

**FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION**

1244 SPEER BOULEVARD #280  
DENVER, CO 80204-3582  
303-844-3993/FAX 303-844-5268

September 5, 1996

SECRETARY OF LABOR,	:	CIVIL PENALTY PROCEEDING
MINE SAFETY AND HEALTH	:	
ADMINISTRATION (MSHA),	:	Docket No. WEST 95-258
Petitioner	:	A.C. No. 42-01944-03649
	:	
v.	:	
	:	Cottonwood Mine
ENERGY WEST MINING COMPANY,	:	
Respondent	:	

**DECISION**

Appearances: Robert Cohen, Esq., Office of he Solicitor,  
U.S. Department of Labor, Arlington, Virginia,  
for Petitioner;  
Timothy M. Biddle, Esq., Lisa A. Price, Esq.,  
Crowell & Moring, Washington, D.C.,  
for Respondent.

Before: Judge Cetti

This case is before me upon a petition for assessment of civil penalties under sections 105(d) and 110 of the Federal Mine Safety and Health Act of 1977, 30 U.S.C. § 801 et seq. the "Mine Act." The Secretary of Labor, on behalf of the Mine Safety and Health Administration, (MSHA), charges Energy West Mining Company (Energy West) with the violation of the mandatory safety standard 30 C.F.R. § 75.202(a). Energy West is the operator of the Cottonwood Mine, an underground coal mine, located in Emery County in Southwestern Utah.

MSHA issued the single citation in question after its investigation of a "coal outburst" or "bounce" <sup>1</sup> which occurred

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<sup>1</sup> The terms "coal outburst" and "pillar bounce" for purposes of this decision are used interchangeably and essentially mean the same condition. The Dictionary of Mining, Mineral and Related Terms defines a bounce: a. a sudden spalling off of the sides of ribs and pillars due to excess pressure; a bump. .... (United States Bureau of Mines), 1967 Edition.

in the 4th left working section of the Cottonwood Mine on May 16, 1994, at approximately 12:38 p.m. in a large uncompleted proposed pillar. The pillar was not fully formed by completion or mining of surrounding entries and crosscuts. (Tr. 421).

There was a mining crew working in the section, but no miners suffered any injuries as a result of the bounce. Nevertheless, because ventilation on the section was disrupted and production stopped more than an hour, MSHA was notified of the incident. MSHA Inspector Baker was at the mine at the time the bounce occurred on May 16, 1994, and immediately went to the 4th left section to investigate. Baker did not issue a citation at that time but did issue the citation in question a full two weeks later on June 1, 1994. The citation alleges a violation of 30 C.F.R. § 75.202(a) which provides as follows:

30 C.F.R. § 75.202 Protection from falls of  
roof, face and ribs:

(a) The roof, face and ribs of areas where persons work or travel shall be supported or otherwise controlled to protect persons from hazards related to falls of the roof, face or ribs and coal or rock bursts.

## II

### ISSUES

The Petitioner in his post-hearing brief states the issues for decision as follows:

1. Did the Secretary establish that a reasonably prudent person familiar with the coal mining conditions at the Cottonwood Mine would have provided additional measures to prevent bounces in 4th left section? See the Commission's decision in Canon Coal Company, 9 FMSHRC 667 (1987).

2. Did the evidence establish that Energy West violated 30 CFR 75.202(a) at the Cottonwood Mine because the operator failed to take adequate roof and rib support destressing measures in the 4th left section, an area prone to "bounces" and "coal outbursts"?

3. Can the Secretary establish a violation of 30 CFR 75.202(a), even if there is no evidence that Energy West violated its approved roof control plan?

4. If the evidence established that Energy West violated 30 CFR 75.202(a), what is the appropriate amount of civil penalty that should (be) assessed by the presiding Administrative Law Judge?

### **III**

#### **STIPULATIONS**

1. Energy West and its Cottonwood Mine are subject to the Federal Mine Safety and Health Act.

2. The Commission has jurisdiction over this proceeding.

3. The citation at issue was issued by an authorized representative of the Secretary and was properly served on an agent of Energy West.

4. The citation was abated in good faith.

5. Energy West, Cottonwood Mine, is a large underground coal mine.

6. Energy West's ability to continue in business will not be affected by an assessment of a reasonable civil penalty if the Secretary proves a violation in this case.

### **IV**

#### **BACKGROUND**

Energy West's Cottonwood Mine is an underground coal mine located under East Mountain in southwestern Utah. At the time of the May 16th bounce which resulted in the citation, the Cottonwood Mine employed 225 hourly workers, represented by the United Mine Workers of America ("UMWA"), and 60 management personnel. Cottonwood produced 3.5 million tons of clean coal in 1994.

The Cottonwood Mine is a "multi-seam" mine. Energy West's Deer Creek Mine lies 85-110 feet above the Cottonwood Mine workings. The amount of "overburden," or cover, over the Cottonwood mine ranges up to 2,100 feet. The cover in the area where the

bounce occurred, the 4th left section, was approximately 1,600 feet.

Energy West mines the coal from Cottonwood Mine with longwall equipment. To prepare for set-up of the longwall unit, continuous mining machines develop gate entries, or roads, off a main line, outlining a solid block of coal to be mined by the longwall mining equipment. In the Cottonwood Mine, these solid blocks of coal, or longwall panels, range from 600-750 feet in width and can vary from 1,500 to 5,000 feet in length. After the longwall equipment is set up at the end of the gateroads, a shear cuts coal along the face of the panel. It takes approximately four months for longwall equipment to mine the entire block of coal between the gateroads, producing about 800,000 tons of coal.

Cottonwood began development of the main entries ("mains") in Second North in 1990. As the mains were developed, continuous mining machines also developed "neck-offs" to begin gateroads for future longwall panels on both the east and west, or right and left, sides off Second North.

These neck-offs were started at the same time as the main entries to create space for future construction when Cottonwood was ready to begin longwall mining in the panels intersecting Second North. The neck-off areas off the mains of Second North were rooms separated by pillars of coal for support. They were the beginning of development of gateroads for future longwall panels and were necessary to allow access to complete necessary ventilation work and belt drive installation for future mining. (See Ex. R-2).

The neck-off areas had three entries with 100-foot pillars separating the entries. Because longwall gateroads must only have two entries adjacent to the coal to be cut with longwall equipment, the three neck-off entries were later reduced to two gateroad entries. Once narrowed to two entries, two large pillars, 50' by 100', separated the gateroad entries. There were no significant differences in the layout of each neck-off area on the east and west sides of Second North. Solid coal lay beyond the place where three entry mining stopped in each neck.

The Second North main entries in Cottonwood Mine were directly under old mains in the Deer Creek workings above. At the time Second North was developed in Cottonwood, the areas above in Deer Creek had already been mined and were not active. Since the Second North mains had to remain open during longwall mining for ventilation, for a conveyor belt, and for transportation of material and miners, a protective 400-foot "barrier" of

solid coal paralleled the mains on both sides of Second North. A similar barrier lay directly above in the Deer Creek works.

Development of the panel neck-offs in Cottonwood's Second North required mining under the Deer Creek barrier. Carl Pollastro, the Mine Manager and General Superintendent testified: "Any time that mining penetrates these barriers, there is stress that's induced by virtue of this barrier and the mining pressures that are transferred from the works above." This stress or pressure is a naturally occurring consequence of multi-seam mining. Crossing under the Deer Creek barrier while developing panel neck-offs as occurred in Second North was a common practice for Cottonwood; for example, the development of the neck-offs in First North involved "at least 11 penetrations of the barrier," with the same type of pillar layout and entry configuration as in Second North. There were about 25 development sections in Cottonwood with similar configurations that involved multi-seam mining. Once gateroad development progressed past the barrier, the pressures caused by barrier penetration dramatically decreased.

After the Second North mains and the longwall panel neck-offs were developed. Cottonwood began the second stage of development; extending two-entry gateroads from the neck-offs for the full length of each successive panel. This work began in each panel with the neckdown from three entries to two entries.

The 8th left and 9th left panels were the first in Second North to be fully developed and retreated with the longwall unit, with 10th right, 11th right and 12th right following thereafter. Mining then moved to the remaining panels on the right or east side of Second North, with gateroad development and longwall retreat mining starting with 8th right and proceeding south to each panel below until all the longwall panels on the east side in Second North (8th to 1st) were mined.

By the end of January 1994, mining was ready to resume on the west side of Second North. The 6th left gateroads were the first scheduled to be developed for longwall mining. As mining began in the neck-off area in 6th left, roof falls and rib bounces occurred in the entries that had already been developed. Because of safety concerns and logistical convenience. Two new entries were developed to the south of the previously developed entries in the 6th left original neck-off so the unstable area would not have to be traveled. Thus, the 6th left entry and pillar configuration in the neck-off area was slightly different than the remaining panels on the west side of Second North.

## V

As the neck-down to two entries continued in 6th left, it became apparent that Deer Creek barrier pressure was causing roof and rib stability problems in that area. As a result, Kevin Tuttle, then Chief Safety Engineer at the Cottonwood Mine and Carl Pollastro, then Manager and General Superintendent at the Cottonwood Mine, met with James E. Kirk, then Acting Subdistrict Manager of the MSHA Subdistrict Office in Price, Utah, to discuss steps that could be taken to reduce or eliminate outbursts of ribs and roof falls. Mr. Kirk and Blake Hanna, an MSHA roof control expert, visited Cottonwood to observe the roof conditions caused by the overlying Deer Creek barrier. The discussions between Cottonwood and MSHA at this time focused on the safest way to continue gateroad development in 6th left, while future panels in Second North were mentioned, no proposals for these panels were made at this time.

## VI

In light of the roof control difficulties in 6th left and knowing the Deer Creek barrier also would have to be crossed during gateroad development in the 5th, 4th, 3rd, and 2nd left panels, Cottonwood management met with the hourly workers in crew meetings to discuss additional safeguards to minimize the hazards. A particular concern involved the pillars in neck-off sections previously developed in 1991 along Second North to allow for subsequent longwall mining. As development proceeded in future Second North panels under the Deer Creek barrier, it was believed important to take measures to "soften" the 1991 pillars so they would not build up pressures caused by penetration under the Deer Creek barrier. Cottonwood's management decided that the 1991 pillars in the remaining Second North neck-offs should be notched to make them smaller and more likely to yield as they absorbed overburden pressure.

"Notching" a pillar means cutting enough coal out of the center of a pillar to allow the release of the stress that naturally and dynamically builds in a pillar as active mining around it forces it to absorb overburden pressures. A notched pillar converges upon itself in a controlled manner so that the likelihood of a sudden outburst of coal or "bounce" is reduced. Pillar notching can be hazardous depending on the circumstances, but those hazards can be minimized by limiting the number of miners near the pillar while the notch is being cut.

Reduction of pillar size through notching created potential for small outbursts, but such activity was a positive sign since

it indicated that the pillar was yielding effectively and in a controlled manner.

## VII

### THE PILLAR NOTCH PLAN

Having decided that notching the remaining 1991 pillars in Second North was necessary to protect the miners, Cottonwood's management formulated a pillar notch plan to supplement its approved roof control plan and asked the Union to review it. Cottonwood incorporated several Union suggestions into its notch plan and the Union approved it. Cottonwood then submitted the notch plan to MSHA on February 2, 1994, as an amendment to its roof control plan. The plan was accompanied by a cover letter summarizing it. (Ex. G-3).

The notch plan provided that the pillars created in 1991 during the development of Second North mains would be notched to relieve stress before further development of gateroads for longwall panels. The plan was detailed; it contained four pages of text and diagrams specifically outlining the procedures to be followed for notching the 1991 pillars in the 5th, 4th, 3rd, and 2nd Left section in Second North. Additionally, the plan included a diagram of the west side of Second North and detailed diagrams for the development of the gateroads in the 5th, 4th, 3d and 2d left sections. Those diagrams showed that notches also were to be cut in the "new" and smaller pillars to be created as the three gateroads in the neck-offs angled down to two gateroads. The new pillars showing notches on the plan diagrams were to be the last pillars under the Deer Creek barrier and Cottonwood believed it prudent to notch these new pillars after they were formed, using the same notching process as used for the 1991 pillars and for the same reason, to relieve overburden pressure.

The notches in the 1991 pillars in the 5th through 2nd left sections were to be cut 40' deep into the center of the pillar, because they were to be smaller, the newly developed pillars were to have 30' notches into their centers (Ex. G-3, Tr. 266-67). Neither the notch plan nor the cover letter summarizing it specified any particular time for notching during the process of mining, neither in terms of which of the 1991 pillars would be notched first, nor when new pillars would be notched during the gateroad development process. (Ropchan, Tr. 182; Pollastro, 265-266, 324).

There was conflicting use of the word "sequence" at the hearing. "Sequence" can refer to the order in which particular

pillars were to be notched. (Tr. 421). "Sequence" of notching could also refer to whether a notch in a new pillar was to be cut before or after the pillar was fully formed by completion of mining of surrounding entries and crosscuts. Under either definition, there was no sequence specified in the notch plan.

## VIII

### THE CONFERENCE CALL

MSHA and Cottonwood agreed to a conference call on February 4, 1994, to discuss the notch plan. Kevin Tuttle, Cottonwood's Chief Safety Engineer, went to the MSHA Subdistrict Office in Price, Utah, where he joined Tony Gabossi, MSHA's Subdistrict Manager. Tuttle and Gabossi called the MSHA District Office in Denver, where several MSHA representatives had gathered to discuss the plan. The MSHA officials in Denver who participated in the conference call were Bill Holgate, MSHA's District Manager, and Jerry Taylor, an MSHA engineer, as well as several officials from MSHA's Technical Support, Safety and Health Technology Center, including Sid Hansen, engineer, and David Ropchan, engineer.

During the conference call, MSHA officials wanted several additions to the notch plan before approving it. Specifically, MSHA required that 20' of roof exposed in each notch be permanently bolted. Further, MSHA required that additional roof support, in the form of timbers or square sets, be installed in the entry where a notch would be started. Nothing was added to the plan about when the notches would be cut in either the 1991 pillars or in the new pillars to be created during gateroad development. Mr. Tuttle immediately made the MSHA required changes to the notch plan and faxed them to the MSHA District Office. The notch plan was approved by District Manager Holgate by letter on February 4, 1994, the day the conference call occurred. (See Ex. G-3).

## IX

### THE IMPLEMENTATION OF NOTCH PLAN IN 5TH LEFT SECTION

Shortly after the notch plan was approved by MSHA on February 4, 1994, Cottonwood implemented the plan in 5th left of Second North. (Ex. R-3; Tr. 268). The 1991 pillars were notched according to the notch plan. (Ex. G-3 at 6, R-3). The #1, #2 and #3 gateroad entries were developed under the general mine plan. (Tr. 321). Once the entries proceeded far enough for the #5 crosscut, the crosscut was mined from the #1 entry to break



through at the #2 entry. (Tr. 270). After a new pillar came into existence between crosscuts #4 and #5, it was notched as shown in the 5th left diagram attached to the plan. Since there were no reportable bounces or significant roof falls during the notching in 5th left, Cottonwood considered its notching technique a success in controlling the pressures exerted by the overlying Deer Creek barrier.

MSHA did not monitor Cottonwood's implementation of the approved notch plan in 5th left and there was no evidence that there was any further communication between Cottonwood and MSHA about the plan or mining conditions until after the bounce in 4th left in May 1994.

There was evidence of only two events at MSHA connected with Cottonwood's notch plan between February 4, 1994, and May 16, 1994, neither of which involved anyone from the company. First, almost six weeks after MSHA's approval of Cottonwood's pillar notch plan, Mr. Ropchan said he prepared a memorandum about his recollection of the subjects discussed in the February 4, 1994, conference call but he did not send a copy of his memorandum to anyone at Cottonwood or MSHA. (Ex. G-6; Tr. 174). Second, Mr. Hansen testified that sometime after the conference call he developed computer simulations to evaluate mining methods that he thought could be used to notch the pillars under the plan. (Tr. 126). He used generic assumptions; he did not visit the Cottonwood Mine nor collect data about it to conduct this analysis. (Tr. 150). Mr. Hansen never discussed the results of his analysis with Cottonwood, nor did he provide the company with a copy of his results. (Tr. 164). Mr. Ropchan and Mr. Hansen had no further involvement in these issues. (Hansen, Tr. 98, 141; Ropchan, Tr. 181, 189).

## X

### THE IMPLEMENTATION OF NOTCH PLAN, 4TH LEFT SECTION

Gatewood development in 4th left, the panel immediately south of 5th left, commenced after the notch plan had been implemented successfully in 5th left. The layout of the 4th left section was identical to that in 5th left with respect to pillar size and configuration. The 1991 pillars in 4th left were notched successfully under the procedures established in the notch plan. New gateroad development began in 4th left precisely as it had in 5th left. The #1, #2 and #3 entries were driven up to the place where #5 crosscut was to be cut. (Tr. 273-74). On Friday, May 13, 1994, a minor, non-reportable bounce occurred

along the north rib of the #1 entry. Supplemental timber support was set in the #1 entry near crosscut #4. (Tr. 361).

## XI

### THE MAY 16TH BOUNCE IN 4TH LEFT SECTION

On the morning of May 16, 1994, because the north rib of the #1 entry had been unstable the preceding Friday, Lester Jorgensen, shift foreman, instructed Leonard Reid, section foreman, to mine crosscut #5 from entry #2 to #1 to keep the miners away from the north rib of entry #1, even though mining the crosscut in this direction was against ventilation. Mr. Jorgensen wanted the crosscut mined in this fashion to protect the miners from a potential outburst from the north rib along the #1 entry.

At the start of the day shift on May 16, 1994, the continuous mining machine was in the #2 entry in 4th left. The #5 crosscut had been started from the #2 entry but could not be driven from the #2 to the #1 entry as planned because the #1 entry had not been entirely bolted by the end of the shift on the preceding work day. The floor of that entry was partially obstructed by sloughage from the bounce the preceding Friday; loose coal had been pushed toward the end of that entry and had to be removed before bolting could be completed. Under its mine plan, Cottonwood cannot break a crosscut through to an unbolted entry. (Tr. 429). The continuous miner was brought from the #2 entry to the #1 entry to clean the entry. After that task was completed, the continuous miner was moved to the #3 entry so the roof bolting machine could be set up in the #1 entry to bolt the roof in the remaining 35-40 feet still unbolted. (Tr. 368, 397). When the bolting was completed in the #1 entry, the continuous miner was to be brought to the #2 entry to cut the #5 crosscut through to the #1 entry. After the #5 crosscut was bolted, and the ventilation established, the next step was to cut a notch in the newly created pillar between the #4 and #5 crosscuts as required by the notch plan. However, operations were interrupted when a rib bounce occurred at 12:38 p.m. The bounce blew coal from newly exposed ribs into the #1 entry, into the #4 crosscut and into the #2 entry for a short distance. Although a roof bolting crew was in #1 entry when the bounce occurred, no one was injured. (Tr. 277).

Although the outburst was an instantaneous release of pressure with considerable force there was little damage. (Tr.

340).<sup>2</sup> The bounce was reported to MSHA because production was stopped for more than one hour, in most part due to the disruption to ventilation and the Company's investigation of the event.

Carl Pollastro, the Mine Superintendent, was notified of the bounce by Leonard Reid and immediately went to 4th left to investigate. James Baker, an MSHA inspector, and Jan Lyall, an MSHA inspector trainee, were at the mine for a regular inspection when the bounce occurred and Mr. Pollastro told them about it. Inspector Baker and Mr. Lyall also went to 4th left.

## XII

### THE CITATION

MSHA Inspector Baker inspected the area on May 16th right after the bounce and issued a 103(k) order to "contro[l] the area until [he] could complete an investigation." Later in the day Baker terminated the 103(k) order and allowed Cottonwood to continue developing the 4th left gateroads without any change in mining procedures. He allowed Cottonwood to complete the #5 crosscut to define the pillar between the #4 and #5 crosscuts before cutting the notch into the newly created pillar. (Tr. 92). Baker did not issue a citation on May 16, 1994, or during the following two weeks.

Inspector Baker returned to the mine over the next two days to interview mine personnel and on May 19, 1994, accompanied Warren Andrews, of Denver Technical Support, who conducted a technical investigation of the bounce. Mr. Andrews took photos of the bounce area in 4th left and eventually prepared a report. Baker did not learn of Andrews' report for several months.

Mr. Baker prepared MSHA's official accident investigation report. (Ex. G-2). This report was released on October 7, 1994. Baker concluded that the block of coal bounded on three sides by the #1 and #2 entries and the #4 crosscut should have been notched prior to the bounce (Tr. 47), and before #1 entry was advanced to where it would intersect the #5 crosscut. However, Baker was unsure whether his suggested sequence of mining would have prevented a bounce; he believed "it may have prevented it. It may not." (Tr. 47-48). Baker could not conclude definitively

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<sup>2</sup> The bounce knocked down the ventilation line curtain and dislodged approximately eight of the square set timbers set in the area on the previous Friday. (Tr. 346, 403). The concussion from the bounce also dislodged part of an overcast. (Tr. 276, 347, 403). There was no damage to the roof. (Tr. 79, 346).

that the actions of the mining crew in 4th left caused or affected the bounce in any way. (Tr. 84).

On June 1, 1994, Mr. Baker, two weeks after his first investigation of the bounce, issued a citation to Cottonwood, alleging a violation of 30 C.F.R. § 75.202(a), not because of his conclusions about when the notch should have been cut but because, in his opinion, "no steps were taken to prevent the bounce that could have seriously injured those two roofbolters that were working in that #1 entry." (See Citation 3588448, Ex. G-1; Tr. 48). Had the roofbolters not been in the #1 entry when the bounce occurred--for example, if the bounce had occurred when no work was being done, or if the roofbolters had been elsewhere at the time of the bounce--Baker would not have issued any citation for the bounce. It is undisputed that no violation of Cottonwood's roof control plan occurred.

### **XIII**

#### **THE ABATEMENT**

To abate the citation, MSHA required Cottonwood to submit a revised notch plan. The revised plan limited the length the #1 and #2 entries could be driven before a notch was cut in newly developed pillars. In other words, MSHA required a notch to be driven on the advance of the #1 entry. The revised plan required by MSHA to abate the citation did not require Cottonwood to develop the new pillars in any different or smaller configuration and the layout of the gateroads in 4th left and the gateroads in the remaining sections to be developed under the plan (3rd left and 2nd left) were identical to the layouts specified in the original notch plan submitted by Energy West and approved by MSHA. The citation was abated after Cottonwood submitted this revised plan.

### **XIV**

#### **CONCLUSION**

The citation issued by MSHA Inspector Baker two weeks after he first investigated the May 16th outburst charges Cottonwood with the violation of 30 C.F.R. § 75.202(a). It alleges that "The operator failed to protect persons from the hazards related to falls of roof, face, or ribs and outbursts as a coal outburst (bounce) occurred in the 4th left section . . . ." (The citation does not mention the fact no one was injured.)

Section 75.202(a) is not a strict liability standard. It does not impose liability whenever a "bounce" occurs. To establish a violation, the Secretary, by a preponderance of evidence, must demonstrate a lack of reasonable care on the part of the operator. Under the Commission decision in Canon Coal Co., 8 FMSHRC 667 (1987) to prove a violation of 30 C.F.R. § 75.202(a) the Secretary must demonstrate by a preponderance of the evidence a lack of reasonable care on the part of the mine operator. To determine if the standard has been violated, an objective standard of a reasonably prudent person is applicable. In the present case I find that a preponderance of the evidence presented fails to prove that Cottonwood acted in any manner other than that of reasonably prudent person, familiar with the mining industry and the protective purpose of the standard, in both recognizing potential outburst hazards and in undertaking measures designed to avoid those hazards.

In this case there was commendable cooperation and earnest work by both the operator and MSHA to prevent any significant coal outburst. In spite of their best efforts, the May 16th outburst did occur. Fortunately no one was injured.

It is only by hindsight that MSHA speculates that perhaps notching pillar No. 5 even before it was completely formed "may" have prevented the bounce. Inspector Baker who issued the citation testified "it may have prevented it. It may not." (Tr. 84).

Having considered the hearing evidence and the record as a whole, I find that a preponderance of the substantial, reliable, and probative evidence fails to establish the violation of 30 C.F.R. § 75.202(a).

#### **ORDER**

Citation No. 3588448 and its corresponding proposed penalty are **VACATED** and this case is **DISMISSED**.

August F. Cetti  
Administrative Law Judge

Distribution:

Robert A. Cohen, Esq., Office of the Solicitor, U.S. Department  
of Labor, 4015 Wilson Boulevard, Arlington, VA 22203  
(Certified Mail)

Timothy M. Biddle, Esq., Lisa A. Price, Esq., CROWELL & MORING,  
1001 Pennsylvania Ave., N.W., Washington, DC 20004-2595  
(Certified Mail)

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