Environmental Dust and Smoke Policy

Purpose: Shakti Safety is committed to ensuring a safe and healthy working environment for all employees, contractors, and visitors. This policy outlines the measures in place to address environmental hazards related to dust and smoke, with a focus on outdoor activities, particularly in forest and roadside working environments.

Scope: This policy applies to all Shakti Safety employees, contractors, and visitors engaged in activities that involve exposure to environmental dust and smoke. It encompasses work conducted in outdoor settings, specifically in forest and roadside environments, where potential hazards from airborne particles are prevalent.

1. **Risk of Exposure:** Breathing in or working in dust and smoke can pose various health hazards, depending on the type of particles and the duration and intensity of exposure.
   1.1. **Breathing in dust and smoke can result in the following range of occupational illnesses and diseases:**

Allergic and Hypersensitivity Reactions / Bacterial and Fungal Infections / Coughing / Trouble Breathing Normally / Stinging Eyes / Lung Scarring and Fibrosis / A Scratchy Throat / Runny Nose / Irritated Sinuses / Wheezing and Shortness of Breath / Chest Pain / Headaches / An Asthma Attack / Tiredness / Fast Heartbeat

   1.2. **Respirable vs. Inhalable Fractions:**
      ○ Particles in the air are often categorized into different fractions based on their size and inhalation characteristics.
      ○ The "respirable fraction" typically refers to particles small enough to penetrate into the deeper parts of the respiratory system, reaching the alveoli in the lungs. These particles are considered more hazardous to health.

   1.3. **Health Impact:**
      ○ The presence of an irrespirable fraction in the air may indicate the presence of particles or substances that pose a health risk if inhaled.
      ○ Depending on the specific nature of the particles, they could cause respiratory issues, irritation, or other adverse health effects.

2. **Roles and Responsibilities:**
   2.1. **Safety and HR Lead Responsible For:**
      ● Conducting Formal Hazard Assessment.
      ● Creating an Emergency Response Plan in the event of high levels of exposure.
      ● Providing the necessary safety training related to effects of exposure and how to protect oneself from Environmental dust & smoke.

- Provide Training to Supervisors on how to use Air Quality Assessment Applications.
- Run evaluation inspections to ensure workers are knowledgeable about the best safety practices and precautions.
- Make sure to supply supervisors and workers with relevant PPE and educate on proper use.
- Ensure Daily Safety Meeting reports are addressing dust and smoke appropriately if they are present.

2.2. Supervisors Are Responsible For:

(If the day begins with the work site exhibiting levels of smoke that are unreasonable to work in for health related reasons then work must stopped until conditions improve)

- Monitoring daily conditions and discussing at Morning Safety Meeting.
- Using Air quality assessment tools as indicators of whether it is safe to work or not.
- Assessing through the course of the work day workers health and reactions to Smoke or Dust.
- Reassessing with the team if the conditions worsen.
- Having the communication devices with them to alert to changing conditions and warn workers if necessary to implement Emergency Plans.

2.3. All Workers Are Responsible For:

- Making sure that they have proper training to deal with environmental dust & smoke in case of wildfire.
- That they have the correct PPE with them and they are using it correctly.
- That they are reporting any health concerns as soon as they experience them.
- That they are exercising their right to refuse work if the conditions feel unsafe.
- Having communication devices with them to stay alert to changing conditions and warnings.

3. Air Quality Assessments Tools For Staff:

Air Quality Index (AQI) Apps:

- Numerous mobile apps provide real-time air quality information based on the AQI. These apps often use data from local environmental monitoring stations. You can check the AQI for your area, and the app may provide information on the main pollutants, including particulate matter (PM10 and PM2.5).
- Popular weather apps or dedicated air quality apps may offer this feature.

Online Air Quality Maps:

- Websites and online platforms provide air quality maps that show real-time pollution levels worldwide. Platforms like the World Air Quality Index (WAQI) offer visualizations of air quality data from monitoring stations.
- You can access these maps through a web browser on your smartphone.

Local Environmental Agencies:

- Check the website or online platforms of local environmental agencies or government bodies. Many environmental agencies provide air quality data, and some even have dedicated apps.
- Look for real-time data on particulate matter concentrations and other pollutants.

Observational Clues:

- Pay attention to visible signs of poor air quality. Hazy or smoggy conditions, an unusual odor, or visible dust may indicate potential air quality concerns.
- Keep an eye out for official health advisories or alerts from local authorities regarding air quality.

Environmental Monitoring:

- In environmental monitoring, especially in areas prone to dust or other airborne contaminants, understanding the irrespirable fraction helps assess the impact on both human health and the environment.

4. **Recommendations:**

1. The Staff should have N95 masks in the case of fire or dust.
2. Drive a safe distance from other vehicles on dusty roads and drive slowly near worksites to keep dust down.
3. Monitor available Air quality Assessment Tools throughout the work day in areas with dust and smoke.
4. Stop work if the dust or smoke fraction is increasing and the environment is reaching a level of pollution that will cause harm to workers.
5. In case of bad condition of health or if you feel any suffocation stop doing work and take necessary precautions.
6. Immediately report on recognition of any potential harm or risk caused by the environmental dust & smoke.

5. **Evaluation of Safety Program:**

Shakti Safety management is committed to communicating the safety program and policies to all employees and the safety team. The Safety team will provide comprehensive education and training on safety precautions related to dust and smoke. Safety Management will actively promote safety training in alignment with global safety standards and organizational requirements.

- The Safety training should be specific for Outdoor activities and workplace such as forest and Road side working.

- Daily Safety Meetings should reflect conversation about smoke and dust if present.
- Safety Lead Inspections of competency results should be documented to identify deficiencies and corrective action taken.
- The program should provide for employee safety training, including all work documentation.
- The JHSC will review the Audit Report and will take necessary action for the improvement of the safety program and training if needed.

6.   References:

1. https://www.who.int/publications/i/item/WHO-SDE-OEH-99-14
2. https://www.cdc.gov/disasters/wildfires/smoke.html)

Review: This Policy will be reviewed every three years or earlier if an incident or procedural change occurs. Oversight is provided by the Leadership Team and Joint Health and Safety Committee (JHSC).

Reviewed: 2025/04/21