PROPOSED MODIFICATION TO THE

NPDES GENERAL PERMIT FOR NEW AND EXISTING SOURCES

IN THE OIL AND GAS EXTRACTION POINT SOURCE CATEGORY

FOR THE WESTERN PORTION OF THE OUTER CONTINENTAL SHELF

OF THE GULF OF MEXICO

(Permit No. GMG290000)

April 19, 1999

U.S. Environmental Protection Agency
Region 6
1445 Ross Ave.
Dallas, TX 75202

Only the following additions to the general permit are proposed. Otherwise, the existing language is not proposed to be changed.

Section B. Effluent Limitations and Monitoring Requirements

1. Drilling Fluids

a) Prohibitions

Non-Aqueous Drilling Fluids. The discharges of non-aqueous drilling fluids is prohibited, except for those adhering to cuttings.

2. Drill Cuttings

a) Prohibitions

1) All Drill Cuttings

Cuttings from Oil Based Drilling Fluids. The discharge of cuttings that are generated while using an oil-based or invert emulsion mud is prohibited.

Cuttings from Oil Contaminated Drilling Fluids. The discharge of cuttings that are generated using drilling fluids which contain waste engine oil, cooling oil, gear oil or any lubricants which have been previously used for purposes other than borehole lubrication, is prohibited.

Cuttings Generated Using Drilling Fluids which Contain Diesel Oil. Drill cuttings generated using drilling fluids to which any diesel oil has been added as a lubricant may not be discharged.

Cuttings Generated Using Mineral Oil. The discharge of cuttings generated using drilling fluids which contain mineral oil is prohibited except when the mineral oil is used as a carrier fluid (transporter fluid), lubricity additive, or pill.

Cadmium and Mercury in Barite. Drill cuttings generated using drilling fluids to which barite has been added shall not be discharged if such barite contains mercury in excess of 1.0 mg/kg (dry weight) or cadmium in excess of 3.0 mg/kg (dry weight).

2) Drill Cuttings Generated Using Water-Based Drilling Fluids.

Toxicity. Drill cuttings generated using drilling fluids with a daily minimum or a monthly average minimum 96-hour LC50 of less than 30,000 ppm in a 9:1 seawater to drilling fluid suspended particulate phase (SPP) volumetric ratio using Mysidopsis bahia shall not be discharged.

3) Drill Cuttings Generated Using Non-Aqueous Drilling Fluids.

Sediment Toxicity. Drill cuttings generated using drilling fluids in which the 10-day LC50 of the stock based fluids minus the 10-day LC50 of C16-C18 internal olefin is less than zero using Leptocherus plumulosus shall not be discharged.

Polynuclear Aromatic Hydrocarbons Drill cuttings generated using drilling fluids which contain greater than 10 ppm wt. Polynuclear Aromatic Hydrocarbons based on phenanthrene/wt. Of the stock base fluid shall not be discharged.

Biodegradation Rate. Drill cuttings generated using drilling fluids in which the percent of stock base fluid degraded at 120 days minus the percent C16-C18 internal olefin degraded at 120 days is less than zero shall not be discharged.

b) Limitations

1) Cuttings Generated Using Water-Based and Non-Aqueous Based Drilling Fluids.

Free Oil. No free oil shall be discharged. Monitoring shall be performed using the static sheen test method once per week when discharging. The number of days a sheen is observed must be recorded.

2) Cuttings Generated Using Non-Aqueous Drilling Fluids.

Formation Oil. No formation oil shall be discharged. Monitoring shall be performed on the stock drilling fluids once per well using Gas Chromatography/Mass Spectrometry and once per week on the circulating drilling fluids using Reverse Phase Extraction.

Base Fluid Retained on Cuttings. The maximum weighted average base fluids retained on wet drill cuttings shall be 9.42 percent as measured using the Retort test method. Monitoring shall be performed once per day when drilling. In fast drilling, monitoring shall be performed once per every 500 feet of hole drilled up to a maximum of three samples per day.

For all limitations and prohibitions for sediment toxicity, cadmium and mercury, PAHs, and biodegradation which pertain to stock base drilling fluids, the permittee may provide certification, as documented by the supplier(s), that the stock base drilling fluid will meet the above limits. Compliance with the limits and prohibitions shall be reported on the DMR as

documented by the supplier.

c) Monitoring Requirements

Seabed Surveys

Operators who discharge drill cuttings which are generated using non-aqueous drilling fluids shall conduct seabed surveys at each location where such a discharge occurs. Results of the seafloor surveys shall be submitted to EPA, Region 6 with the discharge monitoring report no later than 2 years after completion of drilling operations at the site.

At a minimum the survey must include: the area and thickness of drill cuttings deposited on the seafloor, analysis of the toxicity of the cuttings depositions on the seafloor, analysis of contaminants present in the deposited cuttings, and analysis of the benthic populations present at the site of cuttings deposition. Monitoring shall be conducted twice at each site where drill cuttings generated using non-aqueous drilling fluids are discharged. The first survey is required to commence within two weeks after completion of drilling operations. A second survey shall be accomplished one year after commencement of the first survey. In addition, both surveys shall be accompanied by sampling of the seafloor benthic populations and analysis for contaminants at a site which is located near the discharge but sufficiently far as to be unaffected by the discharged drill cuttings or any drilling fluids retained on the cuttings.

Operators shall also monitor the discharge of drill cuttings while drilling is conducted. That monitoring will include: the dates discharge takes place, the prevailing current during discharge, the volumes and types of drilling fluids retained on cuttings and discharged, the volume of cuttings discharged, and a chemical analysis of drilling fluids used at the facility.

Alternatively, operators required to conduct seafloor surveys under this permit may submit a plan for an equivalent industry-wide seafloor monitoring study to EPA Region 6 for approval. The alternative industry-wide study shall be designed to provide information on discharges of cuttings generated using non-aqueous drilling fluids at a minimum of twelve leases where the discharges occur. The majority of those discharge locations must be in deep water (greater than 1000 feet). Monitoring shall include the areal extent and thickness of cuttings deposition, the sediment chemistry and mineralogy, the extent of anoxic effects resulting from cuttings discharges, and biological surveys of the area. Sampling conducted in shallow areas shall include more extensive biological sampling intended to measure community structural changes relative to cuttings discharges as well as the physical and chemical monitoring performed in deep water. Detailed information regarding the volume and types of drilling fluids and the cuttings discharged shall also be recorded and reported with the results of such a study. If Region 6 approves the equivalent seafloor monitoring study, the monitoring conducted under that study shall constitute compliance with the seafloor survey requirements of this permit for those operators who participate in the study.

Section D. Other Conditions

8. SEDIMENT TOXICITY TEST

The approved test method for permit compliance is identified as:
ASTM E1367-92: Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods (Incorporated by reference and available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA, 19428) supplemented with the sediment preparation procedure in 40 CFR Part 435, Subpart A, Appendix 3 (see 64 FR 5487, February 3, 1999).

9. POLYNUCLEAR AROMATIC HYDROCARBONS TEST
The approved test method for permit compliance is identified as:
EPA Method 1654A: Polynuclear Aromatic Hydrocarbon Content of Oil by High Performance Liquid Chromatography with an Ultraviolet Detector in Methods for the Determination of Diesel, Mineral, and Crude Oils in Offshore Oil and Gas Industry Discharges, EPA-821-R-92-008 [Incorporated by reference and available from National Technical Information Service (NTIS) (703/605-6000)].

10. BIODEGRADATION TEST
The approved test method for permit compliance is identified as:
the Method of Determination of Biodegradation of Synthetic Base Fluids in a Solid Phase Test System, See Appendix 1.

11. GAS CHROMATOGRAPHY/MASS SPECTROMETRY TEST FOR OIL CONTAMINATION
The approved test method for permit compliance is identified as:
Determination of Crude Oil Contamination in Non-Aqueous Drilling Fluids by Gas Chromatography/Mass Spectrometry (GC/MS), 40 CFR Part 435, Subpart A, Appendix 5 (see 64 FR 5487, February 3, 1999).

12. REVERSE PHASE EXTRACTION TEST FOR OIL CONTAMINATION
The approved test method for permit compliance is identified as:
Reverse Phase Extraction Method for Detection of Oil Contamination in Non-Aqueous Drilling Fluids, 40 CFR Part 435, Subpart A, Appendix 6 (see 64 FR 5487, February 3, 1999).

13. RETORT TEST FOR DRILLING FLUIDS RETAINED OF CUTTINGS
The approved test method for permit compliance is identified as:
API Recommended Practice 13B-2, 40 CFR Part 435, Subpart A, Appendix 7 (see 64 FR 5487, February 3, 1999).

Part II Section G. Definitions

The following new definitions are proposed to be added to the permit:

The following new definitions from the proposed effluent limitations guidelines are proposed to be added to the OCS general permit:

(a) Base fluid retained on cuttings means the American Petroleum Institute Recommended Practice 13B-2 supplemented with the specifications, sampling methods, and averaging of the retention values provided in Appendix 7 of 40 CFR Part 435, Subpart A.

(b) Biodegradation rate means the test procedure presented in Appendix 4 of 40 CFR Part 435, Subpart A.

(c) Percent degraded at 120 days means the concentration (milligrams/kilogram dry sediment) of the base fluid in sediment relative to the intial concentration of base fluid in sediment at the start of the test on day zero.

(d) Percent stock base fluid degraded at 120 days minus percent C16-C18 internal olefin degraded at 120 days shall not be less than zero means that the percent base fluid degraded at 120 days of any single sample of base fluid shall not be less than the percent C16-C18 internal olefin degraded at 120 days as a control standard

(e) Drill cuttings means the particles generated by drilling into subsurface geologic formations and carried out from the wellbore with the drilling fluid.

(f) Drilling fluid Means the circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure. Classes of drilling fluids are:

(1) a water-based drilling fluid has water or a water miscible fluid as the continuous phase and the suspending medium for solids, whether or not oil is present.

(2) a non-aqueous based drilling fluid is one in which the continuous phase is a water immiscible fluid such as an oleaginous material (e.g., mineral oil, enhanced mineral oil, paraffinic oil, or synthetic material such as olefins and vegetable esters).

(3) an oil-based drilling fluid has diesel oil, mineral oil, or some other oil, but neither a synthetic material nor enhanced mineral oil, as its continuous phase with water as the dispersed phase. Oil-based drilling fluids are a subset of non-aqueous based drilling fluids.

(4) an enhanced mineral oil-based drilling fluid has an enhanced mineral oil as its continuous phase with water as the dispersed phase. Enhanced mineral oil-based drilling fluids are a subset of non-aqueous based drilling fluids.

(5) a synthetic-based drilling fluid has a synthetic material as its continuous phase with water as the dispersed phase. Synthetic-based drilling fluids are a subset of non-aqueous based drilling fluids.

(g) Enhanced mineral oil as applied to enhanced mineral oil-based drilling fluid means a petroleum distillate which has been highly purified and is distinguished from diesel oil and conventional mineral oil in having a lower polycyclic aromatic hydrocarbon (PAH) content. Typically, conventional mineral oils have a PAH content on the order of 0.35 weight percent expressed as phenanthrene, whereas enhanced mineral oils typically have a PAH content of 0.001 or lower weight percent PAH expressed as phenanthrene.

(h) No discharge of formation oil means that cuttings contaminated with non-aqueous based drilling fluids (NAFs) may not be discharged if the NAFs contain formation oil, as determined by the GC/MS baseline method as defined in Appendix 5 to 40 CFR Part 435, Subpart A, to be applied before NAFs are shipped offshore for use, or the RPE method as defined in Appendix 6 to 40 CFR Part 435, Subpart A, to be applied at the point of discharge. At the discretion of the permittee, detection of formation oil by the

RPE method may be assured by the GC/MS method, and the results of the GC/MS method shall supercede those of the RPE method.

(i) Maximum as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings means the maximum concentration allowed as measured in any single sample of the barite for determination of cadmium and mercury content, or as measured in any single sample of base fluid for determination of PAH content.

(j) Maximum weighted average for well for BAT effluent limitations and NSPS for base fluid retained on cuttings means the weighted average base fluid retention as determined by API RP 13B-2, using the methods and averaging calculations presented in Appendix 7 of 40 CFR Part 435, Subpart A.

(k) Minimum as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings means the minimum 96-hour LC50 value allowed as measured in any single sample of the discharged waste stream. The term minimum as applied to BPT and BCT effluent limitations and NSPS for sanitary wastes shall mean the minimum concentration value allowed as measured in any single sample of the discharged waste stream.

(l) Sediment toxicity as applied to BAT effluent limitations and NSPS for drilling fluids and drill cuttings means the ASTM E1367-92: Standard Guide for Conducting 10-day Static Sediment Toxicity Tests with Marine and Estuarine Amphipods (Available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA, 19428) supplemented with the sediment preparation procedure in Appendix 3 of 40 CFR Part 435, Subpart A.

(m) Synthetic material as applied to synthetic-based drilling fluid means material produced by the reaction of specific purified chemical feedstock, as opposed to the traditional base fluids such as diesel and mineral oil which are derived from crude oil solely through physical separation processes. Physical separation processes include fractionation and distillation and/or minor chemical reactions such as cracking and hydro processing. Since they are synthesized by the reaction of purified compounds, synthetic materials suitable for use in drilling fluids are typically free of polycyclic aromatic hydrocarbons (PAH's) but are sometimes found to contain levels of PAH up to 0.001 weight percent PAH expressed as phenanthrene. Poly(alpha olefins) and vegetable esters are two examples of synthetic materials suitable for use by the oil and gas extraction industry in formulating drilling fluids. Poly(alpha olefins) are synthesized from the polymerization (dimerization, trimerization, tetramerization, and higher oligomerization) of purified straight-chain hydrocarbons such as C6-C14 alpha olefins. Vegetable esters are synthesized from the acid-catalyzed esterification of vegetable fatty acids with various alcohols. The mention of these two branches of synthetic fluid base materials is to provide examples, and is not meant to exclude other synthetic materials that are either in current use or may be used in the future. A synthetic-based drilling fluid may include a combination of synthetic materials.

(n) 10-day LC50 means the concentration (milligrams/kilogram dry sediment) of the base fluid in sediment that is lethal to 50 percent of the test organisms exposed to that concentration of the base fluids after 10-days of constant exposure.

(o) 10-day LC50 of stock base fluid minus 10-day LC50 of C16-C18 internal olefin shall not be
less than zero means that the 10-day LC50 of any single sample of the base fluid shall not be less than the LC50 of C16-C18 internal olefin as a control standard.

APPENDIX 1: BIODEGRADATION TEST

Determination of Biodegradation of Synthetic Base Fluids in a Solid-Phase Test System

Section 1.0: Summary of Method

This analytical method determines the biodegradation potential of mineral, paraffinic, and diesel oils as well as synthetic materials that are used as base fluids in the formulation of drilling fluids. The base fluids are mixed with sediment at an initial concentration of 1000 mg/kg dry sediment and placed in seawater at 20°C. Base fluid concentration measurements are made at regular intervals during the test, from zero to 112 days. This method uses two parameters, base-fluid content measured as total petroleum hydrocarbons (TPH) and redox potential, to assess the rate of degradation of base fluids.

Section 1.1: System Requirements

The exposure system is a recirculating system providing flow over replicate test containers (glass jars) for a test duration of 120 days. Approximately 300 mL of the sediment/test compound mixture is placed in 500 mL glass jars (9.5cm height x 8.9cm diameter). These glass jars are then placed in 10-gallon glass aquaria (approximately 26cm width x 31cm height x 50cm length) filled with seawater to approximately 8 cm from the top. Water is circulated in the aquaria using a jet head pump at the rate of 75±10 gal/hour. Water is pumped from the bottom of the aquarium across the top parallel to the water surface. Care should be taken to avoid disturbing the surface of the sediment samples. The water in each aquaria should be maintained at a temperature of 20±1oC and a salinity of 25±1 ppt.

Section 1.2: Sample Requirements

The concentration of the base fluid in sediment is to be 1000 mg/kg dry sediment. A positive control of sediment dosed with olive oil and a negative control of sediment dosed with a Poly Alpha Olefin (PAO) should also be tested at the same time as the base fluids and also at 1000 mg/kg. Each test concentration should be prepared according to the mixing procedure described in Section 1.5. To prevent cross-contamination, individual aquaria should be used for each base fluid treatment.

Sampling for sediment analysis should be conducted according to Table 1. For Day 0 sampling, three glass jars should be removed after ten minutes in the seawater filled aquaria. Scheduled sampling dates may be changed if analytical results from previous sampling dates

indicate that some test samples may reach 100% degradation prior to the next sampling date. Sampling may be terminated once measurements show that base fluid levels have depreciated to near zero. Three replicate samples from separate glass jars should be taken on each sampling date for determination of both redox potential and base-fluid content in each container. Based on the required sampling scheme, sufficient test sediment should be spiked to allow for a minimum of 18 replicate samples to be taken throughout the study (see Table 1).

TABLE 1: Replicate Requirements per Treatment and Control Tests

REPLICATION PER SAMPLING PERIOD1

Base Fluid and PAONegative
Control Dosed Sediments
Olive Oil Control
Dosed Sediments

1000 mg/kg

1000 mg/kg

DAY 0

3

3

DAY 3

-

3

DAY 7

-

3

DAY 14

3

3

DAY 21

-

3

DAY 28

3

-

DAY 35

-

3

DAY 56

3

-

DAY 84

3

-

DAY 112

3

-

Total Samples

18

18

1Scheduled sampling dates may be changed if analytical results from previous sampling dates indicate that some test
samples may reach 100% degradation prior to the next sampling date.

Section 1.3: Seawater Requirements

Synthetic seawater at a salinity of 25±1 ppt should be used for the test. The synthetic seawater should be prepared by mixing commercially available sea salts such as Forty Fathoms , Instant Ocean , or Marinemix into high purity distilled or deionized water. The seawater should be aerated and allowed to age for approximately one month prior to use.

Section 1.4: Sediment Requirements

The dilution sediment must be a natural estuarine or marine sediment free from the compounds of interest. Dilution sediment should be press-sieved through a 2000 micron mesh sieve to remove large debris. Then the sediment should be press-sieved through a 500 micron sieve to remove indigenous organisms that may confound test results.

In order to reduce the shock to the microorganisms in the sediment the salinity of the sediment's porewater should be between 20-30 ppt. Sediment should be used for testing as soon as possible after field collection. If required, sediment can be stored for a maximum period of 2 weeks prior to use. Prior to use in the test the sediment should be stored in the dark at 4oC with

no air over the sealed samples.

Section 1.5: Mixing Procedure

Because base fluids are strongly hydrophobic and do not readily mix with sediments, care must be taken to ensure base fluids are thoroughly homogenized within the sediment. All concentrations are weight-to-weight comparisons (mg of base fluid to kg of dry control sediment). Sediment and base fluid mixing will be accomplished by using the following method.

1. Determine the wet to dry weight ratio for the control sediment by weighing approximately 10 subsamples of approximately 1 g each of the screened and homogenized wet sediment into tared aluminum weigh pans and weigh. Dry sediment at 105ºC for 18-24 h. Remove sediment and cool in a desiccator. Repeat drying, cooling, and weighing cycle until a constant weight is achieved (within 4% of previous weight). Re-weigh the samples to determine the dry weight. Calculate the mean wet and dry weights of the 10 subsamples and determine the wet/dry ratio by dividing the mean wet weight by the mean dry weight using Formula 1. This is required to determine the weight of wet sediment needed to prepare the test samples.

$$\frac{\text{Mean Wet Sediment Weight (g)}}{\text{Mean Dry Sediment Weight (g)}} = \text{Wet to Dry Ratio [1]}$$

2. Determine the density (g/mL) of the wet sediment. This will be used to determine total volume of wet sediment needed for the various test treatments.

$$\frac{\text{Mean Wet Sediment Weight (g)}}{\text{Mean Wet Sediment Volume (mL)}} = \text{Wet Sediment Density (g/mL)} \quad [2]$$

3. To determine the amount of base fluid needed to obtain the desired base fluid concentration per kg dry sediment use the following formulas:

Determine the amount of wet sediment required:

Wet Sediment Density (g/mL) X Volume of Sediment Required per Concentration (mL) = Weight Wet Sediment Required per Conc. (g) [3]

Determine the amount of dry sediment in kilograms (kg) required for each concentration:

Wet Sediment per Concentration (g)

1kg
---------- --------- = Dry Weight Sediment (kg)[4]
(Mean Wet to Dry Ratio)
1000g

Finally, determine the amount of base fluid to provide the required test concentration:

Target Base Fluid Concentration (mg/kg) x Dry Weight Sediment (kg) = Base Fluid Required (mg) [5]

Based on the required 18 replicates per test concentration and a volume of 300 mL per replicate, the approximate volume of wet sediment needed is 6 L. This 6 L test sample includes enough volume to do preliminary testing to determine that test samples have been adequately homogenized.

4. To mix, place appropriate amounts of weighed base fluid into stainless mixing bowls, tare the vessel weight, then add sediment and mix with a high-shear dispersing impeller for 9 minutes.

Section 1.6: Sediment Chemistry

Section 1.6.1: Unspiked Sediment

To determine that the dilution sediment being used is free of the compounds of interest, three replicate samples of the unspiked sediment should be analyzed for base fluid content. To determine the base-fluid content, total petroleum hydrocarbons (TPH) will be measured using EPA Method 3550B and 8015B. All samples should be homogenized thoroughly prior to analysis. If TPH is found in the dilution sediment, the sediment should not be used.

The redox potential of three replicate samples of the unspiked sediment should be measured prior to test initiation. The redox potential should be measured using a combination platinum/reference (Ag/AgCL) electrode held in an adjustable retort stand, one revolution resulting in a lowering of the probe by 5 mm. Readings should be taken after one minute and values for Zobell's solution (g L-1; potassium ferrocyanide, 1.399; potassium ferricyanide, 1.087; potassium chloride, 7.456) and sea water should be monitored after each depth profile. Actual readings should be adjusted to Eh by adding 198.

Section 1.6.2: Spiked Sediment

Section 1.6.2.1: Determination of Adequate Sample Homogenization

Because of the difficulty of homogeneously mixing base fluid with sediment, it is important to demonstrate that the base fluid is evenly mixed with sediment. To demonstrate that the test samples have been adequately mixed, a minimum of three replicate sediment samples will be taken from each 6L batch of dosed sediment and analyzed for TPH prior to distribution into glass jars.

Base-fluid content results should be reported within 48 hours of mixing. Measured and nominal concentrations should be reported for initial test concentrations. The coefficient of variation (CV) for the replicate samples must be less than 20%. If base-fluid content results are not within the 20% CV limit, the test sediment should be remixed. Tests should not begin until the CV is determined to be below the maximum limit of 20%. Spiked samples should be stored at 4oC in the dark until ready for use in the test.

Section 1.6.2.2: Test Monitoring

During the test three replicate containers will be sampled to determine redox potential and base-fluid content according to Table 1. For Day 0 sampling, three glass jars should be removed after ten minutes in the seawater filled aquaria. Scheduled sampling dates may be changed if analytical results from previous sampling dates indicate that some test samples may reach 100% degradation prior to the next sampling date. Since measuring redox potential is non-destructive the same three replicates analyzed for TPH can be measured for redox potential. Redox potential should be measured immediately after the glass jars are removed from the aquaria and prior to homogenizing the samples to analyze for TPH. The overlying water in the sample jar should not be poured off prior to measuring the redox potential. After measuring the sample's redox potential, the overlying water should be carefully poured off and the sample should be thoroughly homogenized prior to analysis for TPH. TPH shall be determined by EPA Methods 3550B and 8015B. Since sampling for base-fluid content is destructive, samples must be taken from a different replicate set of three sampling containers for each sampling date.

Section 1.7: Water Quality Measurements

The following water quality measurements of the overlying water of each aquaria should be taken daily: dissolved oxygen (DO), pH, temperature, and salinity. Temperature should be maintained at 20±1oC. If the temperature falls out of this range corrective action should be taken to raise or lower the temperature as required. As water evaporates from the test aquaria the evaporated water should be replace with distilled water. Salinity should be checked after addition of any water and maintained at 25±1 ppt. If salinity falls out of the acceptable range sea salts should be added to raise the salinity or distilled water should be added to lower the salinity as required. This should be done gradually to avoid large fluctuations in test salinity. Dissolved oxygen should be maintained within 60% of saturation. If DO falls below this level the aquaria should be aerated until DO levels are above the minimum acceptable level.

Section 1.8: Test Acceptability

In order for the solid-phase degradation test to be considered acceptable the positive olive oil control must meet a minimum degradation and the negative PAO control must meet a maximum biodegradation. The required amount of degradation for the olive oil and PAO has not yet been determined, but shall be determined as data are gathered using this method.