATO still need NW? - because a danger world
 90s despite -

52.30

If W turned UK wouldn't be
 a Richard Rogers - English grand program - MOA in etc for
 UK esp for US elements.

FM 2

45.18

55.16

Re: Bush speed to CD no matter if TRI or (2) Det;
 Bechtel speak - committed to diva - but as temporary way with
 begin new SSBN - till 2050.
 - Bush didn't mention
 - Even if UK did cancel TRI - life would go on - we
 still need UK + UK still needs us.

59-

- watch what I do not what I say
 Q - Function of Det - for UK - ⁽¹⁾ prestige - but is this good.
 (2) Main Det - but no seem like UK would be + not US
 for US - (1) share bank of print and currency of NATO
 - but have done (2) 2 center. - could we pool?
 + antiquated - encourage policy
 ↓

Everest + Be (UK) - (Dep (Chief Exec) + Dep (Admin SA))
Been on both sides (ALC) with US management

3.50

US can see as bias - but UK provides external review;
- US has 5 ASOs - NAS - but not same close interaction
as 50 workers; US too get benefits -

12

- Can argue that UK programme does get more
desires more as 50 workers
- so that US system does think they are doing all
the work need to find ways for UK to produce
particular background work

22.50

Rights now US programme is in a mess and ALC
programme is moving rights along

28.06

Mojo 1980

- Relationship has to be guarded.

Commander

Code

Steve Dearden

5.50

US supplies hardware - → UK developed on its own
→ 'we have a fairly robust technical exchange currently'

6.31

90% our own work; share ideas + look at
each other's work; don't use US contractors

8.50

If work with US under MPA works with it on
mud prep is not an option; do work with it on other
aspects of sub design; Ability of working with US
bids cost leverage

2.30

We attend biweekly person on anything not totally
circumstances at open force.

3.53

MPA means we don't share into what is
derived in any way from US design info.

5.05

- Part 4 agents - UK to stand on its own feet
- 'we came back together after a period of
time, we have a fairly robust technical exchange
currently'

(Influence Jessica Yates)

FM2

1.0.0 Europe is assing change is +ve - but look at Res)

1.3.40 'you cannot strike us with impunity'

1.4.58 Carry the burden - intellectual, policy - financial
- eye at CD.

- 'it is always useful to have someone in the dock with you'

- intellectual, moral + political burden we are better off sharing

1.06.40 Q - Marginal benefit - margin is small; is there cost?

- No, as risk of theft/diversion - No.

- This is an excuse for Protis, not a cause -

1.08.40 Q - Vision of rupee - would eliminate UK as a good first step

- from UK stand point - UK will have to keep bill low as / Res / in - upon removal -

- to give up would mean - not needed ever,

1.10.52

9.00 Linton Brooks
- worked into TOU-CFA

Q&A - UK more successful in funds for modernisation.

Q6.16

Q7.00

"The UK put money into A&S on the grounds of the need to maintain the asset debt. They were very careful to separate this from decisions that had not yet been made, I mean they were quite clearly that's of their, but they hadn't been made, to replace TRI + decision that they have not yet made on whether there should be a new hardware."

- PM is able to get up for Paul

They were able to move forward in a way that our system make it difficult - longer is independent - particularly in this area

- are their lessons we can learn?

- we looked a doc like white paper

- UK doesn't include extended debt (alliance) or dissuasion + more comments that did not work

- then not into diff role (as in US).

51.30

There is no continuity of pol elements for central elements when in UK there is - so leading position in UK has direct involvement.

In UK support to new leaders to replace US in Iraq + in US support to BR - which to let use of force

55.40

UK has been better at taking over (eg leading member) like to TRI REPL - than US;

59.40

"If we want to turn Iran into a party led we can turn Iran into a party led? -

The job that we can also do it with us - add a certain amount of credibility to the who wish to reint convert from.

London Brooks

Argyris + MPA ando

- review to secure direct

^{to large}
Bush may 12/16/04

Ando - reviews best, principally in the Sewt Area, to be
connected with unit policies + parties relate to
personel + physical plant

Hydro - tanks, lead, DU

CFE tests we be

DARNT - the fpu ~~am~~ ~~g~~ -

TAIS Tests - DU containing

Nad En Pol NA 69 NEPA A2USC 4321 +
Comit a En Quid NEPA A2 CFR 1500 -
DOE NEPA Regs (10 CFR 1021)

Phenex is 30 yr old → 1970

PU is not used.

65 - Boys Caron Radiant Lanthanum
→ to be replaced by Phenex

Phenex 30 yr old in 2000 (1970) → equal to 1966

Pulsed High Exposure Radiograph Medical Brackets X-rays
Phenex at TAIS

Richard Mollan

11.20 Lab phy - politics - noddy what needs on this thing to avoid people but carefully noddy so it needs something to other (in conference of 1976)

Mason Group - is then update - v sensitive → what would people say if it was known.

18.20

Mason for was MOD CSA; this was very risky
Pol → Tri being considered in 78 against other shift pol background. → Callaghan gets debate out of the way - would the US give us DA!;

Q - How certain 82-86? -

Rationale - 2nd can demoralizing → threaten key aspect of
for power → "where key players in for groups operate from
→ Tri army → change what could threaten
→ able to defend defenses (ABM).

→ Non-run attack - but do you want into the 'theater'
Strat + you might need a lot of eyes.

18.29

UK-F - would we have confidence in warland → raised acute sensitivities;

Cher taught UK the risk of doing own front end.

22.52

RW could not see value of working with UK if we can work with US.

→ Habits of coop + low risk → meant explain was on coop with US;

26.10

Rego 501 incident launched with virtually no notice to UK, + raised issues for UK det.

→ UK det could have been compromised

+ also Rego Reliant - with ^{total} no UK notice

28.37

Re played significant role in NATO nuclear planning
- not a bi-lateral relationship in isolation - but alongside NATO design

31.56 One reason to end of Cold War should be to reduce
risk + rethink some stuff + UK more involved.

40.13 Cobby also out of war is a big ask - particularly
when there is another power (FR).

Blair stated - does world UK need now?

- but we are what we are

41.00 - Q Does B have more clout with now?

- no. but need an argument (would not be days)

42.00 - NK - not an argument for war

+ for Cobby reminds of bad past history - v diff

- Cobby is manageable

42.56 - In giving up a UK wouldn't be cynical as they

45.50 UK have need here Cobby at full power

of a hard TR1 SSOR - have successfully reduced

- So can't play part in talks on reductions.

Kevin Telford

3.36 Benefits to US - US not isolated as now; Diff for
US to manage nuclear relationship with NATO - this was
eased by UK as another nws; US + UK could manage
differences with rest of NATO.

7.22 Q - UK - to what extent?

- FR could never replace US, eg technically I + FR not
in military + couldn't share MDA info with 3rd country

Q - Moscow evidence

Dech officer for Chen:

Q - Why was Porevka!

MDA is fundamental to UK + UK better relat - on too + broad;

- but US all. tends to share best intel - eg Carter not keen!

15.40 This was always a narrow job [12/minds??]

17.20 Hist of over-iss of private discounts betw
1930 PM + Renda - credit denis

US/UK

262

Des Browne - early yr - max gain / min side

"But now, what we ~~are~~ need to do with this agreement [CMTA] is to maximize the confidence in the safety, security + operation of nuclear weapons?"

271

Rowald Brown - at EU d MPA - "I don't think we learned very much from them [UK]" - UK had 8000 fusion bombs.

283

Rita Maros - ⁵ UK ^{UK} 'commonly pursued' subatomic sovereignty program; UK as 3rd lab.

300

David Portes - informal agreement to share with CMC;

336

Mallory Jane - "The amount of work has increased over the last decade"

337

- keep from falling into going while not creating what should not be passed over board

339

Richard Wagon - Charlie Rahn on X-rays

357

Robert Walmisley - we you announce that you would replace - you are sound; the death knell of UK nuclear entire world - (CNSF)

1Q3f

Need generate force - USAF/UK + US + payloads

- UK - AWE, Lockheed INS45 + Thales

US - HAWAIIAN AFB, Lockheed Martin Valley Forge; HQ USAF (Katie)

- next Jan 07.

UK is considering AWE + Thales for future force

0603851F

0 x 3
 16
 8
 128

US/UK ; UK/ROW ; UK/M&A/NSW ;
 M&A-NSW/AWE Dev

x 4
 512
 3824
 16
 12
 32
 16
 192
 600 x 3
 576

- Key points -
- ① Hidden developments - ~~and~~ agreement with AWE
 - ② Decision made in US
 - ③ Increased scope of development:

③ - Stable - what are we for → hardware / what type
 → design / production → AWE & Rotherham

Actual
 AWE Rotherham
 White Paper
 formal verbal decision

Grant plan for UK New Program

Experience with A90

- ① Delay; Overbudget
 - ② Intended product → Actual product (for TR1)
 - ③ Manufacture of most of joint technology in AAS
- (- and also shown by bad O/S

696/sms

Focus on cost/benefit

- Hydrex → potⁿ use for US RRV
(-but this undercuts us also)

Char → cost + deception + UK prog (2)
NSW → - " - + " - + close US coop.
Also A90 (9(C))

→ Use secrecy of new projects to conceal
non desired work + substantial expenditure

Evidence of deception

(Not lying but misleading) process

'Master copy to design + then re-worked'

- Is AUS actually producing a re-worked?

- no - (but will soon be producing ML&A)

- Is AUS actually design a re-worked?

- DOT firing system

- Radio Com External Collab.

- Next level firm with USA etc

- MDA And for security features

- "working on CAR, R, V. of the same"

~~ML&A~~ ML&A.

Area of Deception +

(1) ML&A → UK invol in US CGP, Sea and 20,

(2) UK invol in RRV

(3) Development of re-worked.

(4) Also Development program

(5) UK re-worked?

↳ pd on NS

Asm -

roba to prove with materials. - 6 months;

1/2 full materials.

Capacity \$30.

~~But 31 Jan.~~ No discounts + ~~no~~ must pay before results count;

Oppia - 2 Nov; 9 Nov - min. equities for Oppia
Park house - with the 2nd month with the Cullys;
(2/12); New partners 15/12;

Sat case - where possible parts. problems at work

Winter - 2 floor; - Nov funds in fleet

- main with fuel - 3 way, 3 layer, 3 steps; Credited/Red

- low level boats; Park also circuits;

Club day - with auction off boats;

Franko 6^o oppia / Raffle Prizes;

with 2 email address;

\$12/8. (cut, \$6/land)

1000 best

1030 start. / ? on last to last ?

1000

1030

1165

1100

1265

~~1300~~

1330

1400

1465

1500

1500

Richard Wagner - CCNL - to 8 (→ Ass Sec Sec to Am Pres)
-86-
96-CARC

3.20 'Whe I can to the person I am actually involved
both with the most important itself - some
part of that we deal with the expansion of the
scope of what could be done'

4.40 - Q of NW in Europe + beyond (Chaos in 1980s,
- NW to swim attack by Warsaw Pact + Disarmed
+ safety + very better there have from game state.
Chaos - low level upon Product of what included
the repr.

6.40 UH work on TRI - major part of technical intelligence.
Not like to AWG since 86.

13.30 UH US for about of UH in size of computer → in models (70s, 80s)

14.20 Shang ways of capturing ~~language~~ code with Brit.
writing computer code to capture the physics.

14.44 knowledge problem → expert could talk to with Brit was
expanding; US had better agents + hydrodynamic

18.44 ground that was to continuously expand the
scope of what could be talked about'

technical people for both sides would
purpose expansion + discussed at policy level
- sometimes policy decision would not allow
full expansion or requested from technical level

19.50 - but generally it did. Policy was not
based on CIA - Some of US-UH in Cold War
together or in later. - Mixed in policy reality.
Quid pro quo - not technical level to UH
+ the US would hope that the UH would
go US policy decisions broadly with in terms of
Cold War policy as a whole

→

V09

2050

"There was kind of a quid pro quo. That probably the net benefits of the technical interchanges accrued to the UK side and the US would hope that the UK would support US policy desires broadly with in defense policy on a whole with regard to Cold War policy. It extended to such things as the role of the UK defense force itself in the underlying defense relationship of the Cold War between the Western Part and the Free World; and in some sense the goodwill that was always there in the technical interchange. There was never anything but a sense of common purpose. I think that that carried over to the goodwill with which the much larger defense issues were approached."

22.40

① - What would hold policy makers back from expanding co-operation -

One come - security; Over counter-all intelligence people might have concerns about the way the UK takes might protect information. One of the ~~ways~~ ^{ways} that his boundary of the UK was that we could exchange info about physics +

24.50

engines, but specific US nuclear designs, the blueprints so to speak, with perhaps one or two small exceptions, were barred from the exchange. The idea being that if there was exploitable information in the US designs that we didn't want to risk them being compromised."

- That was the major consideration that precluded more complete interchange.

Way

22.00

Q - How viable is nuclear security issue.
Concern is not that they would turn on us, but that Russian would infiltrate their systems.
- not just vulnerabilities of systems but Soviet understand + using our developments. The first Soviet nuclear test was based on the Los Alamos designs.
Intended to learn judgments of UK lab sys to sys export (as) - They expand some concerns
- showed the expansion of the scope - not a major inhibition.

RRR
sys int
-> prob
as lab
one also
at HWO

26.02

Q - 1979 MDA agreement by did they expand coop + 1984

- In 1980, - on table; we see partly in plan upgrade of safety + sys feature - in US interest to UK sys to be safe + secure - mainly expansion of scope to include this, exp safety; security - we control feature here + we deliberately closely held with specific even categories. + I think we did not share much there; but safety features, incl IHO - was shared; prob in 84 MDA Amst. - but did come.

29.18

Main worry was of steady expansion, "continued expansion" when MDA was modified it would take some yrs to export these modifications.

30.

Q - Falliland?
Don's sense on export relationship betw MDA + Falliland; MDA has played small role in general appearance of the sys issue

W07

Q - Toy Wm sp to Ing etc?
- Most of those hybrid relationships are guided by 'historic Spain Relationships' the speaker & MPA

32.25 Q - Any p concepts that depend on UG copy
- Not on this world here - but some we wouldn't be doing or well - eg flat radiography:
- ~~Answer for~~

34.23 Bill Paron is ending for may yet 2

9.00
*

Early 70's scope of what could be discussed was broadened considerably; 72/3; Lots being said that couldn't have been earlier -
- incl flat radiography - x-ray snapshots of explosion
- a key design tool everywhere for now:
ROCCNE I was responsible for design paper + develop new x-ray machine - include shadow-puller & x-rays; Charlie Martin - innovative idea of how to build flat x-ray machine - many needs in 1973/4 - His ideas led to needed design developed electron technology - led to begin making in 80s + 90, + DAWRT.
- A tool to develop designs rather than design itself.
1970s lecture about how we worked - computer models.

Way

34.23

39.00

the NATO talk as an interim UK delegate would draft a compromise statement, which also supported UK post.

41.00

Not common language but history: in 1970s memory of WW2 still there.

44.11

Because the UK code never is capable the UK people had to think as a physicist

50.43

54.41

US paralyzed by lack of consensus on future of news. 'Over the last 20-3 yrs the Brits have voted out the power on the future of their nuclear det. ... that these kinds of decisions in the US had to be investigated + explained, in order the Brits had the to not have problems or matters of principle more or propaganda - the UK decision - finally I think we could resolve this

56.40

Q MDA + nuclear share in NATO.

- Tended not to see boundary between MDA + this in NATO that included other allies.

58.51

In NATO no nuclear design - but how you operate with it in NATO

1.02.00

looking memory of how to make extended delivery work

1.02.30

'Now are about relations between great powers'

- pos + their - if relations between great powers are not harmonious - the new initiatives

Q - B613 in Europe

1.04.20

"It would be difficult to get them deployed again if we broke the no"

- How much warning would you have of deteriorating relationships

Key

1.08.50

would there not be the draw for ren
sueding - no strates - projects for local Labs
which have wide application - eg NIF

1.10.30

Becha

22.50

"Right now US program is a mess + the dh program may
right along

23.00

Re study of people
- public is not showing up

Steve King -

20.10 Both pricing foreigners + debtors basis of illiquid
radically rational - only comp.

26.00 Q - UK dep on SSBN?

They have done evaluation, based on answers
for US on what we are doing.

21.50 They not have to look into how to
maintain the new itself - US will help
with power of what kind of new need into
future (UK).

23.00 Q - Mint del? 2nd state - counter rule / total ^{look} _{fund}

- index has not yet seen will work out.
What does mint mean - is to add benefits on
a - ve. Does size of stockpile due to
or left person; Overly factor is capital, ^[ie Res]
can never judge intent.
Concern that New Path Res should look at
is flexibility. Small stockpile - only counter-
value - not a good path to be in.

Q - ~~the~~

28.00 Q - Did relationship change with end of Cold War?
Relationship has strengthened. End of vertig has made
Co-op more needed - how do you (analyze + do
analysis) when could best didn't need to know;

31.00 Q - How important is volatility of yield?

Issues →

Increasing US/UK nuclear collaboration

Development of new UK warhead

UK involvement in RRW

US/UK nuclear targets relationship

US use of AWD.

— US condition to accept TRU warhead

—
Common things in PONI tapes -

US Emphasis of way UK has moved forward of US;
Growing collaboration;

—
Evidence -

CANL - Pete Hanson -

P333 - UK support US proposal for com / parity
+ UK warhead for NATO.

Pete
p333²

Sigfried Hecht's Hecker

23.00 In electronics 1950-1970 UK increased dependence on US.
For US per se is more - important when there is no
testing.

So Technical interdependence will increase.

31.30 Important that things we don't give to the world get
to the world via UK

42.47 Knowledge capital - has experienced people working with
younger generation.

Hill

1982 paper by ~~the~~ Vice Admiral Ted Keady
- detailed problem presented + one case
- US complaint - but told that from the
don't co-op for should UK have appropriate system
UK must have F sub program started later, by then a
civil PWR not in service. All the design work
for this was declared to encourage civil industry
~~to~~ → would provide info for UK; ∴ UK wouldn't
need US may help. - US didn't help for.

37.43

A fantastic deal for UK; proven plant which
provided a benchmark for subsequent UK design.
- agreed reactor, core, BWR also + safety standards;
→ reg procedure authorisation;
'Tag out' + 'Rip out' procedures if valve in incorrect
position.
- Focus on core safety + focus on radiation in turbine
primary loop;
- Risk standard far higher than in UKAEA at the
time.

41.10

UKAEA were pretty 'gang ho' with radiation.
- left to our devices we would not have been
on demands + disciplines.
- also intended an org for N.P. program which
mirrored that in US (Rid insisted on).

46.30

had the UK subs ~~had~~ we must quote the
PRO.

57.30

Treasury concern about funding for large-scale core.
- should approach us to try to find cheaper options

1.00.51

most aspects of what don could be traced to DRE

1.03.00

Dill for eyes - lab - lab - firm - firm for RP