NYC 9/11 Public Portal Document

REL for Freon is 1000ppm..) Sampling for the decomposition products of Freon R-22, hydrofluoric acid (HF) and phosgene showed no detectable levels.

Inorganic Acids OSHA has taken approximately **107** samples for inorganic acids such as hydrochloric, phosphoric, and sulfuric acids. Two samples for sulfuric acid were found to exceed OSHA's permissible exposure limit (PEL) of 1 mg/m^3.

Oxides of Nitrogen/ Sulfur: Sampling on grappler operators on the rubble pile, and on employees at the truck wash stations revealed trace levels of nitric oxide and nitrogen dioxide. SO_2 personal and area results were found to be below OSHA limits.

Metals: OSHA has taken a total of **1040** samples (excluding bulk and blank samples) to monitor worker exposures to dusts, fumes, oxides, and other compounds of metals such as antimony, beryllium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, vanadium, zinc, cadmium, magnesium, and arsenic. Results from these samples are generally well below the applicable OSHA limits. However, torch cutting and burning structural steel at the rubble pile have resulted in instances of overexposures as follows: copper (13); iron oxide (26); lead (14); and cadmium (2). Accordingly, OSHA is recommending that workers engaged in these operations wear appropriate respiratory protection. See information below for the specific counts in regards to mercury.

Mercury OSHA has taken **224** air samples for inorganic mercury. Results for **224** of those air samples have been received and no mercury was detected. Also, **36** bulk samples previously collected from rubble were re-analyzed for mercury and none was detected. Additionally, **10** bulks were taken on 1/3, with one (1) sample detecting mercury at 0.9ppm and nine (9) samples being non-detected. **38** bulk samples were taken between 1/8 and 1/11/02; results indicate 0.1 to 0.2 ppm mostly in around the footprint of Bldg.-6, and in the pit between WTC tower 1&2.

Ionizing Radiation: A survey of the rubble pile was conducted on 10/22-10/23 to check for latent radiation with particular attention to alpha radiation. Results show no elevated levels of concern from either known building latent radiation sources or any terrorist origin source materials.

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