

BROOKHAVEN NATIONAL LABORATORY



ESH Coordinator Meeting

**Industrial Hygiene
Program Updates**

February 21, 2007

Industrial Hygiene Program Update

1. Chemical storage hazard assessment-pilot in Chemistry Department
2. Safety & Health Representative Program
3. IH Baseline Monitoring Project
4. Respirator Fit Testing Update
5. S2 Program Call for Proposals
6. Ergonomic Water Bottle Status
7. HEPA Ventilation decommissioning

Chemical storage hazard assessment

**Pilot in Chemistry Department
Wei Lin Litzke**

Hazard Evaluation of Chemical Storage in Chemistry Building (555)

OBJECTIVE: To identify,

- Legacy chemicals;
- Issues pertaining to compatibility, container integrity, labeling, expired chemicals;
- Potential areas for baseline monitoring.

Team: W. Litzke, M. Rankine, D. Cabelli, C. Burns, R. Petricek, J. Pavlak, all PI's



Potential hazards and spills





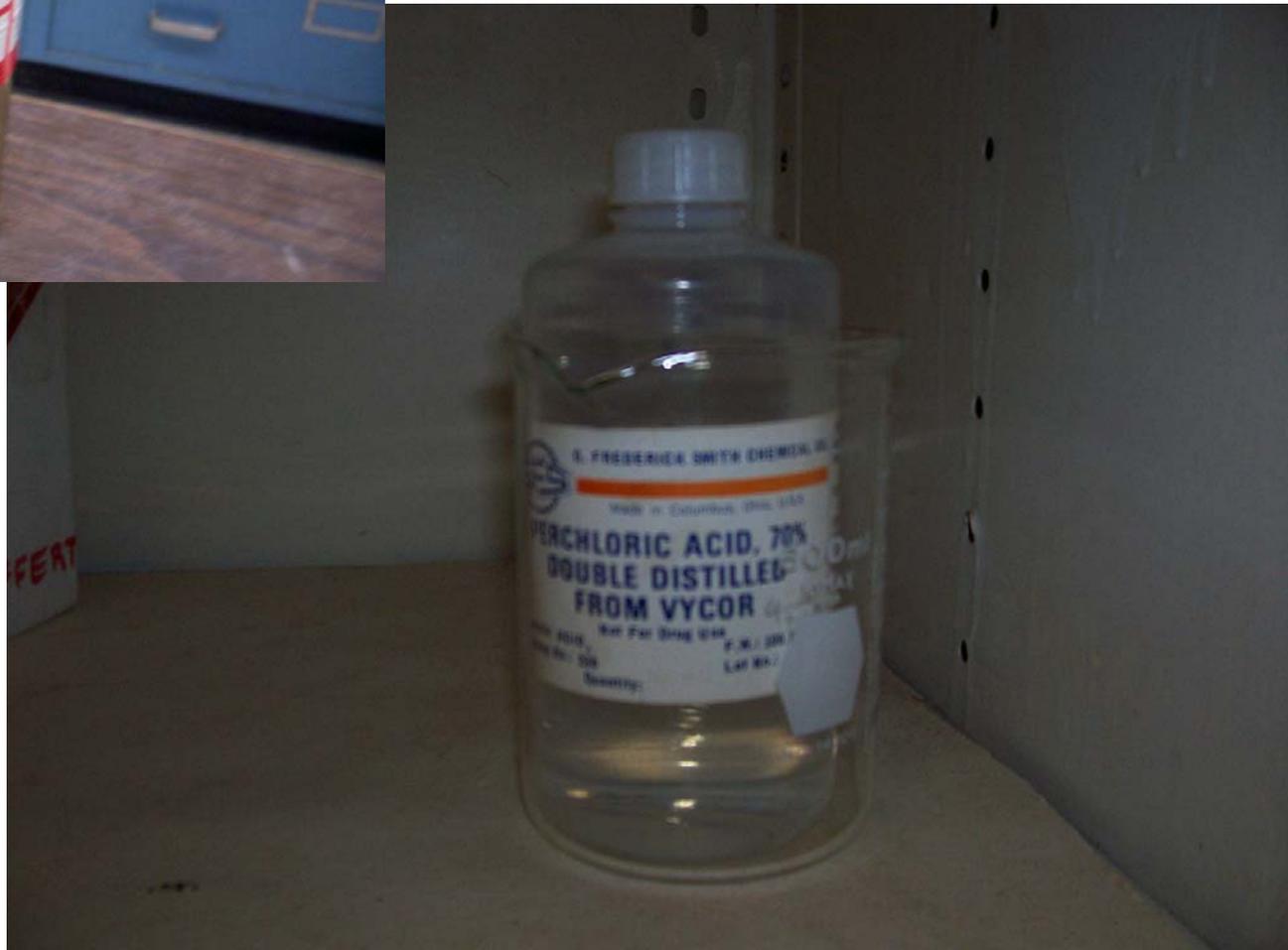
Container integrity



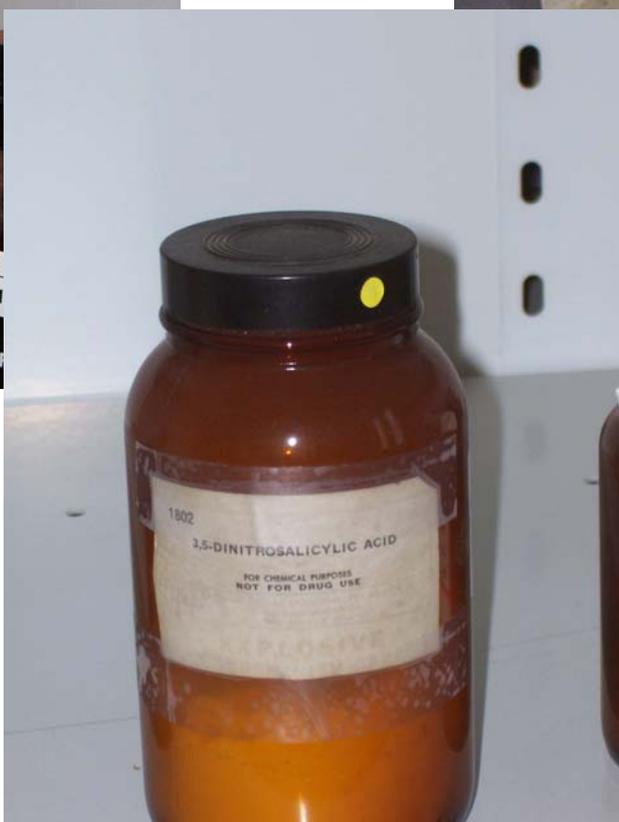
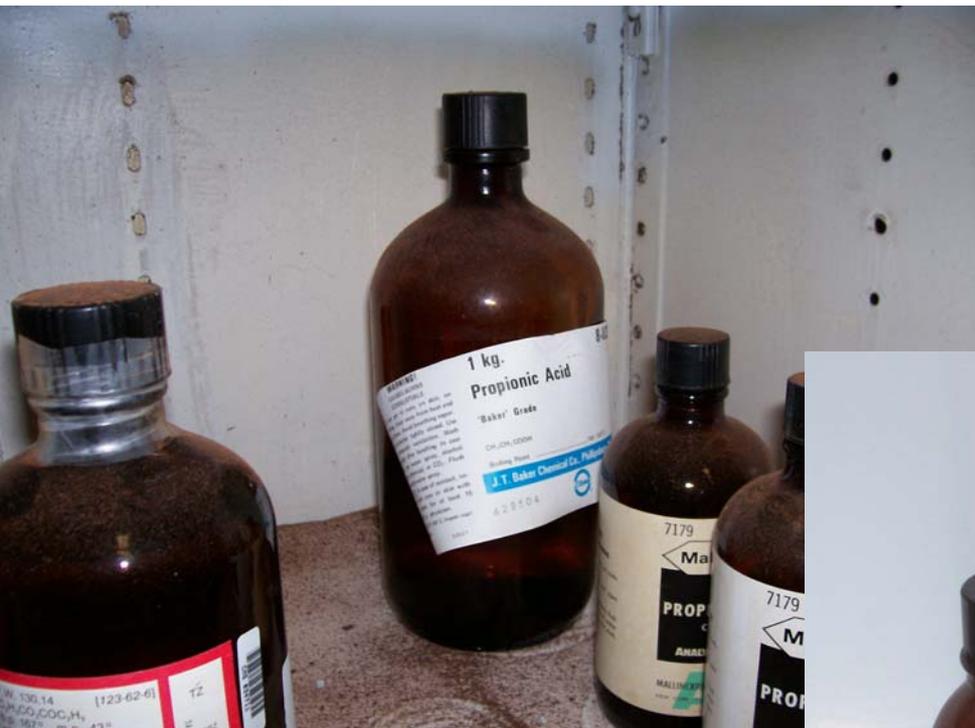
Unforeseen leaks in secondary containers (hydrazine)



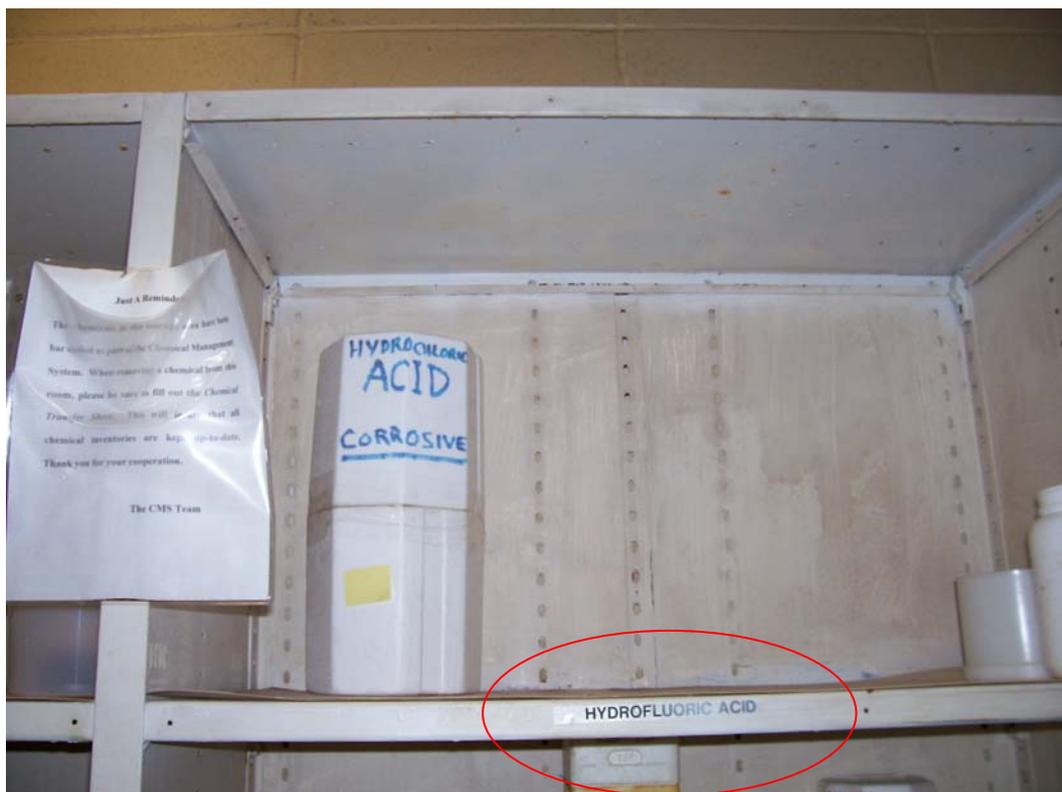
Storage/ age-sensitive chemicals



Labels (fading, falling off, illegible, missing)



Improper storage on shelves







Cracked or open caps



dimethylformamide

Check out model Labs 363, 367 !









Benefits:

- Improved safety (spills- open or leaking containers, explosions – incompatibles, age-sensitive chemicals)
- Reduced personal exposure and potential health risks (open/ leaking containers)
- Identified chemicals for baseline monitoring
- Reduction of inventory
- Developed more accurate identification/ quantification of chemicals in building

Safety & Health Representatives

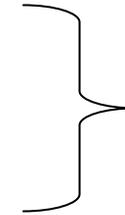
Issues:

- **Open position due to recent vacancy**
- **New SH Rep nearing completion of training to be assigned**
- **Unassigned SH Rep for ERO and ESH&Q**
- **Matching SHR background to organizations**
- **Correcting performance problems as necessary**

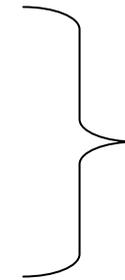
Safety & Health Representatives

- [EVL] = 1 (vacant, in process of being filled)
- DGR = 1
- FZ = 1 (purchased by F&O)

- NMB = .5
- JWP = .5
- CW = .5
- FTH = .3
- RDW = 0.1



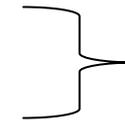
3



1.9

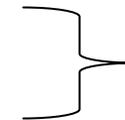
In-Training

- WLL = 1



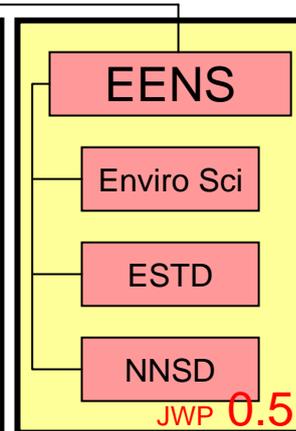
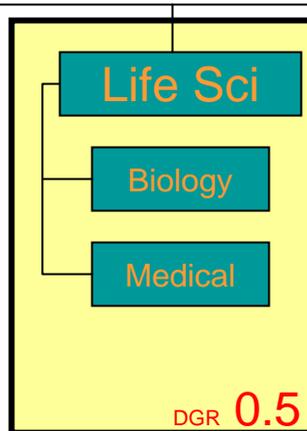
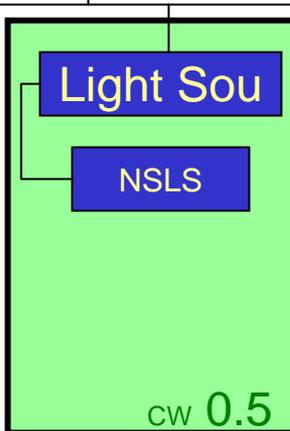
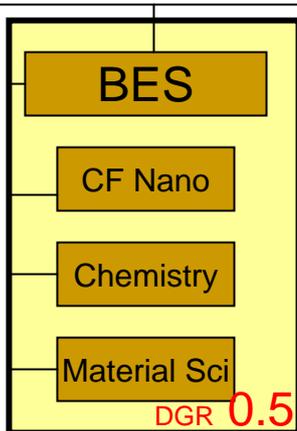
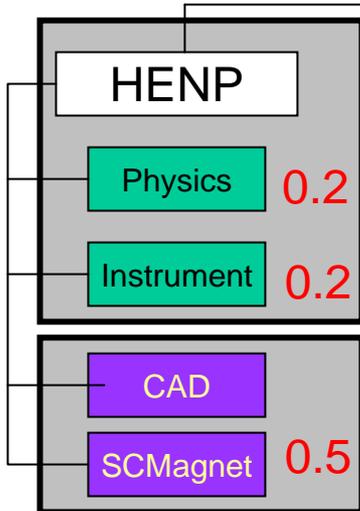
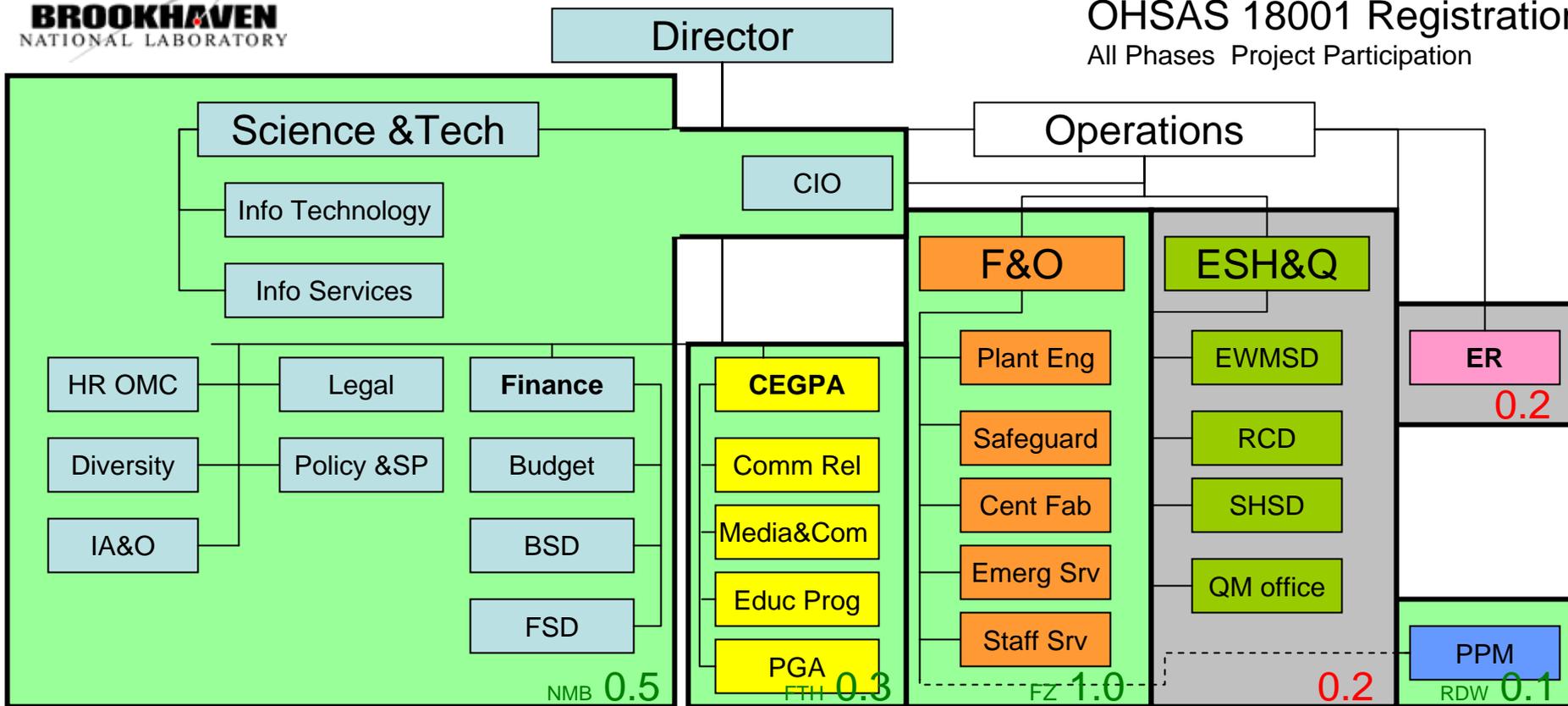
1

-
- KAE = [.2]
 - RLS = 0



[0.2]

6.1



Safety & Health Representatives

Path Forward:

- Reassign staff to fill open spots caused by recent vacancy
- Assign the new SH Rep to an organization(s)
- Switch SHR whose backgrounds do not optimally fit current organizations
- Correct performance problems as necessary

Seeking input from ESH Coordinators in yellow and gray boxes (and green if you desire a change)

IH Baseline Monitoring Project

- Exposures are estimated in Rankings A, B, C, D (A = highest exposure potential)
- Group A sampling is finished
- Group B were scheduled to be completed by 2/28/07 (behind)
- FY2007 ADS was funded at \$200K
- RCD was offered opportunity to supply staffing on temporary basis , but was not able to allocate resources
- Outside Contractor will be used: 1 CIH, 2 Technicians for 3 months starting hopefully in May 2007.

IH Baseline Monitoring Project

Outside Contractor: 1 CIH, 2 Technicians

- Will address chemical monitoring in small science departments, CAD/SCM, and NSLS
- SWAT team concept- concentrate resources for set period

SHSD will provide 2 other term IH tech/professionals to F&O for sampling

Respirator Fit Testing

- **NEW Location:** Now conducted at OMC immediately after the medical exam's second day.
- Alternate year's fit test also at OMC.
- E-mail "Respirator Fit Test" [D. Hanley] when fit test will not be linked to a medical exam.

S2 Program Call for Proposals

- *Call for Proposals* are due by February 28, 2007 (for FY07 evaluation), but will be accepted all year.

http://www.bnl.gov/esh/shsd/OHSAS/S2_Criteria.asp

Ergonomic Water Bottle Status

What is the feedback so far?

- Acceptance of the water quality ?
- Add to PPM Stock ?



HEPA Ventilation Decommissioning

Subject Area: [Exhaust Ventilation](#)

5. Decommissioning, Modifying, or Changing the Operational Status of Fixed Exhaust Ventilation Systems

Step 1 Supervisors, workers, or other appropriate personnel notify their [ESH Coordinator](#) when

- an exhaust system is no longer needed for current operations;
- must be modified at the intake, ducting, or discharge;
- no longer needs the environmental controls that are in place (such as HEPA filters or scrubbers); or
- needs added environmental controls (such as HEPA filters or scrubbers).

Step 2 The ESH Coordinator contacts and works with the Safety and Health Services Division (SHSD), Environmental and Waste Management Division (EMWSD), Radiological Control Division (RCD), and Plant Engineering to **plan for the safe decommissioning or downgrading of controls of fixed exhaust ventilation systems.**

HEPA Ventilation Decommissioning

Subject Area: [Exhaust Ventilation](#)

5. Decommissioning, Modifying, or Changing the Operational Status of Fixed Exhaust Ventilation Systems

Step 3 The Work Planner or other appropriate personnel contacts the [Facility Support \(FS\) Representative](#) (for radiological hoods and chemical hoods) to arrange for contamination **testing** prior to any demolition or modification of the system that will result in the worker's potential exposure to hazardous materials. Use the [BNL Exhaust Ventilation Design Specifications and Use Agreement](#) or equivalent to document the details of the plan.

Step 4 The [FS Representative](#) or [Industrial Hygiene \(IH\) Representative](#) conducts contamination **testing** for

- Radiological hazards;
- Perchloric acid/perchlorates;
- Asbestos;
- Lead;
- Other hazards based on historical use of equipment.

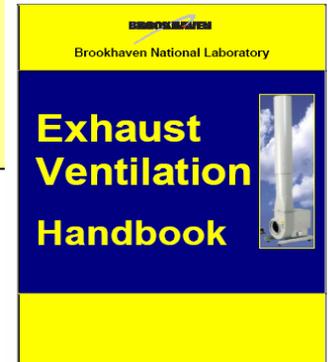
HEPA Ventilation Decommissioning

Subject Area: [Exhaust Ventilation](#)

5. Decommissioning, Modifying, or Changing the Operational Status of Fixed Exhaust Ventilation Systems

- Step 5** When work or modification on systems are completed, the Facility Support (FS) Representative, Industrial Hygiene (IH) Representative, Environmental Compliance Representative, and Plant Engineering remove or update the record on the system in the BNL databases that document compliance of exhaust ventilation units and HEPA filters, as applicable.
- Step 6** When systems are decommissioned or removed from service, label the units with an out-of-service label and update the Facility Use Agreement.
- Step 7** Before a system (i.e., decommissioned or shut down) is restarted, repeat the review in the section [Designing, Purchasing, and Commissioning Exhaust Ventilation Systems](#).

HEPA Ventilation Decommissioning



3.	<p>HEPA Filter Use & Decommissioning: When installed HEPA filters are no longer needed, one of the following actions must be taken:</p> <ul style="list-style-type: none">• Remove the filters from the housing by following the procedure in the section Decommissioning, Modifying, or Changing the Operational Status of Fixed Exhaust Ventilation Systems in the Exhaust Ventilation Subject Area; or• Shut down and seal the exhaust system by following the procedure in the section Decommissioning, Modifying, or Changing the Operational Status of Fixed Exhaust Ventilation Systems in the Exhaust Ventilation Subject Area;• Maintain the filters and system as per the Exhaust Ventilation Subject Area requirements and this handbook when the filters are left in the exhaust system.
4.	<p>Air Pollution Control System Initial Acceptance Testing: This section applies on new</p>

HEPA Ventilation Decommissioning

- What changes to the text of SBMS are needed ?
- HEPA Surveillance Test for efficiency ?
 - versus -
 - Documented Manometer check ?

HEPA Ventilation Decommissioning

Suggestion:

- Use BTMS to track “HEPA Surveillance”
- Assign JTA code to ESH Coordinator and System Owner
- When HEPA Test or Manometer check is completed, send record to BTMS to satisfy requirement

Questions/Comments