

Keep Beryllium Work Areas Clean

July 2018

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- One of the corner stones of the Beryllium Worker Protection Model is Keeping Beryllium Work Areas Clean. The goal is to have work areas visibly clean, well lit, orderly and free of clutter. When work areas are disorganized, cluttered and dirty, it is more difficult to control worker exposure to potentially hazardous materials. Having all surfaces painted and visually attractive will make it easier to determine when surfaces are not visibly clean.

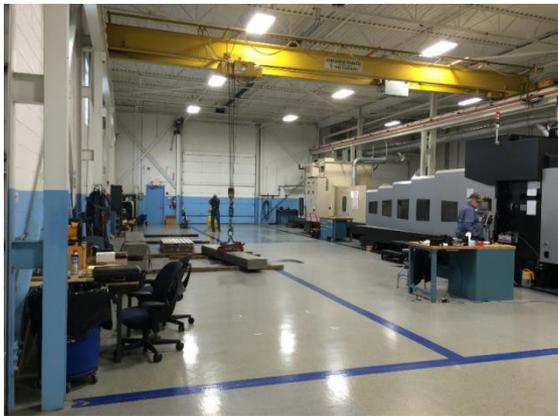
Keep Beryllium Work Areas Clean

Procedures are in place and observed, to ensure that work areas and surfaces are orderly, well-lit, free of clutter and “visible” contaminant accumulation.

Utility of the “visibly clean” metric for cleanliness:

- ❑ No need for technical resources or to wait for results
- ❑ Workers and management can quickly audit and immediately assess
- ❑ Resources must be allocated
- ❑ Expectations and accountabilities must be clearly stated

Visibly Clean



Visibly Dirty



Visibly Dirty



Keep Beryllium Work Areas Clean

Here is what you should know:

- Visible beryllium-containing particles and solutions in work areas:
 - Can contribute to personal exposure to airborne beryllium,
 - Can result in beryllium being transported to other work areas potentially contributing to the exposures of co-workers, and
 - Can result in beryllium being transported off plant site on people and things such as personal items, clothing, laundry, tools, products or equipment potentially resulting in exposure to friends and family, the community, service providers, material transporters and down stream processors.
- Good housekeeping is an essential part of the Beryllium Worker Protection Model. One widely used philosophy, 5S, establishes a standard for good housekeeping while improving productivity.

Keep Beryllium Work Areas Clean

Here is what you should do:

- Develop and implement a housekeeping program, such as 5S, that ensures that work areas are visibly clean, well lit, orderly, and free of clutter. Example elements include:
- Cleaning beryllium processing equipment and associated support equipment such as dust collectors, pumps, electrical panels and reservoirs so no visible accumulation of dirt or debris is apparent.
- Cleaning horizontal surfaces, floors and walls at a frequency so that no visible accumulation of dirt or debris is apparent.
- Prohibiting the use of brooms or compressed air to clean work clothing, surfaces, parts or equipment.
- Providing employees with personal protective equipment such as appropriate respirators, gloves and over-garment protection during cleaning.

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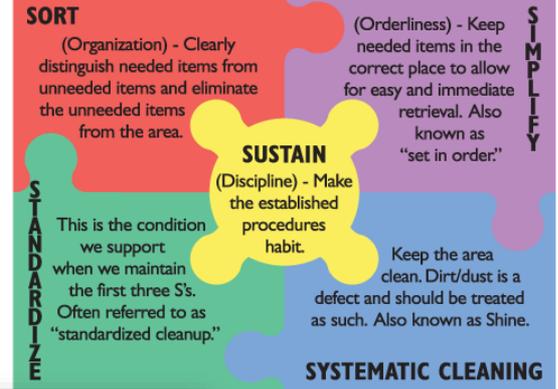
- Here is what you should do:
 - Using High Efficiency Particulate Air (HEPA) vacuums and/or wet cleaning methods for cleaning. (Utilize procedures for emptying and maintaining HEPA vacuums.)
 - Avoiding reuse of rags or towels for drying or wiping parts clean. Keep used rags in a closed container and dispose of in a manner which prevents potential airborne exposure during subsequent handling activities.
 - Maintaining work area lighting.
 - Ensure floors, walls, furniture, fixtures and equipment surfaces are easy to clean to facilitate housekeeping. Paint, seal or condition as needed. Avoid the use of cloth furniture or fixtures in beryllium work areas.
 - Develop leading and lagging measures to set goals and priorities to keep work areas visibly clean and to ensure work practice controls are, and remain effective.

Keep Beryllium Work Areas Clean

The philosophy of 5S is used to organize work areas and to ensure that areas are maintained clean and shipshape.

- Sort
- Set in Order
- Systematically Clean
- Standardize
- Sustain

THE 5S SYSTEM



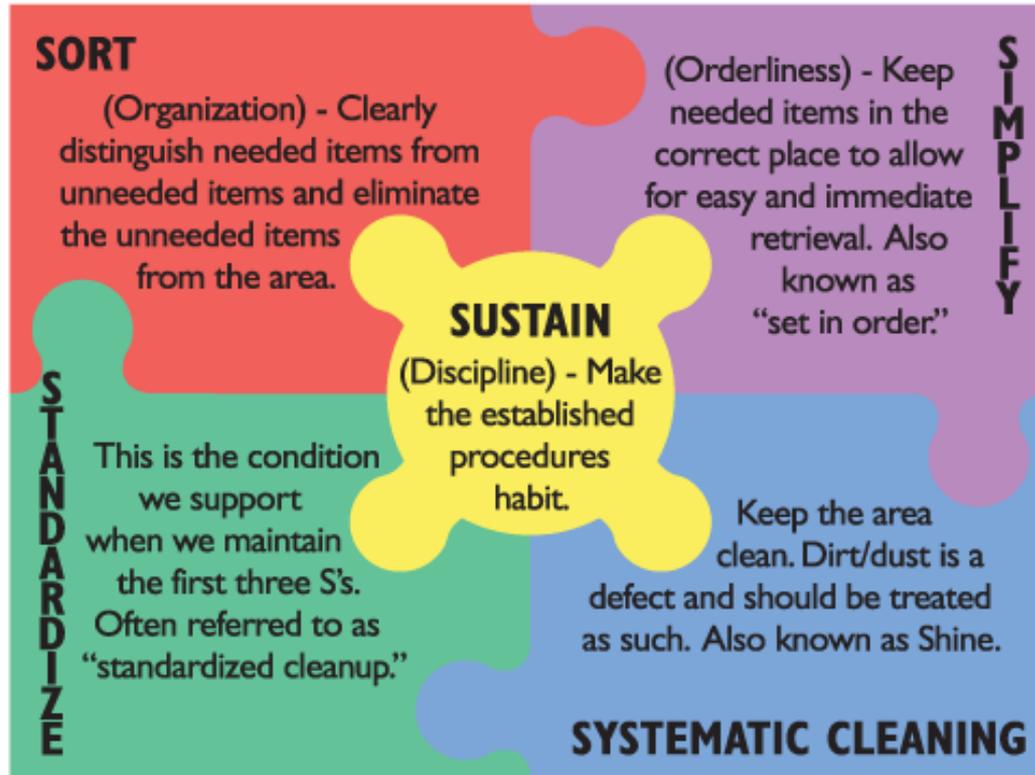
The importance of this element cannot be overstated for compliance in the sub-microgram world!

Quality Policy



5s

THE 5S SYSTEM



5s



Area Visibly Clean

Floors: The floors should be washed down or mopped at the end of each shift, if possible. When washing floors, be sure to get the corners, and wash everything towards the drains. Do not wash any materials out of the building.

Horizontal Surfaces: All horizontal surfaces 8' and under should be washed at least once per week, be careful not to wash electrical panels and water sensitive equipment.

Tools & Equipment: All tools & equipment should be stored at their designated locations when not in use. Tools & equipment need to be cleaned and free of dirt and oil (if applicable) before they are put away.

Work Benches: Work benches should be free of tools and materials when the task is completed. Wash or vacuum off benches weekly.

Barrels & Hoppers: Barrels & hoppers should be emptied when they are filled up. If you fill it up, empty it.

Beryllium Processing Area



Non-beryllium processing areas

