

Third Draft, 20 January 1993

D R A F T

Memorandum of Understanding
between the GOVERNMENT OF CANADA and the
GOVERNMENT OF THE UNITED STATES OF AMERICA
on PROMPT EXCHANGE OF INFORMATION ON
VOLCANIC ASH PLUMES

The Government of Canada and the government of the United States of America:

Recognizing that the western part of North America encompasses a geologically dynamic region which includes a substantial number of volcanoes and volcanic fields;

Noting that the tectonic forces that produced these volcanoes are still active nowadays, thereby creating conditions for volcanic eruptions in the foreseeable future;

Noting further that ash plumes from volcanic eruptions can drift across international borders and can threaten human health and safety as well as constitute a serious hazard to aviation;

Have agreed to develop a mechanism for the prompt notification of volcanic events and formation of airborne plumes of volcanic ash in accordance with the following terms and conditions.

Article 1 - Purpose and scope

(1) The Government of Canada and the Government of the United States of America will cooperate on resolving the issue of the hazard posed by airborne plumes of volcanic ash identified over or resulting from volcanic eruptions within their respective territories, in accordance with this Memorandum of Understanding (MOU).

(2) The purpose of this MOU is to establish a framework acceptable to each Party for the exchange of notifications of volcanic ash events and of related technical and scientific information. Any activity carried on under the aegis of this MOU is subject to the applicable laws and regulations of each Party. Furthermore, this MOU is to be completed by subsidiary arrangements between the agencies approved by the Parties, as indicated in Article 7.

Article 2 - Cooperative activities

Forms of cooperation under this MOU will consist of prompt notification of the detection or occurrence volcanic ash plumes or volcanic eruptions the territories of the Parties and the exchanges of pertinent information on their location, trajectory, and tracking, as detailed in the following sub-clauses, and may include exchanges of related technical and scientific information on event detection, notification, tracking, and response procedures.

(1) Notification Each Party undertakes to notify the other Party, in a prompt and timely fashion, of the detection of any airborne plumes of volcanic ash identified over or resulting from volcanic eruptions within its territory. Such notification shall be transmitted by media and to agencies approved by the Parties. Each Party shall notify the other Party of the occurrence of any volcanic eruption within its territory which may lead to the ejection or formation of a plume of volcanic ash.

This seems to be where we need to identify the approved agencies and approved channels of communication.

(2) Content of the Notification Each Party to this MOU will provide information to the other Party concerning the predicted trajectory of volcanic ash plumes, as determined from calculation or models, so the appropriate warnings may be given to air traffic, and other sensitive economic and social sectors.

(3) Tracking and Revisions of Predictions Each Party will follow normal procedures for tracking the actual course and nature of any volcanic ash plume which crosses its territory, and will inform the other Party of any revisions to the predicted trajectory in a timely manner.

Article 3 - Exchanges of Information

Each Party will exchange information with the other Party concerning procedures and techniques for the detection, notification, evaluation and response mechanisms as used in its territory for volcanic ash plumes and volcanic eruptions.

Article 4 - Sources of Funding

Cooperative activities under this MOU will be subject to and dependent upon the financial support and staff resources available to the Parties.

Article 5 - Technical details (Other Parties)

(We may need to be specific about agencies and communications here also. There is a distinction in English which escapes me -- never mind the French !)

Details of procedures for the transmittal and receipt of notices of volcanic ash plumes or volcanic eruptions and for the exchange of other technical and scientific information will be developed between agencies of the Parties, within the scope of this memorandum. To be revised

Article 6 - Review of Activities

Each Party will designate a representative who, will review activities under the aegis of this MOU with his/her counterpart of the other Party. Such review will take place upon request by either Party.

Article 7 - Annexes

Any activity carried on under the aegis of this MOU will be subject to further arrangements in accordance with the laws and regulations of each Party. Such activity will also be subject to an exchange of correspondence between the Parties.

Article 8 - Amendments

This MOU may be amended by mutual consent of the Parties.

Article 9 - Entry into Force and Termination

This MOU will enter in force upon signature by both Parties and will remain in force for five (5) years, unless extended by mutual agreement. The MOU may be terminated by either Party upon ninety (90) days written notice to the other Party. The termination of this MOU will not affect the validity or duration of projects under this MOU which are initiated prior to such termination.

Done at Ottawa, Ontario, Canada, and Washington, D.C., U.S.A.

For the

For the

Government of Canada

United States Government

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Draft prepared by:

Revisions proposed by:

J.A. Heginbottom
Geological Survey of Canada
601 Booth Street
Ottawa, Ontario K1A 0E8

Robert Vanier
Legal Services Division
External Affairs Canada

Phone: (613) 992 7813
FAX: (613) 992 2468

12 November 1992

4 September 1992

Third draft prepared by:
J.A. Heginbottom
20 January 1993

V. H. G...
MEMORANDUM/NOTE DE SERVICE

To Cathie Hickson, Cordilleran Division
A Peter Foreman, CALPA

From Terrain Sciences Division
De

Date 20 January 1993

Subject Volcanic Ash as a Hazard to Aviation
Object



Here are copies of the MOU, as follows:

- 1 My second draft, of 4 September 1992,
- 2 Suggestions for revisions by Robert Vanier, External Affairs Legal Services Division, 12 November 1992,
- 3 My third draft of today, incorporating most of Vanier's suggestions, but with two or three clauses which still need some work.

The main items to be added are lists of the various agencies in BOTH Canada and USA which should be included in the notification system. Vanier suggests we include our ideas on American agencies, to prompt State Department to think about the question, and come up with their own list! We also need to suggest the "approved media" for communications. This is where the recent Canadian experience v/v Mt Spurr (sp?), etc. may give us some guidance.

Alan Heginbottom
Terrain Dynamics Subdivision

Enclosures (3)

Copies:

Director, Terrain Sciences Division
Director General, Minerals and continental Geoscience Branch