Minutes of the Kick-off meeting

Project Nº ENK5-CT2002-80648
Tar Measurement Standard

Location: European Commission- DG Research, Brussels
Building: Square de Meeûs
Room 8.F
Time: 10.00-16.00 h

Present:

B. Coda	ECN
J. Kiel	ECN
M. Diujkhuis	NEN
H. v.d. Hoek	NEN
J. Neeft	Novem
G. De Jongh	CEN
M. Suomalainen	VTT
U. Zielke	DTI
T. Liliedhal	KTH
J. Good	Verenum
L. Thomas	EMC
H. Knoef	BTG
G. Buffinga	BTG

1. Opening / agenda
Jaap Kiel opens the meeting at 10.00 o'clock. A round-table introduction of all the participants is done. Beatrice Coda is introduced as official project co-ordinator.

2. General introduction of the project

ECN had asked the Commission to postpone the official commencement date from 1/12/02 to 1/2/03. Ms. Guiu, the Commission's Scientific Officer in charge of this project, whom ECN, NOVEM, NEN and VTT met for a short time on the 13/02/03, confirmed that a postponement is not possible, otherwise a contract amendment should be necessary at this early stage of the project. Ms. Guiu said it was anyway important to make the Commission aware of the postponement of the work. She also outlined that the Communication Flow must be directed through the Project Co-ordinator. It was also pointed out that this project is important for the Commission also to learn about CEN standardisation.
ECN gives a short introduction of the project in terms of project workplan, duration time, time schedule, work packages, deliverables and milestones. The most important deliverables are the finalisation of the CEN Standard at month 34, and the termination of the R&D activity required arriving at CEN standard in month 24. There are important questions which at the beginning of the project needs to be answered to streamline further activities, especially: 1) how to link R&D activities with standardisation; 2) how to link the work of the Technical Experts with the Working Group experts.

A general introduction in terms of financial issues is also presented. ECN has received the advance payment from the European Commission, and the payment to all the project partners is on going. In the future, it will be necessary for all the project partners to complete the cost statements as in the format of the contract to receive, through the project Co-ordinator, the periodic payment from the Commission.
A question was raised whether there are financial consequences if the standard is not reached. ECN will inquiry the Commission about it, also in view of the fact that there are different types of standard that can be delivered in the project.

To let representatives of CEN and NEN aware about the scientific content and the topic of this project, NOVEM gives a short introduction about the R&D results of the previous "Tar Guideline project". The focus of the presentation is on the measurement method and on the different types of gasifier where it is applicable.

3. CEN standardisation rules, procedures and Working Group

NEN gives a presentation of the CEN (see attached minutes). Under CEN, a Working Group (technically named 'Task Force") has been established to work at the topic "Oganic Contaminants –'tar'- in Biomass Products". The Resolution BT C52/2002 has been formally issued to create the BT/TF 143. A further resolution to add the specific work item(s) on the CEN Work Programme is still necessary and NEN will take action about that in the following period. The TF is opened to representatives of each country affiliated to CEN, and each representative (or each national committee, if there is more than 1 representative per country) has the right of vote. The Experts of the "Tar Measurement Standard project" will act as national representatives in the TF. Other external experts or people in the field will be contacted to know if they are interested to join the TF activities. For the Standard also a weighted vote procedure applies (Standard adopted when 71% or more of the weighted votes are positive).
CEN and NEN report that there are 2 other CEN TC (Technical Committee) that may have links with the current project: 'Solid Recovered Fuels"(CEN/TC 343) and "Solid Biofuels"(CEN/TC 335). It might well be that the contact person at each national standardisation institute for those TC will become involved in the TC 143.

There are different types of standard:
- TS (Technical Specification),
- TR (Technical Report)- not normative
- EN (European Standard) – highest degree of standard.

For each standard type a different procedure applies.
As far as the drafting process of standard concerns, CEN explains the following alternatives possible for our TF (presentation attached to the minutes):
- classical drafting procedure of the EN standard (about 24 months until CEN publication)
- unified acceptance procedure –UAP- of the EN standard (inquiry + formal voting at one stage- about 13 months after acceptance of the draft standard from the TS until CEN publication)
- Drafting procedure of a TS standard (about 9 months after acceptance of the draft standard from the TS until CEN publication- only formal voting required- no need for inquiry).

These timetables are very important to focus the TF work in order to reach the standard at the end of the project lifetime.

4. R&D work: Current Status (Results of the 'Tar Guideline' project), R&D requirements for optimisation and evaluation needed for the Standard (VTT)

VTT makes a detailed status of the R&D results of the Tar Guideline project, which will be used as a starting point to define the research activities of the current project (see attached minutes).
The most important achievements of the Guideline in terms of sampling and analysis were the following:
1) The choice of Isopropanol as solvent.
2) Best collection results achieved with high temperature gradients in the impinger bottles-frits – high temperature impingers.
3) The importance of the filter temperature
4) A standard deviation rate of 5% when measuring gravimetric tars was determined.
5) The tar concentration has an influence on the gravimetric tars determination.

The most important R&D issues as based on the recommendation for R&D in the short-term are the following:

- ▼ Cost evaluation of the new method should be carried out
- ▼ Determination of accuracy and reproducibility (especially at low tar concentrations 10 - 100 mg/m_3^n)
- ▼ Pressure drops over the particle filter and over the sampling train to check for blocking as a function of sampling flow rate
- ▼ Round Robin test (gravimetric analysis and GC-analysis)
- ▼ Parallel measurements

Presentation of each partner:

DTI
DTI has already made an accurate plan on how to perform the Round Robin test on the GC/Gravimetric tars analysis.[1] As far as synthetic samples concern, DTI will invite the laboratories, prepare the synthetic samples and control their stability, and send to all the partners; after that DTI will receive the GC analysis back, DTI will report according to ISO 5725. For real tar samples, VTT and DTI will procure 2 real samples, and then repeat the procedure described above, including also gravimetric tar analysis. DTI, together with VTT and eventually other partners will decide about the compounds to be analysed.
As far as the parallel testing concerns, DTI will organise the measurement at the Harboøre updraft gasifier next year. DTI would like to use the Peterson Column in the parallel testing, and invites KTH to use the SPA method. DTI has founding for the Round Robin, but not yet for the parallel testing.

BTG
In addition to the dissemination activities in which BTG is involved, BTG foresees the possibility of performing parallel testing for 1 week next year, although at the moment no budget is available. With this respect, it is envisaged that, BTG will look for national founding, possibly with other national parties.

[1] Copies of DTI 's presentation have been distributed at the KOM between the participants.

EMC
EMC has currently no capabilities or funding to perform R&D activities in the framework of this project. Their contribution seems at the moment limited in paper or study work, but they will also look for interest in the measurement method for other parties in the UK.
EMC (now Casella CRE group) has to clarify whether the contract needs to be amended due to status changes of the company.

NOVEM
NOVEM will be mainly involved in chairing the Task Force meetings.

ECN
ECN foresees to be involved in the main R&D topics of the projects: Round Robin tests, Comparison of the Guideline with other methods (SPA), and parallel testing. ECN can be involved in the first 2 activities this year with own funding, while it is foreseen to apply for national funding for the Parallel testing for next year

VTT
VTT states that it will be hardly possible to perform parallel testing at the Lahti gasifier; the Lathi gasifier is also fed with waste (not with biomass). Possibilities are foreseen to perform parallel testing at VTT test-scale gasifier or at the research facilities that are also available in Lahti.

KTH
KTH has other projects on-going where they will test SPA method. They will possibly compare SPA method with the Tar guideline method

Verenum
It seems difficult to get additional Swiss funding for the project. Possibilities to perform measurements according to the Guideline in a pilot-scale downdraft gasifier are foreseen. Also Verenum envisages performing measurements on both raw and clean gas, which are essential to test the guideline method at very low tar concentration

Discussion on the R&D
A first discussion on the R&D activities of the projects has been initiated between ECN, NOVEM, and VTT in a preliminary meeting, which took place the previous day. The R&D activities have been preliminarily divided in 2 groups as it follows:

1) R&D required to get to the standard;
2) R&D desired/interesting.

A first table is shown to the partners for discussion. The table after discussion is finalised and it is attached to the minutes. This table is considered the starting point for partners to develop in details their own R&D workplan that needs to be finalised soon under the supervision of VTT/DTI. It is agreed that the Round Robin tests will start soon, the aim being to achieve a discussion on that already at the next project meeting.

Detailed planning of activities
A preliminary timetable prepared by ECN is shown indicating possible periods for Technical Experts meetings and Task Force meetings (see attached timetable). At the moment, a possible submission of the draft standard for voting is foreseen to occur at the 18th month of

the project. The R&D work has also to be finalised in the 24th month of the project. Being aware of the numerous procedural steps of for an EN standard, it seems at the moment hardly possible to go for a classical drafting procedure of the EN Standard. More realistic options to arrive at a Standard before the completion of the project are either issuing an EN standard by a UAP or issuing a TS. It was agreed between the project participants, that a decision about which procedural way to follow for the standardisation would be taken in a later stage of the project (most likely during the next Technical Experts meeting, meaning 1st TF meeting). In a time period of 4 months it is possible to issue the formal call for participation at the BT/TF 143 and have the first formal BT/TF 143 meeting.
It is agreed that next project meeting (TE meeting) and 1st formal TF 143 meeting will be held in Helsinki, on the 12th-13th June 2003. One possibility will be to hold a Technical Expert meeting/Working Group meeting in Rome, May 2004, in coincidence with the 2nd World Biomass Conference.

List of action points

- Finalise the list of the experts and national representatives to be contacted to join the Working Group (**NOVEM, ECN, other partners**) –2 weeks
- Issue formal call for participation at the CEN-Working Group (**NEN**)- asap
- Write to experts and national Representatives to answer to the call for participation (**ECN**, **NOVEM**) -1 month
- Comparison of different templates for the Standard (**ECN**) - asap
- Preparation of the 1st Version of the Draft Standard/Technical report (**NOVEM**)- 3 months
- Preparation of a plan for Round Robin tests with synthetic compounds and real samples (**VTT, DTI**)
- Evaluation of single R&D activities plan (**each partner**)- 1 month time
- Definition and finalisation of an overall R&D project plan (**VTT, DTI, ECN keeps track**)- 2 months
- Send the final report of the Tar Guideline project to all the project participants (**ECN**)- asap
- Minutes of the project KOM to all partners (**ECN**)- 2 weeks
- Put the resolution for the voting on the CEN Working Program (**NEN**)- to be done at a later stage

Other Deliverables of the project for the next period

Month 4 (march 2003)

Input to and discussion on the BioEnergy and the Gasification mailing list (**ECN**)

Month 6- (june 2003)

- Minutes of National Meeting (**NEN**)
- Minutes of First Working Group Meeting (**NEN**)
- Updated inventory of R&D requirements for optimisation & evaluation of the draft Standard (**VTT**).
- A Web Site presenting the draft Standard and the "Updated inventory of R&D requirements" (**BTG**)

Further issues

It is agreed that the R&D plan, once it is finalised, will be circulated among other R&D parties, which have shown in the past and still may have interest in the tar measurement topic. External parties are welcomed to participate if they have, of course, budget available for that. Especially the parallel testing is of great interest.

It is also agreed to contact Steve Deutch, from US DOE, to let him aware of the follow-up project of the Tar Guideline and of the current Standardisation work. He could also be included as an external observer of the BT/TF 143, if he has interest and funding possibilities. A possible option could be to go also for an ISO standard, but this needs to be carefully checked later on in the future.