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# PCS PHOSPHATE Swift Creek Mining

NATURAL GAS LEAK SURVEY  
APRIL 2019

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April 2019

Potash Corporation  
Swift Creek Mining  
Post Office Box 300  
White Springs, Florida 32096-0300  
ATTN: Mr. Ken Tut  
Project Representative

ANNUAL NATURAL GAS SAFETY SURVEY
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A natural gas leakage survey was conducted for Potash Corporation Swift Creek Mining, White Springs, Florida during the month of April 2019. An area including the entire gas distribution system, as represented by management, was surveyed for natural gas leaks.

There were no Grade I leaks, Grade II leaks or Grade III leaks detected during this survey. No leaks were detected on the following facilities:

METER –	0	REGULATOR –	0	RISER –	0	CUT OFF –	0
SERVICE –	0	SERVICE TAP –	0	VALVE –	0	MAIN –	0

Any leak detected will be classified according to the criteria on the following pages.

## Leak Grading Techniques

Leak grading provides standard evaluation of leak hazards to establish repair priority. That is why leaks must be graded consistently.

When a leak is detected, use a Combustible Gas Indicator (CGI) or an approved Electronic Gas Detector to evaluate and classify it. These are the only two instruments that may be used to classify a leak. Whichever instrument is used, approach every leak as if it is hazardous. Take all safety precautions.

When evaluating any gas leak indication, the first step is to determine the perimeter of the leak area. When this perimeter extends to a building wall, continue the investigation into the building.

Should gas be detected in sanitary sewers or ducts, make further tests in both the manhole and the lateral openings into the manhole. With the manhole lid off, the highest sustained reading in either the manhole or lateral is the true reading.

When evaluating underground leaks, use the highest sustained reading obtained with continued aspiration of the CGI bulb after natural ventilation of a sufficient number of bar holes. Usually, this will be no more than 12 aspirations.

## Leak Grades

Based on an evaluation of the location and magnitude of a leak, assign a leak grade (classification) to establish the leak repair priority. Leaks fall into one of three grades, as defined below:

- **Grade I:**

A leak that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.

- **Grade II:**

A leak that is recognized as being non-hazardous at the time of detection, but requires scheduled repair based on probable future hazard.

- **Grade III:**

A leak that is non-hazardous at the time of detection and can reasonably be expected to remain non-hazardous.

## Grade I Leak

Grade I leaks present an immediate and definite threat and require immediate repair or continuous action until the condition is eliminated.

Some examples of Grade I leaks include:

- Gas migration into or under a building.
- Gas migration into a tunnel, conduit, sanitary sewer or related manhole.
- Gas migration into an enclosure which contains equipment that may be a source of ignition.
- Readings outside a building where gas is likely to migrate to the building.
- A leak where gas has ignited.

Take any necessary action to protect life and property *immediately*. Report these leaks to repair personnel as soon as possible. If necessary, implement the company emergency action plan. This plan may include evacuating the premises, blocking off an area, re-routing traffic, venting the area, stopping gas flow by closing valves or other means and notifying fire and police departments.

Eliminate all sources of ignition in the area. These may include heaters, de-energizing air conditioners, electric motors, starters, electrical switches and any other sources of sparks.

***Remember not to operate electrical appliances in a gaseous atmosphere, even to turn them off or unplug them.*** If it is necessary to shut off electrical power, do it at the pole or other location away from the leak area.

## **Grade II Leak**

Grade II leaks are not an immediate hazard, but because of location, volume or pressure, may become a hazard. Classify leaks Grade II only after investigation (including extensive bar testing for underground leaks) determines that the leak does not meet the criteria for a Grade I leak.

Factors influencing Grade II leaks include amount of migration, proximity to buildings and subsurface structures, extent of pavement near and type of soil around the leak, including soil condition.

Florida's minimum requirement is that Grade II leaks must be repaired within 90 days after they were located.

### **Grade III Leak**

Grade III leaks are not a threat to persons or property and are not expected to become a hazard in the future.

Florida law requires that above ground [surface] Grade III leaks be repaired within 90 days of the date they are located unless the leak is upgraded or does not produce a positive leak indication when a soap and water solution, or its equivalent, is applied on suspected locations at operating pressures.

Florida law requires that below ground Grade III leaks be re-evaluated at least once every six months until cleared. The frequency of re-evaluation shall be determined by the location and magnitude of the leak condition.



## Follow – up Activity

After a leak is classified and repaired, follow-up inspection is required. Follow-up activities include:

- Inspection
- Re-evaluation

### Inspection of a Leak

Always ensure that the leak is completely repaired before backfilling. Check the perimeter of the leak area with a Combustible Gas Indicator. Where there is residual gas in the ground after the repair of a Grade I leak, make a follow-up inspection as soon as practical after allowing the soil to vent gas to the atmosphere and stabilize. This should be within one month following the repair. In the case of other leak repairs, the need for a follow-up inspection should be determined by qualified personnel.

### Re – evaluation of a Leak

When re-evaluating a leak, the same criteria must be used as when the leak was first graded.

## Leak Classification - Grade I

### **DEFINITION:**

Grade I leaks represent an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous.

### **ACTION CRITERIA:**

Grade I leaks require prompt action to protect life and property, and continuous action until the conditions are no longer hazardous. The adequacy of all repairs of leaks shall be checked by appropriate methods immediately after the repairs are completed. Where there is residual gas in the ground, a follow-up inspection using a gas detector instrument must be made as soon as the gas has had an opportunity to dissipate, but no later than one month for Grade I leaks. The date and status of re-check shall be recorded on the leak repair records.

Prompt action in some instances may require one or more of the following:

- Implementation of Company emergency plan (§192.615)
- Evacuating premises
- Block off an area
- Re-route traffic
- Eliminate ignition sources
- Venting the area
- Notify Police and Fire departments
- Stopping the flow of gas by closing valves or other means

## Leak Classification - Grade I

### **EXAMPLES:**

- Any leak which in the judgement of the operating personnel at the scene, is regarded as an immediate hazard.
- Escaping gas that has ignited.
- Any indication of gas which has migrated into or under a building, or into a tunnel.
- Any reading at the outside wall of a building, or where gas would likely migrate to an outside wall of a building.
- Any reading of 80% Lower Explosive Limit, or greater, in a confined space.
- Any reading of 80% Lower Explosive Limit, or greater in small substructures (other than gas associated substructures) from which gas would likely migrate to the outside wall of a building.
- Any leak that can be seen, heard or felt, and which is in a location that may endanger company personnel or property.

## Leak Classification - Grade II

### **DEFINITION:**

A leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard.

### **ACTION CRITERIA:**

Grade II leaks should be repaired or cleared within 90 days from the date the leak was originally located, unless due to re-survey the leak is determined to be a Grade III leak. In determining the repair priority, criteria such as the following should be considered. The adequacy of all leak repair shall be checked by appropriate methods immediately after the repairs are completed. Where there is residual gas in the ground, a follow-up inspection using a gas detector instrument must be made as soon as the gas has had an opportunity to dissipate, but no later than six months for Grade II leaks. The date and status of re-check shall be recorded on the leak repair records.

- Amount of migration of gas.
- Proximity of gas to buildings and subsurface structures.
- Extent of pavement.
- Soil type and conditions (such as moisture and natural venting).

Grade II leaks vary greatly in degree of potential hazard. Some Grade II leaks, when evaluated by the above criteria, may justify scheduled repair within the next five working days. Others will justify repair within 30 days. During the working day on which the leak is discovered, these situations should be brought to the attention of the individual responsible for scheduling leak repair.

On the other hand, many Grade II leaks, because of their location and magnitude, can be scheduled for repair on a normal routine basis with periodic re-inspection as necessary.

## Leak Classification - Grade II

### **EXAMPLES:**

Any leaks requiring action ahead of adverse changes in venting soil conditions. Any leak which, under adverse soil conditions, would likely migrate to the outside wall of a building.

Leaks requiring action within 90 days are:

- Any reading of 40% Lower Explosive Limit, or greater, under a sidewalk, in a wall to wall paved area that has significant gas migration and does not qualify as a Grade I leak.
- Any reading of 100% Lower Explosive Limit, or greater, under a street in a wall to wall paved area that has significant gas migration and does not qualify as a Grade I leak.
- Any reading less than 80% Lower Explosive Limit in small substructures (other than gas associated substructures) from which gas would likely migrate creating a probable future hazard.
- Any reading between 30% Lower Explosive Limit and 80% Lower Explosive Limit in a confined space.
- Any reading on a pipeline operating at 30% SMYS, or greater, in a class three or four location, which does not qualify as a Grade I leak.
- Any reading of 80% Lower Explosive Limit, or greater, in gas associated substructures.
- Any leak which, in the judgment of operating personnel at the scene, is of sufficient magnitude to justify scheduled repair.

## Leak Classification - Grade III

### **DEFINITION:**

A leak that is non-hazardous at the time of detection and can be reasonably expected to remain non-hazardous.

### **ACTION CRITERIA:**

Above ground Grade III leaks shall be repaired within 90 days from the date the leak was originally located unless the leak is upgraded or does not produce a positive leak indication when a soap and water solution, or its equivalent, is applied on suspected locations at operating pressures. Sub-surface Grade III leaks shall be re-evaluated at least once every six months until cleared. The frequency of re-evaluation shall be determined by the location and magnitude of the leak condition.

### **EXAMPLES:**

Leaks requiring re-evaluation at periodic intervals include:

- Any reading of less than 80% Lower Explosive Limit in small gas associated substructures.
- Any reading under a street in areas without wall to wall paving where it is unlikely the gas could migrate to the outside wall of a building.
- Any reading of less than 30% Lower Explosive Limit in a confined area.









City Services, Inc. (CSI)  
User Task Status Report

Run by: Bobby Boyd  
Run on: 3/26/2018

**Whitfield, Mitch**

<b>TASK NAME</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>STATUS</b>
<b>0141 - Visual Inspection For Atmospheric Corrosion</b>				Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Visual Inspection of Atmospheric Coating (7.1, 0141) - 2646	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Insufficient Cathodic Protection - 2212	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-Atmospheric Corrosion (7.1, 0141) - 2223	2/16/2018	2/16/2021	EV
<b>0151 - Visual Inspection of Buried Pipe and Components When Exposed</b>				Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Inspect for External Corrosion on Buried or Submerged Pipe (5.2) - 2643	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Performance	EWN-PE-Inspect the Condition of External Coating on Buried or Submerged Pipe (5.3, 0151) - 2644	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Inoperability of a Pipeline Component - 2211	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-Corrosion Control Fundamentals (5.3, 9.2, 1021, 0031, 0091) - 2355	1/25/2018	1/25/2021	EV
<b>0161 - Visual Inspection for Internal Corrosion</b>				Qualified

<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Inspect Internal Pipe Surfaces (12, 0161) - 2370	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Internal Corrosion (12) - 2213	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-Inspect Internal Pipe Surface (12) - 2685	1/25/2018	1/25/2021	EV
<b>0191 - Measure Atmospheric Corrosion</b>				Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Measure Corroded Area (8.3, 0191) - 2582	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Insufficient Cathodic Protection - 2212	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-Corrosion Control Fundamentals (5.3, 9.2, 1021, 0031, 0091) - 2355	1/25/2018	1/25/2021	EV
<b>0201 - Visual Inspection of Installed Pipe and Components for Mechanical Damage</b>				Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Inspect for Physical Damage on Buried or Submerged pipe (0211) - 2642	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Inoperability of a Pipeline Component - 2211	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-AOC Pipeline Damage (L) - 2753	1/29/2018	1/29/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-Inspect for Physical Damage on Buried or Submerged Pipe (5.1) - 8695	1/25/2018	1/25/2021	EV
<b>0211 - Measure and Characterize Mechanical Damage on Installed Pipe and Components</b>				Qualified

<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Inspect for Physical Damage on Buried or Submerged pipe (0211) - 2642	2/20/2018	2/20/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-AOC Pipeline Damage (L) - 2753	1/29/2018	1/29/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-Inspect for Physical Damage on Buried or Submerged Pipe (5.1) - 8695	1/25/2018	1/25/2021	EV
<b>0591 - Leak Test at Operating Pressure</b>				Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Report of Gas Odor/Liquid Release - 2216	1/24/2018	1/24/2021	EV
<b>0991 - Coating Application and Repair</b>	<b>Brushed or Rolled</b>			Qualified
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>
ENERGY worldnet, Inc. - Performance	EWN-PE-Prepare Surface for Coating Using Hand and Power Tools (13.1) - 2543	2/7/2018	2/7/2021	EV
ENERGY worldnet, Inc. - Performance	EWN-PE-Apply Atmospheric Coating Using Hand Application Methods (7.5) - 2580	1/25/2018	1/25/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow Procedures - 2207	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Insufficient Cathodic Protection - 2212	1/24/2018	1/24/2021	EV
ENERGY worldnet, Inc. - Written	EWN-CBT-Atmospheric Corrosion (7.1, 0141) - 2223	2/16/2018	2/16/2021	EV
ENERGY worldnet, Inc. - Written	EWN-WE-Apply and Repair External	2/23/2018	2/23/2021	EV

ENERGY worldnet, Inc. - Written	EWN-WE-Apply Atmospheric Coating Using Hand Application Methods (7.5) - 8723	2/23/2018	2/23/2021	EV	Verified
<b>1241 - Outside Gas Leak Investigation</b>					
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>	
ENERGY worldnet, Inc. - Performance	EWN-PE-Leak Survey (1241, 1261) - 2283	2/20/2018	2/20/2021	EV	
ENERGY worldnet, Inc. - Performance	EWN-PE-Perform/Observe Leak Survey/Patrol - 2455	2/20/2018	2/20/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow EWN-CBT-AOC Flammable Gas Atmosphere - 2209	1/24/2018	1/24/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Report of Gas	1/24/2018	1/24/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-Leak Survey and Patrols (52.1, 52.2, 1241, 1261) - 2282	2/23/2018	2/23/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-Reporting Field Gas Leaks - 2325	2/23/2018	2/23/2021	Qualified	Verified
<b>1261 - Walking Gas Leakage Survey</b>					
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>	
ENERGY worldnet, Inc. - Written	EWN-PE-Leak Survey (1241, 1261) - EWN-CBT-AOC Failure to Follow EWN-CBT-AOC Flammable Gas Atmosphere - 2209	1/25/2018	1/25/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-AOC Failure to Follow EWN-CBT-AOC Flammable Gas Atmosphere - 2209	1/24/2018	1/24/2021	EV	
ENERGY worldnet, Inc. - Written	EWN-CBT-Leak Survey and Patrols (52.1, 52.2, 1241, 1261) - 2282	2/23/2018	2/23/2021	Qualified	Verified
<b>1291 - Locate Underground Pipelines</b>					
<b>Qualification Type</b>	<b>Evaluations</b>	<b>Evaluation Date</b>	<b>Expiration Date</b>	<b>Verified</b>	
ENERGY worldnet, Inc. - Performance	EWN-PE-Locate Line (14.1, 1291) - EWN-PE-Reporting Protocols (15.2, 1311) - 2553	1/25/2018	1/25/2021	EV	
ENERGY worldnet, Inc. - Performance	EWN-PE-Use of Probing Equipment (16.1) - 2554	1/25/2018	1/25/2021	EV	

# CITY SERVICES, INC.

## 2018 Drug Test Statistical Summary

City Services, Inc.  
 Post Office Box 3217  
 Thomasville, Georgia 31799

Contact Person: Jerry Allen  
 Title: Office Manager  
 Telephone: (229) 226-6569

<b>Total Number of Employees in Organization:</b>	6
<b>Number of Employees in Test Pool:</b>	
<b>Full Time:</b>	6
<b>Temporary:</b>	0
<b>Part Time:</b>	0
<b>Others:</b>	0

Summarized is the number of test, number of employees tested, and positive results for each category listed.

<u>Type of Test</u>	<u>Draws</u>	<u>Tested</u>	<u>Positive Results</u>	<u>Positive For:</u>
<b>Pre-Employment:</b>	0	0	0	N/A
<b>Random:</b>	4	3	0	N/A
<b>Reasonable Cause:</b>	0	0	0	N/A
<b>Post-Accident</b>	0	0	0	N/A
<b>Post-Rehab</b>	0	0	0	N/A

DOT drug tests are conducted only using urine specimens. The urine specimens are analyzed for the following drugs/metabolites:

- Marijuana metabolites/THC
- Cocaine metabolites
- Amphetamines
- Phencyclidine (PCP)
- Opioid Metabolites (i.e., codeine, 6-AM (heroin), morphine)
- Also, four Semi-Synthetic Opioids (i.e., oxycodone, oxymorphone, hydrocodone, hydromorphone)

**Indicate positive results by number as follows:**

Marijuana-1, Cocaine-2, Amphetamines-3, Phencyclidine-4, Opioid Metabolites-5, Semi-Synthetic Opioids - 6

**Indicate test by number as follows:**

Random-1, Post Accident-2, Reasonable Cause-3, Post-Rehab-4, Pre-employment-5

<u>Age</u>	<u>Sex</u>	<u>Test</u>	<u>Substance Found</u>
____	____	____	_____
____	____	____	_____
____	____	____	_____

Report Prepared By: Jerry Allen  
 Period Covered: 1/1/2018 – 12/31/2018

Date Submitted: 04/22/2019  
 Distributed To: PCS – Swift Creek Mining, White Springs, Florida



# Last Calibration Data by Unit

Tuesday, April 16, 2019

10:25:48 AM

Page 1 of 1

[Exit Report](#)

Unit ID: 2  
Serial Number: 1324-402780  
User:  
Model Number: VGI-211

Date Calibrated: 4/16/2019  
Time Calibrated (HH:MM): 03:34:00

Block Check OK(Y/N): Y

Sensor	Calibration Gas	Before Calibration	After Calibration	Sensitivity	OK (Y/N)
LEL	50% LEL	51	50	1575	Y
CO	100 PPM				
GAS	Air / Cal Gas	100	100	971	Y
GAS	System Gas	100	100	4091	Y
OXYGEN	Air				
H2S	H2S				
PPM GAS	50% LEL	50	50	1091	Y