

Effective: September 1, 2007

Revised: July 27, 2011

Reviewed: July 27, 2011

I. PURPOSE:

Stationary gas monitors located throughout the mill are intended to provide operating departments early warning of equipment failure that may result in release of a hazardous chemical to the atmosphere. Gas monitors are also intended to provide early warning to employees and allow them to evacuate the immediate area to avoid possible exposure to a hazardous gas.

II. SCOPE:

This policy applies to all Resolute Forest Products employees, visitors, and contract personnel who work in areas where stationary gas monitors are utilized.

III. DEFINITIONS:

A. Short Term Exposure Limit (STEL) - The maximum allowable concentration, or ceiling, not to be exceeded at any time during a 15-minute exposure period up to four times per day. The level to which persons may be exposed continuously for 15 minutes without adverse effects. Established by the American Conference of Governmental Industrial Hygienists.

B. Permissible Exposure Limit (PEL or OSHA PEL) - The Permissible Exposure Limit is a legal limit in the United States for personal exposure to a substance, usually expressed in parts per million (ppm). Permissible Exposure Limits are defined by the Occupational Safety and Health Administration.

C. Time Weighted Average - The average time, over a given work period (e.g. 8-hour workday) of a person's exposure to a chemical or an agent. The average is determined by sampling for the contaminant throughout the time period. Represented as TLV-TWA.

D. PPM – Parts Per Million

IV. POLICY:

Employees will be trained and expected to immediately leave the area by moving crosswind and then upwind at least 50 feet when an alarm is activated by horn and/or light. Employees are expected to put on their escape respirator when leaving the immediate area to avoid possible respiratory exposure to hazardous gas. Employees should not remove the escape respirator until they are up wind at least 50 feet from the release area and/or air monitoring has indicated that it is safe to remove respiratory protection.

V. PROCEDURE:

A. The gas monitor will be set to alarm at a single set point for the specific sensor detection type.

- B. The red warning light and audible horn will be set to alarm at a specific in-air concentration based on the short-term Exposure Limit (STEL). The STEL is not intended to be an indicator of “safe or unsafe” conditions, but is an action level to ensure adequate warning so that immediate steps can be taken to prevent exposure.
- C. The levels in Section VI are established for stationary gas monitors sensors and set points and will apply to the Calhoun Operations emergency alarm system.

VI. GAS MONITOR SENSOR SET-POINT

Chlorine	1 ppm
Chlorine Dioxide	0.3 ppm
Hydrogen Sulfide	15 ppm
Sulfur Dioxide	5 ppm

(Ref. ACGIH 2009 TLV booklet for Chemical Substances & Physical Agents)

- A. **The following locations are established for stationary gas monitors/sensors.**

GAS MONITOR SENSOR LOCATIONS:

The location of each stationary gas monitor and sensor type is listed on drawing number CD-14156A or see loop sheet titled “toxic gas” which is filed in the Mill Engineering department. **A brief summary of sensor location are noted below:**

Power & Steam

Filter Plant, RB3 Evaporator, Sludge Dewater Plant, Waste Lift, BFB

Kraft Mill

**Bleach Plant & associated area, ClO₂ Building & associated process area
Pulp Dryer Wet End**

Technical

Sewage Treatment

Chip Prep

Chip Screen House

Paper Mill

Hardwood Refiner Press (LCR and HCR)

TMP

Hardwood Refining System

- B. It should be noted that respiratory protection might also be required if gas is detected below the STEL. Personal gas monitors are set to alarm at the Permissible Exposure Limit or Threshold

Limit Value and will provide additional warning for employees to take appropriate action to protect themselves from possible exposure.

VII. RESPONSIBILITY:

A. Employee

1. Know and understand this policy and its requirements.
2. Understand where stationary gas monitors are located within the work area.
3. Immediately leave the affected area if an alarm sounds in an area where you are working.

B. Supervision

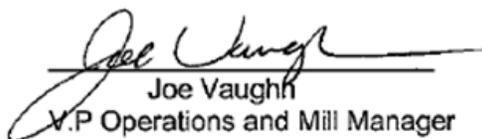
1. Train employees on this policy and the location of stationary gas monitors.
2. Ensure monitors are maintained and routinely calibrated according to the manufacturer's recommended procedures.

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Approval Signatures:



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