

# **Department of Energy**

Washington, DC 20585

May 26, 2004

Mr. Roger Zavadoski Defense Nuclear Facilities Safety Board 625 Indiana Avenue, NW, Suite 700 Washington, D.C. 20004-2941

Dear Mr. Zavadoski:

The Secretary of Energy, in his July 11, 2003 letter to the Defense Nuclear Facilities Safety Board (DNFSB) on High Efficiency Particulate Air (HEPA) filter testing, committed the Office of Environment, Safety and Health (EH) to publish a semiannual report on Filter Test Facility (FTF) data. This is the second report published by EH and includes FTF data for the first six months of FY 2004. The attached Table provides the results of filter inspections and tests performed at the FTF for the period October 1, 2003 through March 31, 2004.

The report indicates that the HEPA filter failures continue at a rate consistent with previous years. I also visited the FTF in February to observe testing. During that visit, a supplier repaired 36 defective HEPAs at FTF preventing delays in deliveries to DOE sites. Questions concerning this report may be directed to me at (301) 903-4218 or Chip.Lagdon@eh.doe.gov.

Sincerely,

Richard H. Lagdon, Jr.

Director

Office of Quality Assurance Programs

#### Attachment

cc: Mark B. Whitaker, DR-1

Frank B. Russo, EH-3



## **Department of Energy**

Washington, DC 20585

June 9, 2004

**MEMORANDUM FOR:** EVERET H. BECKNER, NA-1

JESSIE HILL ROBERSON, EM-1 RAYMOND L. ORBACH, SC-1 WILLIAM D. MAGWOOD, NE-1 DAVID K. GARMAN, EE-1

MARK R. MADDOX, FE-1

FROM: FRANK B. RUSSO

DEPUTY ASSISTANT SECRETARY

OFFICE OF CORPORATE PERFORMANCE

ASSESSMENT

SUBJECT: REPORT ON FILTER TEST FACILITY DATA

FOR FIRST SIX MONTHS OF FY 2004

The Secretary of Energy, in his July 11, 2003, letter to the Defense Nuclear Facilities Safety Board (DNFSB) on High Efficiency Particulate Air (HEPA) filter testing, committed the Office of Environment, Safety and Health (EH) to publish a semiannual report on Filter Test Facility (FTF) data. This is the second report published by EH and includes FTF data for the first six months of FY 2004. The attached Table provides the results of filter inspections and tests performed at the FTF for the period October 1, 2003, through March 31, 2004.

The data indicates that the failure rate for filters (6.5 percent) continues at approximately the same rate as previous years. One hundred twenty or 5.5 percent of the total number of filters inspected were rejected due to shipping damage, manufacturing defects and/or not meeting customer specifications. The consolidated testing and inspection at FTF reduced receipt and inspection problems at the various sites because the vendor repaired a lot of 36 defective filters at the test facility. Guidance is provided in DOE-HDBK-1169-2003, *Nuclear Air Cleaning Handbook* to assist in identifying defects during receiving inspections. The test data indicate that continued independent testing and receipt inspections are necessary for HEPA filters used in DOE nuclear facilities.

If you have questions regarding the semiannual FTF data, please contact me or Richard H. Lagdon, Office of Quality Assurance Programs (EH-31) at (301) 903-4218.

### Attachment

### cc:

Mark B.Whitaker, DR-1 James J. Mangeno, NA-1 Xavier Ascanio, NA-124 Rabindra N. Singh, NA-124 Paul M. Golan, EM-3 Patricia M. Bubar, EM-20 Larry D. Vaughan, EM-5 Milton D. Johnson, SC-1 Gary T. Staffo, EE-3C Craig D. Zamuda, FE-7 Richard H. Lagdon, EH-31

Table 1
Results of Filter Inspection and Tests
October 1, 2003 - March 31, 2004

		T					I		Reason for Reje			
Customer	Manufacturer	Flow	Flow High/Low	Number Tested	Number Accepted	Number Rejected	Resistance	Penetration	Manufacturing Defects	Does not meet PO and/or Spec	Shipping damage	Rejection Rate
Bechtel BWXT Idaho, LLC.(BBWI)	Cumpling A	1000	Н	8	7	1			1			12.5%
	Supplier A	1000	Н	40	36	4			3		1	10.0%
	Supplier A	1000	H	1	1	0	-		3			10.070
	Supplier A	1000	H	111	111	0			<u> </u>			
	Supplier A	1000	<del>L</del>	2	2	0					<b></b>	
	Supplier A	35	L	6	6	ŏ						
Bechtel BWXT Y-12	Supplier B	1500	Н	4	3	1			1			25.0%
	Supplier B	1500	Н	2	1	1				1		50.0%
	Supplier B	1000	Н	1	0	1		l	1			100.0%
	Supplier A	1000	Н	11	11	0						
	Supplier A	250	L	6	4	2			2			33.3%
	Supplier A	250	L	2	2	0						
*	Supplier A	100	L	24	12	12		2		10		50.0%
	Supplier A	50	L	4	4	0				ļ		
AEA Taskaslassa	O. F. B. A	4000	11		1	1				1		50.0%
AEA Technology	Supplier A	1000	H	2	1	1				<u> </u>	ļ	30.0%
D 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Supplier A	1000	Н	1	1	0	<u> </u>					
Bechtel Jacobs X-10	Supplier A	1000 1000	Н	12	12	0			<u> </u>		<del> </del>	
Duratal: Fadaval Carriaga V40	Supplier A		Н	6	6	1	<u> </u>	_	1	<del></del>		100.0%
Duratek Federal Services X10	Supplier A	1000	H	1	5	0	ļ		1	<del> </del>		100.078
	Supplier B	1000 125	H	5	1 1	0					<del> </del>	<del></del>
Foster Wheeler	Supplier B Supplier C	2200	Н	2	2	0	<del>                                     </del>				<del> </del>	<del> </del>
*	Supplier C	2200	H H	48	44	4		4	<del> </del>			8.3%
*	Supplier C	2200	<del>                                     </del>	48	40	8	<del> </del>	1		7		16.7%
*	Supplier C	2200	H	48	45	3		<del>                                     </del>	<del></del>	3	·	6.3%
	Supplier C	2200	<del>                                     </del>	5	5	1 3	1		<del>  -</del>		<del>                                     </del>	0.570
	Supplier C	2200	H	15	13	2	1		2	···	<del> </del>	13.3%
UT Battelle	Supplier B	50	L	3	3	0	<del>                                     </del>		<del>                                     </del>	<del> </del>	<del>                                     </del>	10.070
O i Dattelle	Supplier A	35	L	1	1	0	<u> </u>			1		<del> </del>
	Саррист	+	L .	<u>'</u>	<del> </del>	<del>                                     </del>	1					
BWXT Pantex, LLC	Supplier A	1000	Н	8	7	1		1				12.5%
CH2M Hill Hanford	Supplier A	1500	Н	20	20	0		-		1		
OF IZEN THE TOTAL OF	Supplier A	1000	H	6	6	0	<del>                                     </del>	<b> </b>			<del> </del>	<u> </u>
	Supplier A	1000	<del>l ii</del>	6	6	1 0	<b>†</b>		1	† · · · · · · · · · · · · · · · · · · ·		1
	Supplier A	1000	H	6	4	2		1	<del>                                     </del>	1 1		33.3%
	Supplier A	500	H	12	11	1 1		1 1	1			8.3%

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October 1, 2003 - March 31, 2004

%0℃		3				3	<b>Z</b> 6	100	Н	1000	Supplier A	
/60 6		c c				0	9	9	H	1500	Supplier A	
						0	l l	l J	Н	1200	Supplier B	
						0	<u> </u>	<u> </u>	H	1200	Supplier D	
						0	3	3	H	1200	Supplier D	Los Alamos National Laboratory
			,			0	ε	ω	Н	105	Supplier A	
						0	ļ	l.	Н	1000	Supplier A	
						0	97	97	Н	1000	Supplier A	
						0	30	30	Н	1000	Supplier A	
						0	2	Z	Н	1000	Supplier B	
3.1%	7					7	63	99	Н	1000	Supplier B	
%L'91	- C			L L		L L	9	9	Н	1000	Supplier A	
702.91				ν		0	7	7	H	1000	Supplier A	
						0	81	81	Н	1000	Supplier A	
%0 <sup>.</sup> 09			Ĺ			٠ ١	81	7	Н	1200	Supplier B	
							١					
%0°0t			7			7	3	S	Н	1200	Supplier B	
						0	l	l l	Н	1200	Supplier B	Lawrence Livermore National Lab.
						0	9	9	Н	1000	Supplier A	
						0	7	7	H	1200	Supplier A	
						0	15	15	Н	1200	Supplier A	
%2.2		2				7	88	06	Н	1200	Supplier A	
						0	٦١	٦١	Н	1200	Supplier A	
						0	91	91	Н	1200	Supplier A	****
						0	ħ	Þ	Н	1200	Supplier A	Kaiser-Hill Company LLC
									<u> </u>			911 3111 1
							8		7		11.000	
ļ						0	8	8		20	Supplier A	
						0	T T	Þ		GZ.L	Supplier A	
						0	G	S	7	١¸٢و	Supplier A	
	<u> </u>					0	9	9	7	520	Supplier A	
						0	6	6	Н	1000	Supplier A	
						0	Þ	Þ	H	1000	Supplier A	
						0	t	₽	Н	1200	Supplier A	Fluor Hanford
						0	7	7	7	500	Supplier A	
						0	54	54	7	500	Supplier A	
						0	50	50	ר	200	Supplier A	
	1		L			0	G	S	7	200	Supplier A	
						0	9	9	7	520	Supplier A	
						0	Į į	Į Į		720	Supplier A	
						0	g	9	Н	200	Supplier A	
						0	l	Į.	H	200	Supplier A	
%0.001		l l			i	l l	0	ı	Н	200	Supplier A	CH2M Hill Hanford
	aguuga	Spec	6172120					ļ i		. /-	, ,, ,,	. 2 11 161 710110
Rate	damage	PO and/or	Defects	Penetration	Resistance	Rejected	Accepted	beteeT	woJ/dgiH		lo intonini ini	1011101
Rejection	gniqqidS	Does not meet	Manufacturing		I	Number	Number	Number	Flow	wolŦ	Manufacturer	nemotauO
1			Reason for Reje			1 ''	' ''	l '''	'~			
L								·				

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Customer									Reason for Reje	ejection		
	Manufacturer	Flow	Flow High/Low	Number Tested	Number Accepted	Number Rejected	Resistance	Penetration	Manufacturing Defects	Does not meet PO and/or Spec	Shipping damage	Rejection Rate
Los Alamos National Laboratory	Supplier A	1000	Н	3	3	0						
	Supplier A	1000	Н	100	92	8			8			8.0%
	Supplier A	1000	Н	100	98	2			2			2.0%
	Supplier A	1000	Н	10	10	0						
	Supplier A	1000	Н	30	30	0						
	Supplier A	350	Н	2	2	0						
	Supplier A	250	L	2	2	0						
	Supplier A	250	L	2	2	0						
	Supplier A	205	L	1	1	0						
	Supplier A	160	L	1	1	0						
	Supplier A	50	L	20	20	0			1			
	Supplier A	50	L	20	20	0			1			
	Supplier A	35	L	20	20	0						
	Supplier A	35	L	20	20	0	1					
-	Supplier A	35	L	20	20	0						
KSL Shaw Los Alamos National	· · · ·				1		1	<del></del>				<u> </u>
Laboratory	Supplier A	160	L	1	1	0						
Washington TRU Solutions	Supplier A	350	Н	4	4	0					<b></b>	
West Valley Nuclear Services	**Supplier D	1500	Н	12	12	0						
Westinghouse Savannah River		T										
Company	Supplier A	1500	Н	94	83	11			11			11.7%
	Supplier A	1500	Н	51	49	2	ļ			2		3.9%
	Supplier A	1500	Н	22	21	1	<u> </u>		1			4.5%
	Supplier A	1500	H	10	9	1	<u> </u>				1	10.0%
	Supplier A	1500	Н	20	19	1			1			5.0%
	Supplier A	1500	Н	9	9	0						
	Supplier A	1500	Н	28	27	1			1			3.6%
	Supplier A	1500	Н	146	135	11		1 _	5	5		7.5%
	Supplier A	1500	Н	24	24	0						
	Supplier A	1500	Н	14	14	0						
	Supplier A	1500	Н	6	6	0						
	Supplier A	1500	Н	2	2	0						
	Supplier A	1500	Н	2	2	0						
	Supplier A	1500	Н	36	0	36				36		100.0%
	Supplier A	1500	Н	36	36	0						
	Supplier A	1250	Н	4	4	0						

Table 1 **Results of Filter Inspection and Tests** October 1, 2003 - March 31, 2004

Customer	Manufacturer								Reason for Rejection			
		Flow	Flow High/Low	Number Tested	Number Accepted	Number Rejected	Resistance	Penetration	Manufacturing Defects	Does not meet PO and/or Spec	Shipping damage	Rejection Rate
Westinghouse Savannah River												
Company	Supplier A	1250	Н	10	10_	0	1					1
	Supplier A	1250	Н	4	4	0						
	Supplier A	1250	H	4	4	0						
	Supplier A	1000	Н	5	5	0						
	Supplier A	1000	H	13	13	0						
	Supplier A	1000	Н	20	19	1		1				5.0%
	Supplier A	1000	Н	10	10	0						
	Supplier A	1000	Н	20	17	3		3				15.0%
	Supplier A	1000	Н	60	59	11				1		1.7%
	Supplier A	455	H	3	3	0						
	Supplier A	455	Н	3	2	1		1				33.3%
	Supplier A	250	L	4	4	0						
	Supplier A	250	L	1	1	0		[				
	Supplier A	125	L	4	4	0		l				
	Supplier A	125	L	8	8	0		Ì			1	
	** Supplier A	65	L	2	2	0		\				
	Supplier A	65	L	2	2	0						
	Supplier A	50	L	2	2	0						
	Supplier A	50	L	24	23	1		1				4.2%
	Supplier A	50	L	1	1	0		1				
	Supplier A	40	L	15	15	0	***					
	Supplier A	35	L	3	3	0						
	Supplier A	35	L	11	11	0	, ,					
	Supplier A	35	L	1	1	Ō						
	Supplier A	35	L	2	2	0						
	Supplier A	35	L	2	2	0			Ĭ			
	Supplier A	35	L	4	4	0						
	Supplier A	25	L	4	4	0						
	Supplier A	25	L	18	15	3		3				16.7%
	Supplier A	25	L	3	3	0				1		
	Supplier A	25	L	3	3	0	<u> </u>	† <del></del>	1 -	<u> </u>		
	Supplier A	25	L	4	4	0			<del>                                     </del>			
	Supplier A	25	L	2	2	0			1	†		1
	Supplier A	15	L	2	2	0	1			† <del></del> -	<b></b>	<del></del>
	Supplier A	15	L	4	4	0		†	<del>                                     </del>	<del>                                     </del>		<b>†</b>
	Supplier A	15	L	6	6	0						
7-7	<u> </u>											
	<u> </u>		TOTAL	2176	<u> </u>	141	0	21	43	73	4	6.5%

<sup>\*</sup>Filters received directly from Customer, boxes opened and filters previously handled. The rejection rate is not reflective of the manufacturer.

\*\* Filters accepted with waiver from purchase order requirements i.e. labeling requirements and was not for performance requirements.