#25653-a-GAS

2010 S.D. 99

IN THE SUPREME COURT
OF THE
STATE OF SOUTH DAKOTA

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BOWES CONSTRUCTION, INC., Plaintiff and Appellant,

v.

SOUTH DAKOTA DEPARTMENT
OF TRANSPORTATION, Defendant and Appellee.

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APPEAL FROM THE CIRCUIT COURT OF
THE SIXTH JUDICIAL CIRCUIT
HUGHES COUNTY, SOUTH DAKOTA

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HONORABLE KATHLEEN F. TRANDAHL
Judge

* * * *

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CONSIDERED ON BRIEFS
ON NOVEMBER 15, 2010

OPINION FILED **12/22/10**

#25653

SEVERSON, Justice

[¶1.] Bowes Construction, Inc., a subcontractor hired to produce aggregate materials for three asphalt paving projects, initiated this breach of contract action against the South Dakota Department of Transportation. Under the subcontracts, Bowes was contractually obligated to produce aggregate materials that would pass the Department's sodium-sulfate-soundness test, and the Department was contractually obligated to accept Bowes' aggregate materials in the absence of a valid basis to reject them. The parties' subcontracts incorporated South Dakota's standard test procedure for the sodium-sulfate-soundness test. Bowes contended that its aggregate materials failed the Department's sodium-sulfate-soundness test because the Department did not follow the standard test procedure. Bowes alleged that the Department therefore rejected its aggregate materials without a valid basis and breached the subcontracts with Bowes. After a bench trial, the trial court entered a judgment in the Department's favor. We affirm.

BACKGROUND

[¶2.] Bowes is a heavy highway construction company located in Brookings, South Dakota. Approximately one-third to one-half of its business is producing aggregate materials. Producing aggregate materials involves procuring projects, selecting a source or "pit," setting up a portable "crusher" at the source, producing the aggregate, and testing the aggregate for quality. In addition to producing the aggregate, Bowes may be responsible for developing and producing the mix design.[1]

1. A mix design is a recipe for asphalt or concrete. The composition of asphalt or concrete varies depending on the quality of the aggregate.

Bowes has produced aggregate materials for the Department for more than thirty years.

The Sodium-Sulfate-Soundness Test

[¶3.] The sodium-sulfate-soundness test is used to determine whether aggregate is suitable for use in asphalt paving projects. The use of aggregate that is too soft will cause roads to prematurely crack, break, ravel, or fall apart. To perform the test, one must first wash and dry the aggregate, separate the aggregate into samples based on gradation,[2] and weigh each aggregate sample. A sodium-sulfate solution is then prepared. When used, the solution must have a specific gravity between 1.151 and 1.174, and the temperature must be between sixty-eight and seventy-two degrees Fahrenheit.[3] The aggregate samples are covered in one-half inch of the solution for sixteen to eighteen hours. During immersion, the porous aggregate absorbs the solution. After the immersion period, the aggregate samples are removed from the solution. The aggregate samples are placed in a drying oven at 230 degrees Fahrenheit until they achieve constant weight.[4] This entire process is repeated five times. After the fifth cycle, the aggregate samples

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2. Only the Department's sodium-sulfate-soundness testing of the course aggregate is at issue in this case. Course aggregate consists of rocks one quarter-inch in diameter or larger.

3. Specific gravity, or relative density, is the ratio of the density of a substance to the density of a standard reference substance. *Specific gravity (physics)*, Britannica Online Encyclopedia, www.britannica.com/EBchecked/topic/558700/specific-gravity, (last visited December 16, 2010). In other words, specific gravity is a measure of the strength of the solution.

4. Constant weight is achieved when the aggregate sample loses less than 0.1% of its weight in four hours of drying.

are washed and weighed. A percent loss is calculated for each aggregate sample. South Dakota tolerates a fifteen-percent loss rounded to the nearest whole number. By contrast, some states have sodium-sulfate-soundness-loss limits as low as five percent. Because the absorbed solution crystallizes during the drying cycle and expands during the subsequent soaking cycle, the sodium-sulfate-soundness test measures the durability of the aggregate to freeze and thaw cycles.

[¶4.] Several states utilize the sodium-sulfate-soundness test, but the testing methods vary by state. The American Society for Testing and Materials (ASTM) has published a standard test method for the sodium-sulfate-soundness test known as ASTM C88. SD 220, a modified version of ASTM C88, is the standard test method used by the Department. The most significant difference between ASTM C88 and SD 220 is the containers used during the tests. ASTM C88 requires the use of "baskets made of suitable wire mesh or sieves with suitable openings." SD 220, by contrast, requires the use of "pans."[5] The different containers result in other variations between ASTM C88 and SD 220. According to SD 220, after the soaking cycle, the sodium-sulfate solution is poured off the aggregate sample, and the aggregate sample is placed in the drying oven. Because ASTM C88 requires the use of sieves, it is not necessary to pour off the solution. The sieve containing the aggregate sample is removed from the solution and allowed to drain before it is placed in the drying oven.

5. Although the Department uses metal pans to conduct its sodium-sulfate-soundness tests, several materials-testing laboratories in South Dakota use glass bowls.

[¶5.] The Department has performed the sodium-sulfate-soundness test for decades. Howard Schill was primarily responsible for performing the sodium-sulfate-soundness test for the Department from 1966 to 1999. He testified that when the sodium-sulfate solution is poured off the aggregate sample after the soaking cycle, sodium-sulfate crystals remain in the pan. These crystals liquefy when the aggregate sample is placed in the drying oven. Because SD 220 requires the use of pans rather than sieves, this additional liquid does not drain away from the aggregate sample as it would under ASTM C88. Thus, when Schill began working for the Department in 1966, he was taught to place the aggregate sample in the drying oven, allow it to warm, remove it from the drying oven, and pour off any remaining solution. Schill refers to this additional step as the "double pour" or "redrain."

[¶6.] Schill testified that he performed the sodium-sulfate-soundness test with the double pour during his entire tenure with the Department. In 1996, Schill helped the Department develop SD 220. At trial, Schill acknowledged that SD 220 does not require that the sodium-sulfate-soundness test be performed with the double pour. Yet he testified that he intended SD 220's requirement that "the sodium-sulfate solution from the pan . . . be poured off" to include the double pour. In 1999, in order to train his replacement to perform the sodium-sulfate-soundness test, Schill prepared a procedure sheet, which was posted on the wall of the Department's materials-testing laboratory. Although the procedure sheet explained the several steps necessary to conduct the sodium-sulfate-soundness test, the sheet did not include the double pour.

[¶7.] The Department no longer performs the sodium-sulfate-soundness test with the double pour. For a short period of time after Schill left the Department in 1999, Everett Lawver performed the sodium-sulfate-soundness test. Lawver testified that he performed the sodium-sulfate-soundness test without the double pour. The Department subsequently hired Reed Sommers to perform the sodium-sulfate-soundness test. Schill trained Sommers to perform the sodium-sulfate-soundness test with the double pour. But Sommers passed away in 2001, and Brian Hipple replaced him. There is no evidence whether Hipple performed the sodium-sulfate-soundness test with the double pour. In December 2001, Perry Griffith, who had no previous experience performing the sodium-sulfate-soundness test, replaced Hipple. Hipple, not Schill, trained Griffith. Griffith, who was primarily responsible for performing the sodium-sulfate-soundness test for the Department at all times relevant to this lawsuit, has consistently performed the test without the double pour since 2001.

The Highway 37 Project

[¶8.] The Department let bids on an asphalt paving project on Highway 37 in Bon Homme County, South Dakota, in May 2004. Brauer Construction from Sioux City, Iowa, the successful general contractor on the project, selected Bowes to produce the aggregate and mix design for the project. The parties' subcontract incorporated SD 220 and the South Dakota Quality Control/Quality Assurance (QC/QA) program. South Dakota implemented the QC/QA program in the 1990s to build better roads by providing contractors more control and responsibility in the production of aggregate materials. Under the QC/QA program, a contractor must

submit a mix design to the Department that will pass the sodium-sulfate-soundness test as set forth in SD 220. Thus, under the parties' subcontract, Bowes was contractually obligated to produce aggregate materials that would pass the Department's sodium-sulfate-soundness test as set forth in SD 220, and the Department was contractually obligated to accept Bowes' aggregate materials in the absence of a valid basis to reject them.

[¶9.] Bowes chose the Beeson Pit in Bon Homme County to produce the aggregate materials for the Highway 37 project. While investigating sources for the project, Bowes spoke with another company that had done an asphalt project at the Beeson Pit, but did not contact the Department to inquire about the quality of the aggregate in that pit. Bowes also ran several preliminary laboratory tests on aggregate taken from the Beeson Pit, but did not run a sodium-sulfate-soundness test. Before the Highway 37 project, Bowes had not used the Beeson Pit to produce aggregate materials.

[¶10.] In September 2004, Brauer obtained a sample of the mix design Bowes was producing for the Highway 37 project and submitted it to the Department for testing. The mix design failed the Department's sodium-sulfate-soundness test. On January 20, 2005, Bowes submitted a second sample of the mix design to the Department. On February 1, 2005, the Department notified Bowes that it would not test the mix design a second time. In a letter dated February 8, 2005, Bowes argued that the first sample was not representative of the mix design it was producing. The Department therefore agreed to perform a second sodium-sulfate-

soundness test. The representative second sample of the mix design failed the Department's sodium-sulfate-soundness test with a 15.6 percent loss.

[¶11.] Because Bowes had never before failed a sodium-sulfate-soundness test, it submitted representative samples of the mix design it was producing for the Highway 37 project to independent materials-testing laboratories. In December 2004, before the Department agreed to test the mix design a second time, Bowes sent a sample of the mix design to Maxim Technology. Although Maxim is aware that SD 220 does not provide for it and that the Department performs the sodium-sulfate-soundness test without it, Maxim performs the sodium-sulfate-soundness test with the double pour. The mix design passed Maxim's sodium-sulfate-soundness test with a 13.4 percent loss. Bowes also sent a sample of the mix design to GeoTek Engineering & Testing Services in February 2005. GeoTek ran the sodium-sulfate-soundness test twice. Because the test results are rounded to the nearest whole number, the mix design passed both tests with 14.7 percent and 15.3 percent losses. Ultimately, the Department allowed Bowes to proceed on the Highway 37 project with a mix design containing five-percent Spencer quarry rock.[6]

The Highway 50 Project

[¶12.] The Department let bids on an asphalt paving project on Highway 50 in Bon Homme County in January 2005. Like the Highway 37 project, the Department awarded Brauer the general contract, and Brauer selected Bowes to

6. Spencer quarry rock is very durable to freeze and thaw cycles. It is often added to mix designs to compensate for lower-quality aggregate with higher sodium-sulfate-soundness losses.

produce the aggregate and mix design for the project. Again, the parties' subcontract incorporated SD 220 and the QC/QA program.

[¶13.] Bowes chose the Beeson Pit to produce the aggregate materials for the Highway 50 project. Bowes planned to use the mix design it was already producing for the Highway 37 project on the Highway 50 project. But after Bowes was awarded the Highway 50 subcontract, it learned that the mix design it was producing for the Highway 37 project failed the Department's sodium-sulfate-soundness test.[7] Highway 50, unlike Highway 37, is a medium-volume-traffic roadway, thus requiring stricter testing standards. Therefore, if the mix design Bowes was producing for the Highway 37 project had been submitted to the Department for the Highway 50 project, it almost certainly would have failed. Accordingly, Brauer submitted a mix design that contained five-percent Spencer quarry rock to the Department. In May 2005, that mix design passed the Department's sodium-sulfate-soundness test. The Department allowed Bowes to proceed on the Highway 50 project using the mix design containing five-percent Spencer quarry rock. Bowes did not fail a sodium-sulfate-soundness test performed on a mix design it was producing for the Highway 50 project.

The Highway 47 Project

[¶14.] The Department let bids on an asphalt paving project on Highway 47 in Lyman County in March 2005. The Department awarded Commercial Asphalt

7. Bowes did not learn that the representative sample of the mix design it was producing for the Highway 37 project failed the Department's sodium-sulfate-soundness test until February 2005.

the general contract, and Commercial Asphalt selected Bowes to produce the aggregate materials for the project. Unlike the Highway 37 and 50 projects, Bowes was responsible for not only producing the aggregate and mix design, but also developing the mix design and submitting it to the Department for testing. Again, the parties' subcontract incorporated SD 220 and the QC/QA program.

[¶15.] Bowes chose the Lafferty Pit in Lyman County to produce the aggregate materials for the Highway 47 project. The central part of South Dakota has lower-quality aggregate with higher sodium-sulfate-soundness losses, and Bowes had never before used the Lafferty Pit to produce aggregate materials. Bowes was therefore concerned about the quality of the aggregate in the Lafferty Pit and contacted the Department for information. The Department provided information showing passing sodium-sulfate-soundness-test results for aggregate samples taken from the Lafferty Pit, but Bowes ultimately took its aggregate from a different part of the pit. Further, Bowes ran several preliminary laboratory tests on aggregate taken from the Lafferty Pit, but did not run a sodium-sulfate-soundness test. Bowes did not contact other contractors about the quality of the aggregate in the Lafferty Pit.

[¶16.] Bowes contracted with Maxim to develop the mix design for the Highway 47 project. After developing the mix design, Maxim performed a sodium-sulfate-soundness test on it in July 2005. The mix design passed Maxim's sodium-sulfate-soundness test with a 14.9 percent loss. On July 15, 2005, Maxim submitted the mix design it developed to the Department. Maxim did not, however, send tensile strength ratio (TSR) data, which is required to properly complete and test a

mix design. Nonetheless, the Department began its sodium-sulfate-soundness test on the mix design on July 18, 2005. When the Department contacted Maxim to inquire about the missing TSR data on July 19, 2005, the Department learned that Maxim had already run a sodium-sulfate-soundness test on the mix design. On July 21, 2005, Maxim sent the Department the TSR data and the results of its sodium-sulfate-soundness test. Although Maxim's mix design had passed the sodium-sulfate-soundness test it conducted, Maxim submitted a second mix design containing five-percent Spencer quarry rock to the Department that day.

[¶17.] On July 22, 2005, the Department began a sodium-sulfate-soundness test on Maxim's second mix design. The Department completed its sodium-sulfate-soundness test on the first mix design on July 28, 2005. That test showed a failing twenty-one-percent loss. Given the significant sodium-sulfate-soundness loss, Commercial Asphalt knew that a drastic change to the mix design was necessary. Before the Department completed the sodium-sulfate-soundness test on the second mix design, Commercial Asphalt asked the Department to perform a sodium-sulfate-soundness test on a mix design containing seventeen-percent Spencer quarry rock. The Department completed its sodium-sulfate-soundness test on the second mix design on August 2, 2005. With a twenty-percent loss, the second mix design also failed the Department's sodium-sulfate-soundness test. Only the mix design containing seventeen-percent Spencer quarry rock passed the Department's sodium-sulfate-soundness test. The Department allowed Bowes to proceed on the Highway 47 project using the third mix design.

Procedural History

[¶18.] Bowes initiated this breach of contract against the Department in May 2006.[8] Bowes alleged that its aggregate materials failed the Department's sodium-sulfate-soundness test because the Department did not follow SD 220. Bowes contended that the Department incorrectly performed its sodium-sulfate-soundness test in three respects: (1) the double pour was not done; (2) the temperature of the sodium-sulfate solution was too warm;[9] and, (3) the specific gravity of the solution was too high. *See supra* ¶ 3. Bowes alleged that the Department therefore rejected its aggregate materials without a valid basis and breached the subcontracts with Bowes. After a bench trial, the trial court entered extensive findings of fact and conclusions of law. The trial court concluded that the Department followed SD 220 and did not breach the subcontracts with Bowes. The trial court thus entered a judgment in the Department's favor. Bowes appeals.

ANALYSIS AND DECISION

[¶19.] **Whether the trial court erred by concluding that the Department did not breach the subcontracts with Bowes.**

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8. Bowes, an approved subcontractor for the asphalt paving projects at issue, may directly sue the Department for breach of contract under SDCL 31-2-34. *See Fisher Sand & Gravel Co. v. S.D. Dep't of Transp.*, 1997 S.D. 8, ¶¶ 9-10, 558 N.W.2d 864, 867; *Sweetman Constr. Co. v. S.D. Dep't of Transp.*, 293 N.W.2d 457, 461 (S.D. 1980).

9. Although the Department presented evidence that the temperature of its materials-testing laboratory was within the allowable limits, it presented no evidence that it monitored the temperature of the sodium-sulfate solution. Nonetheless, testimony at trial established that if the solution exceeds seventy-two degrees Fahrenheit, the results of the sodium-sulfate-soundness test will favor the contractor.

[¶20.] Bowes argues that the trial court erred by concluding that the Department did not breach the subcontracts with Bowes. Although Bowes argued at trial that the Department incorrectly performed the sodium-sulfate-soundness test in three respects, the primary issue in this appeal is the double pour. Bowes concedes that SD 220, which is incorporated into the parties' subcontracts, does not require that the sodium-sulfate-soundness test be performed with the double pour. But Bowes claims that SD 220 is ambiguous and should be supplemented or explained by oral testimony of the South Dakota materials-testing industry's usage of trade to perform the sodium-sulfate-soundness test with the double pour. Bowes therefore alleges that the Department breached the subcontracts by rejecting its aggregate materials on the basis of a sodium-sulfate-soundness test performed without the double pour. The Department, on the other hand, contends that SD 220 is not ambiguous.

[¶21.] The trial court found that Bowes failed to establish it suffered damages caused by the breach it alleges. The elements of a breach of contract are (1) an enforceable promise; (2) a breach of the promise; and, (3) resulting damages. *Guthmiller v. Deloitte & Touche, L.L.P.*, 2005 S.D. 77, ¶ 14, 699 N.W.2d 493, 498 (citing *McKie v. Huntley*, 2000 S.D. 160, ¶ 17, 620 N.W.2d 599, 603; *Krzycki v. Genoa Nat'l Bank*, 242 Neb. 819, 496 N.W.2d 916, 923 (1993)). If the trial court properly found that Bowes failed to establish it suffered damages caused by the breach it alleges, we need not decide whether SD 220 is ambiguous thus allowing oral testimony to explain or supplement its written terms. We therefore address the causation of damages issue first.

[¶22.] Bowes presented testimony at trial on its hypothesis that its aggregate materials failed the Department's sodium-sulfate-soundness test because the Department performed the test without the double pour. Bowes argued that excess sodium-sulfate solution remains in the pan during the drying cycle if the double pour is not performed. And although the water in the solution evaporates during the drying cycle, sodium-sulfate crystals remain in the pan. These remaining crystals raise the specific gravity of the solution in the next soaking cycle. The solution is thus stronger in the subsequent soaking cycle. The stronger solution causes more crystallization on the aggregate and more sodium-sulfate-soundness loss. Accordingly, Bowes maintains that if the double pour is not performed, the results of the sodium-sulfate-soundness test will be artificially high. Bowes asserts that the fact that its mix designs passed the sodium-sulfate-soundness tests performed with the double pour by independent materials-testing laboratories supports its hypothesis.

[¶23.] The Department, by contrast, presented evidence at trial that performing the sodium-sulfate-soundness test without the double pour does not materially affect the test results. Upon having its sodium-sulfate-soundness test results questioned, the Department ran several sodium-sulfate-soundness tests on the mix design Bowes produced for the Highway 47 project. The Department first ran a series of tests to determine if the specific gravity of the sodium-sulfate solution increased after each soaking cycle. The tests showed that the specific gravity was within tolerance. The Department also ran two tests with sieves, three tests with the double pour, and one test without the double pour. The results of all

six tests were within close parameters. In fact, the sodium-sulfate-soundness test run without the double pour had the lowest loss percentage. Finally, the Department sent samples of the mix design Bowes produced for the Highway 47 project to materials-testing laboratories in Wisconsin and Wyoming. The sodium-sulfate-soundness tests performed by those laboratories had higher sodium-sulfate-soundness losses than the Department's tests.

[¶24.] The trial court carefully considered and weighed all the evidence and testimony presented on the causation of damages issue. Ultimately, the trial court found that Bowes failed to establish that its aggregate materials failed the Department's sodium-sulfate-soundness test because the Department performed the test without the double pour. The trial court was in the best position to weigh the conflicting evidence, and we will not disturb the trial court's factual findings unless they are clearly erroneous. *See Geraets v. Halter*, 1999 S.D. 11, ¶¶ 12, 18, 588 N.W.2d 231, 233-34 (citations omitted). The record contains sufficient evidence to support the trial court's findings and conclusion that Bowes failed to establish it suffered damages caused by the breach it alleges. We therefore need not further address whether the Department breached the subcontracts with Bowes or breached a duty of good faith and fair dealing. With no proof of causation of damages, Bowes cannot prevail under any of the theories of recovery it has presented.

[¶25.] Affirmed.

[¶26.] GILBERTSON, Chief Justice, and KONENKAMP, ZINTER and MEIERHENRY, Justices, concur.