RINGKASAN

Petugas keamanan Universitas Jambi yang bertugas di gerbang utama waktu kerjanya selama 11 jam dari pukul 07.00 – 18.00 WIB, waktu kerja dari hari senin sampai dengan hari jum'at. Petugas keamanan perannya sangat penting untuk menjaga keamanan serta ketertiban pada Universitas Jambi Kampus Mendalo. Dampak buruk yang akan ditimbulkan dari konsentrasi gas CO tentunya akan terasa apabila terpapar melebihi daripada baku mutu pada PP Nomor 22 Tahun 2021, yaitu sebesar 4000 $\mu g/m^3$ selama 8 jam. Kondisi yang dirasakan oleh petugas keamanan jika terpapar secara terus-menerus dikhawatirkan dapat berakibat sangat buruk bagi kesehatan mereka. Penelitian ini menggunakan jenis penelitian kuantitatif dengan pendekatan deskriptif dan menggunakan desain studi Analisis Risiko Kesehatan Lingkungan (ARKL). Penelitian ini bertujuan untuk mengetahui konsentrasi CO di gerbang utama Universitas Jambi Kampus Mendalo serta mengetahui tingkat risiko paparan CO bagi petugas keamanan di gerbang utama Universitas Jambi Kampus Mendalo. Pengukuran konsentrasi CO dilaksanakan 8 hari sebanyak 2 sesi perharinya untuk mewakilkan jam yang tidak terlalu ramai dan untuk mewakilkan jam yang ramai, alat yang digunakan adalah *Carbon Monoxide Meter* dan disertai pengukuran meteorologi yang meliputi suhu, kelembapan, kecepatan angin dan arah angin. Penilaian tingkat risiko paparan CO pada petugas keamanan dilakukan dengan metode Analisis Risiko Kesehatan Lingkungan (ARKL).

Data hasil pengukuran CO di gerbang utama Universitas Jambi Kampus Mendalo menyatakan bahwa konsentrasi CO yang didapatkan data tertinggi dengan nilai 11041,6 $\mu g/m^3$, dan untuk data terendah yang didapatkan dengan nilai 5937,5 $\mu g/m^3$, serta rata-rata pengukuran selama delapan hari didapatkan dengan nilai 8210,4 $\mu g/m^3$ dan tentunya rata-rata tersebut melebihi baku mutu. Penilaian risiko paparan CO terhadap petugas keamanan di gerbang utama Universitas Jambi Kampus Mendalo nilai *intake* tertinggi, yaitu sebesar 0,9856 mg/kg/hari dengan konsentrasi CO sebesar 8210,4 $\mu g/m^3$, waktu paparannya adalah 11 jam/hari, durasi paparannya selama 4 tahun dan berat badan petugas keamanan tersebut 65 kg, nilai *intake* yang tinggi disebabkan oleh perkalian konsentrasi CO yang melebihi batas aman yaitu sebesar 8210,4 $\mu g/m^3$, sedangkan batas aman konsentrasi CO yang masih aman dihirup sebesar 4000 $\mu g/m^3$ dan waktu paparan yang panjang yaitu selama 11 jam. Hasil ini didapati setelah *intake* dibagi dengan nilai R*f*C sendiri bernilai konstan maka dapat ditarik kesimpulan bahwa nilai RQ≥1 yang dimana berarti konsentrasi pencemaran CO tidak aman bagi kesehatan petugas kemanan.

SUMMARY

Jambi University security officers on duty at the main gate work 11 hours from 07.00 – 18.00 WIB, working hours from Monday to Friday. Security officers play a very important role in maintaining security and order at Jambi University, Mendalo Campus. The negative impacts that will arise from CO gas concentrations will of course be felt if exposure exceeds the quality standards in PP Number 22 of 2021, namely 4000 µg/m³ for 8 hours. It is feared that the conditions experienced by security officers if they are continuously exposed to them could have very bad consequences for their health. This research uses a quantitative type of research with a descriptive approach and uses an Environmental Health Risk Analysis (ARKL) study design. This research aims to determine the concentration of CO at the main gate of Jambi University, Mendalo Campus and to determine the level of risk of CO exposure for security officers at the main gate of Jambi University, Mendalo Campus. CO concentration measurements were carried out 8 days in 2 sessions per day to represent hours that were not too busy and to represent hours that were busy, the tool used was a Carbon Monoxide Meter and accompanied by meteorological measurements which included temperature, humidity, wind speed and wind direction. Assessment of the risk level of CO exposure to security officers was carried out using the Environmental Health Risk Analysis (ARKL) method.

Data from CO measurements at the main gate of Jambi University Mendalo Campus states that the CO concentration obtained was the highest with a value of 11041.6 µg/m³, and the lowest data obtained was 5937.5 µg/m³, as well as the average of measurements over eight day was obtained with a value of 8210.4 µg/m³ and of course this average exceeds the quality standard. Assessment of the risk of CO exposure to security officers at the main gate of Jambi University, Mendalo Campus, the highest intake value, namely 0.9856 µg/kg/day with a CO concentration of 8210.4 µg/m³, exposure time is 11 hours/day, exposure duration is 4 years old and the security officer's body weight is 65 kg, the high intake value is caused by the multiplication of the CO concentration which exceeds the safe limit, namely 8210.4 µg/m³, while the safe limit for the CO concentration which is still safe to inhale is 4000 µg/m³ and the exposure time the long one is 11 hours. This result is found after the intake is divided by the RfC value itself which is constant, so it can be concluded that the RQ value is ≥1 which means the concentration of CO pollution is unsafe for the health of security officers.