



PCS PHOSPHATE
Swift Creek Mine

NATURAL GAS LEAK SURVEY

MAY 2007

May, 2007

PCS Phosphate
Swift Creek Mine
Post Office Box 300
White Springs, Florida 32096
ATTN: Mr. Henry Land
Project Representative

ANNUAL NATURAL GAS LEAKAGE SURVEY

A natural gas leakage survey was conducted for PCS Phosphate Swift Creek Mine, White Springs, Florida during the month of May 2007. An area including the entire gas distribution system, as represented by management, was surveyed for natural gas leaks.

A total of One [1] leak was detected during this survey. This leak was classified as a Grade III leak. There were no Grade I leaks or Grade II leaks detected during this survey. The leak was detected on the following facility;

METER – 0 REGULATOR – 1 CUT OFF – 0 MAIN - 0

SERVICE – 0 SERVICE TAP – 0 VALVE – 0 RISER - 0

The leak was 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 you must grade leaks consistently.

If you find a leak, 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 you use, 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 or the leak area. When this perimeter extends to a building wall, continue the investigation into the building.

If you find gas 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 Leaks

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

Here are some examples of Grade I leaks:

- 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, rerouting traffic, venting the area, stopping flow by closing valves or other means and notifying fire and police departments.

Eliminate all sources of ignition in the area. These may include pool filters or 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 Leaks

These 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 Leaks

These 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 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

After a leak is classified and repaired, you have to follow it up. Follow – up activities include:

- Inspection
- Re – evaluation.

Inspection

Always ensure that the leak is completely repaired before backfilling. Check the perimeter of the leak area with CGI. 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

If you re – evaluate a leak, you must use the same criteria as when it was first graded.

Leak Classifications Grade I

DEFINITION:

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.

ACTION CRITERIA:

Requires 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.

*The prompt action in some instances may require one or more of the following:

- a. Implementation of City emergency plan
- b. Evacuating premises
- c. Block off an area
- d. Reroute traffic
- e. Eliminate Ignition Sources
- f. Venting the area
- g. Notify Police and Fire departments
- h. Stopping the flow of gas by closing valves or other means

Leak Classifications Grade I

EXAMPLES:

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

Leak Classifications 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. In determining the repair priority, criteria such as the following should be considered. 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 six months for Grade II leaks. The date and status of re-check shall be recorded on the leak repair records.

- a. Amount of migration of gas.
- b. Proximity of gas to buildings and subsurface structures.
- c. Extent of pavement.
- d. 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 Classifications Grade II

EXAMPLES:

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

A. Leaks requiring action within 90 days are:

1. Any reading of 40% LEL, 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.
2. Any reading of 100% LEL, 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.
3. Any reading less than 80% LEL in small substructures (other than gas associated substructures) from which gas would likely migrate creating a probable future hazard.
4. Any reading between 30% LEL and 80% LEL in a confined space.
5. 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.
6. Any reading of 80% LEL, or greater, in gas associated substructures.
7. Any leak which, in the judgment of operating personnel at the same, is of sufficient magnitude to justify scheduled repair.

Leak Classifications 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. Grade III leaks that are underground 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:

A. Leaks requiring reevaluation at periodic intervals.

1. Any reading of less than 80% LEL in small gas associated substructures.
2. 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.
3. Any reading of less than 30% LEL in a confined.



FINAL REPORT

Purchase Order No. J-50122934

Company P.C.S. PHOSPHATES - SWIFT CREEK MINE

City WHITE SPRINGS

State FLORIDA

Date Survey Started MAY 4, 2007

Date Survey Completed MAY 4, 2007

Total No. of Survey Days ONE [1]

Total No. of Survey Hours EIGHT [8]

Type of Survey WALKING ELECTRONIC DETECTION

Miles of Main Inspected ONE HALF MILE [1/2]

No. Services Inspected TWO [2]

Cases NONE [0]

Number and Grade of Leaks Located (1) -0- (2) -0- (3) -1- Total -1-

Area of Survey: Commercial Residential School Public Buildings Transmission

Type of Gas: Natural Other

Type of Survey: Vegetation Flame Ionization Soap Test Probe Bar Other ELECTRONIC DETECTION

Parts of System Checked: Transmission Mains Services Meter Sets

Type of System: Cast Iron Steel Plastic Copper Other

Soil Types: Clay Loam Sand Rock

Soil Conditions: Wet Dry Normal

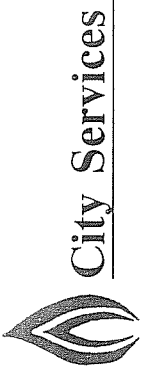
Weather Conditions: Rain Wind Ice Normal

Gas Company Provided: Transportation Guide Maps Other HENRY LAND

City Services Provided: EQUIPMENT - PRAGMATICS 653 MKII SERVICEMAN SURVEYOR

Additional Comments: LOCATION AND IDENTIFICATION INFORMATION ON COMMERCIAL BUILDINGS ARE WRITTEN AS REPRESENTED BY P.C.S. GUIDE - HENRY LAND

Technician J. SCOTT ROBERTS



DAILY-WEEKLY LEAKAGE SURVEY REPORT

CITY OR TOWN	DATE	Chargeable Hours	Type Survey	Area of Survey	Part of System Covered	Main Miles	No. of Services	CASES	LEAKS				AREA OF SURVEY
									I	II	III	TOTAL	
P.C.S. WHITE SPRINGS	5-04-07	1	X	3.6.	M.S.	1/2	2	-0-	-0-	-1-	-1-	1	DOWNTOWN
												2	RESIDENTIAL
												3	RIGHT OF WAY
												4	SCHOOLS
												5	PUBLIC BUILDINGS
												6	OTHER
													PART OF SYSTEM
													MAINS
													SERVICES
													METERSETS
													TRANSMISSIONS
													FUEL LINES
													OTHER
													TYPE OF SURVEY
													Vegetation
													Flame Ionization
													Bubble Test
													Probe Bar
													Other
TOTAL	5-04-07	1	X	3.6	M,S,	1/2	2	-0-	-0-	-1-	-1-		



City Services Surface Leak Detection Report

CITY WHITE SPRINGS , FLORIDA DISTRICT P.S.C. DATE MAY 4, 2007

	ADDRESS	METER NO.	P	N	REMARKS
	Meter Station			X	[Odor coming from oderizor filter]
	Rigging Plant		X		INLET OF 1" REGU:ATPR -046 [Corroded Badley]
	Dryer			X	

SERVICES SURVEYED 2 CLASS 2 LEAKS -0- CLASS 3 LEAKS -1-

TECHNICIAN J. SCOTT ROBERTS GUIDE HENRY LAND



City Services, Inc.

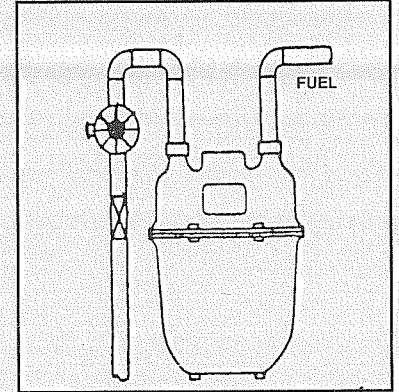
SURFACE LEAK INSPECTION & REPAIR REPORT

City: White Springs State: Florida Date: 5/4/07
 File #: _____ Address: Riggin Plant AREA LOCATION: RESIDENTIAL COMMERCIAL RURAL INDUSTRIAL

LEAK DATA

Detected By	Probable Source	Pressure	Pipe	Leak Cause
Flame Ionization	Pipe	Low	Steel	Corrosion
Combust. Meter	Valve	I.P.	Cast Iron	Outside Force
Mobile Flame Pk	Fitting	High	Ductile Iron	Construct. Defect
Electronic Det.	Meter	Transmission	Copper	Material Failure
Odor	Regulator		Plastic	Other
Other	Cut-Off		Other	

Leak at inlet of Regulator (1" O46) Bushing



REPAIR DATA

LEAK CAUSE	COMPONENT & EXPLANATION	PART OF SYSTEM
Corrosion	Pipe	Transmission
Outside Force	Valve	Main
Construct. Defect	Fitting	Service
Material Failure	Meter	Meter Set
Other	Regulator	Customer Pipe
	Tap Connect	Other

GRADE 1 2 3

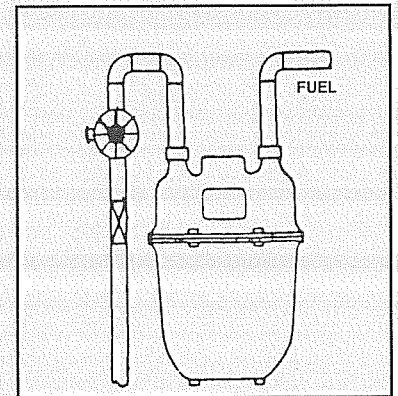
Technician Scott Roberts

Guide Henry Land

File #: _____ Address: _____ AREA LOCATION: RESIDENTIAL COMMERCIAL RURAL INDUSTRIAL

LEAK DATA

Detected By	Probable Source	Pressure	Pipe	Leak Cause
Flame Ionization	Pipe	Low	Steel	Corrosion
Combust. Meter	Valve	I.P.	Cast Iron	Outside Force
Mobile Flame Pk	Fitting	High	Ductile Iron	Construct. Defect
Electronic Det.	Meter	Transmission	Copper	Material Failure
Odor	Regulator		Plastic	Other
Other	Cut-Off		Other	



GRADE 1 2 3

Technician _____

Guide _____

REPAIR DATA

LEAK CAUSE	COMPONENT & EXPLANATION	PART OF SYSTEM
Corrosion	Pipe	Transmission
Outside Force	Valve	Main
Construct. Defect	Fitting	Service
Material Failure	Meter	Meter Set
Other	Regulator	Customer Pipe
	Tap Connect	Other