



**2020 Annual Compliance Monitoring
&
Operational Performance Report Addendum # 2**

Reporting Period January 1 – December 31, 2020

**Blind River Refinery
Operating Licence
FFOL-3632.0/2022**
328 Eldorado Road
Blind River, Ontario
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Submitted to:
The Canadian Nuclear Safety Commission
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Lung Dose

Table 12 and Figure 9 show the breakdown of the internal lung dose for individuals in 2020. This data includes both employees and contractor NEWS. Approximately 44% of individuals had an assigned lung dose less than or equal to 1 mSv. The individual assigned the highest lung dose in 2020 was an analytical employee. Due to the nature of the lung dose assessment methodology, there can be some year-to-year variation in dose group assignments, which impacts directly on the percentage of individuals in each dose range.

Table 12

2020 Lung Dose Distribution	
Dose Range in mSv	% of Individuals
0 – 1	43.7
1 – 2	30.5
2 – 3	22.8
3 – 4	2.4
4 – 5	0.6
>5	0.0

Figure 9

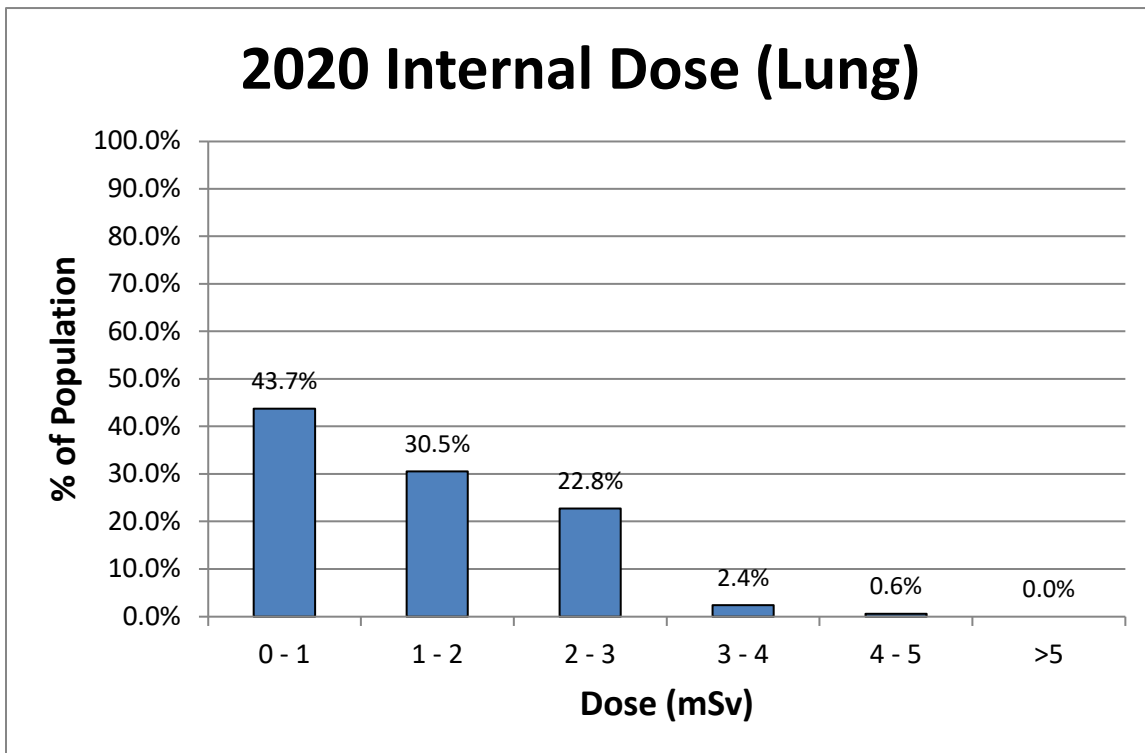


Table 14 shows the annual NEW lung dose results for each of the three work groups. The highest doses are from the administration/support work group, which consists of administration and analytical services.

Table 14

2020 Internal Dose Distribution (Lung)				
Work Group	Number of Individuals	Minimum (mSv)	Average (mSv)	Maximum (mSv)
Administration / Support	63	0.0	1.0	4.0
NEW Contractors	11	0.0	0.0	0.1
Operations	93	0.0	1.5	3.3

Total Effective Dose

Table 15 and Figure 11 show the breakdown of the total effective dose for individuals in 2020. This data includes both employees and contractor NEWs.

Table 15

2020 Total Effective Dose Distribution	
Dose Range in mSv	% of Individuals
0 – 2	47.3
2 – 4	34.3
4 – 6	8.9
6 – 8	5.9
8 – 10	3.0
>10	0.6

Figure 11

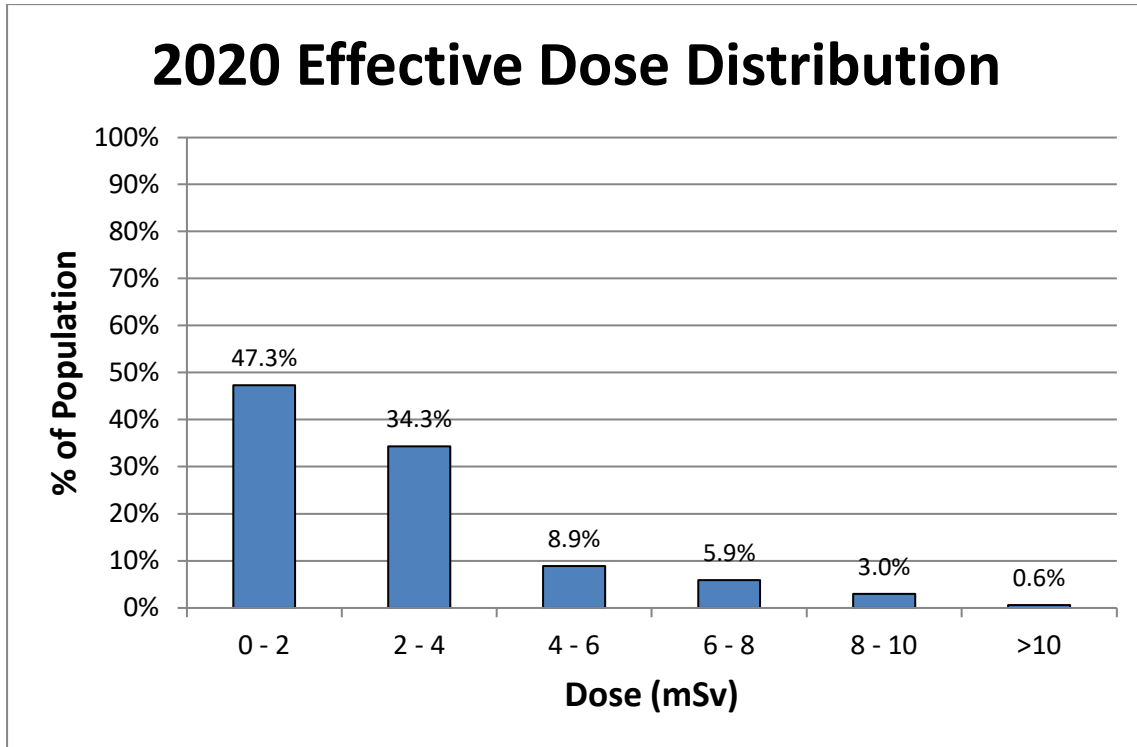


Table 16 and Figure 12 show the total effective dose results for the 2016 – 2020 period. The average total effective dose in 2020 was slightly higher than the average effective dose in the previous year but remains comparable to prior years. Similarly, the maximum individual total effective dose in 2020 was slightly higher than in 2019. The annual regulatory limit for total effective dose is 50 mSv; therefore, the highest individual result in 2020 was approximately 16% of the annual regulatory limit.

Table 16

2016 – 2020 Total Effective Dose				
Year	Number of Individuals	Minimum Dose (mSv)	Average Dose (mSv)	Maximum Dose (mSv)
2016	154	0	1.5	6.1
2017	145	0	0.9	3.3
2018	150	0	1.4	6.9
2019	174	0	1.6	7.7
2020	169	0	2.5	10.1

Figure 12

