

## MINUTES

North Dakota Atmospheric Resource Board

October 25, 2001

The meeting was called to order by Vice Chairman Jay Sandstrom at 9:00 a.m., CDT, October 25, 2001 in the lower level conference room of the State Office Building, Bismarck, North Dakota. Members present were Jay Sandstrom, Robert Brewer, David Schmidt, Chuck Tompkins, Gary Ness representing the ND Aeronautics Commission, and Dale Frink, representing the ND State Water Commission. Staff members present were Darin Langerud, Director; LeNor Dollinger, Business Manager; Aaron Gilstad, Chief Meteorologist; and Dawn Feist, Project Assistant. Others present were Monte Hininger, Williams County; and Mike Dwyer.

### **ELECTION OF OFFICES**

Mr. Sandstrom called for nominations for Chairman.

Gary Ness moved the nomination of Jay Sandstrom as Chairman. Second by Chuck Tompkins.

Mr. Sandstrom called for further nominations three times. There were none.

Gary Ness moved nominations cease and a unanimous ballot be cast for Jay Sandstrom for Chairman. Second by David Schmidt. Motion carried.

Mr. Sandstrom called for nominations for Vice Chairman.

Gary Ness moved the nomination of Mary Cichos as Vice Chairman and Hattie Melvin as Secretary. Second by Robert Brewer.

Mr. Sandstrom called for further nominations three times. There were none.

Gary Ness moved nominations cease and a unanimous ballot be cast for Mary Cichos as Vice Chairman and Hattie Melvin as Secretary. Second by David Schmidt. Motion carried.

### **Minutes**

Robert Brewer moved the minutes of the telephone conference call of June 25, 2001 be approved as distributed. Second by Gary Ness. Motion carried.

### **FINANCIAL STATUS REPORT**

LeNor Dollinger reviewed the financial status report for the period ended 9-30-01. A question was asked about the funding of salaries and wages for employees of the board. Mrs. Dollinger explained that the positions of director, business manager (Executive Staff Officer), and Chief Meteorologist (Environmental Sciences Admin I) are paid from general funds, as is part of the

Project Assistant. However, during the project, the project assistant and the meteorology staff salaries are paid from special funds. There were no further questions.

### **2001 ND CLOUD MODIFICATION PROJECT REVIEW**

Cost summary - LeNor Dollinger distributed and reviewed the 2001 ND Cloud Modification Project cost report. There were no questions regarding the report.

Chairman Sandstrom inquired of Mr. Langerud how District I managed during the 2001 project without a cloud-top aircraft.

Mr. Langerud stated it is the intention that the cloud-top aircraft return to the District I program when funding sources are available. It is a definite limitation for the program even though in previous years the cloud-top aircraft operated at cloud-base a significant amount of the time because opportunities at cloud-top were not available in the small district. Mr. Langerud feels cloud-top aircraft are a more effective means of delivering seeding agent when you have the opportunity than at cloud-base. Mr. Langerud stated a program with a cloud-top seeding capability is the best program they can operate.

Robert Brewer stated the decision not to have a cloud-top aircraft during the 2001 project was largely based on the amount of dollars being put into the project by general funds in comparison to the general fund for the District II program. He stated they would still prefer to have a cloud-top aircraft if the funds are available.

Seeding agent usage/inventory - Aaron Gilstad distributed and reviewed the inventory of seeding agents on hand at the end of the 2001 NDCMP.

Discussion was held on the types of flares, etc., that are in storage and requirements of storage. It was noted the flares are stored in 4G boxes and ammunition boxes. The raw acetone is stored in the 55 gallon barrels at the Water Commission yard, and mixed chemical is stored in the polyethylene carboys. It was also noted the amount of these chemicals stored falls below the threshold of "reportable quantities" requirements of any authority. The Bismarck Fire Department occasionally inspects the storage area to note what is stored there so they are aware of the contents for their purposes.

Mr. Gilstad also reviewed the dry ice purchase and cost report for the 2001 NDCMP.

Mr. Brewer asked how this years chemical inventory, after project, compares to last year. Mr. Langerud responded there is more remaining after this year's project due to the use rate because August was a slow month. Dry chemical and flares are purchased each year based on historical use. Storage of these chemicals is not a problem as it relates to shelf life.

Generator performance - Mr. Gilstad presented results of generator performance for the 2001

project. Total burner time for the project was 182.79 hours, with 64.01 hours for District I and 118.69 hours for District II. The total failure time for the project was 15.30 hours, of that 1.60 hours for District I, and 12.95 hours for District II. This is a 7.96% fail rate for the 2001 NDCMP (2.50% for District I, and 10.91% for District II).

It was noted if the failure rate exceeds 10% for the total project there is a formula to apply for consideration of a contract penalty.

Aircraft operations - Darin Langerud presented information including a list of aircraft maintenance problems incurred during the project and his recommendations for penalties per Article X of the service contract. Mr. Langerud recommended the Board impose penalties for the operations flights missed on July 19 (Seed 2) in the amount of \$578, and on August 8 (Seed 9) in the amount of \$1,125 for a total penalty of \$1,703.

Discussion was held on the particulars of the missed flights.

Robert Brewer moved to penalize the contractor, according to Article X of the 2001 NDCMP, in the amount of \$1,703 for non-performance on July 19 by Seed 2, and August 8 by Seed 9. Second by Chuck Tompkins. Motion carried 5 yea - 0 nay.

Contractor's final report - Mr. Langerud noted a representative of the contractor, Weather Modification, Inc., would not be able to attend today due to the blizzard in eastern North Dakota. Copies of the final report had previously been distributed to the board for their review. Mr. Langerud reviewed the report on behalf of the contractor.

Discussion was held on the benefits of the flight tracking system used in District II during the entire 2001 project and for one-month in District I. Problems noted with the flight tracking system were noted and adjustments were made to the contract costs for the period of time that the system was not operational. The current version of the system incorporates the use of a personal computer in the aircraft that runs software and is connected to a data radio that sends packets back to the radar. That information is then displayed on a computer in the radar. There were communications problems because this is line-of-sight and sometimes when the aircraft get greater distances from the radar there is reception problems. There is also some problems with computer systems due to turbulence experienced by the aircraft. A personal computer is not designed to be bumped around. The contractor (Weather Modification, Inc.) has stated they are working on a new system that will improve on some of the problems. A timetable for this development is not known at this time.

Mr.Langerud reviewed the recommendations made by the contractor.

Chuck Tompkins moved to accept the final report of Weather Modification, for the 2001 ND Cloud Modification Project and authorize final contract payment in the amount of \$48,018.64. Second by David Schmidt. Motion carried 4 yea - 0 nay.

### MONTANA LICENSE & PERMIT APPLICATION

The weather modification license and permit application, fees, and supporting documentation has been sent to the Montana Natural Resource Department. A letter has been received at the ARB office stating it has been received.

Discussion was held on the process of the environmental impact statement (EIS) that is required for the Montana Natural Resource Department to consider granting a weather modification permit.

Discussion was held on the cost of the EIS and how it is going to be funded. Dale Frink stated he would recommend the State Water Commission fund 50% of the cost of the EIS up to an approximate cost of \$170,000. The balance would be paid by the counties and the board. The director will contact the Montana Natural Resource Department and request an updated projected cost to complete the EIS.

### PILOT INTERN PROGRAM

LeNor Dollinger reported on investigations made with legal counsel regarding the internship program status. Further investigations will be made with the ND Department of Labor in order to keep the pilot intern program operating as a bonafide internship program.

### FEDERAL RESEARCH

Darin Langerud reported that efforts working through the North American Interstate Weather Modification Council has been somewhat successful in reestablishing federal involvement in cloud seeding research. Funding in the amount of \$2 million for the next fiscal year was placed in the House version of the energy and water bill to establish a Weather Damage Mitigation Program. These funds were not in the Senate version and a Conference Committee will determine if the funding remains.

Mr. Langerud stated if the funding does become available, ARB will then convene a group of scientists who will work with the ARB staff to identify areas of needed research in North Dakota to improve operational goals and further operational technology and application. When the priorities have been set, a proposal for funding will be submitted to the Bureau of Reclamation, who will handle this program.

### INSURANCE INDUSTRY

Darin Langerud reported he had given a presentation to the North Dakota Insurance Agents Association annual meeting in Fargo on October 1. A number of people expressed interest in many aspects of setting up a program. Chuck Tompkins related that he has visited with several company presidents who expressed interest in cloud modification programs for some areas of the

state not covered in the ongoing program. Mr. Tompkins stated he would like to pursue this further with the ND Insurance Commission and the insurance companies.

2001 ARBCON

Aaron Gilstad reported on the status of the research in conjunction with the University of Iowa and a baseline comparison study to determine if the network observations are biased and to confirm the finding of Huff, 1955 which indicated the gauges perform well with respect to the National Weather Service gauges. At this time ARB is waiting for further input from the University of Iowa.

Mr. Gilstad also distributed copies of the ARBCON total precipitation map for the 2001 season May through September. April was not included for 2001 due to considerable amounts of snowfall.

OTHER BUSINESS

Darin Langerud distributed copies of the preliminary report of the National Transportation Safety Board (NTSB) regarding the aircraft accident in Bowman, Friday, July 20, 2001. Narrative reports from both pilots were included. A final report will be issued by the NTSB at a future date.

Mr. Langerud reported on information received from the Stanley Airport Authority regarding new security procedures in response to the terrorist attacks of September 11. This information will be passed on to Weather Modification, Inc., so they can prepare for new measures of airport security during the project.

Being no further business the meeting adjourned.

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HATTIE MELVIN, SECRETARY

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JAY SANDSTROM, CHAIRMAN