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INDC International Nuclear Data Committee

Summary Report of Consultants' Meeting

IAEA International Database on Irradiated Nuclear Graphite Properties

10th Meeting of the Technical Steering Committee

IAEA Headquarters, Vienna, Austria
26–27 March 2008

Prepared by

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June 2008

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Prepared by

D. Humbert and A.J. Wickham

Abstract

The 10th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties was held on 26–27 March 2008 at the IAEA Headquarters, Vienna, Austria. All discussions, recommendations and actions of this Consultants' Meeting are recorded in this report. The purposes of the meeting were to review the matters and actions identified in the previous meeting, undertake a review of the current status of the database, and make recommendations for action over the next year. This report contains the status of the identified actions as well as a summary of the recommendations on enhancements to the database.

June 2008

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10th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties

26–27 March 2008, IAEA Headquarters, Vienna, Austria

Present

Mr. A.J. Wickham, United Kingdom *(Chairman)*
Mr. D. Humbert, IAEA *(Scientific Secretary)*

Other Members:

Mr. T.D. Burchell (United States of America)
Mr. E.S. Kim (Republic of Korea)
Mr. G. Haag (Germany)
Mr. J.A. Vreeling (The Netherlands)
Mr. R.E.H. Clark (IAEA)
Mr. A.L. Nichols (IAEA (*part-time*))

Observer:

Mr. P. Homerin, Graftech International Inc (France)
Mr. F. Gerstgrasser, SGL Carbon Ltd (Germany)
Mr. M. Mitchell, PBMR Co. (Pty) Ltd (South Africa)
Mr. N. McLachlan, British Energy Ltd (United Kingdom)
Mr. A. Rao (IAEA *(part-time)*)
Mr. B. Tyobeka (IAEA *(part-time)*)
Mr. J. Kupitz (IAEA *(part-time)*)

Apologies for Absence:

Mr. T. Shibata, JAEA (Japan)
Mr. T. Konishi, Toyo Tanso Co. Ltd (Japan)
Mr. A. Smaizys, Lithuanian Energy Institute (Lithuania)
Mr. M. Mitchell, PBMR (Pty) Ltd (South Africa)

Welcome and Opening Remarks

Participants were welcomed to the IAEA by Mr. Nichols on behalf of the Nuclear Data Section. He spoke about the obvious progress which had been made on the project and of the value of this work to the nuclear graphite community. He spoke about the relationship between the Gen-IV community and the Agency, and the risks to knowledge management which could result from uncoordinated parallel activities in the context of HTR design development. Currently, IAEA access to Gen-IV data is limited. The 'Gen-IV club' would possibly have a separate database for a number of years because of issues of IPR, but the two systems could later be 'wired together'. It was noted that a parallel situation also existed with EU-funded projects, such as the INNOGRAPH graphite irradiations in Petten under FP6. He spoke also about the International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) within IAEA, and the importance of coordinating our activities with that programme.

The Chairman welcomed delegates and observers, inviting the latter to take a full role in the meeting. He commented that the Database would again increase greatly in size with the issue of the next DVD, a move from CD-ROM being necessary because of the size of the files generated from the scanning of complete reports. He noted that Phase 1 of the project was due to be completed in 15 months time, and that this programme was broadly on schedule.

He drew member's attention to the special nature of an item on the Agenda for the second day, namely a presentation to Mr. Bismark Tyobeka, who had newly joined the Division of Nuclear Power, concerning the importance of the delayed CRP on Graphite Irradiation Creep, which had been recommended to the Agency at the TWGGCR held in January 2007. This was a topic of importance both to the AGR operators in the United Kingdom and also to the designers of new HTR plant, especially those in Gen-V, and was also of direct importance to the interpretation of a range of data from the Database.

Finally he thanked IAEA representatives, together with Mr. K. Sheikh, for the efficient arrangements for the meeting.

Minutes and Actions

The Chairman moved the adoption of the Agenda for the meeting and this was carried *nem con*.

The Minutes of the previous Committee Meeting (March 2007, IAEA Vienna), published as INDC-(NDS)-0509, were accepted without amendment.

Actions from the previous meeting were then reviewed:

1. INET had not responded to the request for advice on the status of data from their irradiations in a Russian research reactor, which had been promised to the Database. *Note added subsequent to meeting: a direct request made by colleagues of the Chairman during a visit to Tsinghua University in April 2008 led to an apparently negative response.*

2. The updated version of the Quality Assurance document INDC(NDS)-0500 was tabled as an Agenda item.

3. Data categorisation had been completed with the exception of three USA items which were addressed during the meeting.

4. The 2008 CD-ROM had been issued in June 2007.

5. Following an initial discussion with Mr. Drace, a further discussion of a possible decommissioning database will take place during 2008.

6. AREVA had not wished to participate in INGSM-9 (9^{th} International Nuclear Graphite Specialists Meeting).

7. The proposals for INGSM-9 had reduced to only one which was tabled in this meeting.

Review of National Database Users' Meetings and Interests

The Chair asked Members to describe how the Database was utilised in their respective countries. Usage was increasing, with multiple users in the UK and USA. Mr. Homerin, for Graftech, said that he was happy with the present format. Mr. Gerstgrasser, for SGL Carbon, pointed to some inconsistencies in format such as the rendering of both 'H451' and H-451' and 'ATR2E' and 'ATR-2E' as graphite types which could hinder future searches. It was agreed that such issues would be re-visited either before the issue of the *final* version of the Database at the conclusion of Phase 1 or as an essential part of Phase 2 (**Action: Mr. Haag**).

Review of Progress on Project Plan

A review of the Project plan as appended to the previous Minutes showed progress to be broadly on schedule. Extensive data ex-Petten had been assembled in a preliminary Excel file to permit QA cross-checks. These data will be included in the next DVD issue and Mr. Humbert offered to assist with an electronic conversion to combine them with the existing file (**Action: Mr. Humbert**).

Mr. Wickham reminded Mr. Haag that the British data ex-'Magnox' reactors remained 'Restricted' and must not be accessible from an unprotected file. This means that two files are needed in the forthcoming DVD: a full compilation of data protected by a password, and a second file which excludes these data (and a limited quantity of Japanese data), which need not be password-protected. The use of a DVD will allow this separation with no difficulty. Because the British data were largely derived from operational reactors, results tended to be reported against mean core irradiation data rather than local fast-neutron doses, which had hindered their incorporation. Re-conversion of dose-rate units was not a trivial task as this process depended on access to detailed unit-cell dose distributions which themselves were probably best regarded as estimates, and access to the relevant formulae was not necessarily a simple issue either. It was agreed that the final output intended for the Database from the Magnox sources would be reviewed by Mr. Wickham, whilst that from AGRs would be reviewed by Mr. McLachlan (**Actions: Mr. Wickham, Mr. McLachlan**).

Good progress had also been made with US and German data. Additional US data had come to light which was not presently included in Phase 1 planning, together with some additional German data. In order not to compromise the planned conclusion of Phase 1, these items would be carried forward to 'Phase 2'.

Funding Requirements

Delays by the Agency in issuing contracts on data input had unfortunately occurred because promised sponsorship payments were late. It was noted that the Agency was actively pursuing this problem. Members were asked to note that any continuing delays with the expected sponsorship income would result in a delay to the completion of Phase 1. The Chairman also commented upon the poor state of the US Dollar, noting that the principal contracts on which the funds were utilised were in a Euro state. The promised contributions were now, effectively, worth considerably less than had been anticipated.

QA Issues

Mr. Haag described the application of Quality Assurance which he and his colleagues had followed in compiling the new data. This met with approval from the meeting. Mr. Wickham then presented the amended version of INDC(NDS)-0500, which incorporate practical changes encountered during initial application and also removed some duplication between the procedures to be utilised by the Data in-putter and the subsequent proscribed actions of the technical committee. Mr. Wickham had also checked to ensure that the procedures were compliant with the requirements of the Gen-IV Quality Management Guidelines, to further smooth the process of utilising each other's Databases in due time.

The revised report was accepted[1].

Status of Amendments in Published Files

There was significant discussion on the apparent inconsistency in introducing deliberate amendments to data in the existing data files. The data-input QA procedures frequently identify data which are clearly mis-printed, and graphical presentations derived from the Excel files can show isolated data points which are clearly highly ambiguous. In such cases, Mr. Haag has identified such points with a 'comment' in the data cell, and where the error is obvious has changed the data to the 'correct' value when this is clear (*e.g.* power of ten, displaced decimal point, etc.). In some cases, the 'true' figure is not always unambiguously obvious, and in these cases the decision on whether to change or not to change the entry has not been consistent.

It was pointed out that users may extract data without consulting the 'comments'. Mr. McLachlan asked whether it would be possible to issue a version of the Database with *no* corrections, leaving the responsibility for amendment with the user. Others saw this as an inappropriate solution where corrections were obviously in order, although there was concern from Mr. Gerstgrasser and others about the 'hybrid' nature of the present files, where changes were made on the basis of a decision on technical merit made by Mr. Haag: some dubious numbers were altered (and commented), others were left unaltered but also commented upon.

Members agreed to reflect upon the philosophy which was most appropriate and the issue would be raised at the 2009 TCM before being incorporated as part of a general 'clean-up' of the data files. (**Action: Mr. Wickham** to remind Members of the need to reach a view ahead of the next meeting).

QA Grading of 2007 Reports

The meeting consider the QA 'grading' of the reports added to the 2007 Database after first addressing the 'missing' three items from the 2006 input. The use of the 'data string' proposed in the revised report was agreed as a good practical methodology of identifying data QA in the Database, requiring only an additional column. As it would be extremely cumbersome to include a list of the names of the committee members involved in grading decisions at every data line, it

[1] In the copies prepared for the meeting, and subsequently used for QA work during this meeting, a tabulation error had been introduced by the 'Word' program auto-formatting. This affected the 'data string' choices at Item 6 'Nature of Reporting and Quality Assurance'. Consequently the decisions made during the meeting have been amended to ensure that they are compliant with the *corrected* version of the Table in INDC(NDS)0500.

was agreed that the inclusion of the Minutes at which such decision were made would be the acceptable methodology[2].

The following decisions were reached:

1. US reports held over from 2006 list: 1b2b3a4a5b6b7a8a9b
2. UK Magnox data reports: 1b2d3d4e5b6b7b8a9c
3. UK AEA RS 519: 1b2b3d4d5b6b7b8a9b
4. UK AGR reports: 1b2b3d4d5b6b7b8a9c
5. German data on ATR-2E: 1b2b3c4a5a6b7a8a9b
6. German data on ASR-1R: 1b2b3c4a5a6f7a8a9b

Decisions on the data added to the 2007 CD will be taken at the 2009 TCM.

It was agreed that there were no issues to be raised under the standing item on data security.

Special Item on Graphite Irradiation Creep

For this item, the meeting was joined by Mr. Rao, Mr. Tyobeka and (later) by Mr. Kupitz, all from the Division of Nuclear Power. The Chairman introduced the item by explaining the importance of irradiation creep in general terms, and gave his own account of the TWGGCR and his interpretation of what the TWG had recommended in this regard. Mr. Burchell them explained the history prior to the January 2007 TWGGCR: there had been a consultancy which he chaired in November 2006 involving numerous experts, at which the proposal for a CRP had been formulated.

Mr. Rao accepted that the performance of the Agency in responding to requests about progress had not been exemplary. There had been a delay in filling the post vacated by Mr. Methnani of over one year, and Mr. Tyobeka had recently joined the Division but clearly had not had the opportunity to understand fully the priorities suggested by the creep specialists.

A formal decision on prioritising CRPs alongside available funding had not been made because it was very clear that there would be a considerable shortfall if an extension to an existing CRP was allowed to go ahead, and there was a strong argument for this particular extension occurring clearly, the Division of Nuclear Power did not have an immediate view on the relative importance of the projects competing for funding.

Mr. McLachlan gave a short presentation on the importance of creep to the UK AGR operators, explaining the very large potential impact of failing to understand creep processes correctly on the ability to construct operational safety cases for graphite component performance. Mr. Burchell then amplified his initial remarks in the context of Gen-IV and general HTR development programmes, indicating the issues which were relevant to the HTR. Mr. Tyobeka enquired whether there were also creep issues with PBMR fuel elements.

[2] In order for this to happen, there may be a delay in the issue of the 2008 DVD whilst the formal issue of Minutes by IAEA is awaited.

Mr. McLachlan confirmed that British Energy (UK) had invested GBP 30M on graphite work over the past three years to support their programme of AGR operations, and stated that they intended to embark upon a creep experiment designed to assist their own interests, with irradiations to start in 2009. Mr. Burchell indicated that USD 5M had already been committed to design a creep experiment for the Idaho Falls test reactor. These figures give a strong indication of the importance of this topic to graphite reactor operators and designers.

Mr. Haag contributed advice about the very different irradiation conditions which existed in the AGR and HTR cases, stressing the urgent need to 'bridge this gap' with understanding, examining models currently applied in each circumstance and thus 'unravelling' the mechanism of the process in order that operational conditions and design parameters could be derived appropriately. The inclusion of all world experts in this field was crucial in reaching an agreed position, and this emphasised the crucial role of the proposed CRP.

The potential participants were listed: USDOE/INL/ORNL for the US, British Energy for the UK, Kurchatov Institute for Russia, INET for China, JAEA in Japan, KAERI in Republic of Korea, NRG in the Netherlands, PBMR (Pty) Ltd for South Africa, and CEA (France). Mr. Burchell was asked to confirm those interested to the IAEA (**Action: Mr. Burchell**).

Mr. Rao explained the process that needed to be undertaken in order to obtain approval for a new CRP, assuming that the Division was in a position to support the proposal. Documentation would need to be in place by 30th April 2008, including 5 formal agreements from potential participants, a deadline which appeared impossibly close. Further discussions between Mr. Tyobeka and Mr. Burchell took place outside the formal meeting, at which it appeared possible that progress could be made if one or more of the key organisations was willing to contribute funding to the Agency. Both Mr. Burchell and Mr. McLachlan agreed to investigate this possibility within their own organisations (**Actions: Mr. Burchell, Mr. McLachlan**).

The issue of the availability of new creep data for the Database would initially be dependent upon the nature of IPR agreements reached between participants.

Phase 2: Structure of Programme and Materials Data

The Chairman commented that, if Phase 2 of this project was to be considered viable, there needed to be a clear purpose for implementation. This could take the form both of widening the scope of the Database, and of utilising the data in collaborative research activities. Accordingly, the meeting reviewed the candidate materials:

1. Matrix Material. There are already existing irradiation data, and more can be expected, particularly as the PBMR project progresses. The question of whether such material such be in a separate database or within the existing database was raised, a question which largely went unresolved.

2. Highly Oriented Pyrolytic Graphite (HOPG) as a model for single-crystal graphite behaviour.

3. Composites. Numerous TECDOCs, CRP reports etc. already exist, covering work largely from fusion research although it is also relevant to HTR design. The question was asked about whether it is worth re-cataloguing such information.

After a lengthy discussion, the following initial proposals were tabled for Phase 2 of the project, to be further discussed at the 2009 TCM, prioritised and costed, and then presented to potential financial and technical sponsors. The Chairman commented that it did not immediately follow that the participating Member States, nor potential financial sponsors, would be the same as now, and that a well-argued technical case for the work would need to come out of the 2009 TCM;

1. Matrix Material. This is considered by the committee to be a natural progression from considerations of the irradiation of structural material, and it was agreed that the information should enter the *existing* Database. The potential users can clearly be identified. It is important to capture the historical material from Dragon, from the German AVR/THTR programmes, and from the USA (Peach Bottom). It was considered that new Japanese data must already exist, with the potential to obtain new information from PBMR and possibly INET. A realistic timescale (from commencement of Phase 2) to identify, acquire and incorporate information into the Database would be three years. Mr. Haag stated that the German information was already identifiable. **Action: Mr. Burchell** to identify sources and the extent of information within the USA.

2. Composites. It was agreed that this new area should go into a *different* Database file. The meeting identified possible sources, including ITER, German sources, AREVA, Westinghouse, Siemens and Japan. Potential users include the HTR designers and operators, plus the UK (fusion teams, and maybe replacement components for life extension of fission plant). A useful contact at FZJ (Germany) could be Mr. Bolt. Mr. Burchell said that the US programme within Gen-IV may involve work in this area. **Action: Mr. Burchell** to identify potential information sources from ITER and elsewhere.

3. Additional Data not so far incorporated into the existing Database under the Phase 1 plan (for example the US data already mentioned, and some additional German data).

4. Decommissioning Data. This subject has been debated extensively within the committee, without resolution. **Action: Mr. Wickham** to have further discussion with Mr. Drace at IAEA[3].

5. Archiving of General Documents.

6. Thorough review and 'Clean-Up' of Existing Data Files (the 'H451' *versus* 'H-451' issue, for example, and the question of altered numbers on the basis of obvious reprographic errors in reports and the incorporation of 'comments' within the relevant Excel files).

7. Creation of a paper document library or archive (a proposal of Mr. Haag).

8. Revisit of some troublesome files from version 1.3 which have, for now, been excluded.

Action: All Members to review this list well ahead of the next meeting.

[3] A further discussion with Mr. Drace has taken place subsequent to the Committee Meeting. A potential initiative on graphite radwaste disposal is emerging, which will be further discussed between the Chairman and Mr. Drace in July 2008 after which progress will be reported to committee members for discussion at the 2009 meeting.

The Chairman commented that, in addition to changes in Membership for Phase 2, a revision of the Working Arrangement may be required. Mr. Clark advised that it was desirable to arrange affairs nonetheless so that the Phase 2 work came under the umbrella of the original project, in order to avoid having to make a completely new proposal to the IAEA.

As part of the 'Phase 2' discussions, the question of the deferred 'relational searchable database' was raised. It was still felt to be unnecessary by most of the specialists present. Mr. Gerstgrasser felt that one big Excel file was not the perfect solution. It was agreed that, following previous experience with so-called IT specialists, it would be a project which would have to be dealt with externally by recognised specialists, and no funding for this study was presently (or likely) to be available. Mr. Homerin concurred that the correct priority had been to prevent loss of data, and this had been achieved.

INGSM Meetings

In Mr. Mitchell's absence, the Chairman formally recorded the successful INGSM-8 meeting at Bakubung Lodge in South Africa. Although greatly enjoyed, it was thought that the technical programme had been too rushed and that more discussion time was essential in the future. The Chairman commented that themed discussions, which had been introduced at a recent decommissioning meeting held in association with IAEA in Manchester, UK, had proven very successful. The promised CD-ROM of presentations was still awaited.

Mr. Vreeling described the status of INGSM-9, to be held at Hotel Zuiderduin, Egmond Aan Zee, the Netherlands from 15 to 17 September 2008. Arrangements were well in hand for this meeting, and a dedicated web page is available at www.ingsm-9.nl

Mr. Burchell introduced a proposal for the 2009 meeting, INGSM-10. Chaired by Mr. Winds of INL, the meeting would be based either at Idaho Falls or Jackson Hole in the USA, on dates to be decided in September 2009. The meeting would be coordinated with meetings of the Gen-IV group and the ASME graphite-standards team. The TCM accepted this offer to host the meeting.

Database Website

Mr. Humbert stated that the website had received 6,624 hits in the past year. This had resulted in one known enquiry to the Chairman about additional sponsorship, which had not in fact materialised. Mr. Humbert asked for proposals for updating the site (www-amdis.iaea.org/graphite) **Action: All Members**

Dates of Next Meeting

The next meeting (final meeting on Phase 1) will take place on March 25, 26 March 2009 at the IAEA, Vienna.

The updated timeline diagram with all agreed targets for inputs and milestones is shown in the ***Appendix***.

Actions from 10th Meeting

1. **Mr. Haag:** to remove inconsistencies in nomenclature etc. from the Database Excel files either at the conclusion of Phase 1 or the start of Phase 2.

2. **Mr. Humbert**: to assist Mr. Haag with electronic file conversion and amalgation for the Petten data.

3. **Mr. Wickham**: to review the recent input data for Magnox reactors.

4. **Mr. McLachlan**: to review the recently input data for AGRs.

5. **Mr. Burchell**: to identify the potential participants in the proposed creep CRP to Mr. Tyobeka.

6. **Mr. Burchell**: to investigate funding possibilities from the USA for the creep CRP.

7. **Mr. McLachlan**: to investigate funding possibilities from the UK for the creep CRP.

8. **Mr. Burchell**: to investigate data sources on matrix material within the USA.

9. **Mr. Burchell**: to investigate data sources on composites.

10. **Mr. Wickham**: to discuss a possible decommissioning database with Mr. Drace.

11. **All**: review the potential activities in Phase 2.

12. **All**: to review the Database website and advise Mr. Humbert of appropriate changes.

Appendix A

IAEA Consultants' Meeting: 10th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties

26–27 March 2008, Building-A, Floor-07 and Room-42 (A07-42), IAEA Headquarters, Vienna, Austria

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Appendix B

IAEA Consultants' Meeting: 10th Meeting of the Technical Steering Committee for the International Database on Irradiated Nuclear Graphite Properties

26–27 March 2008, Building-A, Floor-07 and Room-42 (A07-42), IAEA Headquarters, Vienna, Austria

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AGENDA

Wednesday March 26th 2008

0900h Welcome *(IAEA, Chairman)*

Welcome to Sponsors' Representatives and Guests

Adoption of the Agenda

Chairman's Remarks

Apologies for Absence

Minutes of the Previous Meeting *(March 2007)*: INDC(NDS)-0509

Matters Arising *(which are not covered elsewhere in the Agenda)*

Review of National Database Users Meetings *(or Report on National Activities by National Liaison Officers if no national meeting has taken place)*

Coffee Break

Review of Project Plan As Amended at March 2007 Meeting

Funding Requirements (Outline of Position without declaration of specific financial data) *(Mr. Humbert)*

Presentation on Progress of Data Input during the past year [Module 3] (*Mr. Haag*)

Report on Application of QA Process to Data Input *(Mr. Haag)*: (INDC(NDS)-500)

1230h *Lunch Break*

1330h Review of Revisions to "Quality Assurance for the IAEA International Database on Irradiated Nuclear Graphite Properties" (INDC(NDS)-500) based upon user experience and the proposed alignment with GenIV Quality Management Guidelines (from GIF/QMS/2007) *(Mr. Wickham)*

Coffee Break

Application of Agreed QA Procedures to Data Inputted to 2007 Database Issue *(all)*

Best Procedure for Recording of QA Evaluations *(options appear to be within the spreadsheet, as textual information, and as a data string as employed out-of-committee following the last meeting)*

Review of Data Security *(standing item)*

~1700h *End of First Day*

1915h *Social Event: Blunzenstricker (details from Mr. Wickham)*

Thursday March 27th 2008

0900h *(or such time as is convenient on either day for Mr. Tyobeka)*

Mr. Bismakr Tyobeka (Division of Nuclear Power) invited to attend meeting to discuss the urgency associated with commencing the Collaborative Research Programme on Irradiation Creep in Graphite which was agreed at TWGGCR in January 2007

Discussion on the importance of creep and related data to current Member-State Issues (new designs *[e.g. PBMR]*, UK AGR continued operation, etc.)

- review of database content and potential additions to facilitate the resolution of these issues;
- focussing Database input to the needs of the current Users;
- alignment of Database work to the CRP activities

(expected contributors: Mr. Burchell, Mr. Haag, Mr. McLachlan, others?)

Coffee break (taken as appropriate)

Data review continues: focussing the content to current issues

Matrix Material Data Availability and Requirements *(Mr. Mitchell, others)*

Review of Remaining Planned Module and Consideration of Amendments (if any)

Issue of Next Database (Excel file format, DVD) *(planned issue date June 2008)*

Agree content

Extent of available hyper-linking of source reports

Mechanism for production of DVDs, and preferred format

Version 3 Project (Relational Search Functionality Development): Proposals for Development *(this is currently regarded as a peripheral issue by the Committee, but observers may like to contribute)*

1230h *Lunch Break*

1330h Phase 2 of the Database Project: Proposals for work post-2009 *(all)* (including additional data not in original Phase 1 plan – *e.g. German data – Mr. Haag)*

ASTM Graphite Standards Progress and Its Implications for the IAEA Graphite Database Project – update on the year *(Mr. Burchell)*

Impact upon IAEA Graphite Database of International Collaboration on Nuclear Graphite Research (*e.g.* Materials and Components Project Management Board of Generation IV International Forum, etc.) – update since March 2007 *(contributions from all Members invited)*

INGSM-8 Report *(Mr. Mitchell)*

INGSM-9 (the Netherlands, September 2008: *Mr. Van der Laan*)

INGSM-10 (2009) – to consider any proposals

Coffee Break

Other Future Activities not presently in the Project Plan *(if any)*

Proposal for Nuclear Graphite Library *(Mr Haag)*

Update Database Website *(Mr. Humbert)*

Any Other Business *(prior notification to the Chairman would be appreciated)*

Dates for Next Committee Meeting

~1630h *(Close of Open Meeting, Observers take their leave)*

<u>Closed Session</u> (Members Only)

Review of Financial Position

Any Other Administrative Matters

<u>Estimated Close 1700h</u>

Appendix C

Updated Timeline for Completion of IAEA Graphite Database Project, Phase 1 (2008-2009)

Date	**Phase 1 Module 3 Data Input**	**Phase 1 Module 4 Data Input**	**Phase 1 Module 5 Data Input**	**Phase 2 Proposal for Data Input**
March 2008			Residual Phase 1 data as indicated in Minutes	Consider options as listed in Minutes:
April 2008				
May 2008				
June 2008		Issue DVD – (Excel)		
July 2008				
Aug 2008				
Sept 2008				
Oct 2008				
Nov 2008				
Dec 2008			TO BE COMPLETED	
Jan 2009				
Feb 2009				
March 2009				
April 2009				
May 2009				
June 2009			Issue CD – (Excel)	
July 2009				Potential commencement of Phase 2

	Colour indicates Steering Committee Meeting Scheduled
	Colour indicates interim position to be achieved by date
	Colour indicates milestone to be achieved by date

All timelines and milestones subject to annual review by the Technical Steering Committee.

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