24.1 Policy Statement

The purpose of this Silica Exposure Control Policy (hereinafter "Policy") is to formalize the controls used by All States Materials Group (ASMG) to prevent exposure to respirable crystalline silica (here in after "silica") and maintain levels below the MSHA and OSHA Action Level. This policy also fulfills the OSHA requirement for a written exposure control Policy. This Policy applies to all ASMG operations involving the potential for respirable crystalline silica exposure.

24.2 Definitions

- **Action Level:** A concentration of airborne respirable crystalline silica of 25 µg/m3,calculated as an 8 hour time weighted average (TWA).
- **Competent Person:** An individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and has the authorization to take prompt corrective action measures to eliminate or minimize them.
- **Crystalline Silica:** Naturally occurring substance in the earth soils, sand, gravel, granite, and other minerals resulting in many building materials containing silica.
- **Exposure Assessment:** The initial determination to find if any employee may be exposed at or above action level. Until the assessment is completed, employees shall take all precautions necessary to maintain exposures below the action level.
- **HEPA:** High Efficiency Particulate Air. A filtering system capable of trapping and retaining at least 99.97% of all particles of 0.3 micron in diameter and larger.
- **Permissible Exposure Level:** (PEL) the MSHA and OSHA limit for silica dust exposure. It is set at 50µg/m3, averaging over an 8 hour time weighted average (TWA).
- **Silicosis:** A lung disease caused by inhalation of silica dust. Silica dust can cause fluid buildup and scar tissue in the lungs that reduces the ability for the lungs to fully function. The disease is not curable but can be prevented through the use of protective systems.

24.3 Methods of Compliance

- ASMG strives to maintain respirable crystalline silica exposure levels below the Action Level. The following methods shall be used:
  - Cab air filtration systems shall be maintained to effectively capture silica dust and minimize operator exposures. It will be important for operators to keep the cab windows closed to the extent reasonable for minimizing the entry of silica dust.
  - **Housekeeping:** Equipment cabs are to be maintained in a clean condition to minimize the entrainment of silica dust into the air.

    - HEPA vacuums shall be used for this purpose.

- Operation of stationary processing equipment shall take place in enclosures, to the extent possible, to isolate employees from silica dust exposures.

- When deemed necessary by onsite supervision, a water spray shall be applied to roadways to suppress silica dust from entering the air.

- **Housekeeping:** When work is to be done on equipment that is visibly coated with silica dust, then a HEPA vacuum or water spray must be used to minimize the entrainment of dust into the air.

- In the event that a fixed location is known to have exposures above the Action Level on a temporary or consistent basis, then a **"Regulated Area"** must be established to effectively prevent the entry of employees.

    - A sign with the following information must be posted at all access points:

DANGER, RESPIRABLE CRYSTALLINE SILICA, MAY CAUSE CANCER, CAUSES DAMAGE TO LUNGS, DO NOT ENTER, AUTHROIZED PERSONNEL ONLY

- **Walk Behind Saws:** The walk behind saws used to cut concrete and asphalt are wet saws. The wet saws are only used outdoors. Water is applied to the sawing area at a flow rate that is sufficient to minimize release of visible dust. The wet saws have an integrated water delivery system that continuously feeds water to the blade. The wet saws are operated and maintained in accordance with the manufacturer's instructions to minimize dust emissions. Employees authorized to use the saws receive training in how to properly use the wet saws.

- **Handheld Cut Off Saws, Jackhammers/Handheld Chipping Tools:** Jackhammers and handheld chipping tools will be either retrofitted to utilize a water delivery system or the work area will be constantly wetted (by an employee dedicated to this task) to keep dust from becoming airborne. These tools will be operated in accordance with the manufacturer's recommendation and the criteria in this Policy. Employees authorized to use these tools have received training in their proper use.

- **Skid Steer Milling Machine:** Skid Steer milling machines are operated outdoors only and are equipped with a constant water delivery system. All water used in the water delivery system will contain a surfactant (such as dish washing liquid) to increase the liquid's dust suppression capabilities. These tools will be operated in accordance with the manufacturer's recommendation and the criteria of this exposure Policy. Employees authorized to use these tools have received training in their proper use.

24.4 Responsibilities

- **Safety Manager:**
  - Ensure that all ASMG employees that perform tasks or work adjacent to tasks that may generate silica dust receive information and training.
  - Audit this Policy at least annually, documenting that the audit was completed, and taking actions necessary to replace deficiencies identified.
  - Ensure that only employees that have been medically evaluated, trained, and fit tested as explained in the ASMG Respiratory Protection Program are allowed to wear respiratory protection for silica. Any employee wearing a respirator 30 days or more per year for protection from silica are required to receive medical surveillance. .
    - Voluntary use of respiratory protection (N95 Filtering Facepieces) is permitted where exposures have been determined to be below the Action Level.
    - Employees must be provided with (and signed for) a copy of OSHA 1910.134 Appendix D.
- **Policy Manager or Competent Person**
  - Periodic evaluations will be required every 6 months to determine if any additional exposures to silica are present or, whenever there is a change in production, processes installation or maintenance of engineering controls, installation or maintenance of equipment, administrative controls, or geological conditions.
  - Evaluation shall include a determination of whether the change may reasonably be expected to result in new or increased respirable crystalline exposure.
  - If changes are determined, post–evaluation sampling must be done. Engineering controls shall be re-evaluated to ensure that exposures are maintained below the Action Level.
    - A log (See Appendix) must be maintained and posted (bulletin board and/or electronically) for periodic evaluations, for 31 days.
    - Ensure that records required by the MSHA and OSHA Silica standards are being properly maintained.
      - **Note:** An OSHA "competent person" is defined as a person who is capable of identifying existing and predictable safety and health hazards at worksites, and who has authorization to take prompt corrective measures to eliminate them.

- The applicable controls are available and in good working order prior to allowing work activities to begin.

- Conduct frequent and regular inspections of job sites, materials, and equipment to implement this Policy.
- Ensuring that all the tools, equipment, PPE, and materials, including water, are available to employees for controlling to exposures to silica.
- Report to the Safety Manager any deviations from this Policy, and/or need to update the Policy.

Employees

- Employees must receive silica hazard training and demonstrate knowledge and understanding of the training topics.
- Employees must be informed on how to use the necessary and appropriate controls to reduce exposure to silica utilizing the protocols in this Policy.
- Employees must report to supervision any silica exposure concerns, such as exposures that are not covered in the Policy and controls that are not effectively reducing airborne silica concentrations.
- Employees must be informed that respiratory protection may only be used as an interim solution by employees that are included in the ASMG respiratory protection program, have been medically approved to wear a respirator, have received training and fit testing, and are achieving a good seal to their faces. NIOSH-approved air-purifying respirators (APR) with P100 filters with a protection factor of 10 or greater are the only types of respirators allowed for silica.

24.5 Tasks Involving Potential Exposure to Silica

Cutting Concrete and Asphalt: Selected employees occasionally use walk behind wet saws outdoors to cut concrete and asphalt.

- The engineering control to prevent airborne silica is to only use the saws when water is being sprayed onto the cutting area during cutting operations.
- The walk behind wet saws have an integral water container reservoir that needs to be full before cutting operations begin, stop sawing before the water runs out, and refill the water container as necessary to only cut using wet methods.
- In accordance with 1926.1153 Table 1 respiratory protection is not required for the use of walk behind wet saws outdoors, however employees in the ASMG respiratory protection program may elect to wear the brand, model and size respirator that they have been fit tested with.

- **Handheld Cut- Off Saws:** Handheld cut- off saws are used occasionally to cut concrete and hot mix asphalt.
  - In accordance with 1926.1153 Table 1, and when these are used for less than 4 hours in non-enclosed outdoor areas, no respiratory protection is required.
  - Employees in the ASMG respiratory protection program may elect to wear the respirator brand, model, and size respirator that they have been fit tested with.
- **Jackhammers/Handheld Chipping Tools:** Jackhammers and handheld chipping tools may be used to chip concrete and hot mix asphalt.
  - This task may be for short duration, or full shift.
  - This task is listed in the 1926.1153 in Table 1. Respiratory protection is required when jackhammers and handheld chipping tools are used for longer than 4 hours per shift outdoors.
- **Skid Steer Milling Machine:** Skid Steer Milling Machines may be used occasionally or up to an entire work shift to cut/mill hot mix asphalt.
  - This task is listed in 1926.1153 Table 1.
  - In accordance with Table 1, no respiratory protection is required for this activity as long as the skid steer's wet cutting or local exhaust ventilation system is being used.

24.6 Housekeeping

- **Walk Behind Saws:** Housekeeping is conducted where the wet saw is used.
  - Any residual wet particulate generated during wet saw cutting operations is typically washed away with a water hose.
  - The wet saw is washed off after use to remove any residual particulate that may have accumulated on it. Using compressed air, dry sweeping and dry brushing are prohibited.
- **Handheld Cut Off Saws:** Any residual wet particulate generated during wet saw cutting operations is typically washed away with a water hose at the work location.
  - The wet saw is washed off utilizing water after use to remove any residual particulate that may have accumulated on it. Using compressed air, dry sweeping and dry brushing are prohibited.
- **Jackhammers/Handheld Chipping Tools:** Cleanup is conducted at the work location.
  - All debris generated from this activity will be cleaned up utilizing manual methods or by vacuum truck.
  - All debris will be sufficiently wet so that visible airborne dust will not be allowed.

- Using compressed air, dry sweeping and dry brushing are prohibited.
- The tools will be washed off utilizing water to remove any residual particulate that may have accumulated on it.

- **Skid Steer Milling Machine:** Cleanup is conducted at the work location.
  - All debris generated from this activity will be cleaned up utilizing manual methods ruck.
  - All debris will be sufficiently wet that no visible airborne dust will be allowed and no blowing down of dry material will be allowed, nor dry sweeping or brushing.
  - The machine will be washed off utilizing water to remove any residual particulate that may have accumulated on it.

24.7 Restricted Work Areas

- **General:** As a general policy, any work area or task in which silica dust may be generated will be restricted to employees that have received silica safety training and utilizing the appropriate controls.
  - If potential silica exposures are generated by other employers on the worksite, ASMG will institute appropriate controls or stop their work until the exposures and controls can be determined.
- **Walk Behind Saws:** In the area where the wet saw is used, the area is restricted to nonauthorized personnel.
  - In some work site situations this may involve taping the area off with Caution tape or other means.
- **Handheld Cut Off Saws:** In the area where this tool is used, the area is restricted to nonauthorized personnel.
  - In some work site situations this may involve taping the area off with Caution tape or other means.
- **Jackhammer/Handheld Chipping Tools:** In the area where these tools are used, the area is restricted to non-authorized personnel.
  - In some work site situations this may involve taping the area off with Caution tape or other means.
- **Skid Steer Milling Machine:** In the area where this tool is used, the area is restricted to nonauthorized personnel.
  - In some work site situations this may involve taping the area off with Caution tape or other means.

24.8Information & Training

- Employees that may be exposed to silica at or above the OSHA Silica Action Level of 25 ug/M^3 need to be trained on the following topics on initial hire or before using or working adjacent to the tasks that may generate airborne silica as explained in this Plan, and annually thereafter.
  - Include silica information in the ASMG Hazard Communication Program, including that each employee has access to labels on containers of silica and safety data sheets.
  - The health hazards, including cancer, lung effects, immune system effects, and kidney effects, associated with exposure to silica;
  - Specific tasks in the workplace that could result in exposure to silica;
  - Specific measures ASMG has implemented to protect employees from exposure to silica, including engineering controls, work practices, and respirators to be used;
  - The contents of the OSHA Silica construction standard, and that a copy will be provided to any employee requesting it;
  - The identity of ASMG competent persons; and
  - The purpose and a description of the OSHA silica medical surveillance program.

24.8. Respiratory Protection

- Only employees in the ASMG Respiratory Protection Program may wear respirators during performance of the tasks that may generate airborne silica.
- Refer to the ASMG Respiratory Protection Program for specific requirements and program elements.
- Any employee that wears a respirator for 30 or more days per year for silica protection needs to be provided medical surveillance as explained in the section below.

24.9 Medical Surveillance

- ASMG needs to make medical surveillance available at no cost to any employees who will be required to use a respirator for 30 or more days per year.
- The medical examinations need to be conducted by a physician and/or other licensed health care practitioners (PLHCP) as defined by OSHA.
- ASMG need to make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section within the last three years.
- The examination shall consist of:

- A medical and work history, with emphasis on past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system;
- Any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history;
- A physical examination with special emphasis on the respiratory system;
- A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labor Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader;
- A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;
- Testing for latent tuberculosis infection; and
- Any other tests deemed appropriate by the PLHCP.
- **Periodic examinations:** ASMG needs to make available medical examinations that include the procedures listed above at least every three years, or more frequently if recommended by the PLHCP.

- ASMG needs to provide the PLHCP the following:
  - A copy of the OSHA Silica standard,
  - A description of the employee’s former, current, and anticipated duties as they relate to the employee’s occupational exposure to e silica;
  - The employee’s former, current, and anticipated levels of occupational exposure to silica;
  - A description of any personal protective equipment used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and
  - Information from records of employment-related medical examinations previously provided to the employee and currently within the control of the employer.
  - ASMG needs to provide each employee with a copy of their written medical opinion within 30 days of each medical examination performed.

- If the PLHCP's written medical opinion indicates that an employee should be examined by a specialist, the employer shall make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion.

24.10 Records

- The following records, if generated, need to be maintained. Exposure and medical records need to be maintained and made available to employees in accordance with 29 CFR 1910.1020.
  - **Air monitoring data:** The following air monitoring data must be generated and maintained:
    - The date of measurement for each sample taken.
    - The task monitored.
    - Sampling and analytical methods used.
    - Number, duration, and results of samples taken.
    - Identity of the laboratory that performed the analysis.
    - Type of personal protective equipment, such as respirators, worn by the employees monitored; and
    - Name, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.
  - **Objective data(OSHA):** Make and maintain an accurate record of all objective data relied upon to comply with the requirements of this section.
    - This record shall include at least the following information:
      - The crystalline silica-containing material in question.
      - The source of the objective data.
      - The testing protocol and results of testing.
        - A description of the process, task, or activity on which the objective data were based; and
    - Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.
  - **Medical surveillance:** Make and maintain an accurate record for each employee covered by the medical surveillance requirements including the following:
    - Name and social security number.

- A copy of the PLHCPs' and specialists' written medical opinions; and
- A copy of the information provided to the PLHCPs and specialists.