FAQ- What type of operations typically require "employee exposure monitoring"?

For additional information on IH monitoring expectations and requirements, refer to these BNL documents:

- *What does Industrial Hygiene "Exposure Monitoring" mean?* for a basic introduction to IH monitoring.
- *SHSD Expectations for IH monitoring of Construction, Renovation and Demolition Projects by Contractors/Sub-contractors* for specific instructions for IH Professional conducting exposure monitoring.

Typical Construction Activities that require personal exposure monitoring or an IH Professional* exposure assessment of negative exposure potential. This is not an all-inclusive list; other operations may require exposure monitoring.

Hazard	Examples of typical Equipment/Operation/ Activity	Control Techniques that can eliminate the need for exposure monitoring
Silica	Cutting concrete with a high speed abrasive (such as diamond tipped or carbide circular saw blade, diamond embedded wire, or diamond embedded hole saw)	Manufacturer designed water spray apparatus at cutting point that has been measured in field tests to eliminate airborne exposure.
		Manufacturer designed HEPA vacuum collection head on the apparatus that has been measured to eliminate airborne exposure.
Noise	High noise source such as impact hammers, saws on sheet metals; pumps; motors & engines. Any equipment listed on manufacturer's specs with noise above 85dBA on	Manufacturers typically list the noise level in equipment specifications. Use of hearing protective devices (plugs, muffs, or combination) with Noise Reduction Rating (NRR) sufficient to bring noise level below 85dBA.
		It is difficult in construction settings to reduce noise with engineering controls, but in some cases controls such as barriers or enclosures can be effectively used.
Asbestos	Disturbance or Removal of Friable Asbestos (Abatement)	Always requires personal exposure monitoring (unless a negative exposure assessment on the contractor previous operations at BNL for similar activities and work settings.
	Removal of non-friable asbestos/concrete panels or pipes (such as transite)	If panels are capable of being removed by removing fasteners and extracting panels or pipe intact without breakage, then monitoring is not needed.
	Drilling holes into non-friable asbestos/concrete panels (such as transite)	A dust containment technique is used on the apparatus on cutting point (such as HEPA vacuum collection head, shaving cream cup technique) that has been verified to eliminate airborne exposure.
Chemicals	Application of products with volatile solvents (especially in enclosed or poorly ventilated areas)	Manufacturer's statement in product specifications that in the use application at BNL that the product does not generate airborne levels in excess occupational exposure limits.

*__Industrial Hygiene Professional:__ Persons with American Board of Industrial Hygiene (ABIH) certification in Comprehensive Practice (i.e. C.I.H.). Persons without the C.I.H. certification can only be approved to be the *Industrial Hygiene Professional* if they have extensive experience and education. Name, work history and education credentials of *Industrial Hygiene Professionals* without C.I.H. certification must be submitted to the BNL Industrial Hygiene Group for approval prior to commencement of sampling.

What is an initial exposure assessment?

To determine expected exposures, an *IH Professional* must perform an initial exposure assessment to assess exposures immediately before or as the operation begins. This person must perform the assessment in time to comply with all OSHA standard requirements triggered by exposure data or the lack of a negative exposure assessment (e.g. PPE selection, respiratory equipment, medical surveillance, and training) and to provide the necessary information to ensure all control systems are appropriate and work properly. A negative exposure assessment demonstrates that employee exposure during an operation is consistently below the permissible exposure limit (PEL).

The initial exposure assessment must be based on the following criteria:

- Results of employee exposure monitoring, unless a negative exposure assessment has been made; and
- Observations, information, or calculations indicating employee exposure, including any previous monitoring.

What is a Negative Exposure Assessment?

Employers may show that exposures will be below the PELs (i.e., negative exposure assessment) through the following:

- Objective data demonstrating that the hazard and activities involving it, cannot release airborne levels in excess of the 8-hour TWA PEL or STEL;

- Exposure data obtained within the past 12 months from prior monitoring of work operations closely resembling the employer's current work operations (the work operations that were previously monitored must have been conducted by employees whose training and experience were no more extensive than that of current employees, and the data must show a high degree of certainty that employee exposures will not exceed the 8-hour TWA PEL or STEL under current conditions); or

- Current initial exposure monitoring that used breathing zone air samples representing the 8-hour TWA and 30-minute short-term exposures for each employee in those operations most likely to result in exposures over the 8-hour TWA PEL for the entire asbestos job.

A negative exposure assessment has been established when the workplace conditions "closely resemble" the process, type of material, control methods, work practices, environmental conditions, and employee training of a job monitored within the past 12 months. Documentation for a negative exposure assessment should be available at each new worksite.

For more details on the Initial and Negative Exposure principles, consult: **Guidance to Small business: OSHA 3096- Asbestos Standard for the Construction Industry (2002 Revised)**
https://www.osha.gov/Publications/OSHA3096/3096.html