

memorandum

DATE: May 15, 1992

REPLY TO
ATTN OF: RW-4

SUBJECT: Final International Symposium on the OECD/NEA Stripa Project

TO: Distribution

I have enclosed a copy of the first announcement for the fourth and final international symposium on the OECD/Nuclear Energy Agency Stripa Project which will be held in Stockholm, Sweden, October 14-16, 1992. The U.S. Department of Energy (DOE) has funded and participated in scientific and engineering research at the Stripa mine from 1977 through the completion of the third and final phase of the Project in 1992. The research activities conducted at Stripa have advanced the state of the art for characterizing the geotechnical, hydrologic, and geochemical properties of a fractured rock mass, as well as the performance of engineered barriers.

As Director of the Office which has sponsored this work, I believe it is important that the lessons learned from this Project be understood and appropriately applied to the OCRWM program. Since the subject symposium is an important opportunity to communicate these lessons, OCRWM intends to select a delegation to attend the symposium.

Other potential U.S. attendees, including representatives from the U.S. Nuclear Regulatory Commission, U.S. Nuclear Waste Technical Review Board, National Academy of Sciences, State of Nevada, and other Offices of DOE (e.g., Waste Isolation Pilot Plant), who are not funded by OCRWM are encouraged to attend the symposium. As indicated in the enclosed announcement, they should contact Dr. Edward Patera at OECD/NEA in Paris or Dr. Bengt Stillborg at SKB in Stockholm for further information. In addition, the two U.S. representatives to the Joint Technical Committee (JTC) of the Stripa Project will be pleased to assist any organization or individual by providing further information concerning the symposium. You may contact Bob Levich of the Yucca Mountain Site Characterization Project Office (YMP) at (702) 794-7946 or Bill Danker of my staff at (202) 586-5624.

Since not all interested parties will be able to attend this symposium, those who are interested in reviewing the results of this Project are reminded that a series of Stripa Project technical reports have been produced over the life of the Project. In addition, two overview reports which are in

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preparation are intended to capture key "lessons learned."
Information on these reports can be obtained from the U.S. JTC
representatives noted above.



Thomas H. Isaacs, Director
Office of Strategic Planning and
International Programs

Enclosure

Distribution:

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FOURTH
INTERNATIONAL SYMPOSIUM
ON THE
OECD/NEA



STRIPA PROJECT
STOCKHOLM · SWEDEN
14-16 OCTOBER 1992

FIRST ANNOUNCEMENT

OECD NUCLEAR ENERGY AGENCY AND
SWEDISH NUCLEAR FUEL AND WASTE MANAGEMENT COMPANY

INTRODUCTION

Research into the disposal of radioactive waste has been carried out at the former Stripa iron-ore mine in the central Sweden since 1976. International co-operation at Stripa began with the joint Swedish-American Co-operative (SAC) programme in 1977, followed in 1980 by three successive international phases within an autonomous OECD/Nuclear Energy Agency International Stripa Project. The Project is managed by the Swedish Nuclear Fuel and Waste Management Company (SKB), under the direction of a Joint Technical Committee with representatives from each of the participating countries. As many as nine countries have participated in the Project.

Since its inception in 1980, the Stripa Project has evolved into three phases, with the last Phase 3 being completed in 1992.

PHASE 1

Phase 1 of the Stripa Project, carried out between 1980 and 1985, involved (1) the development of methods for determining the in-situ hydraulic conductivity of a fractured rock mass by use of both single and multiple boreholes; (2) the development of procedures for evaluating the geochemical characteristics, including the origin and evolution, of ground water; (3) studies of the migration of non-active tracers in a fracture; and (4) evaluations of the behaviour of Na-bentonite-based buffer materials under simulated repository conditions.

PHASE 2

Phase 2, carried out from 1983 until 1988, was concerned with (1) the development of cross-hole geophysical techniques, including radar, seismic, and hydraulic methods, for the detection and characterization of fracture zones; (2) an evaluation of the migration of tracers in a large volume of a fractured rock mass; (3) an evaluation of the sealing ability of highly compacted Na-bentonite when used to plug drilled boreholes and excavations constructed by blasting; (4) additional studies of the hydrologic and geochemical characteristics of the Stripa granite to enhance existing methods for data interpretation.

PHASE 3

Phase 3, carried out between 1986 and 1992, had the two-fold objectives, involving (1) predictions of ground-water flow and nuclide transport within a previously undisturbed large-scale volume of rock in the Stripa mine and the comparison of those predictions with data collected by the use of both existing and improved instruments and methods for site characterization; and (2) the selection and verification of the suitability of materials for the long-term sealing of fracture zones in crystalline rock, and the demonstration of the effectiveness of representative sealing applications in the Stripa mine and the practicality of the associated injection techniques.

SCOPE

Three previous international symposia have been held on the Stripa Project, the most recent in 1989. With the completion of the research work under Phase 3, and the

formal end of the Project in 1992, it is considered appropriate to arrange a 4th and final Stripa Symposium to present and review the accomplishments and developments of the Project since its inception. Topics to be covered will broadly include those that have formed major elements of the Stripa Project phases 1, 2 and 3 as described in the Introduction.

AUDIENCE

The Symposium will be of particular interest to those directly involved in carrying out or evaluating in-situ work in fractured hard rock for geological disposal of radioactive wastes. It will also be of interest to those using the results as guidance for setting priorities in research programmes and waste disposal projects. The work done at Stripa in the area of buffer materials, borehole and shaft plugging as well as sealing of fractured rock also have a general application to geological media outside the rock conditions at Stripa.

ORGANISATION

The Symposium will be jointly organised by the OECD Nuclear Energy Agency and, as managing participant of the Stripa Project, the Swedish Nuclear Fuel and Waste Management Company (SKB). The working language will be English.

TIME AND LOCATION

The Symposium will be held in Stockholm, Sweden, 14-16 October, 1992.

CONTRIBUTIONS

The Symposium will consist entirely of invited papers by experts who have been closely involved with the Stripa Project. The emphasis will be on summaries of phases 1, 2, and 3 work. The Symposium organisers will identify the experts to give invited papers. Further details on the programme and on participation will be provided in the Second Announcement for the Symposium, to appear in the Spring of 1992.

PROCEEDINGS

The proceedings of the Symposium will be published by the OECD Nuclear Energy Agency in 1993.

**FURTHER INFORMATION
ABOUT THE SYMPOSIUM CAN
BE OBTAINED FROM**

**Fourth International Symposium
on the Stripa Project**

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