

MINUTES

North Dakota Atmospheric Resource Board

April 3, 2001

The meeting was called to order at 9:00 a.m. CDT, April 3, 2001, by Chairman James Haaland in the lower level conference room of the State Office Building, Bismarck, North Dakota. Members present were James Haaland, Judith DeWitz, William Geiger, Jay Sandstrom, Dale Frink, Interim State Engineer, Gary Ness, Director, ND Aeronautics Commission, and Steve Weber, ND Health Department. Staff members present were Darin Langerud, Director; LeNor Dollinger, Business Manager; Aaron Gilstad, Chief Meteorologist, and Dawn Feist, Project Assistant. Others present were Ron Sys, Ward County; Hank Bodmer, Ward County; Jim Seidel, Williams County, and Hans Ahlness and Becky Resler, Weather Modification, Inc., Fargo, ND.

MINUTES

William Geiger moved the minutes of December 19, 2001 be approved as distributed. Second by Jay Sandstrom. Motion carried.

CHIEF METEOROLOGIST

Darin Langerud introduced Aaron Gilstad the new Chief Meteorologist for the board who started work March 26, 2001. Mr. Langerud noted Mr. Gilstad is a graduate of the University of North Dakota and has worked on various operational weather modification projects in North Dakota, Texas, and Argentina.

FINANCIAL STATUS REPORT

LeNor Dollinger reviewed the financial status report for the period ended February 28, 2001. There were no questions regarding the report.

CONSIDERATION OF PROPOSALS FOR THE 2001, 2002, AND 2003 NORTH DAKOTA CLOUD MODIFICATION PROJECTS

Evaluations of the bids for cloud base aircraft, pilots, and related services for District I and District II from Weather Modification, Inc., were distributed and reviewed.

Evaluations of the bids for cloud-top aircraft, pilots, and related services for District I and District II from Weather Modification, Inc., were distributed and reviewed.

Mr. Langerud called to the attention of the board, Weather Modification, Inc.'s, response to the bid in Section 5.5 Treatment Equipment which states, "Weather Modification, Inc. does not intend to comply with the request to provide evidence of efficiency from a recognized testing facility regarding nuclei generators". This response is contained in bid responses for the cloud-base and cloud-top aircraft.

The above response to the request for bids (RFB) pertains to the requirement in the RFB, Article

The above response to the request for bids (RFB) pertains to the requirement in the RFB, Article VI B.3: Treatment Equipment, which states in part, "The required minimal nucleation efficiency created by the nuclei generators at -10°C for the 2% silver iodide solution (provided by the Board) shall be 10^{14} active nuclei per gram of silver iodide. Evidence of such efficiency from a recognized testing facility must be presented to the Director three weeks prior to the first day of operations."

Chairman Haaland asked if a representative of Weather Modification, Inc., (WMI) would like to comment regarding the company's response to the section regarding treatment equipment.

Hans Ahlness, Chief Pilot and ND Project Manager, Weather Modification, Inc. stated they have been unable to schedule testing of the generators at Colorado State University and won't be able to do so any time in the near future. Mr. Ahlness stated he would provide the board with a letter clarifying the statement in the bid response. Mr. Ahlness stated WMI will revert back to the generator configuration from 1997 that has been tested and the nuclei output results known, until such time as they are able to have the new generator configuration tested. Once tests are completed on the new configuration, the results will be reviewed and the best configuration will be put into place on the project aircraft.

It was noted by Mr. Ahlness the problem with providing results from the generator testing is a scheduling problem with Colorado State University. Mr. Sandstrom noted that the ARB has been requesting test results since 1999 and questioned that scheduling problems have been on-going over that length of time.

Mr. Sandstrom inquired as to why the stall fence is on the generators. Mr. Langerud stated he had done some investigations and asked why they are there also. He was told that the stall fence increases the turbulence at the back of the can as the nuclei come out and it quenches them faster and reduces the likelihood of coagulation causing them to stick together, clump up, and create larger but fewer ice nuclei. The potential impact of having more laminar flow out the back as opposed to more turbulent flow, is to have larger particles but many less of them. We would be looking at potential nuclei numbers less than 10^{14} per gram which is what is required. Dr. Paul DeMott stated this premise is correct. Dr. Joe Warburton, Desert Research Institute, indicated that it could be a problem by 2 orders of magnitude. Mr. Langerud commented that if the stall fence were put back on, he does not think the failure rate will go up to 15%, but it may go up a little bit but not by that much.

Ms. DeWitz brought it to the board attention that she understands the conflict with scheduling. However, she is not confident that we should except a bid that does not intend to comply. Ms. DeWitz would like see some modification of that phrase in the bid response. Mr. Ahlness will send a letter to the board that the generators are in line to be tested and that the stall fences will be placed back on the generators for 2001 North Dakota Cloud Modification Project. Mr. Langerud stated that the board still needs to know what the output of the generators was in 1998, 1999, and 2000 projects. Mr. Geiger asked Mr. Ahlness if there is any other place that does this testing. Mr. Ahlness informed the board that Colorado State University is the standard for testing generators. WMI wants to make sure

they have the best testing facility and the correct information. Mr. Sandstorm asked Mr. Ahlness what it cost to do the testing. Ms. Dollinger informed the board that in 1997 the cost was \$4,000. There was people from ARB and WMI assisting the testing which was a factor in keeping costs at a minimum. It was a cost share between WMI an ARB. The \$4,000 was just the contract price, it did not include expenses.

Discussion was held regarding the testing facility being moved to the University of North Dakota. The university is applying for a grant to move the testing lab there, if a building to house the laboratory can be secured.

Mr. Langerud noted his recommendation would be to have the bidder (WMI) put the old generator tailcone configuration back on the aircraft until the new configuration is tested. That configuration has been tested and meets the minimum requirements as stated in Article VI B.3: Treatment Equipment of the Request for Bids.

Jay Sandstrom made the motion to accept the three year contract, pending clarification of the statement regarding the testing compliance and re-installation of the tailcone with the fence. The motion was seconded by Hattie Melvin. Members Judith DeWitz, William Geiger, Jay Sandstrom, Dale Frink, Gary Ness and Steven Weber voted aye. There were no nay votes. Motion carried.

CONSIDERATION OF WEATHER MODIFICATION PERMITS

Mr. Langerud informed the board that Weather Modification, Inc., has submitted permit applications for District I which would include Bowman County, and the townships in Slope County. Mr. Langerud recommended that the board grant the permit for District I.

A permit application for District II including McKenzie, Mountrail, Ward, and Williams counties was received from Weather Modification Inc. Mr. Langerud recommended that the board grant the permit for District II.

Judith DeWitz made the motion to grant the permits for District I and II contingent upon responses from the public. The motion was seconded by Jay Sandstrom. Members Judith DeWitz, William Geiger, Jay Sandstrom, Dale Frink, and Steven Weber voted aye. There were no nay votes. Motion carried.

STATUS OF MONTANA ENVIRONMENTAL IMPACT STATEMENT

Mr. Langerud informed the board that the status of the EIS has not changed much since the last time the board met. LeNor and Darin had a meeting with legal council Paul Germolius to ask him a few questions. One question was the length of time the EIS would be conducted over. The contract states that the EIS will be completed within 180 days of the permit. Another document states they will not hold themselves to the 180 days. Mr. Germolius raised a question in regards to an interstate compact

on weather modification. Mr. Germolius could not give Mr. Langerud a time frame for when he will have a chance to answer the legal questions pending.

WEATHER MODIFICATION INTEREST IN OTHER COUNTIES

Mr. Langerud informed the board that he was involved with meetings in Divide County. Mike Dwyer of the ND Weather Modification Association also attended the county commission meeting to discuss the situation that occurred in Williams County. After this meeting the chairmen contacted Darin and wanted to have a public meeting in Bowbells. The meeting was also attended by Jay Sandstrom and Jim Haaland. The people that attended the meeting seemed interested and asked many questions.

DISCUSSION OF A STATE/COUNTY COST-SHARE FORMULA

Mr. Langerud informed the board about a cost-share formula for projects that is being drafted. At this time, the counties that are in the program and the levels they are at have been arrived at in a number of ways over many years. One of the most difficult things is when a county is interested in joining the program the first question they always ask is how much will cost. Right now there is no set formula regarding the costs the counties are paying. Mr. Langerud presented to the board his proposed cost-share formula for their consideration and further discussion. A more comprehensive plan will be submitted to the board at a later time.

STATUS OF FEDERAL RESEARCH PROSPECTS

Mr. Langerud informed the board that the meeting in Washington, D. C. went very well. The research funds have been proposed to be in a pool for all weather modification research. The North American Interstate Weather Modification Council (NAIWMC) will find out more information when the President releases his budget for the year.

DUES AND MEMBERSHIPS

Mr. Langerud distributed an list of the dues and memberships the board participates in. Mr. Langerud informed the board these items are budgeted each biennium.

Jay Sandstrom made a motion to authorize the staff to pay budgeted memberships. The motion was seconded by Bill Geiger. Members Judith DeWitz, William Geiger, Jay Sandstrom, Dale Frink, Gary Ness, and Steven Weber voted aye. There were no nay votes. Motion carried.

Mr. Langerud brought to the board's attention that the North American Interstate Weather Modification Council (NAIWMC) has been asked to consider an agreement with the Weather Modification Association (WMA) and the American Society of Civil Engineers (ASCE) to provide

training to those that will be actively involved in weather modification projects. The membership and special assessment that is paid to NAIWMC now is specifically for the assisting with the lobby effort in Washington, D. C. to get research funds established on the federal level. The ARB staff recommends the board request that the council does not spend any of those funds for training.

Gary Ness made the motion that the membership and special assessment funds paid to North American Interstate Weather Modification Council be used only for research purposes. The motion was seconded by Jay Sandstrom. Members Judith DeWitz, William Geiger, Jay Sandstrom, Dale Frink, Gary Ness, and Steven Weber voted aye. There were no nay votes. Motion carried.

RAIN GAUGE NETWORK UPDATE

Mr. Gilstad reported the activities that have involved the rain gauge network during the past couple of months. The rain gauge reporting network begin on April 1st with almost 800 volunteer observers recording the rainfall amount everyday for the next six months. The board has been awarded a small contract with the University of Iowa under a grant to them from the Department of Commerce for comparison and evaluation of five precipitation databases in the world.

PROJECT PERSONNEL

Mr. Langerud reported the staff is in the process filling the field meteorologist positions for the 2001 ND Cloud Modification Project. Mr. Gilstad will be going to the University of North Dakota and hopefully that will encourage more people to apply for the positions. The intern pilot class is another area of concern. This year the intern pilot class only has eight people in the class. There will not be enough intern pilots to have a rover intern pilot for the project. Plans are underway to contract with Weather Modification, Inc., to provide a low-time pilot to relieve interns for time they need away from the project and at the same time get some time and experience for another pilot.

BOARD APPOINTMENTS

Mr. Langerud informed the board that on July 1 appointments to the board will be due for District II, IV, and XI. These positions are held by James Haaland, Hattie Melvin and Bill Geiger. All appointments are made by the governor's office. Right now we are awaiting the appointment of a director for District VII, which was vacated by Joe Porten. Mr. Haaland requested that he not be considered for appointed again because he has served on the board for eight years.

OTHER BUSINESS

Chairman Haaland noted that prior to June 19, Darin Langerud's performance as director is to be reviewed and recommendations made regarding salary as outlined in Mr. Langerud's letter of hire.

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Chairman Haaland asked for volunteers to serve as a committee to do this review. Dale Frink, Bill Geiger, and Jim Haaland volunteered to serve on this committee.

Dale Frink, Interim State Engineer, gave a brief legislative report to the board, specifically HB 1023, the State Water Commission appropriations bill. The bill has passed the House of Representative at this time.

Being no further business, the meeting adjourned.

MARY CICHOS, SECRETARY

JAMES HAALAND, CHAIRMAN

Transcribed by Dawn Feist