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Description Notes

January 26, 1981

See 71, 22099-7210
 admitted to evidence
 file Gross

TCDD IN VETERANS ADIPOSE TISSUE

V.A. Subject No. ^{a/}	Results of Initial ^{b/} Analyses by UN	Samples With Detectable TCDD Re Gross ^{b/}	Analyses by RTP of ^{b/} Extracts from UN	Results of Analyses by RTP of Samples Extracted at TAC ^{e/}	Results of Analyses by RTP of Additional Samples Extracted at TAC ^{g/}	Results of Analyses by UN of Samples Newly ^{h/} Extracted at UN
<u>"Heavily Exposed Veterans"</u>						
10	12(2), 16(4) 35(9), 23(4)	X	36(3.0)	229(15) ^{f/}	84(6)	
19	nd(15), nd(3)				20(9)	nd(29)
26	63(6), 99(10)	X		173 ⁽²⁰⁾ (21)		
<u>Air Force Officers</u>						
2	5(2)	X			24(2)	
3	4(1) ^{c/}		3(1.0)	10(1)		
4	6(2)	X				
<u>Intermediate Exposure</u>						
6	5(3) ^{c/}					
8	5(3) ^{c/}		3(0.6)	5(1)		
9	nd(12), nd(3), nd(4)		3(1.0)	160(18) ^{f/}	nd(7)	
11	3(2)	X				
12	9(3)	X				
14	4(3)	X ^{d/}				
16	nd(4), nd(8)					
24	5(4), 5(3)	X				
25	12(4), 10(3)	X				
27	nd(11), nd(6)					
29	nd(6), 13(5)	X				
30	9(4), nd(3)					

TCDD IN VETERANS ADIPOSE TISSUE (CONTINUED)

V.A. Subject No. ^{a/}	Results of Initial ^{b/} Analyses by UN	Samples With Detectable TCDD Re Cross- ^{b/}	Analyses by RTP of ^{b/} Extracts from UN	Results of Analyses by RTP of Samples ^{e/} Extracted at TAC	Results of Analyses by RTP of Additional Samples Extracted at TAC ^{f/}	Results of Analyses by UN of Samples Newly ^{h/} Extracted at UN
<u>"Lightly Exposed Veterans"</u>						
1	nd(11), nd(5)					
13	nd(2), nd(2)		nd(0.2)	nd(7)		
15	7(4)	X			18(2)	
28	8(6), 7(5)	X				
34	4(4), 5(3)	X			nd(5)	
<u>No Exposure</u>						
5	9(5), 4(4) ^{c/}					
7	3(2) ^{e/}					
17	3(3), 4(3)	X ^{d/}		20(9)	14(2)	
18	nd(4)		5(0.8)	8(2)		
20	5(4)	X			19(1)	20(NA)
21	6(3) ^{e/}		3(0.7)	12(1)	46(5)	9(NA)
23	6(3), 8(2)	X				
31	4(2), 7(4) ^{e/}			nd(3)		
32	nd(5), 4(4)	X ^{d/}				
33	7(6), 14(7) ^{e/}					

FOOTNOTES

- a/ Subject numbers correspond to listings contained in Ex. 563. The Veterans Administration there established the exposure classifications of the studied veterans as reflected in this column.
- b/ Reported in Ex. 562 (February 13, 1980). Samples reported in these columns were extracted at the University of Nebraska. All data are reported as: ppt TCDD (detection limit).
- c/ Considered as not detected (nd) by Gross due to improper isotope ratios in validation runs. Ex. 562.
- d/ Reported signals were between 2.5 and 3.0 times the noise level. Ex. 562.
- e/ Reported by Harless in Ex. 1204 (February 20, 1980).
- f/ Considered by Gross to be the result of sample contamination. Ex, 930 at 13.
- g/ Reported by Harless in Ex. 932 (September 18, 1980).
- h/ Reported by Gross in rebuttal testimony, Ex. 930 (January 13, 1981). In 2 out of the 3 analyses, no detection limits or other data are given.

See Tract 22379-3210
 January 26, 1980
 Admitted
 Vets
 5/15
 7/5/80

REVISED
 USFS BLODGETT FOREST DEER STUDY SUMMARY
 (New Analyses Indicated by * -- As Reported in Exs. 930 & 931)

Number	Sample Description	UN Results (All Except "*" Taken From Ex. 227) PPT (D.L.)	RTP Results (Taken From Ex. 1340) PPT (D.L.)	Characterization by Gross (Ex.930)	Shipment Number (UN/RTP)
CONTROL					
	Adipose	nd (2) ^{2/} *nd (2) *nd (4)	5 (2) ^{5/} 5 (1) ^{5/}	Anal. discrepancy ^{6/} (and false positive)	FS-15/DFS-27
	Muscle	nd (1)	nd (.6) ^{3/}		FS-1 ^{1/} /DFS-14
	Liver	nd (2) *nd (4)	2 (1) 4 (.4) ^{5/}	Possible positive ^{7/}	FS-39/DFS-31
	Adipose	nd (.9)	3 (2) nd(3) ^{5/}	Anal. discrepancy	FS-16/DFS-26
	Muscle	nd (2) nd (.8)	nd (3)		FS-2/DFS-13
	Liver	nd (2)	nd (1)		FS-38/DFS-32
	Bone Marrow	nd (5)	nd (1)		FS-43/DFS-48
ANALYSES					
	Muscle	nd (.9) *nd (8)	nd (5)		FS-5/DFS-10
	Liver	nd (2)	nd (2)		FS-32/DFS-38
	Adipose	2 (2)	nd (2) ^{3/} nd (1) ^{5/}	Possible positive	FS-19/DFS-23
	Muscle	nd (1)	nd (3)		FS-6/DFS-9
	Liver	nd (5)	nd (4)		FS-37/DFS-33
	Adipose	nd (3) ^{2/}	3 (2) nd (5) ^{5/}	Possible positive	FS-21/DFS-21
	Muscle	nd (1) ^{2/}	nd (5)		FS-9/DFS-6
	Liver	nd (2) *3 (3) *3 (2) *nd (6)	5 (2) ^{3/} 8 (1) ^{5/}	Anal. discrepancy	FS-30/DFS-40

Sample Description	UN Results (All Except "*" Taken From Ex. 227) PPT (D.L.)	RTP Results (Taken From Ex. 1340) PPT (D.L.)	Characterization by Gross (Ex.930)	Shipment Number (UN/RTP)
Adipose	nd (1) ^{2/}	5 (2)	Possible positive	FS-17/DFS-25
Muscle	1.6 (1) *9 (6)	12 (4)	Positive	FS-4/DFS-11
Liver	nd (3)	nd (1)		FS-33/DFS-37
Adipose	nd (1) *nd (8) *nd (3) ^{4/} *nd (4)	7 (3) 15 (2) ^{5/}	Anal. discrepancy (and false positive) (and possible positive) ✓	FS-25/DFS-17
Muscle	nd (.2)	nd (.5) ^{3/}		FS-12/DFS-3
Liver	nd (2)	nd (1)		FS-35/DFS-35
Bone Marrow	nd (3)	nd (1)		FS-48/DFS-43
Adipose	nd (1) ^{2/} *nd (6) *nd (3)	4 (3) ^{4/}	Possible positive	FS-26/DFS-16
Muscle	nd (.6)	nd (1)		FS-13/DFS-2
Liver	nd (2)	nd (2)		FS-28/DFS-42
Adipose	2.9 (1)	12 (1)	Positive	FS-20/DFS-22
Muscle	3.4 (1) *14 (10)	24 (4) ^{3/}	Positive	FS-8/DFS-7
Liver	2.5 (1)	3 (2)	Positive	FS-31/DFS-39
Bone Marrow	nd (2) ^{2/}	nd (1)		FS-44/DFS-47
Adipose	nd (1) ^{2/} *nd (6)	10 (1)	Possible positive (and anal. discrepancy)	FS-22/DFS-20
Muscle	nd (.5) ^{2/}	nd (4)		FS-10/DFS-5
Liver	2.1 (1) *nd (6) *3 (2) *nd (4)	nd (2) ^{3/} 4 (.7) ^{5/}	Possible positive	FS-34/DFS-36
Bone Marrow	nd (7)	nd (3) ^{3/}		FS-16/DFS-15

<u>Sample Number</u>	<u>Sample Description</u>	<u>UN Results (All Except "*" Taken From Ex. 227) PPT (D.L.)</u>	<u>RTP Results (Taken From Ex. 1340) PPT (D.L.)</u>	<u>Characterization by Gross (Ex.930)</u>	<u>Shipment Number (UN/RTP)</u>
WEEKS (Con't)					
1.	Adipose	2.2 (1) *3 (3) ^{4/} *2 (1)	nd (3) ^{3/} nd (1) ^{5/}	Possible positive	FS-24/DFS-18
	Muscle	4.6 (.7) *19 (6)	27 (2)	Positive	FS-11/DFS-4
	Liver	3 (3)	2 (.4)	Positive	FS-42/DFS-28
	Bone Marrow	nd (7)	nd (3)		FS-47/DFS-44

Sample Description	UN Results	RTP Results	Characterization by Gross (Ex.930)	Shipment Number (UN/RTP)
	(All Except "*" Taken From Ex. 227) PPT (D.L.)	(Taken From Ex. 1340) PPT (D.L.)		
Muscle	3.3 (1) *16 (7) (Fortified w/ 15 ppt)	15 (3)		FS-3/DFS-12
Muscle	7.4 (.8) *28 (6) (Fortified w/ 30 ppt)	35 (3)		FS-7 ^{1/2} /DFS-8
Adipose	12 (2) *34 (7) (Fortified w/ 43 ppt)	44 (3)		FS-18 ^{1/2} /DFS-24
Adipose	4.9 (1) *17 (10) (Fortified w/ 16 ppt)	19 (3)		FS-23 ^{1/2} /DFS-19
Liver	14 (.8) (Fortified w/ 48 ppt)	60 (3) ^{3/4}		FS-29 ^{1/2} /DFS-41
Liver	4.5 (2) (Fortified w/ 14 ppt)	20 (1)		FS-36 ^{1/2} /DFS-34
Method Check	nd (.4) *nd (2)	nd (2)		FS-14 ^{1/2} /DFS-1
Method Check	nd (1)	nd (2) ^{3/4}		FS-41 ^{1/2} /DFS-29
Standard Sol'n	3.6 (.7) (Fortified w/ 10 ppt)	16 (3)		FS-27 ^{1/2} /DFS-15
Standard Sol'n	7.8 (2) (Fortified w/ 28 ppt)	18 (4)		FS-40 ^{1/2} /DFS-30
Standard Sol'n	3.9 (3) (Fortified w/ 7 ppt)	12 (2)		FS-45 ^{1/2} /DFS-46

- 1/ Samples shipped from Dow to RTP (March 17, 1980) for TCDD analysis as agreed by Dellarco, Graham & Ross (March 26, 1980).
- 2/ These results are not detected according to Gross although he reported the following values: FS-15 2(2); FS-17 1.9(1); FS-21 3(3); FS-22 1.6(1); FS-26 2.3(1); FS-44 2(2). See Ex. 227.
- 3/ As reported in Memorandum from Robert Harless to Mike Dellarco (May 12, 1980)(Ex. 564-A, Attachment B).
- 4/ Below 50% recovery.
- 5/ Extracts reanalyzed by RTP for confirmation of previous positive and/or ND results. These results have been characterized as "qualitative confirmation analyses." Memorandum from Robert Harless to Mike Dellarco (August 14, 1980). Ex. 1340.
- 6/ Gross defines "analytical discrepancies" as a situation where "the capabilities of the second laboratory were adequate to verify detection (i.e., their detection limit was lower than the level found by other workers), but TCDD was not detected." Ex. 930 at 6.
- 7/ Gross defines a "possible positive" as a result where "TCDD was detected in one of the laboratories but not in the other because the detection limit in that laboratory was comparable or higher than the level determined by the first laboratory." (Emphasis in original.) Ex. 930 at 4.