

COMMISSION OF THE EUROPEAN COMMUNITIES

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RETRIEVAL AND EVALUATION OF DATA ARISING
FROM THE DRAGON PROJECT WORK, CONTINUATION
OF THE HIGH TEMPERATURE METALS (PRIMARY
CIRCUIT) WORK

(Proposals from the Commission to the Council)

1. Introduction

The Commission had proposed to the Council the extension of the Dragon Agreement for 5 years, i.e. from 1/4/76 to 31/3/81. Relevant documents are :

- COM (75) 221, final
- COM (75) 344, final
- COM (75) 471, final.

Despite various proposals for compromise by the Commission and several delegations, it has not been possible to reach a positive decision and the Project, for which a pre-liquidation process had started in September 75, was put on a final termination course on 16th December, 1975. The events leading up to the termination action are explained in some more detail in the following paragraph.

2. The lead-up to termination action

The 49th Dragon Board of Management meeting, held on 5th December 1975, was coincidental with a meeting of the Committee of Permanent Representatives (COREPER). It was at that time hoped that the question of the future of the Dragon Project could be resolved at the Ambassadors' meeting so that the Board of Management could be advised of the outcome that same day. No such advice having been received by the end of the Board's business, the Board gave instructions to the Project to proceed on the already planned and partly begun terminal course if there were no positive indications by the COREPER meeting later that day in favour of an extension.

It has to be noted that by 5th December 1975 five of the remaining nine months of terminal year 1975/76 had elapsed since the 30th June 1975, deadline set by the Dragon Agreement. Viability had been preserved at a cost to the third year objectives of the original 1973/76 programme. One of the sacrifices was much of the time and funds which should have been applied to an orderly and reasonably productive run-down programme.

By 5th December 1975 the time for terminal pre-planning in any depth was also being eroded. This became further eroded by another pause of ten days pending a further opportunity on 15th December 1975 for the Council of Ministers for Research to consider whether some form of extension

could yet be agreed. Despite indications that the Council of Minister of 15th December 1975 was to discuss the Dragon Project question, no such discussion took place and the consequences was that on 16th December the Project's liquidation procedures were irrevocably confirmed. This included a massive and rapid staff run-down.

3. Development of the situation during the second half of December 1975

The situation as it appeared on 16th December 1975 was extremely serious. A number of interested organisations, amongst which the Centre of KFA, Jülich, the US Energy Research and Development Agency (ERDA), General Atomic Company, several Dragon contractors and, of course, the Commission, held a series of consultations and meetings between 16th and 24th December in order to salvage as much as possible of the acquired know how.

The outcome of these consultations was that financial resources were quickly and effectively put at the disposal of the Project in order:

- a) to continue the high temperature metals programme until 31st of March, 1976
- b) to perform a limited data retrieval and evaluation programme.

The assignment of these funds was made according to the provisions contained at par. G of Annex A of the Dragon Agreement*.

As a consequence of these developments the Project has been able to request and obtain the re-secondment of some of the staff already in the process of departing, and to resume payments to certain contractors who had continued work despite suspension of payments during the preceding three months. A total of approx. 35-40 professional staff can therefore be supported until 31st March 1976. Similarly the contracts with Central Institute for Industrial Research (CIIR) Oslo and with FIAT, Turin, can be continued until the same date. The events leading to the arrangements for continuation of the high temperature metals programme and to the initiation of the data retrieval and evaluation programme are described in the following par. 3.1 and 3.2 respectively. Paragraph 3.3 deals with the situation of the Dragon reactor.

* Par.G of Annex A of the Dragon Agreement reads :
" Providing on terms to be agreed by the Board of Management, consultancy
" and other technical services to organizations promoting the high
" temperature reactor.

3.1. Discussions and actions on continuation of the high temperature (primary circuit) metals programme.

On 17th December 1975 a meeting of representatives of the Project, KFA Jülich, ERDA, CIIR Oslo, Fiat Turin and Commission took place at KFA Jülich. Agreement was reached in principle to finance the continuation of the metals programme from 1/1/76 until 31/3/76. This included both the continuation of the contractual work and of the activities of the coordinating team at Winfrith at present strength. The total cost of the programme (up to 31/3/76) was evaluated at £ 82,000 and this was shared as follows :

KFA Jülich	£ 50,000
ERDA/General Atomic	£ 22,000
Joint Research Center (Petten)	£ 10,000

American participation to the Dragon Project metals programme is not a new fact. Provision of metal specimen by industries - including american industries - at their own expenses has always been a feature of the said programme. The increased financial american involvement does not, therefore, alter the regime of dissemination of information which is at any rate covered by the provisions of the Dragon/ERDA Collaboration Agreement.

A further meeting was held, again at KFA Jülich, on 16th January 1976 to consider the continuation of this programme beyond 31/3/76. Having recognised the long term nature of the programme and the necessity to arrive at some form of long term arrangement to continue this programme, the partners agreed to consider as a first step an interim arrangement covering the period from 1/3/76 to 31/12/76 with the hope that, should the Dragon Project be extended for such a period, the Project would continue to provide the managerial and legal structure to continue the execution of the programme until a longer term arrangement could be found for the high temperature metals programme.

The continuation of the programme at present strength from 1/4/76 until 31/12/76 was costed at £ 250,000 and the following financial contributions were suggested :

KFA Jülich	£ 105,000
ERDA/General Atomic	£ 45,000
Commission	£ 100,000

It has to be noted that whilst KfA's and ERDA's contributions were firm offers such substantial Commission contribution could only be found by means of an indirect programme. It is in fact one of the objects of this communication to the Council to seek approval for an indirect programme covering the continuation of the high temperature metals programme up to 31/12/76 in conjunction with an extension of the Dragon Agreement.

3.2. Discussions and actions on a data retrieval and evaluation programme.

On 19th December KfA JÜlich made proposals for a programme of work to salvage as much as possible of the Dragon Project technical information of interest to the Federal Republic of Germany within a given budget limit. Besides the high temperature metals programme dealt with under separate arrangements as described in the previous paragraph, three areas of work were defined i.e.

- A limited post operation examination of the Reactor and completion of operational records.
- Engineering, physics, chemistry, fission products and safety studies.
- Post-irradiation examination of fuel elements from the Dragon-reactor and possibly from extra-mural irradiations.

The total amount of money that KfA JÜlich will make available for this programme is £ 100,000.

Whilst work started at the beginning of January to implement the programme of work indicated by KfA JÜlich, the Project in consultation with its signatories drew-up at the same time a more complete programme of data retrieval and evaluation. A first discussion over this programme was held at a General Purposes Committee meeting held on the 8th January 1976. The programme was finally approved by a meeting of the Dragon Project Board of Management on 3rd February 1976.

This programme is conceived against the background of cost and effort which have gone into the Dragon Project over the years and which, in the financial year 1975/76, have not reaped the reward of planned recovery of technical information. The main objective of this programme is to protect the Signatories' investment by providing a data base from which the status of HTR development may be evaluated by potential users and vendors. This data base, transmitted in an orderly manner to the Signatories, will enable technical awareness in HTR areas to be maintained. It will also assist in the evaluation of this reactor system as a heat source, for energy conversion, steel making and direct cycle gas turbine power generation.

The areas covered by the programme are :

- Reactor Experiment post-operational evaluation
- Post-irradiation examination and evaluation of Dragon fuel elements and of external irradiations
- Fuel technology
- General HTR Technology
- Preparation of Status Reports.

This programme which includes the work envisaged by KFA Jülich could be implemented during 1976 at a total cost of £ 1,162 M. The maximum professional staff involved would be 35.

It is likely that, should an extension of the Dragon Project until 31/12/76 be granted, Austria, Sweden and Switzerland would participate according to their previous scale of contributions, subject to verification of their budgetary authorization. As far as ERDA is concerned, the possibilities of american involvement are being currently explored and while it can be stated that technical interest is very strong, any substantial transfer of funds cannot yet be guaranteed. Furthermore the Commission believes that due to the presence of commercially fabricated fuels within the Dragon reactor irradiation programme, a possible american involvement in the programme could only be negotiated with the full participation and consent of the organisations involved in the fabrication of

Dragon experimental fuels. It is possible that these negotiations might be rather lengthy.

In these circumstances the Commission, taking into account the possible participation of Austria, Sweden and Switzerland proposes to finance 90,36 % of the data retrieval and evaluation programme from the budget of the Community. The Commission would expect, however, to reduce its contribution in the same measure as other Parties subsequently agreed to make contributions toward the implementation of the programme outlined in this paragraph.

3.3 The Dragon reactor

The advanced state of liquidation of the Project, which has implied sale of fissile material, dismantling of fuel elements and massive re-deployment of personnel, especially in the operations team, makes it impossible to conceive that operation of the Dragon reactor could be resumed during 1976.

4. As it appears from the foregoing paragraphs, the evolution of the situation has brought to the continuation of some activities of the Project by means of funds not channelled through the usual contributions by Signatories but assigned to the Project for specific purposes utilizing the provisions contained at par. G of Annex A of the Agreement (see par.3).

The discussions and negotiations concerning the two activities in question, namely :

- a) the continuation of the on-going high-temperature metals programme
 - b) the execution of a data retrieval and evaluation programme
- have followed different patterns and have arrived at different conclusions as far as possibilities of funding are concerned.

Taking into account the aforementioned circumstances and considering that any long term collaboration concerning high temperature gas cooled reactor development will require new arrangements the Commission makes proposals in order to round up the work carried out during the present Agreement in an orderly fashion. The main objectives of these proposals are to protect the Signatories investments made into the Dragon Project over the years and to avoid a much damaging catastrophic termination of the work.

The Commission therefore requests the Council to approve :

- 4.1 a draft Council decision, based on art. 101 of the Euratom Treaty - giving the Commission a directive to negotiate an extension of the Dragon Agreement from 1/4/76 to 31/12/76 with the objective to preserve the managerial and legal structure of the Project which should execute the programme mentioned in par. 4.2 (see Annex I);

- 4.2 a draft Council decision - based on art. 7 of the Euratom Treaty - concerning a research programme covering the period from 1/1/76 to 31/12/76 whose objectives are the retrieval and evaluation of data arising from the Project work up to 31/12/75 and the continuation of the high temperature metals (primary circuit) work. The execution of this programme will be assigned to the Dragon Project. The maximum financial charge for the Community is 2,86 millions units of account. (see Annex II).

ANNEX 1DRAFT COUNCIL DECISION GIVING THE COMMISSION A DIRECTIVE
TO NEGOTIATE AN EXTENSION OF THE DRAGON AGREEMENT

The Council of the European Communities,

Having regard to the Treaty establishing the European Atomic Energy Community, and in particular the second paragraph of Article 101 thereof;

Having regard to the Commission draft,

Whereas the Dragon Agreement expires on 31 March 1976,

Whereas it is desirable, in view to exploit the results obtained under the Dragon Agreement, to preserve the structure of the project until 31 December 1976 so that it may be entrusted by contract with the execution of research programmes,

HAS DECIDED AS FOLLOWS;

Sole Article

In its negotiations with Austria, Switzerland and die Aktiebolaget Atomenergi of Sweden with a view to the extension of the Dragon Agreement to 31 December 1976, the Commission shall comply with the directives annexed to this Decision.

ANNEX A

COUNCIL DIRECTIVES TO THE COMMISSION FOR THE
NEGOTIATION OF THE EXTENSION OF THE DRAGON
AGREEMENT FROM 1 APRIL TO 31 DECEMBER 1976

1. The Commission shall negotiate with Austria, Switzerland and the Aktiebolaget Atomenergi of Sweden the extension of the Dragon Agreement for nine months from 1 April to 31 December 1976.

2. The sole aim of the extension is to preserve the managerial and legal structure of the Project so that it may be entrusted by contract with the execution of research programmes. The extension shall not involve any financial costs.

ANNEX II

PROPOSAL FOR A COUNCIL DECISION ADOPTING A RESEARCH PROGRAMME
CONCERNING THE RETRIEVAL AND EVALUATION OF DATA ARISING FROM
THE DRAGON PROJECT WORK AND THE CONTINUATION OF THE HIGH-
TEMPERATURE METALS (PRIMARY CIRCUIT) WORK

The Council of the European Communities,

Having regard to the Treaty establishing the European Atomic Energy Community and in particular Article 7 thereof,

Having regard to the proposal from the Commission, which has consulted the Scientific and Technical Committee,

Whereas it is desirable to make use of the results obtained under the Dragon Agreement and to continue the research done to date in the field of high-temperature metals,

HAS DECIDED AS FOLLOWS:

Article 1

A research programme, as outlined in the Annex, is adopted for the period 1 January 1976 to 31 December 1976.

Article 2

The financial commitments involved in the execution of the programme shall not exceed 2,86 million units of account. The unit of account is that defined at art. 10 of the financial regulation applicable to the general budget of the European Communities.

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ANNEX

The technical programme shall comprise the following objectives:

- (a) Retrieval and evaluation of data arising from the Dragon Project work up to 31 December 1975, in particular in the following fields:
 - evaluation of reactor experiments up to 31 December 1975
 - post-irradiation examination and evaluation of fuel irradiated in the Dragon reactor and in external loops
 - fuel technology
 - general HTR technology
 - preparation of status reports.
- (b) Continuation of tests and studies on high-temperature metals (primary circuit).

This programme will be carried out under a contract by the Dragon Project.

FINANCIAL RECORD SHEET

Budget entry : Chapter 3.40 Dragon Project - in the Statement of expenditure relating to research and investment activities (Annex I, Section III - Commission - of the Budget of the European Communities)

Legal basis : Article 7 of the EAEC Treaty
Proposal forwarded to the Commission on
Programme decision of the Council of

Authorizing department : Directorate-General for Industrial and Technological Affairs

Description and objectives of and reasons for the project :

The programme comprises :

- (a) Utilization of the data acquired up to 31 December 1975
 - evaluation of reactor experiments up to 31 December 1975
 - post-irradiation examination of fuel irradiated in the Dragon reactor and in external loops
 - fuel technology
 - general HTR technology
 - preparation of status reports

(b) Continuation of tests and studies on high-temperature metals
The above programme will be allocated by contract to the Dragon Project, represented by the UKAEA.

The programme is justified by the need to make optimum use of and obtain the maximum profit from the capital invested by the Signatories during the Dragon Agreement.

Duration of Project

One year (1 January 1976 - 31 December 1976)

Staff requirements

Total personnel necessary to execute the programme : 35 of which 8 are Commission's personnel (from 1/4/76).

Cost of the project

The total cost of the programme is 3,39 million u.a.
(£ 1,412 million) broken down as follows :
Part (a) 2.79 million u.a. (£ 1.162 million)
Part (b) 0.6 million u.a. (£ 250 000)

The Commission will contribute 2.76 million u.a. as follows :
Part (a) 2.52 million u.a. i.e. 90.36 %
Part (b) 0.24 million u.a. i.e. 40 %

To this amount must be added 0.1 million u.a. to cover the difference between the real salaries of officials seconded to the Project by the Commission and the salaries calculated according to the salary scales in force at the Project, together with the corresponding administrative and infrastructure costs.

Total financial cost to the Commission : 2.86 million u.a.
2.61 million u.a. Contract expenses
0.25 million u.a. Personnel expenses

Schedule of commitments and payments

1976 : commitments	2.86 million u.a.	1977 : commitments	: nothing
payments	2.01 million u.a.	payments	: 0.85 million u.a.

Funding of the project

Transfer within Chapter 33.

(Financial Record Sheet)

Supervision

Scientific, technical and financial supervision of the results will be carried out under the contract to be concluded with the Dragon Project, by the Board of Management and the General Purposes Committees of the Dragon Project on which the Commission is represented.

Financial supervision in respect of the Commission's contribution is carried out by the Directorate-General for Financial Control.