GexCon
A company in the CMR Group

MINUTES OF MEETING

Meeting : **FLACS USER GROUP**

Venue : **Norsk Hydro ASA, Porsgrunn, Norway**

Date : **October 16th, 2002**

Prepared by : **Ole Jacob Taraldset**

Participants:

Chris Savvides	BP Amoco Ltd.
Simen R. Armond	Det Norske Veritas
Seshu Dharmavaram	Du Pont
Pierre Foisselon	Gaz de France
Ole Jacob Taraldset	GexCon AS
Olav R. Hansen	GexCon AS
Atle Gyllensten	Hydro ASA
Stian Høiset	Hydro ASA
Eirik Lunde	Hydro ASA
Olav Sæter	Hydro ASA
Kjetil Kristoffersen	HiT
Jan Terje Birkeland	Lilleaker
Øystein Palmgren	Lilleaker
Jean-Luc Revel	Rhodia
Anette Urheim	Safetec
Ingar Fossan	Scandpower
Thomas Magnussen	Statoil
Jens Kristian Holen	Statoil
Henri Tonda	TotalFinaElf

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Marcelo Santux	Det Norske Veritas
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Svein-Tore Sivertsen	TotalFinaElf
Martyn Ramsden	Amey Vectra
Gary Walker	Amey Vectra

1. Welcome
Olav Sæter (Hydro) welcomed to the meeting. IRSN apologized for not being able to attend.

2. Adoption of Agenda
One presentation by Kjetil Kristoffersen, HiT, was added to the agenda. The agenda was then adopted.

3. Minutes of previous meeting
Ole Jacob Taraldset went through the previous minutes of meeting. There were no comments.

4. Actions
- Finalize the FLACS guidance document or "best practice"-manual.
- Next FLACS update will be released February 1st, 2003.
- GexCon to present its strategy for future FLACS development on next FLUG meeting.
- Next FLUG meeting: May 8th, 2003 at GexCon's offices in Bergen, Norway.

5. Presentations by GexCon

5.1. Phase 3B, Olav R. Hansen
Olav R. Hansen gave a presentation about the Phase 3B project including tests and results.

5.2. Status FLACS development, Olav R. Hansen
Olav R. Hansen gave a presentation about the latest FLACS development.

6. CAVE demonstration
Seshu Dharmavaram, Du Pont, had brought with him a FLACS geometry of a on-shore plant. The FLUG group got the opportunity to see how the results from a ventilation simulation in this geometry looked in the Hydro CAVE.

7. Presentations by FLACS users

7.1. Kjetil Kristoffersen, HiT
Kjetil Kristoffersen, HiT, presented a study he had performed which included both experimental tests and FLACS simulations in a 21.5 mm pipe. He had performed FLACS simulations using both the SIF (Single Interface Flame) and ß flame models. Boundary conditions used were PLANE_WAVE and NOZZLE, and simulations with both 2mm and 4mm control volume size were performed. The SIF model produced twice the overpressure as seen in the experiments and the ß model showed a good coherence with the experimental results.

Comment, Olav Sæter: This is a known problem with the ß-model. SIF model burns twice as fast as ß-model and result in approximately twice as high overpressure.
Comments, Olav R. Hansen:
- When using PLANE_WAVE no flame must go through the boundary. Better to use NOZZLE and EULER.
- 1D (1 CV across tube) simulation will not work well for different reasons. Use minimum 6-8 CV across tube.
- Cooling effects are not well implemented in FLACS. This is important in small scale test like this. Radiation is possible in FLACS (use the cs.RAD file).

7.2. Olav Sæter, Hydro
Olav Sæter gave a short presentation about the background and goals of the Hydro CAVE project.

8. General discussion
There was a short discussion where the topic was future FLACS development. More features are wanted both core FLACS and CASD/Flowvis.

9. Election of new chairman
Jens Kristian Holen, Statoil, was elected as new chairman for the next two years.