

STILLMEADOW

INCORPORATED

April 12, 2005

Thuslick Inc.
P.O. Box 12265
Spring, Texas 77391

Dear Luis Lopez:

Please find attached the amended report pages for test 00-460-001/002 that refer to the General Permit GMG290000. The sample THUSLICK 2000 was submitted to our Environmental Toxicology Laboratory for testing from July 19 to July 28, 2000. We performed range finding and definitive acute toxicity testing (STILLMEADOW, Inc. test #00-460-001/002) in accordance with the Federal Register guideline, Appendix 2 to Subpart A of Part 435 concerning Drilling Fluids Toxicity Test (EPA 1993).

The sample supplied by Thuslick Inc. was subcontracted to an outside lab to be mixed into a mud system in order to be representative of your particular type of use. The report we provided indicated that the THUSLICK 2000 sample you provided and mixed into a mud system was not toxic to the mysid (*mysidopsis bahia*) as indicated by a median lethal concentration of > 1,000,000 ppm SPP and is permitted to be discharged with drill cuttings and used as indicated in the General Permit GMG290000.

Sincerely,



Hernan Hernandez, Jr
Laboratory Manager

1. EXECUTIVE SUMMARY

OBJECTIVE:	The objective of this study was to determine the acute toxicity to <i>Mysidopsis bahia</i> of a drilling fluid sample submitted by Thuslick, Inc.	
SAMPLE INFORMATION:	Thuslick 2000 STILLMEADOW, Inc. sample numbers Q00359.01 and Q00362.01	
SAMPLE CHRONOLOG:	Samples Received: Range Finder Test: Definitive Test:	July 13, 2000 (powder) and July 18, 2000 (powder incorporated into mud) July 19, 2000 to July 23, 2000 July 24, 2000 to July 28, 2000
TEST METHOD:	Test Type:	Drilling Fluid Toxicity Test
	Test Method:	Federal Register. Appendix 2 to Subpart A of Part 435. Drilling Fluids Toxicity Test (EPA, 1993)
PERMIT	General Permit	GMG290000
TEST CONDITIONS:	Diluent: Salinity: Temperature:	Reconstituted sea water 20±2 parts per thousand 20±2°C
TEST ACCEPTABILITY:	Control Mortality	EPA Criteria
	0%	≤10%
TEST RESULTS:	Range-finding Test	
	96-Hour LC ₅₀ ¹	>1,000,000 ppm SPP ²
	Definitive Test	
	96-Hour LC ₅₀ :	>1,000,000 ppm SPP
	95% Confidence Limits:	Not Applicable

¹Median lethal concentration

²Parts per million suspended particulate phase

2. INTRODUCTION

The purpose of this study was to determine the acute toxicity of a drilling fluid sample to mysids (*Mysidopsis bahia*). Testing procedures used were those required by the U. S. Environmental Protection Agency to determine compliance with toxicity limitations in NPDES discharge permits for offshore oil and gas operations (EPA 1985, 1993) under General Permit GMG290000. All data, laboratory notebooks, associated documentation and chemical analyses of laboratory water are stored by STILLMEADOW, Inc. Environmental Toxicology Laboratory for future reference.

3. METHODS AND MATERIALS

The drilling fluid sample Thuslick 2000 powder (STILLMEADOW, Inc. sample number Q00359.01) was delivered to STILLMEADOW, Inc. Environmental Toxicology Laboratory on July 13, 2000 in a 1-gallon bag. Chain of custody procedures were followed (Appendix A). The sample was stored at ambient temperature. These measurements are listed in Table 1. A copy of the completed sample check-in form is included in Appendix B.

Table 1. Summary of initial characteristics.

Laboratory Sample # and Date of Receipt	Appearance
Q00359.01 July 13, 2000	Fine Black Powder

STILLMEADOW, Inc. personnel delivered the Thuslick 2000 powder to OGS Laboratory, Inc., Houston, Texas, where it was incorporated into generic mud #7 at a concentration of 50 pounds per barrel. A copy of the completed sample check-in form is included in Appendix B. Documentation from OGS regarding the formulation of the mud is included in Appendix C. The mud was delivered to STILLMEADOW, Inc. Environmental Toxicology Laboratory on July 18, 2000 in a 1-gallon bucket (STILLMEADOW, Inc. sample number Q00362.01). Chain of custody procedures were followed (Appendix A). Initial parameters were measured prior to storing the sample under a nitrogen atmosphere at 1-4°C. These measurements are listed in Table 2.

Table 2. Summary of initial parameters.

Laboratory Sample # and Date of Receipt	Odor	Temp. (°C)	pH (units)	Appearance
Q00362.01 July 18, 2000	No Foul Odor	29	9.0	No Black Spots