



**2024 Second Quarter Compliance Monitoring  
&  
Operational Performance Report**

**Reporting Period April 1 – June 30, 2024**

**Port Hope Conversion Facility  
Operating Licence  
FFOL-3631.00/2027**

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Submitted to:  
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## **I Executive Summary**

Cameco Corporation (Cameco) is committed to the safe, clean, and reliable operation of all its facilities and continually strives to improve its performance and processes to ensure the safety of both its employees and local residents. The Port Hope Conversion Facility (PHCF) maintains the required programs, plans and procedures in the areas of health and safety, radiation protection, environment, emergency response, fire protection, waste management, and training.

As a result of these programs, plans and procedures, the PHCF has maintained radiation exposures to workers and the public well below the regulatory dose limits. Environmental emissions are also being controlled to levels that are a fraction of the regulatory limits.

Cameco utilizes administrative levels and action levels to provide early detection of issues and ensure levels remain well below regulatory limits. A variety of control measures and practices are employed as part of site programs to ensure the protection of the public, site employees and the environment. A robust ALARA program is in place to ensure continual improvement and to ensure exposures and emissions remain well below action levels.

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## 1.0 Second Quarter Overview

### 1.1 Facility Operation

Cameco continues to strive for operational excellence at all its facilities through consistent application of management systems to ensure that they operate in a safe, clean, and reliable manner. Corporate policies and programs, including that for Safety, Health, Environment and Quality (SHEQ) provide guidance and direction for all site-based programs and procedures that define the PHCF Quality Management System.

There were no significant changes to Structure, Systems and Components (SSC) or processes in the second quarter.

On April 9, 2024, a contractor sustained an injury due a fall from height at the site 2 Dorset Street location.

On April 18, 2024, a vacuum truck transferring contaminated water from a storage tank leaked, releasing water to the ground and to the harbour via a catch basin. It was estimated approximately 10 L entered the catch basin. The leak was stopped and residual water at surface and within the catch basin was recovered. An investigation was completed.

On May 21, 2024, Cameco reported to the Ontario Ministry of Environment, Conservation and Parks (MECP) ambient station high volume air sampler (hi-vol) exceedances of 148 µg TSP/m<sup>3</sup>, 121 µg TSP/m<sup>3</sup> and 217 µg TSP/m<sup>3</sup> total suspended particulate (TSP) for the period of May 14 - 16, 2024, at the Marsh Street Hi-Vol station. The measurements are above the ECCC and MECP 120 µg/m<sup>3</sup> TSP dust criteria for visibility. These elevated dust results were localized and caused by sections of roadway along Marsh Street being prepped for paving (May 14), asphalt paving (May 15) and street sweeping (May 16).

A contractor had fluoride in urine sample results above the action level of 7 mgF/L. An investigation was completed. The contractor had not been onsite for 4 days prior. The sample results are most likely non-occupational.

Both the UF<sub>6</sub> plant and UO<sub>2</sub> plant operated without interruption in Q2 with the exception of a planned mini outage in April 2024 for the UF<sub>6</sub> plant. The UO<sub>2</sub> plant completed their last day of production on June 28, and commenced a summer shut down and maintenance outage period.

## 1.2 Physical Design / Facility Modification

There were no modifications affecting the safety analysis of the licensed facility made in the quarter that required written approval of the Commission or a person authorized by the Commission.

At the PHCF, changes to the physical design of equipment, processes, and the facility with the potential to impact safety are evaluated using the internal design change process described in *Process and Design Change Control, CQP-113*. Changes are reviewed through Cameco's management of change workflow, which ensures all potential impacts to the environment as well as to the health and safety of personnel are evaluated prior to implementation.

## 2.0 Radiation Protection

This safety and control area covers the implementation of a radiation protection program, in accordance with the *Radiation Protection Regulations*. This program must ensure that contamination and radiation doses are monitored and controlled. Cameco manages its Radiation Protection Program at the PHCF using ALARA principles in order to ensure doses are maintained well below regulatory limits.

A contractor had fluoride in urine sample results above the action level of 7 mgF/L. An investigation was completed. The contractor had not been onsite for 4 days prior. The sample results are most likely non-occupational.

### Whole Body Dose

Table 1 shows the whole-body dose summary results from Q2 2024 for six work groups: UF<sub>6</sub> Plant; UO<sub>2</sub> Plant; Maintenance; Technical Support (including Nuclear Energy Worker (NEW) contractors); Corporate Technical Services; and Administration.

**Table 1**

<b>Second Quarter 2024 Whole Body Dose Results</b>				
<b>Work Group</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
UF <sub>6</sub> Plant	103	0.15	0.00	1.06
UO <sub>2</sub> Plant	24	0.12	0.00	0.32
Maintenance	92	0.11	0.00	2.74
Technical Support <sup>1</sup>	513	0.03	0.00	0.77
Corporate Technical Services	35	0.02	0.00	0.20
Administration	95	0.00	0.00	0.02
<b>Total (Max)</b>	<b>827</b>	<b>0.05</b>	<b>0.00</b>	<b>2.74</b>
<sup>1</sup> Includes contractors (NEWs) and Corporate Technical Services				

Table 2 shows the average, minimum and maximum quarterly individual external whole-body exposures from Q2 2023 through Q2 2024. The average whole-body dose is lower compared to previous quarters. The maximum whole-body dose received by Maintenance personnel was related to work in the flame reactor area.

**Table 2**

<b>Whole Body Dose Results by Quarter</b>				
<b>Monitoring Period</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
Q2 2023	816	0.07	0.00	1.73
Q3 2023	855	0.05	0.00	1.30
Q4 2023	770	0.11	0.00	2.38
Q1 2024	752	0.05	0.00	1.16
Q2 2024	827	0.05	0.00	2.74

Skin Dose

Table 3 shows the quarterly skin dose summary results for six work groups: UF<sub>6</sub> Plant; UO<sub>2</sub> Plant; Maintenance; Technical Support (including NEW contractors); Corporate Technical Services; and Administration. The highest exposures are from the UF<sub>6</sub> work group related to work in the flame reactor area.

**Table 3**

<b>Second Quarter 2024 Skin Dose Results</b>				
<b>Work Group</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
UF <sub>6</sub> Plant	103	0.43	0.00	3.62
UO <sub>2</sub> Plant	24	0.35	0.00	0.99
Maintenance	92	0.39	0.00	2.84
Technical Support <sup>1</sup>	513	0.07	0.00	2.87
Corporate Technical Services	35	0.03	0.00	0.23
Administration	95	0.00	0.00	0.02
<b>Total (Max)</b>	<b>827</b>	<b>0.15</b>	<b>0.00</b>	<b>3.62</b>
<sup>1</sup> Includes contractors (NEWs) and Corporate Technical Services				

Table 4 shows the average and maximum quarterly individual skin exposure for Q2 2023 through Q2 2024. The average skin dose is lower compared to previous quarters.

**Table 4**

<b>Skin Dose Results by Quarter</b>				
<b>Monitoring Period</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
Q2 2023	816	0.24	0.00	7.36
Q3 2023	855	0.16	0.00	4.94
Q4 2023	770	0.30	0.00	8.30
Q1 2024	752	0.19	0.00	12.38
Q2 2024	827	0.15	0.00	3.62

Eye Dose

Table 5 shows the quarterly eye dose summary results for six work groups: UF<sub>6</sub> Plant; UO<sub>2</sub> Plant; Maintenance; Technical Support (including NEW contractors), Corporate Technical Services; and Administration. The highest exposure is from the Maintenance work group related to time in the flame reactor areas of the UF<sub>6</sub> plant.

**Table 5**

<b>Second Quarter 2024 Eye Dose Results</b>				
<b>Work Group</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
UF <sub>6</sub> Plant	103	0.29	0.00	2.33
UO <sub>2</sub> Plant	24	0.24	0.00	0.67
Maintenance	92	0.25	0.00	2.80
Technical Support <sup>1</sup>	513	0.05	0.00	1.80
Corporate Technical	35	0.02	0.00	0.66
Administration	95	0.00	0.00	0.02
<b>Total (Max)</b>	<b>827</b>	<b>0.10</b>	<b>0.00</b>	<b>2.80</b>
<sup>1</sup> Includes contractors (NEWs)				

Table 6 shows the average and maximum quarterly individual external eye exposures for Q2 2023 through Q2 2024. The average eye dose is lower compared to previous quarters.



**Table 6**

<b>Eye Dose Results by Quarter</b>				
<b>Monitoring Period</b>	<b>Number of Individuals</b>	<b>Average Dose (mSv)</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>
Q2 2023	816	0.15	0.00	4.08
Q3 2023	855	0.11	0.00	2.31
Q4 2023	770	0.20	0.00	4.58
Q1 2024	<b>752</b>	<b>0.12</b>	<b>0.00</b>	<b>5.26</b>
Q2 2024	<b>827</b>	<b>0.10</b>	<b>0.00</b>	<b>2.80</b>

Urine Analysis

The urine analysis action levels are presented in Table 7 below.

**Table 7**

<b>Urine Analysis Action Levels</b>		
	<b>Parameter</b>	<b>Action Level</b>
Urinalysis (NEW)	Weekly - UO <sub>2</sub> /UF <sub>6</sub> Operators, Maintenance, Technical Support	65 µg U/L
	Monthly - Administrative Support	25 µg U/L
	Long-term Contractors	65 µg U/L
	Short-term Contractors	80 µg U/L
	Chemical toxicity – post shift sample	500 µg U/L
	Fluoride toxicity – all samples	7 mg F/L
Urinalysis (Non-NEW)	Daily - Routine Sample	40 µg U/L
	Monthly - Routine Sample	25 µg U/L
	Chemical Toxicity - Post Shift Sample	500 µg U/L
	Fluoride Toxicity – All Samples	4 mg F/L

Table 8 shows the distribution of urine results for Q2 2024. A total of 12,163 urine samples were collected and analyzed for uranium during Q2 2024. The majority of routine urine analysis results (99.2%) were less than 5 µg U/L in the quarter.

All results above 13 µg U/L were screened by radiation protection staff. There were no official investigations for uranium in urine during Q2 2024

**Table 8**

<b>Second Quarter 2024 Routine Urine Analysis Results</b>	
<b>Distribution of Results</b>	<b>Q2 2024</b>
Number of Samples < 5 µg U/L	12,067
Number of Samples > 5 to < 25 µg U/L	92
Number of Samples > 25 to < 50 µg U/L	3
Number of Samples > 50 µg U/L	1
Number of Samples Analyzed (Uranium)	12,163

Table 9 presents the internal urine analysis doses for the last five quarters. The average and maximum internal urine analysis doses in the quarter were 0.01 mSv and 0.17 mSv, respectively, which was consistent with previous quarters.

**Table 9**

<b>Internal Dose (Urine) by Quarter</b>				
<b>Quarter</b>	<b>Number of Individuals</b>	<b>Minimum Dose (mSv)</b>	<b>Maximum Dose (mSv)</b>	<b>Average Dose (mSv)</b>
Q2 2023	662	0.00	0.10	0.01
Q3 2023	735	0.00	0.23	0.01
Q4 2023	662	0.00	0.19	0.01
Q1 2024	657	0.00	0.16	0.01
Q2 2024	693	0.00	0.17	0.01

Fluoride in Urine

A total of 7,310 urine samples were analyzed for fluoride during Q2 with summary results provided in Table 10.

There were 10 routine and non-routine samples above the internal administrative investigation level of 4 mg F/L during Q2. The samples were investigated and entered into CIRS.

**Table 10**

<b>Second Quarter 2024 Fluoride in Urine Analysis Results</b>			
<b>Type of Fluoride Samples</b>	<b>Number of Samples</b>	<b>Minimum Concentration (mg F/L)</b>	<b>Maximum Concentration (mg F/L)</b>
All fluoride samples	7,310	0.0	16
Routine post-shift fluoride samples $\geq 7$ mg F/L	2	-	-
Routine post-shift fluoride samples $\geq 4$ mg F/L	7	-	-
Non-routine fluoride samples	461	0.0	4.2
Samples analyzed for U, insufficient volume (< 30mL) for F analysis	39	-	-

Lung Counting

The lung count trailer was in Blind River for the month of April and May and at PHCF for the month of June 2024.

Contamination Control

The PHCF is divided into three zones for contamination control purposes. Zone 1 areas (clean areas - no radioactive sources other than monitoring equipment) are clearly delineated. Whole body monitors are located at the Zone 1 boundary in the main lobby, men’s, and women’s change rooms. There is also a monitor located at the gate 12 vehicle port. In Zone 2 areas and the yard Zone 3 areas (transition areas – may contain limited amounts of uranium compounds), no visible contamination should exist and, when detected, loose contamination is promptly isolated, monitored, cleaned, and monitored again to ensure the contamination has been removed. Zone 3 production areas are production areas where uranium compounds are expected. Incidents of zone contamination are presented in Table 11.

**Table 11**

<b>Q2 2024 Alpha Contamination Monitoring Results</b>			
<b>Area</b>	<b>Number of Samples Taken</b>	<b>Zone Contamination Criteria (Bq/cm<sup>2</sup>)</b>	<b>Number of Samples Above Criteria</b>
Zone 1	1,090	0.4	0
Zone 2	14,195	0.4	39
Zone 3 (Yard)*	3	0.4	3

\*Note – Samples are not routinely required in the yard area. Samples are taken as required if contamination is suspected.

The contamination in Zone 2 areas was primarily detected in the office areas and lunchrooms of production buildings. Contamination measurements are taken upon request in Zone 3 areas when contamination is suspected and only documented when above the applicable levels.

**In-Plant Air**

Routine air sampling is performed by collecting airborne particulate on air sampling filters and quantifying the airborne concentration of uranium. The Q2 results are presented in Table 12.

The site administrative level and derived air concentration (DAC), based on slow moving (low solubility) material, is 100 µg U/m<sup>3</sup> but protective measures, such as investigation and respiratory protection, are normally required as a precaution at lower DAC levels. Continuous air monitoring equipment (iCAMS) in the UF<sub>6</sub> and UO<sub>2</sub> plants are also used to provide early warning and to prompt response to elevated airborne uranium concentrations. Local alarms and direct communication with the control rooms provide early warning to plant personnel.

**Table 12**

<b>Second Quarter 2024 In-Plant Air Uranium Concentration by Operations Group</b>				
<b>Operations Group</b>	<b>Number of Samples Taken</b>	<b>Average (µg U/m<sup>3</sup>)</b>	<b>Maximum (µg U/m<sup>3</sup>)</b>	<b>Number of Samples Taken Above Administrative Level</b>
UF <sub>6</sub> Plant	4,601	109	563	112
UO <sub>2</sub> Plant	1,476	32	67	0
Waste Recovery	446	3	68	0
CUP	372	1	3	0

The maximum in-plant air sample of 563  $\mu\text{g U/m}^3$  was recorded on May 28, 2024, in the  $\text{UF}_6$  plant. This result was due to work in the cleaning out dust lines in the  $\text{UF}_4$  elevator.

The average in-plant air concentrations are consistent with previous quarters.

### 3.0 Conventional Health and Safety

This safety and control area covers the implementation of a program to manage non-radiological workplace safety hazards and to protect personnel and equipment.

Conventional safety statistics are presented in Table 13.

**Table 13**

2024 Safety Statistics					
Quarter / Parameter	Q1 2024	Q2 2024	Q3 2024	Q4 2024	YTD
First Aid Injuries	9	18	-	-	27
Medical Diagnostic Procedures	8	4	-	-	12
Medical Treatment Injuries	1	3	-	-	4
Other Recordable Injuries	0	0	-	-	0
Lost Time Injuries	0	2	-	-	2
Lost Time Injury Frequency	0	1.64	-	-	0.84
Lost Time Injury Severity	0	63.08	-	-	32.23

#### Health and Safety Activities

- **Communications:** OHS and CSSC continued to issue safety bulletins to promote a focus on continuing safety awareness. Safety meeting presentations were also used to communicate safety focused messages.
- **Education and Training:** Training continued routinely using both in person methods and computer-based learning.
- **Safety Awareness Activities:** A safety awareness breakfast was held in May for employees and contractors to promote safety. First aid kits were handed out to take home. A mental health speaker came to site in May to present on mental health resiliency. A specialist came to site in April to present on lightening safety awareness.
- **CSSC:** The CSSC committee continues to meet for regulatory meetings.
- **Safety & Industrial Hygiene:** The safety group focused on ergonomic assessments in the second quarter of 2024.

- **Total Recordable Injury Rate (TRIR)** – Q1 Ending = 3.35 (27 First Aids, 12 Medical Diagnostics, 4 Medical Treatments). Contractor TRIR YTD is 3.53 (as of June 30, 2024).

#### 4.0 Environmental Protection

This safety and control area covers the programs that monitor and control all releases of nuclear and hazardous substances into the environment, as well as their effects on the environment, as the result of licensed activities.

##### Public Dose

ORL equations for Site 1 and Site 2 have been derived and are expressed in the form shown below.

$$\text{Public Dose} = \text{Dose}_{\text{Air}} + \text{Dose}_{\text{Water}} + \text{Dose}_{\text{Gamma}} < 0.3 \text{ mSv/y}$$

The monthly dose from Site 1 and Site 2 are based on monitoring results for each dose component as shown in Table 14.

**Table 14**

<b>Quarterly Dose (mSv/quarter)</b>					
<b>ORL Component</b>	<b>Q1 2024</b>	<b>Q2 2024</b>	<b>Q3 2024</b>	<b>Q4 2024</b>	<b>2024 Total</b>
Air	<0.001	<0.001	-	-	<0.001
Water	<0.001	<0.001	-	-	<0.001
Gamma – Site 1	0.021	0.021	-	-	0.042
Gamma – Site 2	0.029	0.023	-	-	0.053
Quarterly Dose – Site 1	0.021	0.021	-	-	0.043
Quarterly Dose – Site 2	0.030	0.024	-	-	0.053

##### Gamma Monitoring

Dose to the public is calculated for both site 1 and 2 using specific gamma fenceline monitoring locations. The results at station 2 are used for site 1 public dose calculations and the results at station 21 are used for site 2 public dose calculations. The results at these locations for this quarter are summarized and compared with regulatory action levels in Table 15.

There were no monthly gamma radiation action levels exceeded during Q2.



**Table 15**

<b>Second Quarter 2024 Public Dose Gamma Monitoring Results</b>					
<b>Station Number</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>Action Level (µSv/h)</b>	<b>Licence Limit (µSv/h)</b>
2	0.159	0.160	0.125	0.400	0.570
10	0.031	0.021	0.000	0.400	0.610
21	0.013	0.048	0.000	0.250	0.260

**Air Emissions**

The quarterly average and maximum stack emissions from the UF<sub>6</sub> plant main stack and the UO<sub>2</sub> plant main stack are presented in Table 16.

A stack monitoring program is used to determine the airborne uranium emission rates on a daily basis from the main stacks of the UF<sub>6</sub> and UO<sub>2</sub> plants.

No licensed action levels were exceeded for uranium emissions from the UF<sub>6</sub> plant main stack in the quarter. The UF<sub>6</sub> main stack average uranium emission rate was consistent with previous quarters during which production was operational.

No licensed action levels were exceeded for uranium emissions from the UO<sub>2</sub> plant main stack in the quarter. The UO<sub>2</sub> main stack average uranium emission rate was consistent with previous quarters during which production was operational.

Fluoride emissions from the UF<sub>6</sub> main stack are sampled and analyzed on a continuous basis using an on-line analyzer and the data is collected on the plant computer system. No licensed action levels were exceeded for fluorides in the quarter. The UF<sub>6</sub> main stack average fluoride emission rate was consistent with previous quarters during which production was operational.

The UO<sub>2</sub> main stack is also continuously sampled for ammonia. No licensed action levels were exceeded for ammonia emissions from the UO<sub>2</sub> plant main stack in the quarter. The UO<sub>2</sub> main stack average ammonia emission rate was consistent with previous quarters.

**Table 16**

Daily Main Stack Emissions by Quarter									
Plant	Parameter	Licence Limit	Action Level	Value	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024
UF <sub>6</sub>	Uranium g U/h	280	40	Quarterly Daily Average	2.1	2.1	2.7	2.8	1.9
				Quarterly Daily Maximum	4.3	10.7	6.3	9.3	5.7
	Hydrogen Fluoride g HF/h	650	230	Quarterly Daily Average	16	15	10	14	24
				Quarterly Daily Maximum	197	107	75	128	226
UO <sub>2</sub>	Uranium g U/h	240	10	Quarterly Daily Average	1.1	0.6	0.7	0.6	0.5
				Quarterly Daily Maximum	2.9	1.8	1.4	1.7	1.7
	Ammonia kg NH <sub>3</sub> /h	58	10	Quarterly Daily Average	1.7	1.6	2.0	2.0	2.2
				Quarterly Daily Maximum	2.8	4.6	3.0	2.7	3.7

Liquid Discharges

The sanitary sewer action level was revised in the second quarter of 2024. A daily uranium action level of 100 µg U/L (0.10 mg U/L) applied through June 18. Effective June 19, the action level was revised to a monthly mean action level of 150 µg U/L (0.15 mg U/L). The monthly mean release limit of 275 µg U/L (0.275 mg U/L) otherwise remains unchanged.

Tables 17 and 18 summarize uranium concentrations and pH values recorded for the second quarter of 2024. Facility discharge quality remained below the daily action level through the quarter and the June monthly mean concentration was well below the revised action level. Effluent quality otherwise remained well below the monthly mean limit through the quarter.

The magnitude and frequency of precipitation events has routinely been seen to influence sanitary sewer quality as a function of an increase in groundwater infiltration potential. In April 2023, the daily action level was reached on two occasions as a function of groundwater infiltration exacerbated by precipitation events and spring thaw conditions.

No uranium excursions were recorded in the second half of 2023 and no excursions were recorded in the first half of 2024.

Cameco has evaluated targeted sanitary sewer infrastructure rehabilitation, replacement and/or abandonment tasks, taking into consideration work completed to date and planned site and VIM project sanitary sewer system improvements. Near term focus items include the replacement and realignment of sewer infrastructure servicing existing facility lift stations and portions of Building 20, and the abandonment of associated inactive utilities. Rehabilitation work had also been planned for the building 13 lateral service.

The building 13 work was expanded to include the replacement of a portion of the service, and the sewer lateral replacement and rehabilitation tasks were mostly completed in July. Work was initiated on the replacement/realignment of sanitary sewer infrastructure adjacent to Building 32 in July, however, the project work was halted due to challenges posed by subsurface utility interferences. Water main infrastructure work is required in advance of resuming the sanitary sewer work scope.

**Table 17**

<b>Sanitary Sewer Discharge Data by Quarter</b>							
<b>Parameter</b>	<b>Units of Measure</b>	<b>Value</b>	<b>Q2 2023</b>	<b>Q3 2023</b>	<b>Q4 2023</b>	<b>Q1 2024</b>	<b>Q2 2024</b>
Uranium	mg U/L	Average	0.038	0.0054	0.0039	0.0053	0.0064
		Maximum	0.10	0.020	0.021	0.014	0.053
pH	-	Minimum	7.44	7.26	7.59	7.30	7.63
		Maximum	8.28	8.29	8.96	8.24	8.26

**Table 18**

<b>Q2 2024 Monthly Sanitary Sewer Discharges</b>			
<b>Period</b>	<b>Sanitary Sewer Action Level/Release Limit</b>	<b>Monthly Average Uranium Concentration (µg U/L)</b>	<b>Daily Maximum Uranium Concentration (µg U/L)</b>
April	Daily action Level of 100 µg U/L through June 18. Monthly mean release limit of 275 µg U/L  Monthly mean action level of 150 µg U/L effective June 19. Monthly mean release limit of 275 µg U/L	12	53
May		3.7	7.1
June		3.3	18

Ambient Air Monitoring

Table 19 shows the quarterly all-station average and maximum uranium dustfall results from Q2 2023 through to Q2 2024.

No uranium dustfall results exceeded the internal administrative screening level in the second quarter. The average uranium in dustfall results in the second quarter of 2024 were consistent with the uranium in dustfall averages during the previous quarters.

**Table 19**

<b>Uranium in Dustfall Results by Quarter (mg U/m<sup>2</sup>/30 days)</b>					
<b>Value</b>	<b>Q2 2023</b>	<b>Q3 2023</b>	<b>Q4 2023</b>	<b>Q1 2024</b>	<b>Q2 2024</b>
Average	0.1	0.3	0.3	0.1	<0.1
Maximum	0.2	0.9	1.8	0.2	0.1
Internal Administrative Screening Level = 10 mg U/m <sup>2</sup> /30 days					

Table 20 summarizes the average and maximum uranium hi-vol results from Q2 2023 through to Q2 2024.

On May 21, 2024, Cameco reported to the Ontario Ministry of Environment, Conservation and Parks (MECP) ambient station high volume air sampler (hi-vol) exceedances of 148 µg TSP/m<sup>3</sup>, 121 µg TSP/m<sup>3</sup> and 217 µg TSP/m<sup>3</sup> total suspended particulate (TSP) for the period of May 14 - 16, 2024, at the Marsh Street Hi-Vol station. The measurements are above the ECCC and MECP 120 µg/m<sup>3</sup> TSP dust criteria for visibility. These elevated dust results were localized and caused by sections of roadway along Marsh Street being prepped for paving (May 14), asphalt paving (May 15) and street sweeping (May 16).

**Table 20**

<b>Uranium-in-Air Concentration at Hi-Vol Stations by Quarter (µg U in TSP/m<sup>3</sup>)</b>					
<b>Quarter</b>	<b>Result</b>	<b>Waterworks</b>	<b>Shuter Substation</b>	<b>Marsh Street</b>	<b>Hayward Street</b>
Q2 2023	Average	0.002	0.001	0.005	0.002
	Maximum	0.007	0.005	0.022	0.010
Q3 2023	Average	0.002	0.002	0.009	0.004
	Maximum	0.009	0.021	0.099	0.027
Q4 2023	Average	0.002	0.008	0.006	0.003
	Maximum	0.012	0.409	0.104	0.066
Q1 2024	Average	0.002	0.001	0.003	0.002
	Maximum	0.011	0.003	0.013	0.016
Q2 2024	Average	0.001	0.001	0.004	0.002
	Maximum	0.012	0.003	0.017	0.030
Average <0.06 µg U in TSP/m <sup>3</sup> (annual) AAQC					
Maximum <0.3 µg U in TSP/m <sup>3</sup> (24 hr) AAQC					

Table 21 shows the quarterly all-station average and maximum fluoride dustfall results from Q2 2023 through to Q2 2024.

The average fluoride in dustfall results in the second quarter of 2024 were consistent with previous quarters.

**Table 21**

<b>Fluoride in Dustfall Results by Quarter (mg F/m<sup>2</sup>/30 days)</b>					
<b>Value</b>	<b>Q2 2023</b>	<b>Q3 2023</b>	<b>Q4 2023</b>	<b>Q1 2024</b>	<b>Q2 2024</b>
Average	1.1	0.8	1.0	0.8	1.3
Maximum	5.5	6.8	7.0	5.8	8.5
Internal Administrative Screening Level = 20 mg F/m <sup>2</sup> /30 days					

Table 22 shows the average and maximum lime candle results from the second quarter of 2023 through to the second quarter of 2024. The average results are comparable to levels observed in the previous quarters.

**Table 22**

<b>Monthly Lime Candle Results by Quarter (µg F/100 cm<sup>2</sup>/30 days)</b>					
<b>Value</b>	<b>Q2 2023</b>	<b>Q3 2023</b>	<b>Q4 2023</b>	<b>Q1 2024</b>	<b>Q2 2024</b>
Average	3	3	4	3	5
Maximum	7	10	9	9	11
The desirable ambient air quality criteria for lime candles are to protect forage crops consumed by livestock. During the summer growing season (April 1 – October 31), the criteria is 40µg F/100cm <sup>2</sup> /30 days, changing to 80µg F/100cm <sup>2</sup> /30 days in winter (November 1 – March 31).					

## 5.0 Public Information Program

During the second quarter of 2024, PHCF continued to meet the requirements of CNSC RD/GD 3.2.1, Public Information and Disclosure programs.

### Public Engagement

The PHCF hosted three facility tours for members of the Port Hope & District Chamber of Commerce on April 2 and 4. A total of 21 members of the local business community participated in the tours.

Cameco sponsored and attended the Northumberland Diverse Peoples Coalition, Spring into Spring fundraiser on April 14.

On May 3, Cameco announced a significant gift to the newly established Youth Wellness Hub Ontario in Port Hope. The announcement included an in-person event and local news release.

Cameco's Step Up for Mental Health run took place on May 11<sup>th</sup>. Over 700 people registered for the event, raising approximately \$78,000 for mental health.

The annual Cameco Charity Golf Tournament took place on June 14. The sold-out event raised over \$21,000 for mental health.

The annual Cameco Community BBQ took place on June 27 in Memorial Park, Port Hope. The BBQ is an opportunity for community members to interact with Cameco leadership and subject matter experts to learn more about Cameco's operations. Cameco provided visual displays with information on operations and activities such as the PHCF, benefits of nuclear, regulatory compliance, environmental monitoring and Vision in Motion. Approximately 400 people attended the BBQ. Cameco notified the community of the BBQ through a postcard mailer to over 2,700 address and social media.

The spring issue of Energize was mailed to all addresses in Port Hope in mid-June. The issue featured stories on the Port Hope Chamber tours, Vision in Motion, the upcoming public opinion polling and recent community investments.

Cameco provided free advertising to local charitable organizations with its sponsorship of MyFM's Community Partner Program. Through the quarter, Northumberland Humane Society, Capitol Theatre and Diversity Festival benefitted from this sponsorship by receiving advertising.

Public Disclosure

PHCF made four public disclosures during the first quarter: [Environment & Safety - Conversion: Port Hope - Fuel Services - Businesses - Cameco](#)

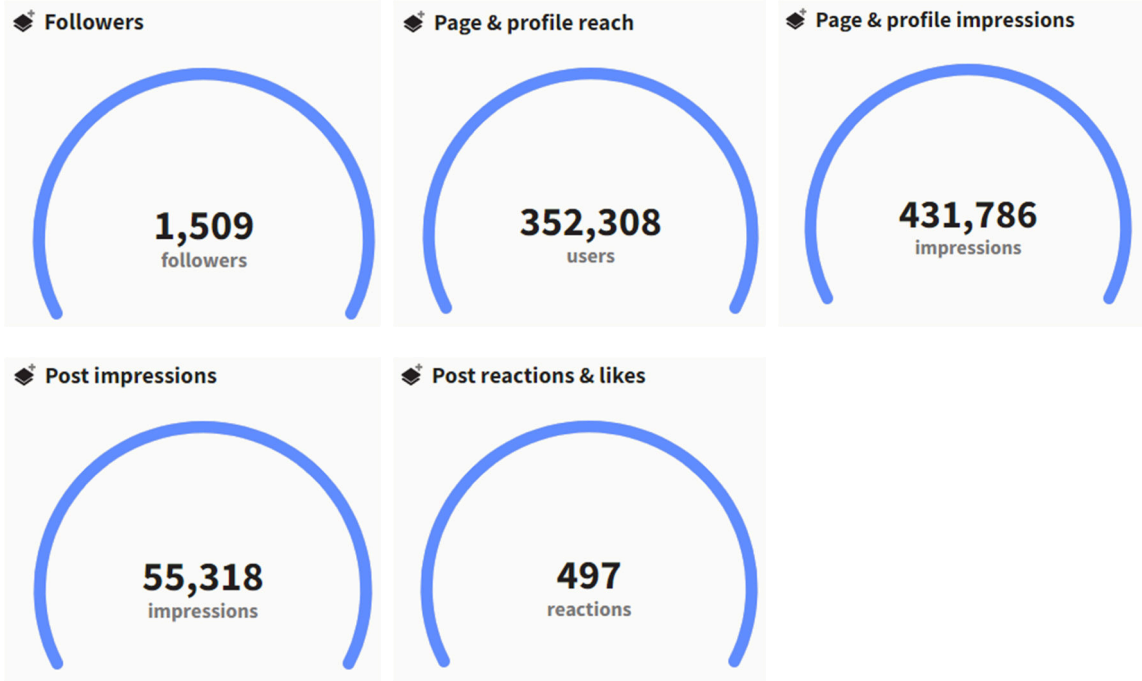
<b>Posting Date</b>	April 8, 2024
<b>Incident Date</b>	April 4, 2024
<b>Incident</b>	Transportation Incident
<b>Details</b>	<p>A transport carrying one cylinder of uranium material was involved in a minor traffic accident on the 401 westbound between Mavis Road and Creditview Road. Traffic had slowed down and came to an abrupt stop, resulting in the transport rearended another truck.</p> <p>There was no damage to the cylinder and only minor damage to the front of the truck.</p> <p>There was no health or safety risk posed to the public, workers or the environment.</p>
<b>Corrective Action</b>	<p>A new transport truck and driver carried on with the shipment.</p> <p>Cameco notified the Canadian Nuclear Safety Commission.</p>
<b>Cameco Environmental Effect Rating</b>	1
<b>Posting Date</b>	April 9, 2024
<b>Incident Date</b>	April 9, 2024
<b>Incident</b>	Emergency Transport to External Medical Facility
<b>Details</b>	<p>A contractor sustained injuries while working at Cameco's Dorset Street warehouse after falling from a height. The individual is in stable condition and was transported to a Toronto hospital via air ambulance.</p> <p>There was no health or safety risk posed to the public or the environment.</p> <p>There was no health or safety risk posed to the public, workers, or the environment.</p>
<b>Corrective Action</b>	<p>Northumberland Paramedics and Port Hope Police attended the location and paramedics provided medical attention. The individual was transported to a Toronto hospital via air ambulance.</p> <p>Cameco notified the Municipality of Port Hope, Canadian Nuclear Safety Commission.</p> <p>All work at the Dorset Street warehouse location has been halted while the incident is investigated.</p>
<b>Cameco Environmental Effect Rating</b>	1



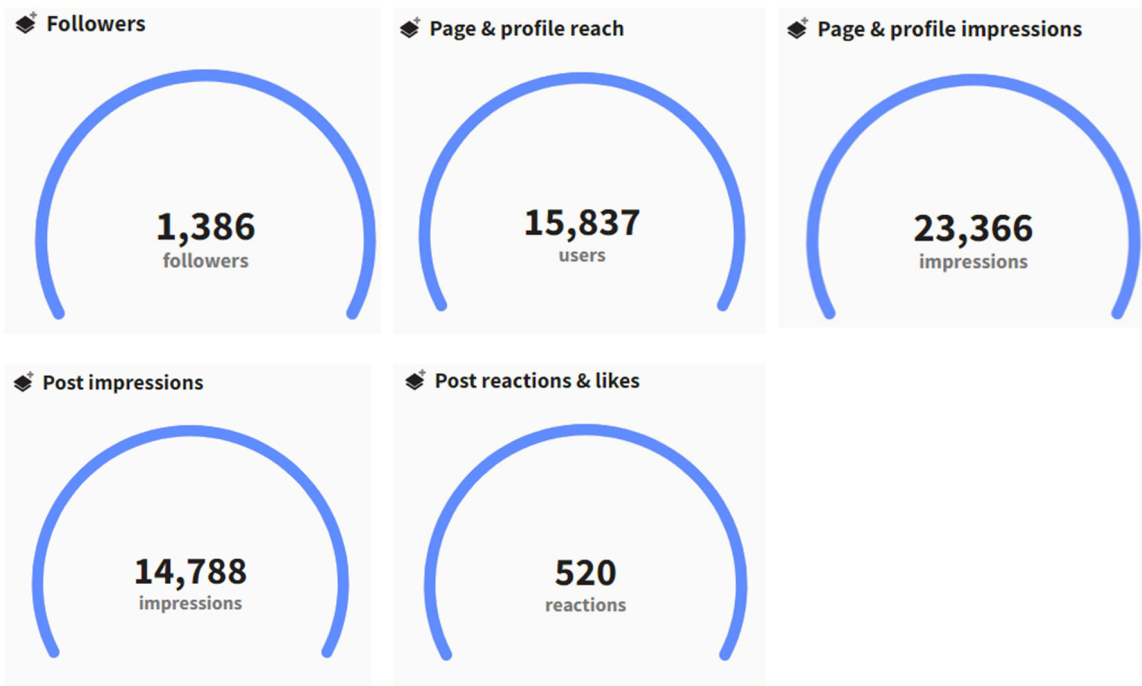
<b>Posting Date</b>	April 23, 2024
<b>Incident Date</b>	April 18, 2024
<b>Incident</b>	Reportable Spill
<b>Details</b>	<p>A vacuum truck was removing water from a storage tank containing accumulated rainwater from a floor area of a recently demolished building when the hatch of the vacuum truck leaked approximately 200L of water to the ground. Efforts were made to contain the leaked water however a small portion of that water, estimated up to 10 litres at an approximate uranium concentration of 120 µg/L, drained into the restricted harbour area where remediation activities are taking place.</p> <p>There was no health or safety risk posed to the public, workers, or the environment.</p>
<b>Corrective Action</b>	<p>A tray was placed under the leak, a second vacuum truck emptied the truck that was leaking, sandbags were placed at the nearby catch basin perimeter, and pooling water was recovered. The catch basin was pumped out for any remaining water that could be removed.</p> <p>The Canadian Nuclear Safety Commission and the Ministry of Environment, Conservation and Parks have been notified.</p>
<b>Cameco Environmental Effect Rating</b>	1
<b>Posting Date</b>	May 24, 2024
<b>Incident Date</b>	May 14-16, 2024
<b>Incident</b>	Environmental Limit Exceedance
<b>Details</b>	<p>The Marsh Street high volume air sampler recorded a results of 148 µg TSP/m<sup>3</sup>, 121 µg TSP/m<sup>3</sup> and 217 µg TSP/m<sup>3</sup> suspended particulate (TSP) for the period of May 14-16, 2024. This result is above the regulatory dust criteria of 120 µg/m<sup>3</sup> set by Environment and Climate Change Canada and the Ministry of Environment, Conservation and Parks.</p> <p>There was no health or safety risk posed to the public, workers, or the environment.</p>
<b>Corrective Action</b>	<p>The elevated dust results were localized and caused by sections of roadway along Marsh Street that were being prepared for paving (May 14), and asphalt paving (May 15), and street sweeping (May 16).</p> <p>The Canadian Nuclear Safety Commission and the Ministry of Environment, Conservation and Parks have been notified.</p>
<b>Cameco Environmental Effect Rating</b>	1

Social Media

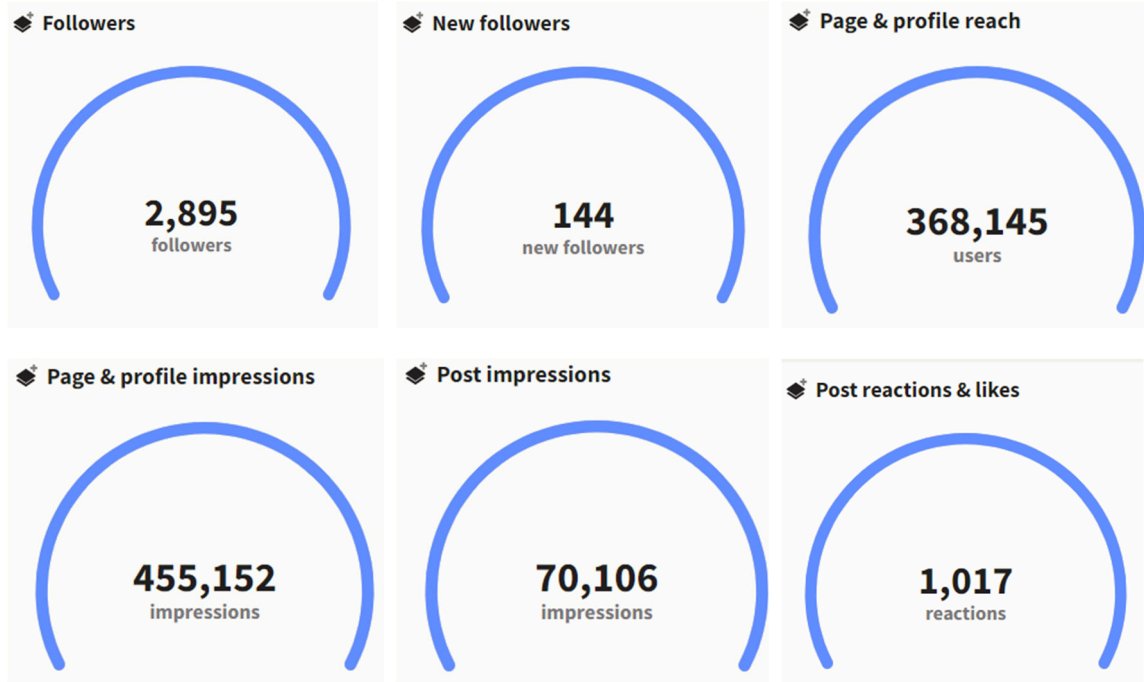
**Facebook: April 1, 2024 to June 30, 2024**



**Other platforms (Instagram, X & YouTube): April 1, 2024 to June 30, 2024**



**All Platforms:** April 1, 2024 to June 30, 2024



**Top Performing Posts**

**Top posts**

**Cameco Ontario**  
May 04, 00:18

Tim Gitzel, president and CEO of Cameco Corporation was in Port Hope this evening to present a \$500,000 cheque to the new Youth Wellness Hub Ontario (YWHO) in Port Hope. We are thrilled to support this important

**74** likes and reactions

**Cameco Ontario**  
Jun 11, 16:03

Last Thursday, over 50 Blind River Cameco employees volunteered for the 19th annual Cameco Cares Day. The employees did an amazing job on their projects in Blind River, Mississauga First Nations, Township of the North


**27** likes and reactions

**Cameco Ontario**  
May 30, 19:01

Cameco's Step Up for Mental Health 5k ran \$78,000 for local mental health services! Thank you to the participants, volunteers, donors, and community members who supported this year's Step Up

**24** likes and reactions


**Top posts**



**cameco\_ontario**  
Jun 11, 16:05

Last Thursday, over 50 Blind River Cameco employees volunteered for the 19th annual Cameco Cares Day. The employees did an amazing job on their projects in Blind River, Mississauga First Nations, Township of the North


**34** likes



**cameco\_ontario**  
May 31, 20:11

May is Mental Health Awareness Month across Canada. As we wrap up the month, we're sharing some photos from our Step Up for Mental Health 5k run/walk that was held a couple weeks ago in Downtown Cobourg. Thank

**29** likes




**cameco\_ontario**  
May 07, 15:02

Last week, volunteers were at @TimHort across our community to support Five Co Children's Centre, the recipients of this ye Cookie campaign in Cobourg and Colborr

**23** likes


**Top tweets**



**@CamecoOntario**  
Apr 22, 14:03

We're sharing stories from our employees who have contributed to Cameco's success over the past 35 years. For Brian Reilly, Senior VP & COO, Cameco's safety culture means no job is so important that we can't take


**11.11%** engagement rate



**@CamecoOntario**  
May 22, 18:55

Energize your career with Cameco! The Port Hope Conversion Facility currently has an opening for a 2nd Class Operating Engineer. Apply online today!  
<https://ow.ly/TmuJ50RRFXP>

**9.76%** engagement rate



**@CamecoOntario**  
May 11, 11:35

Today is the day! Our Step Up for Mental Health 5k run/walk returns this morning in Victoria And look who's back! Come down to help participants as they cross the finish line. #

**8.64%** engagement rate

Cameco Ontario's 184 posts (combined across Facebook, Instagram, X):

- Facebook: 68
- Instagram: 60
- X: 56

These posts included information such as:

- Career opportunities
- CEO, Tim Gitzel's involvement in industry conversations such as at the World Nuclear Spotlight
- My Cameco stories profiling Cameco employees
- Indigenous engagement activities
- Cameco's Step Up for Mental Health events including the 5km run/walk and golf tournament

## Website

Information about the Step Up for Mental Health 5K was updated:

- [Step Up for Mental Health 5K Run/Walk returns to Ontario | Cameco Fuel Services](#)

Spring issue of Energize

- [Energize - Spring 2024 | Cameco Fuel Services](#)

The Q1 2024 Compliance Report:

- [Media Library - Media - Cameco Fuel Services](#)

2023 Sustainability Report:

- [Cameco Releases 2023 Sustainability Report | Cameco](#)

Four public disclosures:

- [Environment & Safety - Conversion: Port Hope - Fuel Services - Businesses - Cameco](#)

News release announcing gift to Youth Wellness Hub in Port Hope:

- [Cameco Supports Northumberland County's New Youth Wellness Hub with \\$500,000 Gift | Cameco Fuel Services](#)

## Media Analysis

Cameco received media coverage for its \$500,000 gift to Port Hope's new Youth Wellness Hub:

- **Ontario government supports new youth wellness hub in Port Hope** – May 2, 2024 – Global News
  - [Ontario government supports new youth wellness hub in Port Hope | Global News](#)
- **Cameco supports new Youth Wellness Hub with half-a-million dollar donation** – May 7, 2024 – GoNorthumberland.ca
  - [Cameco supports new Youth Wellness Hub with half-a-million dollar donation | 93.3 MyFM \(gonorthumberland.ca\)](#)

Cameco also received media coverage for its Step Up for Mental Health 5km run/walk:

- **COMMUNITY SPOTLIGHT: Hey Northumberland, are you ready to Step Up for Mental Health?** – May 9, 2024 – [GoNorthumberland.ca](https://gonorthumberland.ca)
  - [COMMUNITY SPOTLIGHT: Hey Northumberland, are you ready to Step Up for Mental Health? | 93.3 MyFM \(gonorthumberland.ca\)](https://gonorthumberland.ca/93.3-MyFM)

### Communication Products

Spring issue of Energize

- [Energize - Spring 2024 | Cameco Fuel Services](#)

Community BBQ invitation



News release announcing gift to Youth Wellness Hub in Port Hope

- [Cameco Supports Northumberland County's New Youth Wellness Hub with \\$500,000 Gift | Cameco Fuel Services](#)

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## 6.0 Indigenous Engagement

Regular engagement continued with Curve Lake First Nation (CLFN) and the Mississaugas of Scugog Island First Nation (MSIFN).

From June 19-21, Cameco hosted representatives from Curve Lake First Nation (CLFN) in Saskatchewan. The visit combined an educational tour of Cameco's Cigar Lake mine with a cultural immersion experience in the northern community of Pinehouse. The visit aimed to enhance CLFN's understanding of the nuclear fuel cycle and its safety measures, while also fostering community connections through participation in local traditions and community events.

On April 1, an email was sent to Curve Lake, Alderville, Hiawatha, Mississaugas of Scugog Island, Mohawks of the Bay of Quinte and Chippewas of Rama First Nations with details of Cameco's Step-Up for Mental Health 5k walk/run with information regarding the event and registration details. An invitation to Port Hope's annual community barbeque was sent to Curve Lake, Alderville, Mississaugas of Scugog Island and Hiawatha First Nations on June 24.

On April 24, Hiawatha requested to receive public disclosures going forward. Public disclosures are discussed at the next available meeting, where applicable. Public disclosures were shared with Curve Lake, Mississaugas of Scugog Island, and Hiawatha First Nations.

The 2023 Annual Compliance Reports for PHCF and CFM were sent via email to Curve Lake, Alderville, Hiawatha, Mississaugas of Scugog Island, Mohawks of the Bay of Quinte and Chippewas of Rama First Nations on April 23 and the 2024 Q1 Compliance Reports for PHCF and CFM were sent to Curve Lake, Alderville, Hiawatha, Mississaugas of Scugog Island, Mohawks of the Bay of Quinte and Chippewas of Rama First Nations on June 3.

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## 7.0 Other Matters of Regulatory Interest

### 7.1 Vision in Motion

VIM engineering and procurement activities that were in progress this period included: Vendor design of the Building 72 structure (new warehouse); award of a contract for design of interior fit out of Building 72; planning for the remediation trial to be conducted later this year to the west of the turning basin (Area 5); planning for future pipe rack work; and preparation of construction work packages for building improvements at the Dorset St. facility. In collaboration with the Municipality of Port Hope a consultant progressed design work for civil works in the vicinity of the parking lot (Area 9) and a tender for equipment purchase was near completion.

A variety of field activities were also in progress: Water management at the former Building 27 slab is ongoing. At former Building 14 and 15 concrete slab removal and backfill was completed. Equipment removal in Building 5B was completed and new structural work and installation of drum dumping equipment was in progress. Removal of equipment from Building 2 was ongoing throughout the quarter. Work began and was completed for a temporary UF6 cylinder storage area north of former Building 27.

Waste shipments to the LTWMF continued from the PHCF main site and the Dorset St. facility, including packaged wastes, bulk wastes (dump trucks and roll-off bins) and vac trucks.

Coordination with CNL continued. CNL continued with soil removal at the centre pier on Cameco's behalf according to the protocol established earlier in the year. Discussions were held about a potential change to the design of the new harbour wall on the west side of the turning basin due to technical and productivity challenges with construction, but CNL elected to continue with installation of the existing combi-wall design.

The Supplementary Environmental Monitoring Plan for Vision in Motion and Other Clean-Up Program Projects is in place to monitor environmental impacts for the VIM activities, primarily during demolition/excavation.

There were 2 environmental monitoring exceedances in the second quarter related to VIM activities. Elevated DustTrak results were recorded in April and June 2024 as a result of a tamper being operated on dry ground at building 14 and a granular stone delivery and material spreading in Area 4.



## **8.0 Concluding Remarks**

Cameco is committed to the safe, clean, and reliable operations of all its facilities and continually strives to improve safety performance and processes to ensure the safety of both its employees and the people in neighbouring communities.

In the second quarter of 2024, PHCF did not exceed any CNSC regulatory limits. As a result of the effective programs, plans and procedures in place, the PHCF was able to maintain individual radiation exposures well below all regulatory dose limits. In addition, environmental emissions continued to be controlled to levels that are a fraction of the CNSC regulatory limits, and public radiation exposures are also well below the regulatory limits.

PHCF's ALARA program continued to be effective in the second quarter of 2024.

Cameco's relationship with local residents remains strong and Cameco is committed to maintaining the strong support and trust developed over the past several years.