April 30, 2007

Department of Transportation
Attn: Mr. R.M. Seeley
Director, Southwest Region
8701 South Gessner, Suite 1110
Houston, Texas 77074

RE: CPF 4-2007-5009M

Dear Mr. Seeley;

Per your request in your letter dated March 28, 2007, Noble Energy, Inc. (Noble Energy) submits the following letter in response to your request of a Notice of Amendment of our Integrity Management Plan covering the Noble Energy Main Pass 305 Pipeline system.

DOT Notice of Amendment #3: Noble Energy must modify their risk analysis process to include all risk factors required by 195.452 (e) for evaluation of threats that impact the integrity of the pipeline system, Noble Energy's risk analysis process shows modest participation or review by IM personnel and lacks a sufficient analytical evaluation that adequately measures risks for developing or modification of the BAP. (Refer to Attachment A for our Revised IMP Insert). Input data defaults were sometimes used because of a lack of information about the actual condition of the pipeline. Noble must take steps to collect data to minimize distortion in risk ranking and to identify the most important risk drivers for segments that can affect an HCA.

Response: Noble Energy has revised our Risk Analysis for the Main Pass 305 Pipeline System. A copy of our April 2007 Risk Analysis is enclosed and we direct your attention to Attachment C of that document. This risk analysis has been prepared in accordance with your inspector's recommendations to utilize the Pipeline Risk Management Manual (third edition) by W. Kent Muhlbauer.

DOT Notice of Amendment #4: Noble Energy must modify the process to ensure the appropriate assessment method is selected and the justification for that selection must be comprehensive and formally documented. (Refer to Attachment B for our revised IMP Insert). Noble Energy must have the ability to understand all the threats to each pipeline segment (e.g., susceptible to dents, has exhibited crack-like features in past). The relative importance of threats and their associated consequences that make up this risk profile must be understood to support effective decision-making regarding the overall management of pipeline integrity.

Response: Noble Energy has revised our Risk Analysis for the Main Pass 305 Pipeline System. A copy of our April 2007 Risk Analysis is enclosed and we direct your attention to Attachment C of that document. This risk analysis has been prepared in accordance with your inspector's recommendations to utilize the Pipeline Risk Management Manual (third edition) by W. Kent Muhlbauer.

If you have any questions, please contact Mr. Bob Bemis at (281) 872-3100.

Sincerely,

Mr. Bob Bemis

Attachment A

Integration of Risk Information

The integrity management rule requires that the operator must consider all information relevant to determining risk associated with pipeline operation that could affect HCAs. This means information regarding the likelihood that a pipeline leak or failure will occur, as well as information regarding the consequences to an HCA. A list of some of the more important information that Noble Energy will consider in an integrated manner is provided below.

- Results of previous integrity assessments, defect type and size that the assessment method can detect and defect growth rate;
- Pipe size, material, manufacturing information, coating type and condition, and seam type;
- Leak history, repair history and cathodic protection history;
- Product transported;
- Operating stress level;
- Existing or projected activities in the area;
- Local environmental factors that could affect the pipeline (e.g., corrosivity of soil, subsidence, climatic);
- Geo-technical hazards;
- Physical support of the segment such as by a cable suspension bridge;

Attachment B

Baseline Assessment Schedule

The Baseline Assessment Plan (BAP) uses a risk-based approach to prioritize pipeline segments identified in **SECTION 1.0** that could affect an HCA. Where a test section contains multiple HCA sections, the prescribed assessment method must be capable of addressing all threats identified for each HCA section. The Noble Energy risk model assigns relative ranking of risk factors associated with the likelihood of failure and the consequence of failure of a pipeline segment which are used for prioritizing the HCA segment assessment schedule in the BAP. Details of the risk assessment model are given in **APPENDIX A**. After the risk model is run, the Lead Operator and the Integrity Management Team will review the results for reasonableness. The review will primarily be a check of the reasonableness of the relative risk ranking of the segments in the IMP. Data will be re-verified if necessary. Each line segment that could affect HCAs is identified and sorted by descending total risk score. The schedule is then determined as follows:

- Is in descending order beginning with the highest risk first to lowest risk last to the extent practicable;
- Completes assessment of 50% of the line pipe mileage that could affect HCAs by August 16, 2005; and
- Completes all baseline assessments by February 17, 2009.

Noble Energy utilizes the integrity management team to develop Segment Rankings for the pipeline. Likelihood of Failure, Consequence of Failure and Results of failure are all part of the considerations when ranking the systems. The assessment schedule will be developed according to the risk rankings with the highest risk segments being addressed first.

The risk-based assessment schedule for the pipeline segments is provided in the following **TABLE 2.2**.

TABLE 2.2 – BASELINE ASSESSMENT PLAN (BAP)

Rank	Segment Name	Length HCA (miles)	% Completed	Method of Assessment	Projected Assessment Date
1	Main Pass 305	19	100	Hydro	June 11, 2010

Note: C – Clean, G – Geometric Tool, HR MFL – Hi Resolution Magnetic Flux Leakage Tool

ATTACHMENT C

Main Pass 305 Pipeline System – Risk Analysis (page 1)

THIRD PARTY DAMAGE			
Risk Factor	Weighting Factor	Risk Analysis Score	Remarks
Minimum Depth of Cover	0 – 20 points	7	Deeper than required as indicated in depth of burial survey
Activity Level	0 – 20 points	5	Class 1, low activity area
Aboveground Facilities	0 – 10 points	3	Signs, Area surrounded by fence
Line Locating (onshore only)	0 – 15 points	11	Meets requirements, maps and records available, appropriate reaction to calls
Public Education Programs	0 – 15 points	6	Newspaper Add, Liaison with public officials & excavation safety letters
Right-of-way Condition	0 – 5 points	3	ROW in excellent condition, signs are minimal
Patrol Frequency	0 – 15 points	4	Less than 4 times per month
OVERALL THIRD PARTY DAMAGE RISK (Possible 0 – 100 points)			**39 POINTS**

Main Pass 305 Pipeline System - Risk Analysis (page 2)

CORROSION THREAT

Corrosion Threat = (Atmospheric Corrosion 10%) + (Internal Corrosion 20%) + (Buried Metal corrosion 70%) = 100%

Risk Factor	Weighting Factor	Risk Analysis Score	Remarks
Atmospheric Corrosion	**10%**	**4**	
Atmospheric Exposure	0 - 5 points	0	Air / Water Interface
Atmospheric Type	0 - 2 points	2	High humidity, high temperature, marine, swamp, coastal
Atmospheric Coating	0 - 3 points	2	fair
Internal Corrosion	**20%**	**8**	
Product Corrosivity	0 - 10 points	3	mild
Preventions	0 - 10 points	5	No coupon monitoring, however chemicals injected
Subsurface Corrosion	**70%**	**48**	
Submerged pipe environment	0 - 20 points	10	
Cathodic protection	0 - 25 points	18	
Coating	0 - 25 points	20	
		OVERALL THREAT OF CORROSION	**60**

Main Pass 305 Pipeline System – Risk Analysis (page 1)

DESIGN RISK			
Risk Factor	Weighting Factor	Risk Analysis Score	Remarks
Safety Factor	0 – 35 points	7	1.106 safety factor as calculated
Fatigue	0 – 15 points	5	
Surge Potential	0 – 10 points	5	Low probability
Integrity Verifications	0 – 25 points	11	
Land Movements	0 - 15 points	5	Medium potential for significant soil movements – land slide area in MP 305
		OVERALL DESIGN RISK (Possible 0 – 100 points)	**33**

Main Pass 305 Pipeline System - Risk Analysis (page 2)

INCORRECT OPERATIONS			
Risk Factor	Weighting Factor	Risk Analysis Score	Remarks
Design	**30%**		
Hazard Identification	0 – 4 points	0	
MOP Potential	0 – 12 points	5	Failure could occur pending at least two levels of safety failure
Safety Systems	0 – 10 points	3	Remote, observations and control devices are in place and active
Material Selection	0 – 2 points	0	
Checks	0 - 2 points	2	
Construction	**20%**		
Inspection	0 – 10 points	2	
Materials	0 – 2 points	2	
Joining	0 – 2 points	2	
Backfill	0 – 2 points	0	
Handling	0 – 2 points	2	
Coating	0 – 2 points	2	
Operations	**35%**		
Procedures	0 – 7 points	2	
SCADA / Communications	0 – 3 points	3	
Drug Testing	0 – 2 points	1	
Safety Programs	0 – 2 points	2	
Surveys / Maps / Records	0 – 5 points	2	
Training	0 – 10 points	10	
Mechanical Error Preventors	0 – 6 points	5	Computer permissives, lock-out devices, highlighting of critical instruments
Maintenance	**15%**		
Documentation	0 – 2 points	2	
Schedule	0 – 3 points	3	
Procedures	0 – 10 points	7	
INCORRECT OPERATIONS RISK (Possible 0 – 100 points)			**57**