I-11 Design-Build Project

NOA Monitoring Results
Frequently Asked Questions

Naturally Occurring Asbestos Air Quality Monitoring Data

The following questions and answers will assist you when reading the monthly results from our air monitoring stations.

Q: Why are some data points missing on given days on the graph?
A: Sampling is not conducted in zones where no work is being performed that might result in disturbance of asbestos-containing soil or rock. Also, the remote location of some of the sampling stations (many are reached via steep dirt roads) makes them inaccessible during periods of heavy rains that result in hazardous road conditions. Work will not be performed in these areas on days when road conditions have become impassable due to weather. Even if work were possible, significant dust generation (and release of airborne NOA) is unlikely during heavy rains.

Q: What is the Perimeter Threshold Level?
A: The perimeter threshold level is the project-specific concentration of airborne asbestos fibers that is used to evaluate measured data from the project's perimeter air monitoring stations. The perimeter threshold level represents a calculated risk-based concentration that, if not exceeded on average over the course of the project, will indicate that construction activities have not contributed to increasing the potential health risks of people, who live, work, or recreate in the vicinity of the project site.

We have implemented extensive work practice and administrative controls to keep perimeter air concentrations below the threshold level every day. Any exceedance of the perimeter threshold level results in a review of the project's work practices and controls and additional dust control measures as appropriate will be implemented.

Q: How did you come up with this Perimeter Threshold Level?
A: The perimeter threshold level is a risk-based concentration calculated based on the U.S. EPA cancer toxicity value for asbestos and adjusted in consideration of the local meteorology, topography, and proximity to populated areas.

Q: What does it mean if a monitoring result reaches or exceeds the Perimeter Threshold Level?
A: Isolated exceedances of the perimeter threshold level do not indicate that exposures pose an unacceptable risk to the public. It is only if the threshold level is exceeded by the average concentration over the full course of the project that exposures could result in unacceptable risk. The project team, in response to isolated exceedances, reviews work activities and will alter work practices and enhance dust control measures to minimize the potential for future exceedances. A pattern of exceedances (any zone with three or more consecutive days of airborne asbestos

concentrations about the threshold level) will result in stopping work altogether to reassess dust mitigation measures, thereby ensuring the protection of the public and our workers.

Q: How will NOA mitigation compliance be enforced and by whom?
A: In addition to the standard Dust Permit (detailing control measures) administered by the Clark County Department of Air Quality (CCDAQ) and required for all state construction projects, a NOA Mitigation Plan (NMP) has been developed for the project. In accordance with the NMP, air quality will be monitored continuously around work areas. Monitoring of airborne asbestos concentrations will be performed at the perimeter of all active work zones, and any air concentrations exceeding the perimeter threshold level or Occupational Safety and Health Administration (OSHA) worker exposure limits will require additional mitigation measures. Such measures include, but are not limited to implementing additional suppression, change of construction methods, and/or alteration of work practices. As stated above, a pattern of perimeter monitor exceedances (more than three consecutive days) will result in a stoppage of work in that zone until the applicable dust mitigation measures are developed and verified they are acceptable.

The CCDAQ will be responsible for enforcing general dust mitigation. NDOT and RTC have employed third party oversight contractors to verify that asbestos air monitoring and data interpretation are performed consistent with the requirements of the NMP.

Q: How will workers be protected during construction?
A: Protection of workers, the public, and the environment is the highest priority for NDOT and the RTC. Federal and state laws require that worker exposure to asbestos be maintained "As Low as Reasonably Achievable." The project's specifications as well as OSHA regulations require that engineering controls (in this case, largely in the form of dust suppression systems) be in place prior to any disturbance of NOA-containing material, thereby reducing or eliminating the airborne exposure hazard to site personnel. This will be the primary means of worker protection, with respirators and other protective gear used only in the event that controls prove inadequate. As work starts, OSHA requires that an initial exposure assessment of each applicable work task under varying job conditions be conducted to measure worker exposure. Based on these assessments, the appropriate level of respiratory protection and other protective gear for each worker will be determined. Worker exposure monitoring will continue throughout the project to ensure that they are not exposed to asbestos fiber concentrations above the OSHA Permissible Exposure Limit (PEL).

To prevent the potential for our work force to take any NOA-containing dust and/or debris home after a work shift workers may wear protective clothing, most commonly Tyvek™ coveralls, which are removed and discarded daily. Workers also use vacuums equipped with high efficiency particulate air (HEPA) filters as well as water and brushes to remove soil from work shoes or residual dust from clothing when leaving the work area before entering any vehicle or other clean area. Most importantly, all workers receive specific OSHA-regulated training that informs each person of the appropriate work practices and site decontamination procedures when working in areas with NOA.