



Petróleos Mexicanos

**Methane to Markets Partnership
(M2M)**

PEMEX Working Plan, 2007

**Oil and Gas Industry Subcommittee Meeting
Aberdeen, May 1st., 2007**

Introduction

This presentation resumes the actions to continue the implementation of the Methane to Markets (M2M) initiative in Pemex during 2007, and reflects the discussions and agreements reached during the meetings held on February 15th., 2007 by PEMEX, PEP, PEMEX Gas, and US AID/Mexico in Villahermosa, México.



These activities follow up to those developed during 2006:

- **International technical workshop and meeting of the Oil and Gas Subcommittee in Villahermosa, México**
- **Preliminary analyses of methane emissions in PEMEX**
- **Base line measurements in the gas compressors of the Ciudad Pemex gas processing complex.**
- **Identification and quantification of fugitive emissions in the Cactus, Ciudad Pemex y Nuevo Pemex gas processing complexes.**



TASKS

Task 1: Measurement of methane emissions reductions due to the replacement of wet seals in gas compressors

Objective: To apply a consistent measurement approach to measure CH₄ emissions before and after the substitution of seals in three gas compressors of the Ciudad PEMEX GPC, to support the potential replication in 43 additional compressors in Pemex Gas
Proposed schedule: June 7-9
Implementation team: PEMEX Gas, PA Consulting, Heath Consultants

Task 2: Fugitive emissions measurements

Objective: To evaluate the elimination of CH₄ fugitive emissions in the devices where fugitive emissions were found in August, 2006 in the Ciudad PEMEX, Nuevo PEMEX y Cactus gas processing complexes, in order to quantify the reduction due to the suggested repairs.
Proposed schedule: June
Implementation team: PEMEX Gas, PA Consulting, Heath Consultants

TASKS ...

Task 3. Fugitive emissions in gas pipelines

Objective: To corroborate the results of a fugitive emissions survey made by the Pipelines Division of Pemex Gas to build a successful methane study case in Pemex.
Proposed schedule : June
Implementation team : PEMEX Gas, PA Consulting, Heath Consultants

Task 4: CH₄ vapors emissions in crude tanks and separation batteries

Objective: To quantify methane vapors emissions in crude storage tanks to install vapor recovery systems
Proposed schedule : June-July
Implementation team : PEP, PA Consulting, HyBon Engineering and/or Heath Consultants

TASKS...



Task 5: Pilot Project. Fugitive Emissions Evaluation in Gasoductos de Chihuahua, in the USA-México border.

Objective: To share experiences with Gasoductos de Chihuahua, a subsidiary of Pemex Gas, and El Paso Gas Company to reduce CH₄ fugitive emissions.

Proposed schedule : June – December

Implementation team : PEMEX, PEMEX Gas, Gasoductos de Chihuahua, PA Consulting, Heath Consultants

Task 6: PEMEX CH₄ emissions inventory

Objective: Improvement of the Pemex CH₄ emissions inventory based in the activities described in this program and on the analyses of additional available information.

Proposed schedule : Continuous support; up dated estimations in February, May and September

Implementation team : PEMEX Corporate Environmental Protection Department, PA Consulting

Task 7: Implementation of a Energy Efficiency Approach to Reduce CH4 Emissions

Objective: To demonstrate that the current diagnosis and analyses techniques are coincident with the CH4 emissions, and that through its integration it is possible to reach better results and a more efficient investment.

Proposed schedule : Starting in August
Implementation team : PEMEX Gas, PEP, PA Consulting, Clearstone Engineering.

Task 8: Fugitive Emissions Reduction Capacity Building in PEMEX Gas

Objective: To train a technical team in PEMEX Gas to keep Methane fugitive emissions at the lower level, and provide them with the procedures and equipment required to accomplish this duty. To disseminate this expertise in the rest of the Company.

Proposed schedule : July to December
Implementation team : PEMEX Gas, PA Consulting, consultants to be confirmed