



STATENS KÄRNKRAFTINSPEKTION
Swedish Nuclear Power Inspectorate

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To:
INTRAVAL Participants,

Participants at the sixth
Coordinating Group Meeting

**MINUTES OF THE SIXTH COORDINATING GROUP MEETING HELD IN
COLOGNE; OCTOBER 19, 1990.**

Please find enclosed the minutes of the sixth coordinating
group meeting held in Cologne in October 19, 1990.

With Season's Greetings!

Johan Andersson
Secretary to the
Coordinating Group

9012280050 901217
PDR WASTE
WM-1

PDR

ADD: PHIL JUSTUS

412

WM-1 N401

Postadress - Postal address
Box 27106
S-102 52 STOCKHOLM

Gatadress - Office
Sehlstedtsgratan 11

Telefon - Telephone
08-665 44 00

Telegram - Cable
SWEDATOM, Stockholm

Telex
119 61 SWEATOMS
Telefax
08-661 90 86

December 17, 1990
Johan Andersson

INTRAVAL M(90)4

INTRAVAL

MINUTES OF THE SIXTH COORDINATING GROUP MEETING HELD IN
COLOGNE; OCTOBER 19, 1990.

1. ATTENDENCE AND OPENING OF THE MEETING

The meeting was attended by (Appendix 1) 38 participants, including 13 coordinating group members representing the INTRAVAL parties and 1 observer, as well as members of the Project secretariat, members of the VOIC committee and accompanying experts.

The meeting was opened by Mr. A. Larsson, Chairman of the coordinating group.

2. ADOPTION OF THE AGENDA

The proposed agenda (Appendix 2) for the meeting was adopted.

3. MINUTES OF THE FIFTH COORDINATING GROUP MEETING.

The minutes of the fifth INTRAVAL coordinating group meeting (INTRAVAL Letter M(90)2) were adopted.

4. STATUS REPORT ON INTRAVAL PHASE-1, BY THE PROJECT SECRETARIAT

A brief report on the formal status of INTRAVAL-Phase 1 was given by Mr. J. Andersson, secretary to the coordinating group.

The INTRAVAL workshop preceeding the coordinating group meeting was the last workshop within INTRAVAL Phase-1. During the week the last Phase-1 Project Team analyses have been presented. Contents as well as procedures for the finalization of the INTRAVAL Phase-1 reporting have been discussed in working groups and in plenary sessions. (see point 6 in these minutes).

The next INTRAVAL workshop will formally be within Phase-2, but there will also be a final discussion on the Phase-1 reports.

5. REPORT FROM VOIC

Mr. T. Nicholson gave a report from the VOIC committee. The

VOIC committee have met, together with representatives of the Secretariat, during the preceding INTRAVAL workshop. This has been the only meeting since the coordinating group meeting in Las Vegas. VOIC discussed the status of the Phase-1 reporting as well as the proposed Phase-2 test cases.

VOIC regards INTRAVAL phase-1 as successful. The VOIC recognizes that INTRAVAL Phase-1 is ending and thus that the VOIC committee should no longer be in existence. The formation of a new VOIC for Phase-2 should be decided by the Phase-2 coordinating group.

6. DECISIONS ON PHASE 1 REPORT PRODUCTION AND PROCEDURE FOR TERMINATING PHASE-1.

Mr. J. Andersson presented the secretariats plans for report production.

The Phase-1 working group leaders should use the material gathered during the last workshop and submit working group reports to the secretariat before February 15, 1991. The secretariat will distribute these working group reports to all INTRAVAL participants by March 15, 1991.

The secretariat will write a first draft of the executive summary. This draft will be distributed by April 1, 1991.

At the INTRAVAL workshop in late April 1991, these documents will be discussed. The secretariat takes care of the comments and prepares the final versions of the reports.

The secretariat will distribute all working group reports and the executive summary to all INTRAVAL Phase-1 parties by October, 1991, and ask for approval of all these reports.

The INTRAVAL Phase-1 parties should approve the reports by December, 1991.

The INTRAVAL Phase-1 reports will be printed during spring, 1992.

The coordinating group accepted this schedule for report production.

The Chairman, Mr. A. Larsson concluded that thereby INTRAVAL Phase-1 has come to an end.

7. INTRAVAL PHASE-2; START OF PROJECT AND PARTICIPATION

The secretariat informed that in the agreement for INTRAVAL it was foreseen as a possibility to extend the project into a second phase covering an additional three year period. In June 1990, SKI sent a formal invitation for INTRAVAL Phase-2 together with a Phase-2 proposal to potential parties. At present 18 parties have confirmed that they wish to

participate in Phase-2 (Appendix 3). Additional positive answers are expected.

The coordinating group agreed to start INTRAVAL Phase-2.

The coordinating group recognized and agreed to that DOE/WIPP is a new party in INTRAVAL Phase-2.

8. STATUS REPORT ON INTRAVAL PHASE-2

The secretariat have prepared a Phase-2 proposal based on test case proposals submitted by potential Pilot Groups. The secretariat have also prepared a proposal for the organisation and working format of Phase-2.

9. ORGANISATION AND TIME SCHEDULE FOR PHASE-2.

The secretariat presented a proposal for the organisation and working format of Phase-2. In essence it is suggested to keep the same organisational structure of Phase-1 in Phase-2 with a few modifications.

In Phase-2 the working groups should be organized from the start.

- Working groups should have one leader possibly aided by another person.
- Working groups should meet at least once in between INTRAVAL meetings.
- Discussions within working groups should be on a technical detailed level and also be used to promote work.
- The working group (leader) is responsible for writing a working group report, which will form a part of the final reporting.
- The working groups should document its meetings and should appoint a secretary. The INTRAVAL secretariat should obtain copies of working group documentation. The secretariat should also coordinate the information on working group activities.
- The secretariat will cover some, but not all working group meetings.

A tentative list on which test cases that belong to which working groups as well as tentative working group leaders are listed in Appendix 4.

Phase-2 INTRAVAL meeting frequency should be slightly smaller than in Phase-1. Tentatively there should be one INTRAVAL meeting per year. The meetings should follow the following format:

- Introductory reports from working groups
- All technical presentations from Project Groups in plenary sessions; working group leaders act as chairmen.
- (Last day) working groups meet and discuss next step.
- Conclusion of meeting and Coordinating Group meeting.

The proposed time schedule for Phase-2 is

- a first meeting in April, 1991
- the project duration is 1991 - 1993 (with final report production in 1994).
- INTRAVAL meetings once a year, working group meetings at least one in between INTRAVAL meetings.

The coordinating group agreed to organize Phase-2 according to the proposal from the secretariat with final decisions on working groups at the next INTRAVAL meeting.

9. DECISION ON PHASE-2 TEST CASES

The secretariat suggested that if at least two Project Teams plan to analyse one of the proposed test cases for Phase-2 that test case will be accepted for Phase-2. Test cases not meeting this criterion directly will be on trial up to the next INTRAVAL meeting. Test cases that have not met the criterion at that stage will not be accepted for Phase-2

The coordinating group agreed to these criteria for accepting test cases to Phase-2.

A questionnaire, where Project Teams could indicate their interest in the proposed INTRAVAL Phase-2 test cases, was circulated during the workshop preceeding the Coordinating Group meeting. Based on this questionnaire it can be concluded that the following test cases have been accepted for INTRAVAL Phase-2:

Appache Leap Tuff (Unsaturated flow and transport through fractured rock)

Las Cruces (Unsaturated flow and transport through heterogeneous soil)

Gorleben (Flow and brine transport at the Gorleben site)

WIPP 1 (Brine flow through bedded evaporities at the WIPP site)

WIPP 2 (Flow and transport in heterogeneous fractured media)

Finnsjön (Tracer experiments in a complex fracture zone)

Stripa (Three-dimensional flow and tracer experiments in crystalline fractured rock)

Mol (Field studies of tritium migration in clay)

Twin Lake (Tracer experiments in a sandy (to gravel) aquifer)

Alligator Rivers (Radio-nuclide migration at the Alligator Rivers natural analogue)

The proposed Pocos de Caldas test case did not attract the sufficient interest at the Cologne workshop. Consequently, this test case will be on trial up the next INTRAVAL workshop.

10. DECISION ON NEXT WORKSHOP AND COORDINATING GROUP MEETING

Mr. C. Voss, on behalf of the U.S. DOE, invited the INTRAVAL project to have its next meeting in Seattle, USA. The coordinating group accepted this invitation and decided to have the next INTRAVAL meeting in Seattle in the week April 22 - 26, 1991.

11. OTHER MATTERS

Mr. L. Chaturverdi of the Environmental Evaluation Group (EEG), that performs technical evaluation of the WIPP-project, has indicated an interest of the EEG to become observers to INTRAVAL Phase-2. The coordinating group decided to invite the EEG to the next INTRAVAL meeting and then decide if EEG should be adopted as an observer.

Mr. Alf Larsson, chairman of the coordinating group, declared that he by this coordinating group meeting will leave his chairmanship for INTRAVAL, but he will remain an active member of the secretariat. Mr. Larsson expressed his sincere gratitude for being chairman for such a successful project as INTRAVAL and thanked all INTRAVAL participants for their excellent work.

The coordinating group acknowledged that the new chairman of INTRAVAL is Mr. Kjell Andersson (SKI).

12. CONCLUDING REMARKS.

Mr. Larsson, concluded the meeting by, on behalf of all workshop participants, expressing his sincere thanks to GRS and Peter Bogorinski for the excellent organisation of the Cologne meeting and the preceding field trips.

INTRAVAL Coordinating group meeting, Cologne, October 19, 1990

Participants

Kjell Andersson, SKI
Johan Andersson, SKI
Horst Besenecker, NMU
Peter Bogorinski, GRS
Neil Chapman, INTERA (for UK DoE)
Richard Codell, NRC
Lars Dagerholt, Kemakta
Lionel Dewiere, ANDRA
Peter Duerden, ANSTO
Michel Durin, CEA/DMT
Sharon Finley, SNL/USDOE
Eckhard Fein, GSF
Alan Flint, USGS
Peter Glasbergen, RIVM
Cezary Golian, ANSTO
Bertil Grundfelt, Kemakta
Jörg Haderman, PSI (for NAGRA)
Richard Hills, NRC (NMSU)
David Hodgkinson, INTERA
Shaheed Hossian, IAEA
Peter Jackson, AEA (Harwell)
Fred Karlsson, SKB
Hideo Kimura, JAERI
Alf Larsson, SKI/Kemakta
Tim McCartin, NRC
Greg Molyaner, AECL
Shlomo Neuman, NRC (Univeristy of Arizona)
Tom Nicholson, NRC
Budhi Sagar, CNWRA
Klaus Schelkes, BGR
Kristina Skagius, Kemakta
Claes Thegerström, OECD/NEA
Chin-Fu Tsang, LBL
Juhani Vira, TVO
Charlie Voss, USDOE (Golder Associates Inc)
Ria Wijland, RIVM
Jüri Wolrath, Bfs

SIXTH INTRAVAL COORDINATING GROUP MEETING**Cologne, October 19, 1990****TENTATIVE AGENDA**

1. Opening of meeting
2. Adoption of the agenda
3. Approval of the minutes of the fifth INTRAVAL Coordinating Group meeting
4. Status report by the Project Secretariat
5. Report from VOIC
6. Decisions on Phase 1 report production and procedure for terminating INTRAVAL Phase-1
7. INTRAVAL Phase-2 participation
8. Status report on INTRAVAL Phase-2
9. Organisation and time schedule for Phase-2
10. Decision on Phase-2 test cases
11. Decisions on the next workshop and Coordinating Group meeting
12. Other matters

CONFIRMED PARTICIPATION IN INTRAVAL PHASE-2

**PARTIES/Coordinating
Group members**

**Project teams /
team leaders**

AECB

Mr. D. Metcalfe

AECB

D. Metcalfe

ANDRA

Mr L. Dewiere

CEA/DEMT

Michel Durin

BRGM/STO

J.P. Sauty

ANSTO

Peter Duerden

ANSTO

Cezary Golian

BGR/BFS

Klaus Schelkes

BGR

Klaus Schelkes

BFS

Heinrich Illi

CEA/IPSN

Alain Cernes

Ecole des Mines

Patrick Goblet

GRS

Peter Bogorinski

GRS

Peter Bogorinski

GSF

Richard Storck

GSF

Georg Arens

JAERI

H. Matuzuru

NAGRA

Piet Zuidema

PNC

Hiroyuki Umeki

RIVM

Peter Glasbergen

SKB

Fred Karlsson

SKIKjell Andersson (Chairman)
Johan Andersson (secretary)**TVO**

J. Vira

U.K. Nirex Ltd.Dennis George
(David Lever)**JAERI**

Hideo Kimura

CRIEPI

Motoi Kawanishi

Hazama-gumi

Akira Kobayashi

Paul Scherrer Institute

Jörg Hadermann

PNC

Hiroyuki Umeki

RIVM

Majid Hassanizadeh

KTH

Ivars Neretnieks

KTH

Björn Dverstorp

VTT

Seppo Vuori

AEA (Harwell)

P. Jackson

INTERA/ECL

David Hodgkinson

U.S. DOE (to be confirmed)

Charles Voss (Golder)

U.S. DOE/WIPP

J. Carr
(J. Bickel)

U.S. EPA

William Gunter

U.S. NRC

Thomas Nicholson

Sandia Nat. Lab.

E. Gorham

U.S. EPA

Cheng Hung

U.S. NRC

Timothy McCartin

CNWRA

Budhi Sagar

MIT

Lynn Gelhar

PNL

Glendon Gee

Sandia

E.J. Bonano

University of Arizona

Peter Wierenga
Daniel Evans

OECD/NEA

Member of Secretariat:
Claes Thegerström

IAEA (observer)

Shaheed Hossain

State of Nevada (observer)

Linda Lehman

TENTATIVE WORKING GROUPS FOR INTRAVAL PHASE-2

Working Group 1:	Las Cruces Apache Leap Twin Lake	leader: Tom Nicholson
Working Group 2:	Finnsjön Stripa WIPP-2	leaders: Chin-Fu Tsang Shlomo P. Neuman
Working Group 3:	Gorleben WIPP-1 Mol	leader: Peter Glasbergen
Working Group 4:	Alligator Rivers Pocos de Caldas	leader: Neil Chapman