



**AIR TECHNIQUES
INTERNATIONAL**

Report On The Oak Ridge Filter Test Facility (ORFTF)



Nuclear Air Cleaning Conference

September 2000



Operational Overview - Oak Ridge Filter Test Facility

- Oak Ridge was one of the last three remaining DOE HEPA filter testing facilities
- DOE subsequently decided to cease operations at the other two facilities - Hanford and Rocky Flats
- After lengthy debate earlier this year, DOE decided to maintain independent HEPA filter testing operations at Oak Ridge
- DOE has also decided to implement Quality Product List (QPL) testing capability at the Oak Ridge Filter Test Facility
- ORFTF is now being operated by Air Techniques International (ATI) under the FMSIT contract through Bechtel-Jacobs LLC and American Technologies, Inc.
- Key Personnel responsible for running the facility include David Crosby (Project Manager) and Julie McIntyre (Site Supervisor)



Summary of Filters Tested Since 1996

Fiscal Year	Number Tested	Number Rejected	Percentage Rejected
1996	2,643	493	18.7%
1997	2,916	102	3.5%
1998	2,305	68	3.0%
1999	2,362	37	1.6%
2000(a)	1,754	263	15.0%
Total	11,980	963	8.0%

(a) First Six-Month Period

Filters are rejected at the ORFTF for up to five different reasons



Summary Of Filter Rejections

Fiscal Year	Resistance	Penetration	Mfg. Defects	P.O./Spec. Discrepancy	Shipping Damage	Total
1996	371	70	35	17	0	493
1997	59	20	7	16	0	102
1998	1	28	3	34	2	68
1999	0	31	6	0	0	37
2000(a)	0	4	2	254(b)	3	263
Total	431	153	53	321	5	963

(a) First Six-Month Period

(b) Failed visual inspection due to poor workmanship

The biggest consistent cause for filter rejections is excessive aerosol penetration



The Testing Volume At ORFTF Is Increasing

- During FY2000, the number of filters tested is expected to jump significantly over 1999, summarized as follows:

Tested 10/1/99 - 3/31/00	1,754 (first half FY2000)
Tested 4/1/00 - 8/7/00	697
In Warehouse as of 8/7/00	540
Additional to test by 9/30/00	<u>500</u>

Total Expected FY2000 3,500

- During FY2001, we expect that this trend will continue for several reasons:
 - Contractors are not being charged directly for testing
 - DOE is considering a centralized funding arrangement for this service
 - The uncertainty over the continuance of centralized filter testing at Oak Ridge has been removed
 - The fires at Los Alamos mid-year will result in accelerated filter change-outs
 - Greater attention is being given overall to the issue of HEPA filter life and change-out frequencies



FY2000 Challenges In Satisfying DOE Customers

- Facility Management Contractor change from Bechtel-Jacobs LLC to ATI resulted in a shutdown from 12/19/99 to 2/7/00
- The LAS-X laser spectrometers in the HFATS system have been plagued with calibration and operational problems
- There were problems with the heater and standard relay circuit for the Q76 Penetrometer
- The electrostatic precipitation emission control system has been a consistent problem and required a new cell
- An unannounced, but planned, power outage resulted in a safety shutdown for evaluation of the fire suppression system
- Since February of this year, the ORFTF has been shut down for 30-40% of the time due to equipment problems

The challenge of maintaining 25-year old equipment has been further compounded by the apparent lack of routine maintenance, repairs, and calibration procedures prior to the contract change-over early this year - New equipment must be seriously considered by DOE



DOE Has Decided To Continue The QPL System

- Early this year, DOE decided to re-institute Quality Products List (QPL) testing after the US Army stopped offering this service last December
- DOE owns QPL equipment, but it is sitting in crates at Lawrence Livermore and has not been used in years - condition uncertain
- In order to co-locate this equipment with the ORF-TF, suitable space will need to be located at the Oak Ridge Facility
- The equipment will need to be transported, inspected, installed, and upgraded
- Pricing of the service will need to be established
- All manufacturers providing filters to DOE will need to comply with the QPL requirements

In order for QPL testing to be re-instituted, installation decisions will need to be made and a project plan with specific timelines will need to be developed



In Summary - ORFTF Is Alive And Well!

- Filter testing workload has increased and is expected to stay heavy
- New management is streamlining the process for increased efficiency
- The most consistent cause for filter rejection has been excessive penetration
- Maintaining the old equipment in top condition has been a challenge, and new equipment must be given serious consideration
- Improved work processes and new equipment with less down-time will enable the ORFTF to achieve a target testing turn-around of 14 days
- An aggressive project plan must be developed and approved if the QPL test program is to be implemented

A lot of great changes have occurred at the ORFTF recently, and more are planned



OAK RIDGE FILTER TEST FACILITY



Any Questions? - We Are Here To Serve You

- Dave Crosby, Project Manager
ORFTF@atitest.com
865-574-9384 (ORFTF phone)
865-576-8793 (ORFTF fax)
410-363-9696 (ATI HQ)
- Julie McIntyre, Site Supervisor
ORFTF@atitest.com
865-574-9384 (ORFTF phone)
865-576-8793 (ORFTF fax)
- Eric Hanson, ATI President
ehanson@atitest.com
410-363-9696 (ATI phone)
410-363-9695 (ATI fax)