In what may be the strongest signal yet of the new pro-labor orientation of the National Labor Relations Board under President Obama, the agency filed a complaint Wednesday seeking to force Boeing to bring an airplane production line back to its unionized facilities in Washington State instead of moving the work to a nonunion plant in South Carolina.

In its complaint, the labor board said that Boeing’s decision to transfer a second production line for its new 787 Dreamliner passenger plane to South Carolina was motivated by an unlawful desire to retaliate against union workers for their past strikes in Washington and to discourage future strikes. The agency’s acting general counsel, Lafe Solomon, said it was illegal for companies to take actions in retaliation against workers for exercising the right to strike.

Although manufacturers have long moved plants to nonunion states, the board noted that Boeing officials had, in internal documents and news interviews, specifically cited the strikes and potential future strikes as a reason for their 2009 decision to expand in South Carolina.

Boeing said it would “vigorously contest” the labor board’s complaint. “This claim is legally frivolous and represents a radical departure from both N.L.R.B. and Supreme Court precedent,” said J. Michael Luttig, a Boeing executive vice president and its general counsel. “Boeing has every right under both federal law and its collective bargaining agreement to build additional U.S. production capacity outside of the Puget Sound region.”

It is highly unusual for the federal government to seek to reverse a corporate decision as important as the location of plant.

But ever since a Democratic majority took control of the five-member board after Mr. Obama’s election, the board has signaled that it would seek to adopt a more liberal, pro-union tilt after years of pro-employer decisions under President Bush.

Although the board has not yet issued many major decisions reversing Bush-era policies, it has proposed requiring private sector employers to post a notice about workers’ right to unionize, and Mr. Solomon has begun moving more aggressively to win reinstatement of union supporters fired illegally by management during unionization drives.

In a statement Wednesday, Mr. Solomon said: “A worker’s right to strike is a fundamental right guaranteed by the National Labor Relations Act. We also recognize the rights of employers to make business decisions based on their economic interests, but they must do so within the law.”
South Carolina’s two senators, both Republicans, Lindsey Graham and Jim DeMint, denounced the board’s move. “This is nothing more than a political favor for the unions who are supporting President Obama’s re-election campaign,” Mr. DeMint said.

The labor board said that in 2007, Boeing announced plans to create a second production line that would make three 787 Dreamliner planes a month in the Puget Sound area to address a growing backlog of orders. That was to be in addition to a line already making seven Dreamliners a month there. In October 2009, Boeing said it would locate its second line at a new, nonunion plant in South Carolina.

The N.L.R.B. asserted that on numerous occasions Boeing officials had communicated an unlawful motive for transferring the production line, including an interview with The Seattle Times in which a Boeing executive said, “The overriding factor was not the business climate. And it was not the wages we’re paying today. It was that we cannot afford to have a work stoppage, you know, every three years.”

Mr. Solomon brought the complaint after a union representing many of Boeing’s Washington workers, the International Association of Machinists and Aerospace Workers, complained that Boeing had decided to move production to South Carolina largely in retaliation for a 58-day strike in 2008.

“Boeing’s decision to build a 787 assembly line in South Carolina sent a message that Boeing workers would suffer financial harm for exercising their collective bargaining rights,” said the union’s vice president, Rich Michalski.

Mr. Solomon said that if he failed to settle the dispute, an administrative judge would begin hearing the case on June 14 in Seattle. Mr. Solomon said he was not seeking to close the South Carolina factory or prohibit Boeing from assembling planes there.

Boeing criticized the timing of the N.L.R.B.’s complaint, saying it came when construction of the factory in North Charleston, S.C., was nearly complete and after 1,000 employees had already been hired there.

Boeing said on Wednesday that none of the production jobs in South Carolina had come at the expense of jobs in Washington. It noted that its unionized employment in the Puget Sound area had increased by 2,000 since it announced its decision to expand in South Carolina.

The company also said it had decided to expand in South Carolina in part to protect business continuity and to reduce the damage to its finances and reputation from future work stoppages.