

DEFENSE NUCLEAR AGENCY
WASHINGTON, D.C. 20345

403680

9 MAY 1979

TO COL DAMON: Please pass to CJTG, Enewetak, on earliest available aircraft.

TO CJTG: Request comments IAW Dir, DNA, note at bottom of pg 1 of Encl 1, be provided at earliest possible time.

LGEC

SUBJECT: Nose Swipe Data

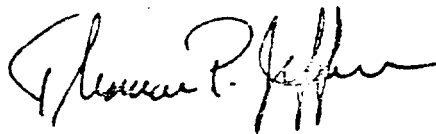
ROBERT L. PETERS, COL, USA

Commander, Field Command
Defense Nuclear Agency
Kirtland AFB, New Mexico 87115
ATTN: FCZ/COL Peters

BEST COPY AVAILABLE

1. Attached is a copy of Memorandum by Biomedical Advisor, 29 April 1979, subject as above, with comments thereon by the Director (Enclosure 1). This memorandum was prepared in response to the Director's question about an CALG memorandum of 13 March 1979 (Enclosure 2) which responded to his memorandum of 5 March (Enclosure 3) which asked why so many nose swipes for action level reason (counters showing action level when scanning filter paper taken from air filters). Both memos are attached as Enclosure 1.
2. Your review and comments on the Biomedical Advisor's memo, particularly paragraph 3, are requested not later than 23 May 1979.
3. It is further requested that necessary action be taken to comply with the Director's instructions concerning the inclusion of chapters in the Enewetak history on the health-physics aspects of the cleanup in accordance with the Director's note.

FOR THE DIRECTOR:



THOMAS P. JEFFERS
Director for Logistics

3 Enclosures:
as

CY FURN:

FCP/LTC Burke

BA

MEMORANDUM FOR ADMIRAL MONROE

SUBJECT: Nose Swipe Data

1. The attached nose swipe data is *extensive* *on the subj's health* *physicists* *of data on air* *swipes, film* *etc.)* the explanation as to why it is, and the relationship of "action level" to taking of swipes follows for your information.
2. An "action level" is a derived level for given circumstances and has meaning really for health physicist *rad-safe* type personnel. It is an indicator that attentiveness is proper or needed for some situation. For example, in a laboratory dealing with radioisotopes that may become airborne, health physicists can place an air sampler, take concentration measurements, measure air flows, characterize particle sizes and obtain other measurements. Over a period of time, they will have enough data to correlate a gross reading from the filter paper of the air sampler with the concentration of radioactive material in the air and the potential for an individual to become contaminated by it. Thus, an "action level" can be set based on the filter paper gross reading-in counts or disintegrations per minute, not a quantitative basis-- which triggers or indicates to the rad-safe personnel that a condition is developing that will require additional measurements or actions.

Obviously, at Enewetak conditions are not generally consistent as they would be in a lab; yet it is still of value to have a field indicator for rad-safe purposes. So air samplers are used with this action level, which they have set at about 112.6 pci/sample. But what is really meant-- at least in my experience and understanding-- is that

② PLS get comment from FC & C716 (RCC) on this memo - particularly A 3 ! ②

5/1/79
5/1/79
 DALG ~~action~~ *re health*
 PSM *re health*
 physics aspects of *our history.* (We *haven't discussed this* *before.*) I *want more* *on the subj's* *health* *physicists* *of data on air* *swipes, film* *etc.)*
 29 March 1979
 chapters written by Payne, showing pages of data on air swipes, film, etc.)
 26 APR 1979

BA
SUBJECT: Nose Swipe Data

the action level equates to 112.6 pci per filter paper. What is done is to take the gross alpha activity in counts per minute of the filter paper using a field survey instrument. If a certain number of counts is obtained, it equates to an approximate concentration in the air of radioactivity and triggers additional measurements, i.e., nose swipes. The action level at Enewetak is conservative, thus many nose swipes are taken when conditions such as have apparently existed recently occur-- an apparent abundance of short-lived natural alpha-emitting isotopes, probably radon from sea water. The field instrument does not discriminate among alphas from plutonium, americium or radon or any other nuclide.

That the activity on the filter paper is short-lived is borne out by the fact that no activity is measured a few days later in the laboratory.


3. The aspect of these messages that should be emphasized, in my opinion, concerns the statement about a programming error that existed for close to four months. It is not surprising that an error occurred; however, it is surprising that the fact that the ^{rise} ~~use~~ in the air sample measurement valves during that period apparently did not provoke a bit of curiosity on the part of someone as to whether they were real or not, or ^{to what} ~~due to~~ the probable cause ^{was dup.} (It may be that it did, and they couldn't find the reason until this time had elapsed.) Abrupt changes are important to rad-safe people from the standpoint of what caused them-- Are they

BA

SUBJECT: Nose Swipe Data

real or instrument malfunctions, miscalculations, etc.[?]
That is why measurements are made, records are kept, and
trends are evaluated.

Very respectfully,



EDWIN T. STILL
LtCol, USAF, VC
Biomedical Advisor

Attachment
as stated

DIRECTOR
DEFENSE NUCLEAR AGENCY
WASHINGTON, D. C. 20305

3/16

From: VADM Monroe

To: IRHE

Look ok to you?

Resp
by

5



Headquarters
Defense Nuclear Agency
Logistics Directorate

Washington, D.C. 20305
13 March 1979

imp
TO: DIR

THRU: DDM C 14/3/79

SUBJECT: Nose Swipe Data

1. The reason for "so many" nose swipes for Action Level for the periods in question is attributed to short lived natural isotopes that apparently caused the readings. Action level for nose swipes is 112.6 PCI/Sample. Highest readings for these periods are:

2-7 Dec 78: All readings less than 0.63 PCI/Sample.

8-18 Dec 78: The highest reading was 1.01 PCI/Sample. Eleven highest readings, which ranged from 0.72 PCI to 1.01 PCI, were recounted eight days after the first count. The recounts ranged from 0.00 PCI to 0.53. After the recount, the highest reading among all 170 samples was 0.69 PCI/Sample.

15-17 Jan 79: The highest reading was 0.72 PCI/Sample.

2. Period recorded as "8-18 Jan" should have read "8-18 Dec". Book has been corrected to reflect correct period.

THOMAS P. JEFFERS
Director for Logistics

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DIRECTOR
DEFENSE NUCLEAR AGENCY
WASHINGTON, D. C. 20305

3/5

From: VADM Monroe

To: OALG _____

^{C 7/3/79}
① Why so many nose
swipes for "action level"
~~reason~~ reason during following
3 periods:

- 2-7 Dec _____ (42)
- 8-18 Jan _____ (142)
- 15-17 Jan _____ (62)

② What were results of
these nose swipes?
over

⑦

③ Why are periods
so screwed up [is top
entry on p. 2 possibly
8-18 Dec ?]
Σ

Resp
y

⑧