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August, 2001

P. C. S. Phosphates
Swift Creek Mining Plant
Post Office Box 300
White Springs, Florida 32096
ATTN: Mr. Jerry Ogburn
Maintenance Supervisor

**RE: Effectiveness of Cathodic Protection
Survey Underground Natural Gas System**

INTRODUCTION

An annual cathodic protection survey was conducted for P.C.S. Phosphates – Swift Mining Creek Plant during the month of August, 2001. During this survey, P.C.S. Phosphates – Swift Creek Mining Plant natural gas system was inspected for the effectiveness of cathodic protection, as applied. The cathodic protection system for P.C.S. Phosphates – Swift Creek Mining Plant consists essentially of Galvomag Magnesium anodes placed in various locations throughout the natural gas system.

RESULTS AND ANALYSIS

A total of 12 readings were taken during this survey. As can be seen by the structure-to-soil potential measurements and the enclosed data sheet, all of the readings obtained were indicative of cathodic protection. A structure-to-soil potential of 850 millivolts or more negative is the basis used in this report to confirm cathodic protection.

RECOMMENDATIONS

P. C. S. Phosphates – Swift Creek Mining Plant Underground Natural Gas System August, 2001

The sacrificial anode arrangement designed to protect the coated and wrapped steel natural gas system is providing adequate current to afford cathodic protection to the steel distribution system. Structure-to-soil readings obtained from Cathodic Test Points and gas risers on the steel distribution system indicate complete cathodic protection. One [1] highway casing and Two [2] Railroad casings were inspected during this survey. All carrier casing pipes were found to be isolated from the natural gas piping.

Cathodic Test Point #3 is no longer in service due to severance of wires connecting the anode and steel gas main to the test point. Reconnection could not be established due to depth (approx. 18 feet) of the steel gas pipe. The control panel for Pump #1 on the odorization unit is badly corroded. Recommend this be cleaned, primed and painted to protect from further atmospheric corrosion.

At this time, the Natural Gas Distribution System for the P.C.S. – Swift Creek complex is completely Cathodically Protected with no further action required. I trust the above information to be satisfactory and in sufficient detail, however, should you require additional information, please contact me.

Sincerely,

J. Scott Roberts
NACE C.P. Tester
Certification # 371

CATHODIC TEST POINTS

CATHODIC TEST POINTS
P.C.S. Phosphates – Swift Creek Mining Plant
Underground Natural Gas System
August, 2001

CTP - #1

Black Anode Wire -1.371 MV
Black Gas Pipeline Wire -1.312 MV
White Casing Pipe Wire -0.599 MV

CTP - #2

White Anode Wire -1.450 MV
Black Gas Pipeline Wire -1.395 MV

CTP - #3

No Longer Used - Disconnected

STRUCTURE-TO-SOIL POTENTIALS
GAS PIPE CASINGS

STRUCTURE-TO-SOIL POTENTIAL - GAS PIPE CASINGS
P.C.S. Phosphates – Swift Creek Mining Plant
Underground Natural Gas System
August, 2001

Railroad Casing - #1	-0.599
Railroad Casing - #2	-0.613
Highway Casing - #3	-0.517

STRUCTURE - TO - SOIL POTENTIAL DATA

STRUCTURE – TO – SOIL POTENTIAL DATA
P.C.S. Phosphates – Swift Creek Mining Plant
Underground Natural Gas System
August, 2001

Test Location	Energized Potentials Volts
Gas Metering Station - Inlet	-1.172
Gas Metering Station – Outlet	-1.379
4" Gas Riser @ Plant	-1.452
2" Gas Riser @ Boiler Room	-1.384