## Background and Corrective Actions Related to a Wolf Attack in Northern Saskatchewan

March 1, 2018

#### Kirk Lamont, MSc., P.Eng.

**Cameco Corporation** 

cameco.com

Cameco



- Background information leading up to the event
- Description of the event
- Immediate actions taken
- Investigation results
- Corrective actions resulting from the investigation

## **Background Information**

 In 2014 status of the landfill was identified as not adequately maintained and controlled





## **Background Information**

 As a result corrective actions were initiated: installation of an elk and electric fence around the active landfill; improved landfill management protocols and food waste handling







## **Background Information**

- As a result of the improvements made to the landfill and food waste handling the wildlife's operational food source was successfully cutoff.
- However, with no easy food source readily available wildlife, especially bears and wolves, began to venture further into the operational workings of Cigar Lake in search for food
- This resulted in an increase in wildlife sights as well as an increased need for hazing, trapping and relocations of both wolves and bears.

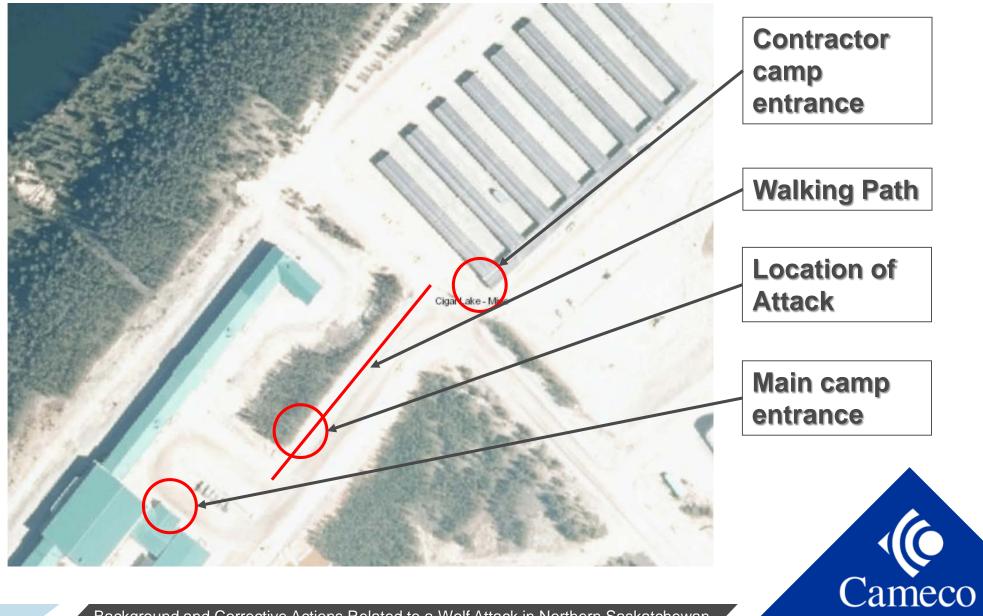


## **Description of Event**

- At approximately 12:05 am on August 29, 2016 a night-shift catering contractor was on his meal break and was walking alone on the path from the main camp to the contractor camp (approx. 170 m apart)
- While walking to the contractor camp, a white wolf exited the trees across the road and approached the worker
- The wolf approached within two feet and then attacked the worker on the neck
- The on duty security guard heard the attack from the construction camp, scared the wolf away with her vehicle, called the ERT and administered on-scene first aid



### **Description of Event**



- As a result of this event a number of actions were taken immediately:
  - Walking bans were immediately implemented
  - Townhall meetings with entire site were completed to properly inform the work force of the event and actions being taken; Conservation Officers participated in these townhalls
  - In consultation with Conservation Officers, wolves were no longer hazed but were destroyed due to habituation (this protocol was in place for seven months)



• Trees, tall grasses and brush adjacent to the camps were all removed to increase line of sight and remove cover for animals







 A covered walking corridor was installed between the camps with elk fencing installed at both entrances of the corridor







| Cameco  | Cigar Lake   | Wildlife Activity Guide   | Doc. No. ENV-003-03-R1<br>Rev. No. 2<br>Date Revised: Jan.28/17<br>Date Issued: Jan.19/17 |
|---|--|---|---|
|   |  | Risk Description/and Requirements   | Risk Colour Indicator   |
| Normal W  |  | reased wildlife activity  |   |
|   | Day Time Hours:  |   |   |
|   | -  | en work buildings alone: PERMITTED  |   |
|   |  | m camp alone: PERMITTED   |   |
|   | <ul> <li>Waiking between o Working alone</li> </ul>  | en camps alone: PERMITTED (Arctic Corridor usage: OPTIONAL)   | GREEN   |
|   | Night Time Hours:  | PERMITTED   | GREEN   |
|   |  | en work buildings alone: PERMITTED  |   |
|   |  | m camp alone: PERMITTED   |   |
|   | - ·  | en camps alone: PERMITTED (Arctic Corridor usage: OPTIONAL)   |   |
|   | <ul> <li>Working alone</li> </ul>  |   |   |
|   |  | o carry communication device (Radio/Cell Phone)   |   |
|   |  | e increased wildlife activity/sightings (ex. Bears or Wolves spotted in areas   |   |
| Day Time Hours: O Walking between work buildings alone: PERMITTED |  |   |   |
|   |  |   |   |
|   | <ul> <li>Walking between the second seco</li></ul> |   |   |
|   | <ul> <li>Working alone</li> </ul>  |   |   |
| Night Time Hours:   |  |   | FELLOW  |
|   | -  | en work buildings alone: PERMITTED  |   |
|   |  | m camp in pairs/group: REQUIRED   |   |
|   | <ul> <li>Walking between the second seco</li></ul> |   |   |
|   | <ul> <li>Working alone</li> </ul>  | PERMITTED   |   |
| (Radio/Cel  |  | activities at Dusk/Dawn. Recommend to carry communication device  |   |
| Increased<br>areas)   | -  | Wildlife Activity (ex. Repeated sightings of animals in one or more particular  |   |
|   | Day Time Hours:  |   |   |
|   |  | en work buildings alone: PERMITTED  |   |
|   |  | m camp in pairs/groups: REQUIRED  |   |
|   |  | en camps alone: PERMITTED (Arctic Corridor usage: REQUIRED)   |   |
|   | <ul> <li>Working alone</li> </ul>  | PERMITTED   | RED   |
|   | Night Time Hours:  |   |   |
|   | -  | en work buildings alone: PERMITTED  |   |
|   |  | m camp: NOT ALLOWED (VEHICLES MUST BE USED)   |   |
|   | -  | en camps in pairs/groups: REQUIRED (Arctic Corridor usage: REQUIRED)  |   |
|   |  | rs/groups: REQUIRED   |   |
| High Wild<br>behavior)  | llife Risk: Dangerou   | n device (Radio/Cell Phone): REQUIRED<br>sly high, aggressive animal activity (ex. Not responding to hazing, aggressive |   |
|   | Day Time Hours:  |   |   |
|   | o Walking betwe  | en work buildings in pairs/groups: REQUIRED   |   |
|   | <ul> <li>Walking to/fro</li> </ul>   | m camp: NOT ALLOWED (VEHICLES MUST BE USED)   |   |
|   | o Walking betwe  | en camps in pairs/groups: NOT ALLOWED (VEHICLES MUST BE USED)   |   |
|   | o Working in pai   | rs/groups: REQUIRED   |   |
|   | Night Time Hours:  |   | BLACK   |
|   | o Walking betwe  | en work buildings in pairs/groups: REQUIRED   |   |
|   |  |   |   |
|   | <ul> <li>Walking to/fro</li> </ul>   | m camp: NOT ALLOWED (VEHICLES MUST BE USED)   |   |
|   |  | m camp: NOT ALLOWED (VEHICLES MUST BE USED)<br>en camps in pairs/groups: NOT ALLOWED (VEHICLES MUST BE USED)            |   |
|   | o Walking betwee   |   |   |
|   | <ul> <li>Walking between o Working in pair</li> </ul>  | en camps in pairs/groups: NOT ALLOWED (VEHICLES MUST BE USED)   |   |

 Wildlife hazard requirements were established along with signs around site



Cameco

## Investigation Results

- Causal Factors:
  - Human behaviours which can attract wildlife
  - Less vigilant reporting of wildlife sightings
  - Habituated wildlife
  - Inimical effect due to improvements made
- Root Causes:
  - Tolerant culture towards wildlife
  - Inadequate safety rules on wildlife
  - Inadequate knowledge on wildlife
  - Inadequate risk assessment on wildlife



#### Investigation Results Corrective Actions

- Implement improved safety rules related to wildlife to improve human behaviours related to wildlife
- Update wildlife training to include all information related to Cameco wildlife management practices, wildlife sighting reporting requirements, wildlife safety rules, as well as information on habituated wildlife behaviours, and minimum steps to be taken during a wildlife encounter
- Update rules around wildlife deterrence measures and training all appropriate staff in these requirements (i.e. 3-strike rule)
- Work with third party experts to improve the Cameco wildlife standard to ensure industry best practice is incorporated into requirements at all Saskatchewan operations

# Questions

LAR J. BERBALLARDICES. SILSSISSISSI

REALIZED BY STREET STREET

A REAL PRESERVATION OF THE REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PROPERTY AND A REAL PR ETERAR ARTER, TERRETERE PAPER

ALL DESCRIPTION OF

AN AVERAGE AND AND A STATE

L'EREPERENTERED

SEFERIES) TO

REDERREATER CA

APPENDING V PERCAST.

SPREASPRE IS ST APPERTRANSING APPERTRANSI (1)

alla na

AND THE PROPERTY AND A DESCRIPTION OF A

AND DE CONTRA

**REFERENCE** ANTERN BARRAN CLIFFE IV

ATTERN AND A

A MILEY

Reas

THE PROPERTY AND ADDRESS OF

**Thank you!** 



IZZEENDE FREESS

FRANKER FRANK

PARTER OF THE PARTY OF THE PART

TARBORIS A LEVEL SALE A LEVE

CANADARA PAR FRANKS AN

CONCERNING AND A CONTRACT

ARREST AND A DECKART AND A DECKART

SHEETS PERSON AND A SHEETS SHE

AUDENARDA-RANNAR AUNTRA SAMATAN

AND PROPERTY.

-BARNA PREMA

SPUTS IS SEE

NECHBERGE ER SKI

19.00

ATTERNA MARTE AND DANK PRIMA ACTORNEY AND A **AREABER** FEET RA tast ne See. 1040 Gercade ANNERSES EXAMPLE 4000 NE2 A SE CONSIGN

A DESESTAN 「「「「「」」「「」」「「」」」「「」」」「」」」「「」」」」」 - ISAN ARASS CONSTRAINTS OF STRAIN

> ECLARS BROATAR AND IN STREET

> > ITBI-

cameco.com