2024 First Quarter Compliance Monitoring
&
Operational Performance Report

Reporting Period January 1 – March 31, 2024

Port Hope Conversion Facility
Operating Licence
FFOL-3631.00/2027

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Submitted to:
The Canadian Nuclear Safety Commission
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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 First 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 first quarter.

On January 22, 2024, Cameco reported to the Ontario Ministry of Environment, Conservation and Parks (MECP) an ambient station high volume air sampler (hi-vol) exceedance of 171 µg TSP/m^3 total suspended particulate (TSP) for the period of January 19-20, 2024 at the Marsh Street Hi-Vol station. The measurement was above the ECCC and MECP 120 µg/m^3 TSP dust criteria for visibility. It is likely that a combination of street traffic levels along Marsh Street and certain weather conditions are contributing to higher dust levels at the Marsh Street Hi-Vol sampler.

An employee pre-shift uranium in urine sample result was 120 µgU/L which is above the action level of 65 µgU/L. An investigation was completed, and the elevated result was found to have been due to a contaminated sample.

Both the UO_2 plant and the UF_6 plant operated without interruption in the 1st quarter.

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.

There was one action level exceedance for uranium in urine in the first quarter. The sample was found to be a contaminated sample.

Whole Body Dose

Table 1 shows the whole-body dose summary results from Q1 2024 for six work groups: UF_6 Plant; UO_2 Plant; Maintenance; Technical Support (including Nuclear Energy Worker (NEW) contractors); Corporate Technical Services; and Administration.

Table 1

First Quarter 2024 Whole Body Dose Results				
Work Group	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
UF_6 Plant	99	0.17	0.00	1.16
UO_2 Plant	24	0.08	0.00	0.20
Maintenance	85	0.08	0.00	0.69
Technical Support [1]	459	0.02	0.00	0.95
Corporate Technical Services	34	0.02	0.00	0.23
Administration	85	0.00	0.00	0.02
Total (Max)	**752**	**0.05**	**0.00**	**1.16**
[1]Includes contractors (NEWs) and Corporate Technical Services				

Table 2 shows the average, minimum and maximum quarterly individual external whole-body exposures from Q1 2023 through Q1 2024. The average whole-body dose is lower compared to previous quarters. The maximum whole-body dose received by UF_6 personnel was related to work in the flame reactor area.

Table 2

Whole Body Dose Results by Quarter				
Monitoring Period	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
Q1 2023	684	0.10	0.00	2.08
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

Skin Dose

Table 3 shows the quarterly skin dose summary results for six work groups: UF_6 Plant; UO_2 Plant; Maintenance; Technical Support (including NEW contractors); Corporate Technical Services; and Administration. The highest exposures are from the Maintenance work group related to work in the flame reactor area.

Table 3

First Quarter 2024 Skin Dose Results				
Work Group	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
UF_6 Plant	99	0.59	0.00	6.03
UO_2 Plant	24	0.30	0.00	0.89
Maintenance	85	0.63	0.00	12.38
Technical Support[1]	459	0.05	0.00	1.09
Corporate Technical Services	34	0.03	0.00	0.26
Administration	85	0.00	0.00	0.01
Total (Max)	**752**	**0.19**	**0.00**	**12.38**
[1]Includes contractors (NEWs) and Corporate Technical Services				

Table 4 shows the average and maximum quarterly individual skin exposure for Q1 2023 through Q1 2024. The average skin dose is consistent compared to previous quarters.

Table 4

Skin Dose Results by Quarter				
Monitoring Period	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
Q1 2023	684	0.33	0.00	7.82
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

Eye Dose

Table 5 shows the quarterly eye dose summary results for six work groups: UF_6 Plant; UO_2 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_6 plant.

Table 5

First Quarter 2024 Eye Dose Results				
Work Group	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
UF_6 Plant	99	0.38	0.00	3.25
UO_2 Plant	24	0.19	0.00	0.55
Maintenance	85	0.34	0.00	5.26
Technical Support[1]	459	0.04	0.00	0.96
Corporate Technical	34	0.02	0.00	0.24
Administration	85	0.00	0.00	0.01
Total (Max)	**752**	**0.12**	**0.00**	**5.26**
[1]Includes contractors (NEWs)				

Table 6 shows the average and maximum quarterly individual external eye exposures for Q1 2023 through Q1 2024. The average eye dose is consistent compared to previous quarters.

Table 6

Eye Dose Results by Quarter				
Monitoring Period	**Number of Individuals**	**Average Dose (mSv)**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**
Q1 2023	684	0.21	0.00	4.14
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	**752**	**0.12**	**0.00**	**5.26**

Urine Analysis

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

Table 7

Urine Analysis Action Levels		
Parameter		**Action Level**
Urinalysis (NEW)	Weekly - UO_2/UF_6 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

There were no fluoride in urine results above the action level of 7 mg F/L in Q1 2024.

Table 8 shows the distribution of urine results for Q1 2024. A total of 11,929 urine samples were collected and analyzed for uranium during Q1 2024. The majority of routine urine analysis results (99.3%) were less than 5 µg U/L in the quarter.

All results above 13 µg U/L were screened by radiation protection staff. There was one official investigation for uranium in urine during Q1 2024. The investigation found the sample was contaminated.

Table 8

First Quarter 2024 Routine Urine Analysis Results	
Distribution of Results	**Q1 2024**
Number of Samples < 5 µg U/L	11,842
Number of Samples > 5 to < 25 µg U/L	83
Number of Samples > 25 to < 50 µg U/L	4
Number of Samples > 50 µg U/L	1
Number of Samples Analyzed (Uranium)	11,930

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 0.16 mSv, respectively, which was consistent with previous quarters.

Table 9

Internal Dose (Urine) by Quarter				
Quarter	**Number of Individuals**	**Minimum Dose (mSv)**	**Maximum Dose (mSv)**	**Average Dose (mSv)**
Q1 2023	586	0.00	0.21	0.01
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

Fluoride in Urine

A total of 6,958 urine samples were analyzed for fluoride during Q1 with summary results provided in Table 10.

There were 3 routine and non-routine samples above the internal administrative investigation level of 4 mg F/L during Q1. The samples were investigated and entered into CIRS.

Table 10

First Quarter 2024 Fluoride in Urine Analysis Results			
Type of Fluoride Samples	**Number of Samples**	**Minimum Concentration (mg F/L)**	**Maximum Concentration (mg F/L)**
All fluoride samples	6,958	0.1	6.3
Routine post-shift fluoride samples >= 7 mg F/L	0	-	-
Routine post-shift fluoride samples >= 4 mg F/L	0	-	-
Non-routine fluoride samples	553	0.1	6.3
Samples analyzed for U, insufficient volume (< 30mL) for F analysis	15	-	-

Lung Counting

The lung count trailer was at PHCF for Q1 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

Q1 2024 Alpha Contamination Monitoring Results			
Area	**Number of Samples Taken**	**Zone Contamination Criteria (Bq/cm²)**	**Number of Samples Above Criteria**
Zone 1	1,291	0.4	0
Zone 2	15,817	0.4	26
Zone 3 (Yard)*	6	0.4	5

*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 Q1 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^3 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_6 and UO_2 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

First Quarter 2024 In-Plant Air Uranium Concentration by Operations Group				
Operations Group	**Number of Samples Taken**	**Average (µg U/m^3)**	**Maximum (µg U/m^3)**	**Number of Samples Taken Above Administrative Level**
UF_6 Plant	4,827	13	706	106
UO_2 Plant	1,550	3	50	0
Waste Recovery	613	3	79	0
CUP	426	1	67	0

The maximum in-plant air sample of 706 µg U/m^3 was recorded on January 17, 2024, in the UF_6 plant. This result was due to work in the cleaning out dust lines in the UF4 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	-	-	-	9
Medical Diagnostic Procedures	8	-	-	-	8
Medical Treatment Injuries	1	-	-	-	1
Other Recordable Injuries	0	-	-	-	0
Lost Time Injuries	0	-	-	-	0
Lost Time Injury Frequency	0	-	-	-	0
Lost Time Injury Severity	0	-	-	-	0

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 word search was distributed to promote safety. A mental health speaker came to site in February to speak about mental health awareness.
- **CSSC:** The CSSC committee continues to meet for regulatory meetings.
- **Safety & Industrial Hygiene**: The safety group focused on ergonomic assessments in the first quarter of 2024. 8 assessments were completed in the quarter.
- **Total Recordable Injury Rate (TRIR)** – Q1 Ending = 1.69 (9 First Aids, 8 Medical Diagnostics, 1 Medical Treatment). Contractor TRIR YTD is 0.00 (as of March 31, 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.

Public Dose = Dose $_{Air}$ + Dose $_{Water}$ + Dose $_{Gamma}$ < 0.3 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

Quarterly Dose (mSv/quarter)					
ORL Component	**Q1 2024**	**Q2 2024**	**Q3 2024**	**Q4 2024**	**2024 Total**
Air	<0.001	-	-	-	<0.001
Water	<0.001	-	-	-	<0.001
Gamma – Site 1	0.021	-	-	-	0.021
Gamma – Site 2	0.029	-	-	-	0.029
Quarterly Dose – Site 1	0.021	-	-	-	0.021
Quarterly Dose – Site 2	0.030	-	-	-	0.030

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 Q1.

Table 15

First Quarter 2024 Public Dose Gamma Monitoring Results					
Station Number	**January**	**February**	**March**	**Action Level (µSv/h)**	**Licence Limit (µSv/h)**
2	0.148	0.161	0.167	0.400	0.570
10	0.002	0.000	0.035	0.400	0.610
21	0.037	0.002	0.049	0.250	0.260

Air Emissions

The quarterly average and maximum stack emissions from the UF_6 plant main stack and the UO_2 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_6 and UO_2 plants.

No licensed action levels were exceeded for uranium emissions from the UF_6 plant main stack in the quarter. The UF_6 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_2 plant main stack in the quarter. The UO_2 main stack average uranium emission rate was consistent with previous quarters during which production was operational.

Fluoride emissions from the UF_6 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_6 main stack average fluoride emission rate was consistent with previous quarters during which production was operational.

The UO_2 main stack is also continuously sampled for ammonia. No licensed action levels were exceeded for ammonia emissions from the UO_2 plant main stack in the quarter. The UO_2 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**	**Q1 2023**	**Q2 2023**	**Q3 2023**	**Q4 2023**	**Q1 2024**
UF_6	Uranium g U/h	280	40	Quarterly Daily Average	2.5	2.1	2.1	2.7	2.8
				Quarterly Daily Maximum	5.0	4.3	10.7	6.3	9.3
	Hydrogen Fluoride g HF/h	650	230	Quarterly Daily Average	9	16	15	10	14
				Quarterly Daily Maximum	60	197	107	75	128
UO_2	Uranium g U/h	240	10	Quarterly Daily Average	0.8	1.1	0.6	0.7	0.6
				Quarterly Daily Maximum	1.7	2.9	1.8	1.4	1.7
	Ammonia kg NH_3/h	58	10	Quarterly Daily Average	2.3	1.7	1.6	2.0	2.0
				Quarterly Daily Maximum	4.6	2.8	4.6	3.0	2.7

Liquid Discharges

A daily sanitary sewer discharge uranium action level of 100 µg U/L (0.10 mg U/L) and a monthly mean release limit of 275 µg U/L (0.275 mg U/L) are currently in place. Tables 17 and 18 summarize uranium concentrations and pH values recorded for the first quarter of 2024. Facility discharge quality remained below the daily action level and monthly average limit during the first quarter of 2024.

The magnitude and frequency of precipitation events has been seen to influence sanitary sewer quality as a function of an increase in groundwater infiltration potential. In January 2023 sanitary sewer trending increased due to warm and rainy weather, along with influences from Powerhouse effluent discharges as noted in prior quarterly reports. Uranium trending decreased following Powerhouse remedial actions in January, then

subsequently increased in March 2023 in association with warmer ambient conditions and precipitation events that exacerbated baseline groundwater infiltration conditions.

The March and April 2023 sanitary sewage uranium excursions are interpreted to have resulted from groundwater infiltration, exacerbated by precipitation events and spring thaw conditions. Uranium trending had generally decreased in the second quarter of 2023 and remained stable in the third and fourth quarters. No uranium excursions were recorded in the third or fourth quarters of 2023.

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. Sewer contractor work had been initiated in preparation for a planned service reline, however, it had been determined the work scope needed to be expanded to include the replacement of a portion of the service. The Building 13 sanitary sewer infrastructure work is being initiated in the second quarter of 2024.

Table 17

Sanitary Sewer Discharge Data by Quarter							
Parameter	**Units of Measure**	**Value**	**Q1 2023**	**Q2 2023**	**Q3 2023**	**Q4 2023**	**Q1 2024**
Uranium	mg U/L	Average	0.039	0.038	0.0054	0.0039	0.0053
		Maximum	0.22	0.10	0.020	0.021	0.014
pH	-	Minimum	7.39	7.44	7.26	7.59	7.30
		Maximum	8.84	8.28	8.29	8.96	8.24

Table 18

Q1 2024 Monthly Sanitary Sewer Discharges			
Period	**Sanitary Sewer Action Level/Release Limit**	**Monthly Average Uranium Concentration (µg U/L)**	**Daily Maximum Uranium Concentration (µg U/L)**
January	Action Level of 100 µg U/L – daily composite samples Release Limit of 275 µg U/L – monthly average of daily composite samples	6.6	14
February		4.6	9.1
March		4.7	11

Ambient Air Monitoring

Table 19 shows the quarterly all-station average and maximum uranium dustfall results from Q1 2023 through to Q1 2024.

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

Table 19

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

Table 20 summarizes the average and maximum uranium hi-vol results from Q1 2023 through to Q1 2024.

On January 22, 2024, Cameco reported to the Ontario Ministry of Environment, Conservation and Parks (MECP) an ambient station high volume air sampler (hi-vol) exceedance of 171 µg TSP/m^3 total suspended particulate (TSP) for the period of January

19-20, 2024 at the Marsh Street Hi-Vol station. The measurement was above the ECCC and MECP 120 µg/m^3 TSP dust criteria for visibility. It is likely that a combination of street traffic levels along Marsh Street and certain weather conditions are contributing to higher dust levels at the Marsh Street Hi-Vol sampler.

Table 20

Uranium-in-Air Concentration at Hi-Vol Stations by Quarter (µg U in TSP/m^3)					
Quarter	**Result**	**Waterworks**	**Shuter Substation**	**Marsh Street**	**Hayward Street**
Q1 2023	Average	0.008	0.001	0.006	0.002
	Maximum	0.381	0.003	0.132	0.047
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
Average <0.06 µg U in TSP/m^3 (annual) AAQC Maximum <0.3 µg U in TSP/m^3 (24 hr) AAQC					

Table 21 shows the quarterly all-station average and maximum fluoride dustfall results from Q1 2023 through to Q1 2024.

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

Table 21

Fluoride in Dustfall Results by Quarter (mg F/m^2/30 days)					
Value	**Q1 2023**	**Q2 2023**	**Q3 2023**	**Q4 2023**	**Q1 2024**
Average	0.6	1.1	0.8	1.0	0.8
Maximum	5.3	5.5	6.8	7.0	5.8
Internal Administrative Screening Level = 20 mg F/m^2/30 days					

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

Table 22

Monthly Lime Candle Results by Quarter (μg F/100 cm^2/30 days)					
Value	**Q1 2023**	**Q2 2023**	**Q3 2023**	**Q4 2023**	**Q1 2024**
Average	3	3	3	4	3
Maximum	4	7	10	9	9
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^2/30 days, changing to 80µg F/100cm^2/30 days in winter (November 1 – March 31).					

5.0 Public Information Program

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

Public Engagement

On February 14, Cameco Fuel Services Division leadership met with the CAO of the Municipality of Port Hope. Cameco provided an overview of local operations and activities.

Cameco launched its Step Up for Mental Health 5K run/walk on February 13. Information was shared via social media and updated on www.stepupontario.ca.

Cameco representatives attended the Canadian Nuclear Association's annual conference in Ottawa from February 27 to March 1. Cameco's booth provided information on its operations and activities and representatives interacted with conference attendees from across the industry, Indigenous communities and students.

Cameco representatives participated in the Bowl for Kids Sake – Northumberland Big Brothers and Big Sisters on March 6.

Students from third year Chemical Engineering Technology at Durham College toured PHCF on March 12 and members of Women in Nuclear were provided a tour on March 26.

Cameco partnered with the Port Hope and District Chamber of Commerce to offer tours of the PHCF to Chamber members. The Chamber promoted the tour opportunity through its regular communication channels and took place in Q2.

Cameco provided free advertising to local charitable organizations with its sponsorship of MyFM's Community Partner Program. Through the quarter, Big Brothers Big Sisters, Green Wood Coalition and Cornerstone Family Violence Prevention Centre benefitted from this sponsorship by receiving advertising.

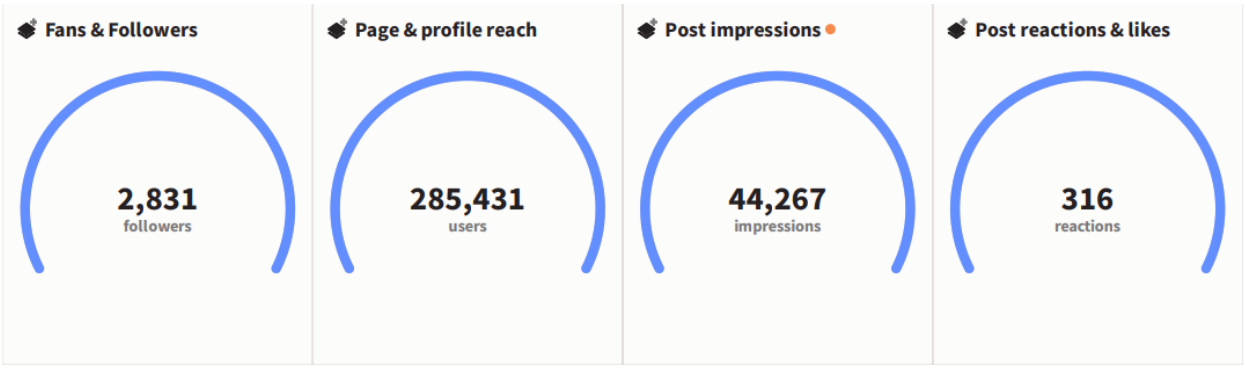
Public Disclosure

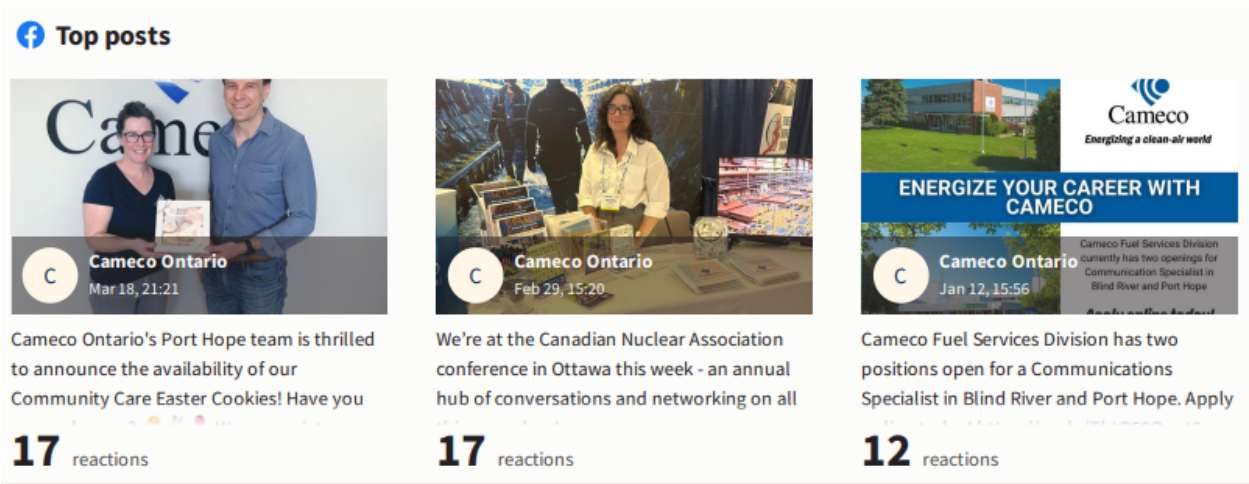
PHCF made one public disclosures during the first quarter: Environment & Safety - Conversion: Port Hope - Fuel Services - Businesses - Cameco

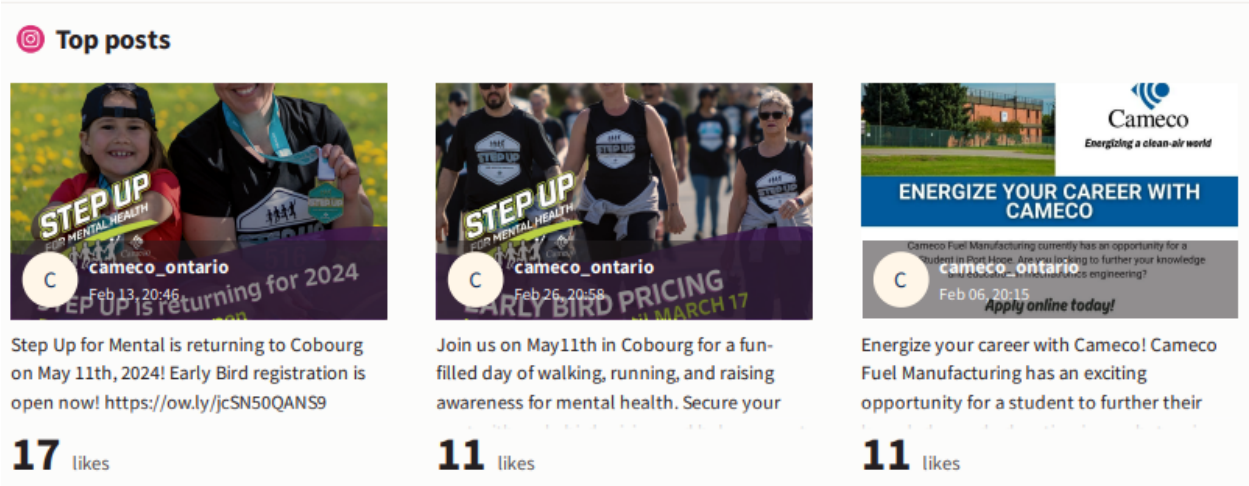
Posting Date	January 22, 2024
Incident Date	January 19-20, 2024
Incident	Environmental Limit Exceedance
Details	The Marsh Street high volume air sampler recorded a result of 171 µg TSP/m^3 total suspended particulate (TSP) for the period of January 19-20, 2024. This result is above the regulatory dust criteria of 120 µg/m^3 set by Environment and Climate Change Canada and the Ministry of Environment, Conservation and Parks. There was no health or safety risk posed to the public, workers or the environment.
Corrective Action	Watermain construction work is occurring on Marsh Street and has resulted in unpaved sections of road. It is believed that the unpaved road and traffic levels are contributing to the elevated dust levels at the Marsh Street Hi-Vol. The Canadian Nuclear Safety Commission and the Ministry of Environment, Conservation and Parks have been notified.
Cameco Environmental Effect Rating	1

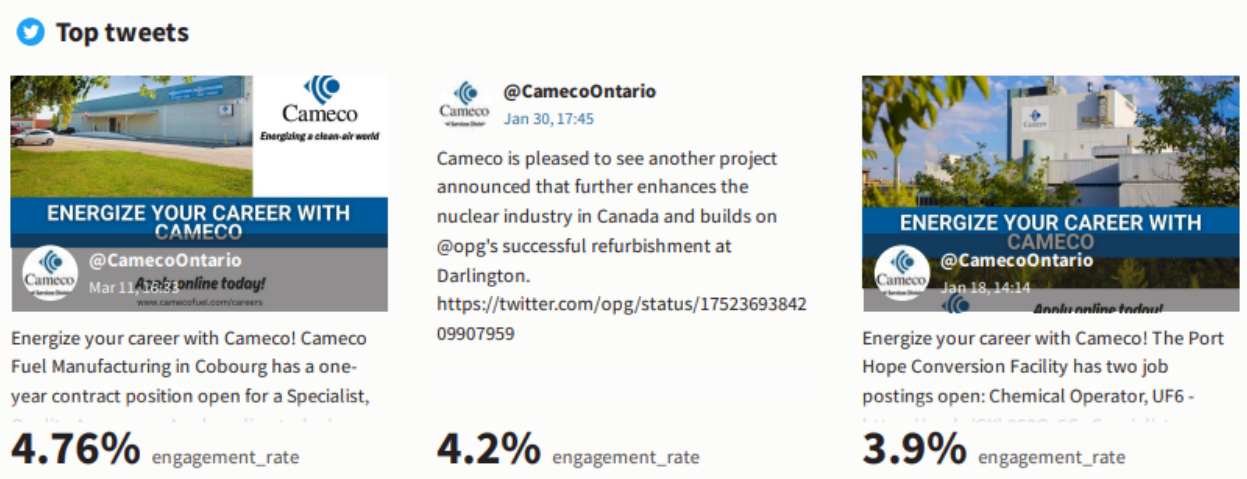
Social Media

Facebook – January 1, 2024 to March 31, 2024









Cameco Ontario's 64 posts (combined across Facebook, Instagram and X) covered information such as:

- Cameco's participation at the Canadian Nuclear Association's annual conference
- Career opportunities
- Cameco's Step Up for Mental Health 5K
- My Cameco Stories

Website

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

- Step Up for Mental Health 5K Run/Walk returns to Ontario - Making a Difference - Community - Cameco Fuel Services

The Q4 Compliance Report was posted to the website:

- Media Library - Media - Cameco Fuel Services

The Annual Compliance Report was posted to the website:

- Media Library - Media - Cameco Fuel Services

One public disclosure was posted to the website:

- Environment & Safety - Conversion: Port Hope - Fuel Services - Businesses - Cameco

Media Analysis

Cameco received media coverage about its support of Northumberland Food for Thought

- **Cameco Recognized for its Ongoing Support of Student Nutrition** — Today's Northumberland
    - Cameco Recognized for Its Ongoing Support of Student Nutrition Programs in Northumberland - Today's Northumberland - Your Source For What's Happening Locally and Beyond (todaysnorthumberland.ca)

- **Cameco Makes $4,500 donation to Northumberland student nutrition program** – March 25, 2024 – Northumberland News
    - Northumberland student nutrition program receives donation (northumberlandnews.com)

- **Cameco Makes $4,500 donation to Northumberland student nutrition program** – March 25, 2024 – InQuinte.ca
    - InQuinte.ca | Northumberland Food For Thought receives $4,500 donation from Cameco

- **Cameco Makes $4,500 donation to Northumberland student nutrition program** – March 26, 2024 – GoNorthumberland.ca
    - Cameco are fueling students with a $4,500 grant to Northumberland Food for Thought | 93.3 myFM (gonorthumberland.ca)

Communication Products

There were no new communication products in Q1.

6.0 Indigenous Engagement

Regular meetings continued with Curve Lake First Nation. The Environmental Working Group met on March 6 to discuss and plan joint deliverables for 2024. Topics of discussion included tours of the Cameco and CFM facilities, a community visit of Curve Lake First Nation, and the possibility of a Harvest Food Study. Cameco also provided an update on the new Closed Loop Cooling Water System, the Vision in Motion project and an overview of the Q4 Compliance Report.

Cameco continued engagement with Scugog Island which focused on formalizing the relationship.

Public disclosures were emailed to Curve Lake and Scugog Island and then discussed at the next available meeting.

On January 4, Q3 Compliance Reports were emailed to Curve Lake, Scugog Island, Alderville, Hiawatha and Rama First Nations and the Mohawks of the Bay of Quinte.

On March 4, Cameco emailed the Q4 Compliance Reports to Curve Lake, Scugog Island, Alderville, Hiawatha and Rama First Nations and the Mohawks of the Bay of Quinte

7.0 Other Matters of Regulatory Interest

7.1 Vision in Motion

VIM engineering and procurement activities were in progress on numerous fronts: A contract was awarded for the design and fabrication of the Building 72 structure (new warehouse). A contract was awarded for civil work in the area north of former Building 27 (Area 4) including preparation of a temporary cylinder storage area. An engineering scope was awarded to support development the remediation approach to be trialed in 2024 in the area west of the turning basin (Area 5). 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).

A variety of field activities were also in progress: Processing of demolition materials from former Building 27 was completed, and roofing and cladding work was done on the portion of the structure that will remain and water management at the building slab will be ongoing. Demolition of Buildings 14 and 15 was completed. Equipment removal and structural work continued in Building 5B. Mobilization was completed for a contract to remove equipment from Building 2 and this work was ongoing.

Waste shipments to the LTWMF continued, including packaged wastes, bulk wastes (dump trucks and roll-off bins) and vac trucks.

Coordination with CNL continued. Cameco returned comments to CNL on a draft legal agreement that will support remediation activities with shared responsibilities at the Centre Pier and near the Cameco fence line along the harbour. CNL continued with soil removal at the centre pier on Cameco's behalf according to the protocol established earlier in the year. CNL noted some technical and productivity challenges with the ongoing construction of the new harbour wall on the west side of the turning basin.

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 no environmental monitoring exceedances that occurred in the first quarter related to VIM activities.

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 first 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 first 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.