FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

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July 2, 2015

MARK GRAY, Complainant	DISCRIMINATION PROCEEDING Docket No. KENT 2010-430-D BARB-CD-2009-13
v.	
NORTH FORK COAL CORPORATION, Respondent	Mine: Mine No. 4 Mine ID: 15-18340

DECISION ON REMAND

Appearances: Tony Oppegard, Esq., Lexington, Kentucky and Wes Addington, Esq., Appalachian Citizens' Law Center, Whitesburg, Kentucky, for Complainant

Stephen M. Hodges, Esq., Penn, Stuart & Eskridge, Abingdon, Virginia, for Respondent

Before: Judge Rae

This case is before me upon a complaint of discrimination filed by coal miner Mark Gray ("Gray") against North Fork Coal Corporation ("North Fork") under section 105(c) of the Federal Mine Safety and Health Act of 1977 ("the Mine Act"), 30 U.S.C. § 815(c).[1]

I. PROCEDURAL HISTORY

A. Original Decision

On May 15, 2009, Gray was terminated from his job as a roof bolter at North Fork's Mine No. 4. Gray subsequently filed a complaint against North Fork alleging discrimination

[1] Section 105(c)(1) of the Mine Act provides in pertinent part: "No person shall discharge or in any manner discriminate against or cause to be discharged or cause discrimination against or otherwise interfere with the exercise of the statutory rights of any miner … because of the exercise by such miner … of any statutory right afforded by this Act." Section 105(c)(2) permits the Secretary of Labor to initiate an action on a miner's behalf if he determines that discrimination has occurred. Section 105(c)(3) permits a miner to file a discrimination claim on his own behalf if the Secretary decides not to pursue the claim, which is what occurred here.

under section 105(c)(3) of the Mine Act. He alleged that he had been fired for a protected work refusal in that he refused to roof bolt a "deep cut," a cut of coal that exceeded the maximum depth allowed by the roof control plan. (Complaint, Dec. 30, 2009.) He also alleged that his foreman had "expressed annoyance/hostility when Gray insisted that the ventilation curtains had to be hung while he was roof bolting." *Id.*

A hearing was held on December 15-16, 2010. I issued a decision on October 20, 2011. 33 FMSHRC 2495 (Oct. 2011) (ALJ). After considering all the evidence and testimony that had been presented at the December 2010 hearing and at Gray's earlier temporary reinstatement hearing,[2] I concluded that Gray had failed to make out a *prima facie* case of discrimination because he had failed to prove he engaged in protected activity. My earlier decision is incorporated by reference herein.

B. Scope of Remand

Gray appealed my decision on grounds that he should have been permitted to present expert testimony on the issue of whether his signatures were forged on two written disciplinary warnings that had purportedly been issued to him on February 27, 2009 and April 29, 2009 (Exhibits Compl.-B and Compl.-A, respectively).[3] 35 FMSHRC 2349, 2355 (Aug. 2013). Several days before the hearing, Gray had named forensic document examiners Dr. Larry S. Miller and Peter J. Belcastro, Jr. as potential expert witnesses who would testify as to the authenticity of Gray's signature on the purported disciplinary warnings. (*See* Supplemental Answer of Mark Gray to North Fork's 2nd Set of Interrogs., Dec. 3, 2010; 2nd Suppl. Answer to 2nd Set of Interrogs., Dec. 6, 2010.) North Fork had immediately moved to preclude Gray from calling the two expert witnesses. I had granted North Fork's motion and excluded the witnesses on the basis of late disclosure, (Order, Dec. 8, 2010, unpublished), but I had permitted Gray to submit the experts' reports in an offer of proof at the close of the hearing, (Tr.II 110-21).

On appeal, the Commission found that Gray's late disclosure of the expert witnesses did not violate any discovery rules such as would have justified excluding their testimony. 35 FMSHRC 2349, 2356-58 (Aug. 2013). To the extent that the late disclosure violated the

[2] The temporary reinstatement hearing was held on September 2, 2009. *See* 31 FMSHRC 1143 (Sept. 2009) (ALJ). Gray's case has been the subject of multiple hearings. The hearing transcripts are abbreviated as follows:

Transcript of September 2, 2009 temporary reinstatement hearing – "Temp. R."
Transcript of December 15, 2010 proceedings on the merits – "Tr."
Transcript of December 16, 2010 proceedings on the merits – "Tr.II"
Transcript of July 25, 2014 hearing taking expert testimony – "ET"

[3] In the closing paragraphs of his petition for review, Gray also asserted that several of my factual findings were unsupported by the record. (Pet. for Discretionary Review 17-18.) However, Gray did not revisit these assertions in his appeal brief, instead focusing solely on the exclusion of the expert testimony, and the Commission declined to address the assertions in its decision. This is consistent with past cases where the Commission has deemed an issue abandoned and declined to address it after the petitioner raised the issue in his PDR but failed to argue it on brief. *RNS Services, Inc.*, 18 FMSHRC 523, 526 n.6 (Apr. 1996), *aff'd*, 115 F.3d 182 (3d Cir. 1997); *ASARCO Mining Co.*, 15 FMSHRC 1303, 1304 n.3 (July 1993).

deadlines set forth in my scheduling order, the Commission found that the witnesses nonetheless should have been permitted to testify in light of the lack of prejudice to North Fork, the absence of evidence of bad faith on Gray's part, and the importance of the witnesses' testimony. *Id.* at 2360. The majority opined that the expert testimony regarding the written warnings was important both because the written warnings were the "principal documentary evidence supporting North Fork's claim of Gray's poor performance" and because Gray's allegation that the documents were fraudulent touched on the integrity of the proceedings. *Id.* at 2362. The majority further opined that the evidentiary exclusion could have affected the analysis of whether protected activity occurred.[4] *Id.* at 2362-65. My order excluding the expert testimony was reversed, the decision was vacated, and the case was remanded "for further proceedings, including any necessary discovery." *Id.* at 2366.

On remand, I am limited to considering the issues that were appealed to the Commission and addressed in the Commissioners' decision. As always, the Commission's scope of review on appeal was statutorily limited to the questions raised by Gray in his petition for discretionary review. 30 U.S.C. § 823(d)(2)(A)(iii); *see also* 29 C.F.R. § 2700.70(g); *Saab v. Dumbarton Quarry Associates*, 22 FMSHRC 491, 495 (Apr. 2000). Gray's PDR focused squarely on whether I should have excluded Miller's and Belcastro's testimony. The Commission did not entertain any new theories or evidence and did not grant a *de novo* trial, but merely remanded the case to me for consideration of the expert testimony and its effect on my credibility determinations, along with any necessary discovery, adhering to "the basic principle that parties in Mine Act cases must first present their evidence and advance their legal theories before the Judge, and not for the first time on appeal." *Black Beauty Coal Co.*, 37 FMSHRC 687, 693-94 (Apr. 2015); *see also Oak Grove Res., LLC*, 33 FMSHRC 2657, 2664 (Nov. 2011); *Beech Fork Processing, Inc.*, 14 FMSHRC 1316, 1321 (Aug. 1992). Accordingly, the scope of this case on remand is limited to my consideration of the testimony of Gray's handwriting experts, any rebuttal evidence presented by North Fork, and the effect of the expert testimony on all the other witnesses' credibility and on the outcome of the case.

C. Rehearing

When the case was returned to me, I scheduled a hearing to take the testimony of the two expert witnesses previously identified by Gray, Miller and Belcastro. North Fork filed a motion requesting that I expressly limit the scope of the hearing to those two witnesses' testimony and any necessary rebuttal testimony. (Mot. to Amend Notice of Hr'g, Jan. 22, 2014). Gray opposed that motion and filed a separate motion seeking leave to introduce additional evidence in the form of (1) testimony from a new lay witness, and (2) evidence from a previously unidentified

[4] Chairman Jordan issued a dissenting opinion stating it was "highly speculative at best" to anticipate that a different result would have been obtained if the experts had testified. 35 FMSHRC at 2367-70 (Jordan, Chairman, dissenting). She opined that a finding of forgery was far from inevitable based on Gray's offer of proof, and even if proven, the alleged forgery would not necessarily call into question my prior credibility determinations. *Id.* at 2368-70. In this regard, she noted that I had credited the testimony of witnesses who had nothing whatsoever to do with the disciplinary warnings and that witnesses involved with the warnings could still be credited as to matters unrelated to the warnings, including whether Gray engaged in protected activity. *Id.*

"mine safety expert" whose anticipated testimony was not described with particularity. (Mot. to Allow Presentation of Add'l Lay & Expert Evidence at Re-Trial, Feb. 14, 2014.)

On March 4, 2014, I issued an order granting North Fork's motion to limit the scope of the hearing and denying Gray's motion to allow additional evidence. 36 FMSHRC 797 (Mar. 2014) (ALJ). I explained that the scope of the hearing on remand was limited to those issues raised in the petition for discretionary review and accepted for review by the Commission – namely, whether Gray should have been permitted to attack the credibility of North Fork's witnesses by presenting the testimony of Miller and Belcastro. *Id.* at 799-800. Although I recognized that the Commission had contemplated a possible change in the outcome of the case on remand, I noted that such a change was contemplated only to the extent it resulted from Miller's and Belcastro's impact on my credibility assessments. *Id.*

I rejected Gray's argument that he was entitled to a *de novo* trial or presentation of new evidence under Federal Rules of Civil Procedure 59 or 60(b)(2), finding that he did not meet the stringent requirements for either of these extraordinary forms of relief. *Id.* at 800-03. To obtain a new trial under Rule 59 based on affidavits, the movant must file a motion with affidavits within 28 days of entry of judgment; here, Gray's motion and affidavits were filed 28 months after entry of judgment, so his Rule 59 motion was time-barred. *Id.* at 800. Similarly, to obtain relief from judgment based on newly discovered evidence under Rule 60(b)(2), the movant must request relief within one year of entry of judgment, which has been interpreted by the Commission as an absolute requirement; again, Gray did not meet this time limitation. *Id.* at 800-01. In addition, a party seeking to introduce new evidence under Rule 60(b) must show that the evidence was in existence at the time of trial but could not have been obtained even by exercising due diligence, is not merely cumulative, and would change the result. *Id.* at 801. Gray did not make these showings, for the reasons that follow.

First, the new lay testimony Gray sought to admit could have been presented during the initial proceedings and lacked any indicia of reliability such as would show it would change the result of the case. *Id.* at 801-02. The new lay witness, Michael Creech, was a former roof bolter at North Fork's No. 4 Mine who would purportedly testify that he had seen deep cuts being taken at the mine, that he had been told to bolt faster than Gray to make him look bad, and that he had heard an unidentified member of management say he wanted to be rid of Gray for making safety complaints. *Id.* at 801. However, Creech's vaguely worded affidavit did not include any details such as when and where he had observed deep cuts, who told him to bolt faster, or whom he had overheard discussing Gray; in sum, the affidavit lacked any specific facts that would lend credibility to Creech's proffered testimony. *Id.* at 802.The information Creech would provide would not change the outcome of the case in light of the independent documentary evidence and credible testimony that contradicts Creech's affidavit. *Id.* Gray also failed to show that Creech's testimony was unavailable at trial. Although Creech's alleged fear of reprisal from his employer had supposedly prevented him from testifying at the initial hearing, there was no evidence Gray had attempted to secure Creech's presence at that hearing and Creech had stopped working for North Fork at least five months before my initial decision was issued, yet Gray had not filed for a new hearing or made any attempt to identify or secure Creech as a witness. *Id.* at 801-02. I concluded that the affidavit from Creech did not justify reopening the litigation and I still reach the same conclusion having reevaluated the evidence as set forth below.

I also found that the new expert testimony Gray sought to admit could have been obtained before the initial hearing and would not necessarily change the result. Gray was requesting to call Tracy Stumbo as an "expert on mine safety." *Id.* at 802. Gray's counsel did not offer an affidavit or summary of Stumbo's proffered testimony, but during a conference call he suggested that Stumbo would testify "just generally about taking deep cuts and whether or not that means you will have a roof fall." *Id.* at 803. There was no proffer that this expert had ever set foot in the North Fork mine during the March through May 2009 period of time or had any particular knowledge of the conditions at that time as did those persons who worked in and inspected the mine during the relevant period. I found that this information could have easily been addressed at the initial hearing, and furthermore there was no showing that Stumbo's testimony would materially affect the outcome of the case, as the roof fall issue was only one basis upon which I made credibility determinations at trial. *Id.* This is particularly true taking into account MSHA roof specialist Doan's testimony that no deep cuts were permitted in District 7, the MSHA district where the mine was located, at this time due to the roof conditions. I also took into account the fact that all the witnesses, including Gray, testified that conditions were such that traveling under unsupported top posed a very high risk of danger. Accordingly, I denied Gray's request to present the new expert testimony. I find it would not have changed my assessment of the evidence or the outcome of the case.

Gray subsequently filed notice that he would call only Miller to testify at the hearing. North Fork filed a motion seeking to exclude or limit Miller's testimony on the basis that handwriting analysis is not a reliable field of expertise under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993).[5] However, I denied that motion, reasoning that in a non-jury trial the risk of improper influence is eliminated and the reliability of expert testimony goes more to its probative weight than to its admissibility. (Pretrial Ruling on Resp.'s Mot. to Exclude Expert Testimony & Objection to Exhibits, July 25, 2014, unpublished). I also noted that the Commission had specifically directed me to admit the expert testimony.

A hearing was held on July 29, 2014 in Harlan, Kentucky, at which time Gray offered Miller's expert testimony and related documentary evidence, including Miller's report, his curriculum vitae, and copies of the signatures he analyzed. Belcastro was not called as a witness. North Fork did not call any rebuttal witnesses. The following decision is based upon my

[5] When addressing expert testimony, the Commission has stated it is guided by the principles established under *Daubert* and Rule 702 of the Federal Rules of Evidence. *In re: Contests of Respirable Dust Sample Alteration Citations*, 17 FMSHRC 1819, 1843 (Nov. 1995), *aff'd sub nom. Sec'y of Labor v. Keystone Coal Mining Corp.*, 151 F.3d 1096 (D.C. Cir. 1998). Rule 702 sets requirements for the admission of evidence deriving from "scientific, technical, or other specialized knowledge." *Daubert* requires the trial court to evaluate whether the theories and techniques underlying a witness's testimony meet certain minimum standards of reliability before allowing the witness to testify as an expert under Rule 702. Although *Daubert* dealt specifically with Rule 702 testimony deriving from "scientific" knowledge, the Supreme Court subsequently made clear that the principles set forth in *Daubert* apply equally to testimony deriving from "technical, or other specialized knowledge," including experientially derived knowledge such as that possessed by forensic document examiners like Miller. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999).

consideration of the new evidence, my thorough review of the entire record, and my observations of the demeanor of the witnesses at the December 15-16, 2010 and July 29, 2014 hearings.

II. EXPERT TESTIMONY

A. Summary of Expert Testimony

Dr. Larry S. Miller is an expert in the field of forensic document examination, which includes handwriting identification, signature verification, and examination of paper and ink to identify the source of impressions and markings. (ET 9.)

Miller's qualifications are set forth in his testimony and curriculum vitae. He holds Bachelor's and Master's degrees in Criminal Justice and a Ph.D. in Public Health and Safety. He has worked as a forensic science professor ever since he received his Master's degree in 1977, and he currently serves as chair of East Tennessee State University's Criminal Justice and Criminology department and director of its graduate program for forensic document examination. Miller has also worked as a forensic document examiner (FDE) for the state of Tennessee since 1981 and for a private consulting firm since 2008. His earliest training as an FDE was received through the Tennessee Law Enforcement Training Academy and a community college in the 1980s. He later completed the U.S. Secret Service's basic and advanced courses in questioned document examination in 1987 and 2002, respectively. Although there are no state or federal licensing programs for FDEs, Miller is certified by the Board of Forensic Document Examiners, which is accredited by the Forensic Specialties Accreditation Board. (ET 6-17, 52-58; Ex. Compl.-E.)

In this case, Miller was asked to examine the purported disciplinary warnings dated February 27, 2009 (Exhibit Compl.-B, also referred to as "Q1") and April 29, 2009 (Exhibit Compl.-A, also referred to as "Q2") to determine whether Gray's signatures on these documents were genuine. After comparing the questioned signatures to a group of 54 exemplar signatures known to have been executed by Gray, Miller issued a two-page report opining to a high degree of likelihood that the questioned signatures were not penned by Gray. (Ex. Compl.-D.) This conclusion was based on Miller's observation of "numerous significant disqualifying dissimilarities" between the questioned and exemplar signatures, including "dissimilarities in line quality, letter formations, proportional spacings, beginning and ending strokes, and angle/slant." *Id.*

Miller explained his findings in greater detail at the hearing. First he described the theory behind handwriting analysis. Handwriting analysis is a forensic identification procedure that relies on pattern recognition. (ET 101-02.) The underlying principle is that "given a sufficient quantity and quality of handwriting, no writer has ever been found to possess the same characteristics of the writing of another person." (ET 19.) Unlike a fingerprint, each specimen of a person's handwriting is not exactly the same, but it is expected to fall within the "normal curve" representing the natural variation of his known writing. (ET 22-23, 82.) Thus, to authenticate a questioned signature, a handwriting examiner first examines a group of known signatures to become familiar with the characteristics of the subject's writing and then examines

the questioned signature to determine whether it falls within the normal curve of the subject's writing. (ET 22-23, 67.)

Miller relied on the 54 exemplar signatures contained in Exhibit Compl.-F to familiarize himself with Gray's usual writing. The exemplars were collected by MSHA investigators during the investigation of Gray's discrimination complaint. Forty of them comprise two lists of "request" exemplars that Gray produced at the request of MSHA Special Investigator Guy Fain on July 21 and 30, 2009. (Ex. Compl.-F, pages 9-10.) There is very little variation amongst the signatures in either of these lists. Miller testified this uniformity is typical for a list of request exemplars because all of them were written under the same conditions. (ET 112.) The other fourteen exemplars display much greater variation. Six of them were taken from Department of Labor forms dating from 2001 to 2005. (Ex. Compl.-F, pages 3-8.) The remaining eight are from unknown sources. One is dated November 20, 2007 and the rest are undated. (Ex. Compl.-F, pages 11-18.)

Miller testified that Gray's known writing (i.e., the exemplars) exhibited an above average degree of natural variation. (ET 24-25.) Because of this wide range of natural variation, Miller's level of confidence in his conclusion that Gray did not pen the questioned signatures was "a notch below certainty." (ET 32-33, 88-89.) Nonetheless, Miller testified he had identified several fundamental differences between the questioned and known signatures that led him to believe they were not written by the same person. (ET 71-72.)

Miller did not define "fundamental difference" or explain what differences he characterized as fundamental in this case. However, he provided a letter-by-letter analysis of the dissimilarities he observed between the questioned signatures and the exemplars, including differences in the formation of the M's, R's, and K's. (ET 25-29.) He also described differences in writing speed, skill level, and slant. The feathering, or fading of the terminal stroke, in the questioned signatures indicated they were written with a greater degree of speed than was apparent in the exemplar signatures. (ET 29.) Miller also felt that the questioned signatures were executed with a greater level of skill than the exemplars, which showed an immature type of writing indicative of someone who does not write frequently. (ET 29-30.) In addition, the right-handed slant in the questioned signatures was more prominent than in the exemplars. (ET 30-31.)

Miller also testified that he had sent the case for peer-review by two other forensic document examiners, both of whom expressed stronger opinions than he did that Gray could be eliminated as the writer of the questioned signatures. (ET 71-72.) These two FDEs were Heidi Harralson and Chris Burkey. (ET 102-03.) Harralson and Burkey's opinions were not submitted into evidence.

On cross-examination, Miller conceded that handwriting analysis does not "fall under the same quantifiable measures" as other sciences such as DNA analysis in that there is an element of subjectivity in quantifying the probabilities involved in handwriting that does not exist with DNA. (ET 90-91.) Examples of this subjectivity are mentioned elsewhere in Miller's testimony. For instance, when asked how many exemplars a handwriting examiner should review before forming an opinion, Miller said the number must be "sufficient" but sufficiency is a judgment

call made by the examiner. (ET 63.) Similarly, when asked how many differences are required to rule a signature invalid or not authentic, Miller testified that this is a matter for the examiner's judgment. (ET 71-72.)

Cross-examination revealed there were factors that Miller did not consider in his analysis of the signatures. Although he recognized that numerous extrinsic and intrinsic conditions can affect the appearance of handwriting – including the pen, the writing surface, the general environment where the writing takes place, the positioning of the writer, any physical conditions affecting the writer such as illness or fatigue, caffeine intake, alcohol or drug intake, age and the passage of time, and even stress, anger, and the writer's state of mind – Miller testified he was unaware of the circumstances under which the disciplinary warnings were signed and did not seek any information about the extrinsic and intrinsic conditions surrounding the writings. (ET 83-88, 105-06.) He explained that he "saw no evidence where [he] would need to" because the questioned signatures were "better signatures than Mark Gray can possibly produce" and the documents themselves gave no indication that any extrinsic or intrinsic factors were at play. (ET 85, 88, 105-06.) Also, Miller did not note the color of the ink on the questioned documents or test it to determine what type it was, although he agreed these factors could be relevant to evaluating whether the documents were written by the same person at the same time. (ET 40-43.)

Miller also failed to supplement his evaluation with a computer analysis. Computer programs exist that are capable of identifying and matching handwriting with a 98% success rate. (ET 68-69, 98-100, 107.) Miller has access to such software and he took his computer with him when he evaluated the questioned documents. (ET 37, 68.) However, he felt that a computer analysis was unnecessary because he is capable of performing the same analysis and this was a simple case involving just two questioned signatures, so it was faster for him to simply look at the signatures himself. (ET 107-08.)

Miller was confronted with two new signatures on cross examination. The new signatures can be found in Exhibit R-21, consisting of Gray's signatures from interrogatory responses dated August 3, 2010 (Ex. R-23) and November 29, 2010 (Ex. R-22). At first glance, Miller testified these signatures added nothing to his analysis. (ET 75.) He testified that the quality of the November 29 signature, which was a photocopy, was so poor that he could not make it out well enough to discuss the letter characteristics, and neither of the signatures had been enlarged. (ET 76-80.) When pressed, Miller examined the signatures more closely and opined that the word "Gray" in the November 29 signature had a tremulous appearance that indicated the paper had been lying on a rough surface when the signature was written. He suggested the pen may have dipped into something rough or the writer was nervous or had too much coffee that day. (ET; Tr. 80-81.) "[I]t looks like they're trying to make it appear like the Gray in the [August 3] signature, but it looks like they had a little bit of trouble in the writing," he said. (ET 80.)

Aside from analyzing signatures, Miller also analyzed and took photographs of a set of ESDA film lifts showing indentations on the two disciplinary warnings. ESDA films are created using an electrostatic data apparatus (ESDA). An electrostatically charged Mylar film is pressed very flat against a piece of paper in a vacuum table such that a dark powder sprinkled over the

film will adhere to any indentations in the underlying paper, including minute impressions that would not be visible to the naked eye. The powder is then lifted off of the Mylar film using clear tape to preserve an image of the indentations. (ET 31-32.)

The ESDA film lifts Miller examined were created by government investigators, rather than by Miller himself, but he deemed them adequate for his analysis. (ET 35-36.) North Fork has submitted photographs of the film lifts in Exhibit R-30. The photographs show that portions of the handwriting and signatures appearing on the April 29, 2009 warning are indented onto the February 27, 2009 warning. (Ex. R-30.) Miller concluded that parts of the April 29 warning were written while it was on top of the February 27 warning. (ET 21, 32-33, 47-49, 97-98.) On cross-examination, he conceded that he could not say when either warning was written, who wrote them, or whether they were written by the same person. (ET 49-50.)

B. Reliability of Handwriting Analysis

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, the Supreme Court considered the admissibility of expert testimony under Federal Rule of Evidence 702 and concluded that a trial judge must carefully screen scientific evidence before admitting it in order to ensure that it is based on theories and techniques that meet certain minimum standards of reliability. 509 U.S. 579 (1993); *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999) (applying *Daubert* to Rule 702 testimony derived from technical or other specialized knowledge, not just scientific knowledge). The Court provided the following non-exclusive list of factors to consider in assessing the reliability of a theory or technique relied upon by an expert witness: (1) whether the theory or technique is subject to empirical testing, (2) whether it has been subjected to peer review and publication, (3) the known or potential error rate, (4) the existence and maintenance of standards controlling its operation, and (5) the degree of its general acceptance. *Daubert*, 509 U.S. at 593-94.

North Fork's pretrial position was that Miller's testimony should be excluded or limited under *Daubert* because the "science" of handwriting analysis is not sufficiently reliable. However, I allowed Miller to testify, reasoning that in a non-jury trial the *Daubert* factors go more to the weight of the evidence than to its admissibility. *See Deal v. Hamilton County Bd. of Educ.*, 392 F.3d 840, 852 (6th Cir. 2004) ("The 'gatekeeper' doctrine was designed to protect juries and is largely irrelevant in the context of a bench trial."), *cert. denied*, 546 U.S. 936 (2005); *United States v. Velasquez*, 64 F.3d 844, 848 (3d Cir. 1995) ("[T]he same considerations that inform the court's legal decision to admit evidence under Rule 702 [i.e., the *Daubert* factors] may also influence the factfinder's determination as to what weight such evidence, once admitted, should receive.").

Now that Miller's testimony has been presented and North Fork has been given an opportunity to rebut it, I must assess the weight and credibility of the testimony. Accordingly, I must now reconsider in greater detail the reliability of the theories and techniques that underlie handwriting analysis.

Daubert Analysis of Handwriting Testimony by Other Courts

Before *Daubert*, courts routinely admitted expert testimony on handwriting analysis without questioning the underlying theories and techniques. However, handwriting analysis has received closer scrutiny and some negative treatment since *Daubert*. The fear is that unless forensic document examiners (FDEs) can show that their theories and methods produce reliable results, allowing a handwriting analyst to label himself an "expert" could imbue his testimony with a false air of scientific infallibility that may confuse or mislead a factfinder into attaching greater significance to the testimony than it truly warrants. In light of this concern, in recent years several trial courts have refused to admit handwriting testimony entirely. *United States v. Johnsted*, 30 F. Supp. 3d 814 (W.D. Wis. 2013); *American Gen. Life & Accident Ins. Co. v. Ward*, 530 F. Supp. 2d 1306, 1311-15 (N.D. Ga. 2008); *United States v. Lewis*, 220 F. Supp. 2d 548 (S.D.W. Va. 2002); *United States v. Saelee*, 162 F. Supp. 2d 1097 (D. Alaska 2001); *United States v. Fujii*, 152 F. Supp. 2d 939 (N.D. Ill. 2000).[6] Other courts have allowed testimony as to similarities and differences in handwriting but restrained the expert from offering an opinion on the ultimate issue of authorship of a questioned document or signature. *See, e.g., United States v. Oskowitz*, 294 F. Supp. 2d 379, 383-84 (E.D.N.Y. 2003); *Wolf v. Ramsey*, 253 F. Supp. 2d 1323, 1341-48 (N.D. Ga. 2003); *United States v. Hidalgo*, 229 F. Supp. 2d 961 (D. Ariz. 2002); *United States v. Rutherford*, 104 F. Supp. 2d 1190 (D. Neb. 2000); *United States v. Hines*, 55 F. Supp. 2d 62 (D. Mass. 1999).

Even in cases where expert testimony on handwriting is admitted, courts have taken a closer look at the scientific bases for the testimony and have often found it lacking in some respects. This was the case in *United States v. Starzecpyzel*, a seminal early decision critiquing handwriting analysis. 880 F. Supp. 1027 (S.D.N.Y. 1995). In that case, the trial court concluded that handwriting analysis "clothes itself with the trappings of science" yet "does not rest on carefully articulated postulates, does not employ rigorous methodology, and has not convincingly documented the accuracy of its determinations." *Id.* at 1028. A pre-trial evidentiary hearing had elicited testimony that the two basic principles underlying handwriting analysis are inter-writer variation (i.e., uniqueness) and intra-writer variation (natural variation). *Id.* at 1031. The fundamental issue, the court concluded, is whether FDEs can reliably distinguish between the two forms of variation; "How FDEs might accomplish this was unclear to the Court before the hearing, and largely remains so after the hearing," the trial judge stated. *Id.* at 1031-32. Although he concluded that expert testimony on handwriting would not be admissible under *Daubert*, the judge ultimately allowed the testimony under a less stringent evidentiary standard because *Daubert* had not yet been applied to non-scientific expert testimony. *Id.* at 1043-46.

Since *Starzecpyzel*, other courts that have admitted handwriting testimony have appeared to agree that handwriting analysis has reliability issues but to skew in favor of giving the jury the opportunity to decide for itself. *See, e.g.*, *United States v. Crisp*, 324 F.3d 261, 271 (4th Cir. 2003) (noting FDE's primary role is simply to draw jury's attention to similarities and differences that they can then inspect themselves), *cert. denied*, 540 U.S. 888 (2003); *United*

[6] In *Johnsted*, *Saelee*, and *Fujii*, the courts noted they were analyzing hand printing rather than handwriting, although each of the courts spent considerable time discussing the evidence on the reliability of hand*writing* analysis. I find the distinction between handwriting and hand printing to be of minor significance. *See United States v. Prime*, 220 F. Supp. 2d 1203, 1214 n.7 (W.D. Wash. 2002), *aff'd*, 431 F.3d 1147 (9th Cir. 2005).

States v. Paul, 175 F.3d 906, 911 (11th Cir. 1999) (finding testimony more probative than prejudicial based on expert's candid acknowledgement of limitations of the science and jury's ability to perform its own visual comparisons of the handwriting); *United States v. Jones*, 107 F.3d 1147, 1157, 1161 (6th Cir. 1997) (discussing concerns about reliability but emphasizing parties' ability to continue to challenge reliability of evidence after its admission), *cert. denied*, 528 U.S. 1023 (1999); *United States v. Prime*, 220 F. Supp. 2d 1203, 1216 (W.D. Wash. 2002) (finding that handwriting analysis "would come up short" if subjected to stricter scrutiny, but admitting it under flexible reading of *Daubert*), *aff'd*, 431 F.3d 1147 (9th Cir. 2005).

In this case, the parties have not presented much evidence specifically directed to the reliability of handwriting analysis as a science. Gray relies solely on Miller's testimony, report, and curriculum vitae. North Fork submitted two published studies on handwriting analysis with its pre-trial *Daubert* motion, one of which is a study on the individuality of handwriting and the other on whether certain propositions pertaining to handwriting analysis are generally accepted in the relevant scientific community. (North Fork's Mot. to Exclude Expert Testimony, July 22, 2014, Exs. A & B.) Except for these studies, North Fork has not presented any other rebuttal evidence. Given the dearth of record evidence on the reliability of handwriting analysis as a science, I have reviewed other courts' treatment of handwriting analysis with regard to each of the *Daubert* factors in order to inform my assessment of Miller's testimony.

Empirical Testing; Peer Review and Publication

The first *Daubert* factor, empirical testing, requires an evaluation of whether the theories and techniques underlying the proffered expert testimony can be challenged in an objective, empirical sense and whether they have in fact been subjected to such challenges. The second *Daubert* factor evaluates whether the underlying theories and techniques have been subjected to peer review and publication. This is essentially a measure of whether the empirical testing undertaken in the field has proven reliable enough to withstand review. Because empirical testing and peer review and publication are interrelated, I will consider them together.

The theories and techniques at issue here are described in Miller's testimony. Miller testified he relied on the theory that everyone's handwriting displays unique characteristics. (ET 19.) The logical outgrowth of this theory is that handwriting is individually distinguishable. Applying this theory, an FDE can determine whether a particular person penned a questioned writing or signature by comparing it to the person's known writing to see if it falls within the "normal curve" or "critical region" representing the person's unique, distinguishable handwriting characteristics. (ET 22-23.)

The theory and technique described above are capable of being empirically tested to validate the underlying principles and establish an error rate. However, Miller did not cite any studies or peer-reviewed literature to show that such empirical testing has been conducted. The only relevant empirical data before me is a journal article submitted with North Fork's pre-trial *Daubert* motion discussing a study by Sargur N. Srihari, et al. purporting to establish the individuality of handwriting.[7] (North Fork's Mot. to Exclude, Ex. A.) In this study, the researchers asked approximately 1500 people to write out three copies each of a 156-word

[7] Sargur N. Srihari, et al., *Individuality of Handwriting*, 47 J. Forensic Sci. 856 (July 2002).

document that featured all the letters in the alphabet, all ten numerals, several distinctive character combinations, and other "attributes of interest." *Id.* The writing samples were then scanned into a computer, which was able to identify authorship of a given writing sample or partial sample with a high accuracy rate. *Id.* However, the accuracy rate decreased when fewer words and characters were considered. *Id.*

In this case, Miller's task was to determine whether two questioned signatures containing just six distinct characters (M, a, r, k, G, and y) were forged or genuine. The Srihari study does not provide strong empirical support for an FDE's ability to reliably perform this particular task. The amount of questioned writing at issue here is very small, and the Srihari study showed that attribution of authorship becomes less accurate as the amount of questioned writing decreases.[8] Gray has not presented any other evidence of empirical testing. The reliability of the technique Miller applied is unclear in that there is insufficient evidence for me to conclude it has been subjected to adequate empirically-based peer-reviewed testing to establish its efficacy.

In addition, it is unclear whether the underlying theories Miller relied on have been subjected to adequate empirical testing and peer review. Miller himself agreed on cross-examination that some aspects of handwriting variability remain untouched by empirical investigation, as was noted by one of his students in her graduate thesis. (ET 95-96.) This admission is significant because understanding the variability of handwriting is crucial to analyzing it. The Srihari study provides some support for the common-sense proposition that handwriting is individualistic and therefore distinguishable by examining its variations. Yet it is unclear to what extent the assumption holds true that any given person's handwriting will be unique and distinguishable from everyone else's handwriting, and these fundamental propositions have been questioned by some courts.

For example, in *Starzecpyzel*, the court discussed a study in which an FDE had examined the signatures of individuals with the same name and found that many of the signatures looked so alike that they were not worth photographing. 880 F. Supp. at 1036 (citing John J. Harris, *How Much Do People Write Alike?*, 48 J. Crim. Law & Criminology 637 (1958)); *see also Hidalgo*, 229 F. Supp. 2d at 967 (agreeing with expert witness that hypothesis of uniqueness "has not been fairly tested"); *Lewis*, 220 F. Supp. 2d at 552-53 (noting theories that penmanship characteristics are distinguishable and that there is a base rate of such characteristics in the population have not been tested). After discussing a number of other studies on handwriting analysis, the *Starzecpyzel* court concluded that the field lacks "critical self-examination" and scholarship. 880 F. Supp. at 1037-38. Other courts have reached similar conclusions. *See Jones*, 107 F.3d at 1157 (noting both academicians and FDEs have recognized lack of empirical evidence in field); *Hines*, 55 F. Supp. 2d at 68-69 (finding that studies cited by expert "cannot be said to have 'established' the validity of the field to any meaningful degree"); *Saelee*, 162 F. Supp. 2d at 1102-03 (finding "overall lack" of empirical testing and meaningful peer review); *Fujii*, 152 F. Supp. 2d at 940-41 (noting that studies on handwriting analysis have been criticized for methodological flaws and lack of unbiased peer review).

[8] By analogy, in *United States v. Prime*, the court relied in part on the Srihari study to find that the premises of handwriting analysis were sound in the context of that particular case, in which the FDE had been provided with a very extensive array of writing samples that included 112 pages of known writing and 76 questioned documents. 220 F. Supp. 2d at 1211-12.

In a recent case, a federal district judge found that the two main principles on which handwriting analysis is premised, the principles of uniqueness and intra-writer variation, have not been adequately tested. *Johnsted*, 30 F. Supp. 3d at 817-18. The court explained why the lack of adequate testing of these two principles is so troubling:

> This lack of testing has serious repercussions on a practical level: because the entire premise of interpersonal individuality and intrapersonal variations of handwriting remains untested in reliable, double blind studies, the task of distinguishing a minor intrapersonal variation from a significant interpersonal difference – which is necessary for making an identification or exclusion – cannot be said to rest on scientifically valid principles. The lack of testing also calls into question the reliability of analysts' highly discretionary decisions as to whether some aspect of a questioned writing constitutes a difference or merely a variation; without any proof indicating that the distinction between the two is valid, those decisions do not appear based on a reliable methodology. With its underlying principles at best half-tested, handwriting analysis itself would appear to rest on a shaky foundation.

Id. at 818.

In sum, although handwriting analysis has been subjected to some empirical testing and peer review, it appears that reliable data is lacking. There is insufficient evidence on the record before me to establish that the theories Miller relied on have been validated or that the techniques he applied have been proven accurate and effective in cases involving a very small amount of questioned writing.

Error Rate

The task Miller was asked to perform in this case was to determine whether the two questioned signatures were authentic or forged. In evaluating the reliability of his conclusions, it would be useful to know two separate error rates: the rate at which FDEs falsely identify a forged signature as genuine and the rate at which FDEs falsely identify a genuine signature as forged. However, Miller did not provide any error rate at all.

Miller testified that computer technology exists with the capability of matching handwriting samples with a 98% confidence rate, i.e., a 2% error rate. (ET 68-69, 99, 107.) However, he did not use a computer program to analyze the signatures in this case. Thus, the only error rate applicable here would be the rate at which FDEs make mistakes in their work when relying on their own analytical powers rather than a computer program.

It is not clear whether it is possible to assign a definitive error rate to FDEs' work because, as noted by Miller, the probabilities involved in handwriting analysis are not as readily quantifiable as those involved in other sciences such as DNA analysis. (ET 89-90.) Nonetheless, many courts have found the lack of an error rate in the field of handwriting analysis to be problematic. *See, e.g., Johnsted*, 30 F. Supp. 3d at 820; *Lewis*, 220 F. Supp. 2d at 552-54;

Saelee, 162 F. Supp. 2d at 1103 ("There is little known about the error rates of forensic document examiners. The little testing that has been done raises serious questions about the reliability of methods currently in use."); *Fujii*, 152 F. Supp. 2d at 940-41; *Hines*, 55 F. Supp. 2d at 69; *Starzecpyzel*, 880 F. Supp. at 1037 (characterizing data on error rate as "sparse, inconclusive and highly disputed" and opining that accuracy testing "must be conducted if forensic document examination is to carry the imprimatur of 'science'"); *see also Crisp*, 324 F.3d at 280-81 (Michael, J., dissenting). *But see United States v. Mooney*, 315 F.3d 54, 62 (1st Cir. 2002) (accepting without comment expert's reliance on unnamed study said to demonstrate 6.5% error rate). I find that the lack of an error rate is troubling because it prevents me from ascribing any particular level of confidence to Miller's methodology.

Standards Governing Operation of Technique

As discussed above, Miller testified that the technique he applied was to first examine the exemplar signatures to familiarize himself with Gray's known writing and then examine the questioned signatures to determine whether they fell within the normal curve of Gray's writing. (ET 22-23, 67.) Miller also discussed which features he analyzed, which included the shape of each letter and the slant, speed, and skill level of the writing. (ET 25-31.) His report further states that in conducting his analysis, he employed "standardized (ASTM) questioned document examination techniques" where applicable. (Ex. Compl.-D.)

Beyond these vague descriptions, Miller did not explain what criteria he applied in reaching an ultimate opinion on authorship of the questioned signatures. North Fork has pointed out that the ASTM (American Society for Testing and Materials) standards are non-specific, including such vague directives as "[c]onduct a side-by-side comparison of comparable portions of the bodies of writing" and "[a]nalyze, compare, and evaluate the individualizing characteristics and other potentially significant features present" without defining what constitutes a similarity or difference or which ones are significant. (North Fork's Mot. to Exclude, paragraph 12.) The ASTM standards also do not explain and Miller did not testify as to what standards FDEs follow to define the parameters of the normal curve of someone's handwriting. Miller further did not explain what standards are employed to distinguish the natural variation in one person's handwriting from the variation observed between different writers. He testified there is no standard in the profession for how much known writing an FDE should review before reaching a conclusion; the number of exemplars reviewed must be "sufficient," but sufficiency is a judgment call made by the examiner. (ET 63.) Miller also failed to provide any standards as to the type or number of dissimilarities that must be identified to determine a signature is inauthentic. He testified that a single fundamental dissimilarity can be sufficient to rule a signature inauthentic, but provided no guidance as to how FDEs determine whether a dissimilarity is "fundamental" or decide how many differences are sufficient, saying only that this determination depends on the examiner. (ET 71-72.) Miller did not even provide a general idea of how many handwriting traits should be compared before reaching a conclusion.

Miller further acknowledged that handwriting analysis is not governed by the same quantifiable standards as some of the other forensic sciences. Unlike fingerprints or DNA, a person's handwriting or signature does not look exactly the same all the time. (ET 23, 82.) Miller testified that DNA analysis produces a "parametric type statistical inference" that gives

DNA experts a scientific basis to present a definite opinion, but handwriting analysis does not "fall under the same quantifiable measures." (ET 89-90.) Because it is a type of pattern recognition, it is measured in nominal and ordinal levels of measurement rather than interval or ratio levels of measurement, meaning there is an element of subjectivity in quantifying the associated probabilities that is not present with DNA analysis. (ET 90-91.)

Courts have noted, and at times lamented, the lack of objective quantifying standards governing the operation of handwriting analysis. *See, e.g.*, *Paul*, 175 F.3d at 911 (noting that FDE himself acknowledged lack of quantifying standards); *Ward*, 530 F. Supp. 2d at 1314 (discussing FDE's failure to articulate methodology and characterizing FDE's description of operation of handwriting analysis as "not very enlightening"); *Starzecpyzel*, 880 F. Supp. at 1032-33 (finding that FDE's testimony failed to elucidate his methodology and identifying various standards that were lacking). Several courts have deemed it significant that most FDEs follow the same methodology. For example, in *United States v. Crisp*, the Fourth Circuit admitted an FDE's expert testimony in part because he had "testified to a consistent methodology of handwriting examination and identification" used by most FDEs. 324 F.3d at 271; *see also Mooney*, 315 F.3d at 62; *Velasquez*, 64 F.3d at 850-51. But regardless of the fact that most FDEs seem to apply consistent methods, the real problem is that the standards governing these methods are not *objective*, as was noted by the dissent in *Crisp*. 324 F.3d at 281 (Michael, J., dissenting). The lack of objective guidelines gives rise to an element of subjectivity recognized by Miller that has troubled many courts. *See, e.g.*, *Johnsted*, 30 F. Supp. 3d at 819 (excluding testimony in part because of "extremely discretionary" standards followed by FDEs); *Saelee*, 162 F. Supp. 2d at 1104 (excluding testimony after finding that "[t]he technique of comparing known writings with questioned documents appears to be entirely subjective and entirely lacking in controlling standards"); *Rutherford*, 104 F. Supp. 2d at 1193 (finding it problematic that a handwriting match "is declared upon the subjective satisfaction of the FDE" rather than based on empirically based peer-reviewed standards); *Hines*, 55 F. Supp. 2d at 69 (explaining that nature of handwriting analysis obliges FDEs to make subjective judgments).

The concerns stemming from this element of subjectivity are twofold. First, the FDE's reasoning is shielded from review and scrutiny to the extent that his conclusions are not based on articulable criteria. In *Wolf v. Ramsey*, the trial court explained how this reduces the reliability of the expert's opinion:

> Nowhere in the submissions provided by plaintiffs is there any attempt to show by what methodology Mr. Epstein [the FDE] reaches a conclusion of absolute certainty that a given person is, in fact, the writer of a questioned document. …The underlying notion behind *Daubert*, and all good science, is that a given premise or principle should be capable of being tested to determine whether the principle is, in fact, sound. Thus, if Epstein indicated, for example, that whenever a writer of known material has x number of similarities, there is a given probability that the writer wrote the note – and if this methodology had been tested by reliable means in the past – then Epstein would have shown reliability in the methodology that he used to reach a determination of the likelihood of his conclusion. As it is, however, Epstein's explanation for his conclusion seems to be little more than "Trust me; I'm an expert." *Daubert* case law has indicated that

such an assertion, which seems to be based more on intuition than on scientific reasoning, is insufficient.

253 F. Supp. 2d at 1347.

The second problem with subjectivity is that it gives rise to a potential for bias. Miller agreed that forensic sciences like handwriting analysis are subject to bias, which has presented problems within the field. (ET 56-57.) As an example of unethical bias, he testified that an FDE could pick a single signature that looks nothing like the subject's normal writing and say "of course they don't match." (ET 64.) Conscious bias is certainly a concern. But even an honest and ethical FDE with the best of intentions can fall prey to forms of unconscious prejudice such as confirmation bias, which is a bias of expectation and suggestion. The threat of bias thus decreases the reliability of an FDE's opinion even if there are no signs of conscious bias.

After reviewing the evidence, I conclude that Miller has not established that the technique he applied to analyze the questioned signatures is governed by consistent objective standards. Rather, the methodology he applied contains an element of subjectivity that is troubling because it prevents me from fully evaluating his reasoning and gives rise to a potential for bias.

Degree of General Acceptance of Underlying Theories/Techniques

Except for Miller's testimony, Gray did not produce any evidence that would establish the degree of general acceptance of the theories and techniques underpinning handwriting analysis. Miller testified that the approach he applied to analyze the questioned signatures is generally accepted in the field of forensic document examination because no two people have ever been shown to have the same handwriting characteristics. (ET 18-19.) On the other hand, North Fork submitted a published study purporting to show that various principles of handwriting identification are not generally accepted.[9] (North Fork's Mot. to Exclude, Ex. B.) The researchers had framed general statements of purported principles about handwriting analysis and asked FDEs and handwriting scientists what they understood their field's degree of consensus to be regarding the validity of each principle. *Id.* They found that FDEs and handwriting scientists appeared not to agree on the acceptability of most of the propositions posed to them, and the handwriting scientists viewed fewer of the propositions as generally accepted. *Id.*

I do not doubt Miller's assertion that the FDE community accepts the general theory underlying his methodology, which is that no two people write alike. However, the study submitted by North Fork shows that many of the principles of handwriting analysis have not yet achieved general acceptance and the technique is still unsettled. In addition, general acceptance by the FDE community is of minimal significance until it can be shown that this community has undertaken the type of critical self-review of its science that would be necessary to empirically validate the pertinent techniques and to establish an error rate and objective controlling standards. *See Saelee*, 162 F. Supp. 2d at 1104-05 (deeming acceptance within field insignificant because of its uncritical nature); *Fujii*, 152 F. Supp. 2d at 940-41 (finding it problematic that

[9] Michael J. Saks & Holly VanderHaar, *On the "General Acceptance" of Handwriting Identification Principles*, 50 J. Forensic Sci. 119 (Jan. 2005).

acceptance of handwriting expertise is largely by handwriting experts themselves); *Starzecpyzel*, 880 F. Supp. at 1038 (attaching little significance to acceptance within field because field is devoid of financially disinterested parties and there was no showing of acceptance by related scientific or academic communities); *Crisp*, 324 F.3d at 281 (Michael, J., dissenting) (stating that general acceptance comes only from those who have not questioned basic underlying premises).

In analyzing *Daubert*'s general acceptance factor, some courts have found it relevant that all of the Circuit Courts to consider the issue have admitted handwriting testimony. However, under *Daubert*, it is acceptance by the scientific community rather than the court system that is relevant. Moreover, the Circuit Courts that have permitted expert testimony on handwriting have done so under the deferential abuse-of-discretion standard, meaning their opinions can be read not so much as an endorsement of the science than as an unwillingness to impinge upon the trial court's gatekeeping function. *See Johnsted*, 30 F. Supp. 3d at 821.

On the record before me, I cannot say that the theories and techniques underlying handwriting analysis have achieved general acceptance in the relevant scientific community. The study submitted by North Fork suggests a lack of consensus among FDEs as to the significance and even the validity of various principles underlying handwriting analysis. The lack of a cohesive generally accepted theory and technique decreases the reliability of Miller's analysis.

C. Analysis of Miller's Conclusions

Because of my concerns about the reliability of handwriting analysis as a science, I have carefully evaluated Miller's conclusions and reasoning therefor to determine how much weight to accord his opinion that the signatures were forged. Miller made many interesting and helpful observations about the signatures which I have fully considered. However, I find that his ultimate conclusion that the questioned signatures were forged is of low probative value for the reasons discussed below. These reasons include failure to adequately account for the high degree of natural variation in Gray's writing; potential problems with the sufficiency of the exemplars; failure to delineate the bounds of the "normal curve" of Gray's writing or define what would constitute a "fundamental" divergence from this curve; failure to convincingly explain the significance of the dissimilarities observed between the questioned and known signatures; failure to adequately account for certain other relevant factors, including the circumstances surrounding the execution of the disciplinary warnings and the ink, indentations, and other handwriting appearing on the documents; the potential for confirmation bias; and inadequate justification for the high level of certainty Miller expressed in his opinion.

First, the high degree of natural variation in Gray's known signatures, as seen in Exhibit Compl.-F, raises significant doubts about Miller's ability to reliably apply the signature analysis technique he described. As noted above, Miller testified that he analyzed the signatures by first familiarizing himself with the characteristics of Gray's known writing and then determining whether the questioned signatures fell within the "normal curve" or "critical region" of Gray's natural variation. (ET 22-23.) The idea that a person's handwriting will always fall within a certain range of natural variation is essentially a principle of individual discriminability that relies on an assumption that handwriting characteristics are, to a certain critical degree,

immutable. Broad variation in a person's handwriting undermines this assumption. Miller acknowledged that the broad variation in Gray's known signatures decreased his level of confidence to "a notch below certainty." (ET 32-33, 88-89.) However, he did not otherwise discuss how the variation affected his analysis. He did not explain how he accounted for the variation or how he determined that the differences between the questioned and known signatures were attributable to variation between writers rather than to the broad variation seen in Gray's own writing. Furthermore, "a notch below" is hardly a scientific measurement and his use of this term speaks to the subjectivity involved in his analysis.

In addition, I am not convinced that the exemplar signatures Miller reviewed were sufficient to familiarize him with Gray's normal writing to the degree that he would be able to reliably identify or exclude Gray as the signer of other documents. As noted above, Miller reviewed 54 exemplars to familiarize himself with Gray's writing. (*See* Ex. Compl.-F.) Forty of them appear on two lists of request exemplars that were penned at the same time under the same conditions (ET 112), meaning that the 54 exemplars represent Gray's penmanship under just 16 distinct sets of circumstances. Miller did not say whether this is typically considered a sufficient representation of a person's handwriting. He testified that numerous exemplars must be reviewed as opposed to just one or two because of the natural variation in a person's handwriting, but he did not give any indication what number of exemplars is generally considered sufficient, saying only that this is a matter for the handwriting examiner's judgment. (ET 22-23, 63.) He also did not address whether the above average degree of natural variation in Gray's writing would merit an above average number of exemplars. Because Miller did not provide any standards for evaluating the sufficiency of the known writing, he has not provided any assurance that the known writing he relied on was adequate to allow him to accurately delineate the bounds of Gray's normal writing.

Furthermore, the exemplars are not necessarily contemporaneous with the questioned signatures. Miller testified that the closer in time an exemplar is written to the questioned writing, the more accurate the analysis. (ET 65.) Yet seven of the exemplars are undated, others were penned as many as seven or eight years before the questioned signatures, and the only ones that are known to have been produced within three years of the questioned signatures are the two lists of request exemplars and a single signature from an unknown source dated November 20, 2007. (Exs. Compl.-A, -B, -F.) The non-contemporaneous nature of the exemplars detracts from my confidence in the accuracy of the comparison.

Because it is unclear where some of the exemplars came from, it is also unclear under what circumstances they were written and whether the conditions surrounding their execution were sufficiently similar to the questioned signatures to make the comparison useful. Miller would not necessarily have known where the exemplars came from because he did not collect any of them himself. Rather, the exemplars were apparently collected by MSHA investigators. MSHA Special Investigator Guy Fain obtained the request exemplars. Although Gray denied having a personal relationship with Fain, he testified he has known Fain for about ten or twenty years because they used to go to the same church and were involved in a prior case together. (Temp. R. 88-90, 93-94.) Yet Miller testified he would normally recommend against allowing a longtime acquaintance to take writing samples. (ET 50-52.) It is unknown what instructions Fain gave to Gray before he executed the signatures or under what conditions they were written.

As is the case with all the exemplars, there is no information as to whether Gray was sitting down or standing up when he wrote them, what surface he was bearing on, or whether there was anything under the paper, and no information as to his physical state or state of mind at the time. Miller testified that a multitude of conditions both intrinsic and extrinsic to the writer can affect handwriting, (ET 83-87), so all of the factors mentioned above could have affected the exemplars.

Given the potential deficiencies in the exemplars and the uncertainties surrounding their execution, it is not clear that they supplied Miller with sufficient information to accurately delineate the bounds of the "normal curve" of Gray's widely variable handwriting. Miller also did not make any effort to delineate those bounds in his testimony – he could have, for example, identified distinguishing traits observed in Gray's known writing that he would have expected to see every time Gray executes his signature, but he did not do so.

An even more significant problem is that Miller did not clearly explain what it was about the questioned signatures that assured him to a high degree of certainty that they fell outside the bounds of Gray's normal writing. Miller testified that one "fundamental dissimilarity" can be sufficient to rule a signature not authentic and that he had identified several such differences in this case. (ET 71-72.) Yet he failed to explain what makes a difference "fundamental" or even to offer any examples of differences that generally qualify as fundamental, and he did not identify which particular differences he had characterized as fundamental in this case.

Although Miller did not provide an explanation for his key finding of several fundamental differences, he did provide a letter-by-letter analysis of the questioned signatures. He noted differences in the M's, R's, K's, and the overall appearance of the word "Gray."

Miller testified that the M's in the questioned signatures were written more quickly than those in the exemplars and had more of an embellished look, with a large loop on the first stroke, and the two top humps were more wedge-shaped with a shorter than usual middle stroke between them. (ET 25-26.) However, as Miller himself suggested, the exemplars display broad enough variation to explain these purported distinctions. As Miller noted, the M's in the exemplars alternately feature wedge-shaped, bowl-shaped, and printed humps, and at times the first stroke features an embellished loop. (ET 25.) In addition, a contemporaneous known signature of Gray's that appears elsewhere in the record, his signature on the June 17, 2009 statement he gave to Special Investigator Fain, features an M that strongly resembles the questioned M's in that its initial stroke begins with an upward loop and its humps are small and wedge-shaped with a truncated middle stroke. The fact that the M's in the two questioned signatures look more similar to each other than to any of the exemplars could be viewed as a sign that they were written by someone else, but the similar-looking and contemporaneous June 17, 2009 signature shows that the range of natural variation in Gray's M's is broader than indicated by the exemplars and likely broad enough to encompass the M's in the questioned signatures. Furthermore, the questioned signatures were purportedly penned within several months of each other under very similar circumstances – if North Fork's witnesses are to be believed, both were signed in the mine superintendent's office during a disciplinary session. Similar circumstances and the contemporaneous nature of the signatures could explain their similarity to each other. In

sum, the M's in the questioned signatures do not appear so different from Gray's known writing as to constitute a "fundamental" difference.

Miller testified that the lowercase R's in the questioned signatures differed from Gray's normal writing style in that the top of each letter was bowl-shaped, which is common for people who were taught cursive in the Zaner-Bloser style, whereas Gray's lowercase R's were normally either wedge-shaped or flat across the top, which is indicative of American Standard cursive. (ET 26-27.) Similarly, Gray's known writing usually features an American Standard cursive K, which is formed with one continuous stroke that goes up, comes down, forms a "belly," then "kicks out" above the baseline. (ET 27.) By contrast, the K's in the questioned signatures were formed with two separate strokes, with the pen lifting to form the belly and kick out, and in one of them the kick out was actually formed using an unnecessary third stroke. (ET 27.)

Miller testified that an unnecessary stroke is sometimes referred to as patching or retouching and is commonly seen in cases where a person is trying to make a simulated signature resemble a model signature. (ET 27-28.) If Miller was trying to imply that the patching seen in this case is a sign of simulation, I am not persuaded, because the patching does not in any way make the letter look more like an American Standard cursive K or any of the other K's within the spectrum of Gray's known writing.

I accept Miller's conclusion that the R's and K's in the questioned signatures do not look like any of the exemplars. However, given the wide range of variation in the exemplars, I am not convinced that the appearance of the R's and K's is an indication of forgery rather than simply a manifestation of the tremendous variation in Gray's handwriting. It is true that when Gray sat down and wrote out a list of request signatures all at the same time, he produced columns of uniform signatures featuring wedge-shaped R's and American Standard cursive K's. (Ex. Compl.-F, pages 9-10.) But the rest of the exemplars are not at all uniform. Compare, for example, the rounded R and neatly formed K on page 13 of the exemplar packet with the caret-shaped R and illegible K on page 16, then compare both against the anomalous signature on page 18 in which a lowercase cursive A is connected to an uppercase R followed by a standalone printed K. (Exhibit Compl.-F.) In the same vein, looking just at the five exemplars that Miller enlarged for demonstrative purposes on page 2, the lowercase R's and K's show a variety of different shapes and stroke patterns. *Id.* These include variations in the shape of the R; variations in the height, slant, and shape of the first up-and-down stroke forming the back of the K; and considerable variations in the shape of and connection between the belly and kick out on the K. Given the variation in the known writing, it is not at all established that the R's and K's in the questioned signatures diverge from Gray's normal curve.

Miller also testified that the word "Gray" in the questioned signatures differs from the exemplars in that the Y's are proportionately larger and the A's are not intact. (ET 28-29.) On review, however, there are a number of exemplars in which the A is not intact or is only partially intact, including most of the request exemplars. The A was not intact in the very first signature in the exemplar packet and Miller posited that the questioned signatures were modeled after something like that, thereby implicitly recognizing the similarities between the word "Gray" in the questioned signatures and exemplars. (ET 28.) As for the Y's, the Y's in the questioned signatures are proportionately larger than some, but not all of the Y's in the exemplars. Once

again, Gray's broad range of natural variation could explain the differences. In addition, one of North Fork's witnesses who was purportedly present at the disciplinary meeting when the second questioned document was signed, Countiss, testified that Gray "appeared to be angry" when he signed it and "stood up over the paper, when he wrote it and slashed at the end and threw his pen down, and kind of stomped out the door." (Tr. 120, 135-36.) This testimony is entirely consistent with the jagged, slashing appearance of the word "Gray" in the questioned signature. It is also consistent with Estevez's testimony that Gray was standing at the desk when he received and signed that warning. (Temp. R. 279.) According to Miller, the appearance of handwriting can be influenced by factors including the posture and position of the writer and the writer's state of mind. (ET 83-87.) Thus, if North Fork's testimony is to be credited, Gray was signing the document under the stressful condition of a disciplinary meeting, which could have affected his state of mind and therefore changed the appearance of his handwriting, and he was standing up, which also could have influenced the appearance of the writing and made it look different from signatures executed from the more typical seated position.[10] In sum, even if the word "Gray" in the questioned signatures did not appear to fall well within the range of the natural variation seen in the exemplars, the differences identified by Miller could be explained by the plausible factual scenario North Fork has presented.

Miller testified that the speed and slant of the writing also influenced his opinion. He believed the questioned signatures were written with more speed than the exemplars based on the fading of the terminal stroke, (the final upstroke of the letter Y), in the questioned signatures. (ET 29.) Miller also testified that the questioned writing had a more prominent right-handed slant than the exemplars. (ET 30.) As discussed above, however, the appearance of the signatures could have been affected by the circumstances under which they were written. North Fork's witnesses suggested at least one of the signatures was written with a quick slashing motion while the writer was standing up. Miller specifically stated that the positioning of the writer typically changes the slant of the writing. (ET 86-87.) Although forgery is a possible explanation for the apparent increase in speed and slant in the questioned signatures, North Fork's witnesses have suggested the plausible alternative explanation that the signatures were affected by the circumstances surrounding their execution. Additionally, the broad variation in Gray's known signatures is again worth noting. The exemplars appear to have been written with various degrees of speed and several of them display a prominent right-handed slant. (*E.g.*, Ex. Compl.-F, pages 13-14.) I find that the slant and speed of the writing are not fundamental distinctions that would compel or even strongly support a conclusion of forgery.

Miller also testified that the skill of the questioned writing, which he referred to as "line quality," was better than that of the exemplars. (ET 29-30.) He opined that Gray's known signatures demonstrated an immature type of writing indicative of someone without much practice. (ET 30.) Although Miller did not expressly identify skill level as a fundamental difference, he seemed to find it significant, testifying at one point that the questioned signatures "are actually better signatures than Mark Gray can possibly produce." (ET 85, 88.) Yet Miller did not explain how or why the appearance of the questioned signatures led him to believe they had been executed with greater skill than the exemplars. After reviewing the exemplars, I agree that many of them look as if they were penned by someone who does not write much. This

[10] North Fork did not offer testimony on the circumstances surrounding the execution of the other disciplinary warning, but presumably they would be similar.

makes sense because Gray is functionally illiterate. (Tr. 224-25.) However, it is still unclear what led Miller to find that the questioned signatures were executed at a higher skill level. To the untrained eye they simply look sloppier than Gray's normal writing. In addition, some of the exemplar signatures strike me as more skillfully executed than others (e.g., those found on pages 13 and 14 of the exemplar packet), although this is speculative on my part because Miller did not provide any criteria to consider when assessing skill level. In sum, Miller has not clearly explained how the "line quality" or apparent skill level of the questioned writing influenced his analysis.

In addition to Miller's failure to convincingly explain how the numerous minor differences described above translate into "several … fundamental differences" (ET 71), there were other factors that he did not consider at all or failed to adequately account for, which further detracts from the weight of his opinion.

First, I find it highly significant that Miller did not consider how the conditions surrounding the signing of the questioned documents could have affected the appearance of the questioned signatures. Miller testified that numerous extrinsic and intrinsic conditions can affect the appearance of handwriting, including the pen, the surface the writer is bearing on, the writer's position, the writer's state of mind or emotional state, drug or caffeine intake, stress, intoxication, being cold, and many other factors. Yet he admitted he did not know the circumstances under which the questioned documents were signed and did not ask about them. (ET 83-87, 105-06.) He declared there was no need to consider the surrounding circumstances because if any extrinsic or intrinsic factors were in play, he would have been able to see some sign of them in the signatures, but in this case the "similarities and dissimilarities did not reflect any problems with extrinsic and intrinsic characteristics." (ET 105-06.) In other words, "you have to find the evidence in the paper," but there was nothing on the paper that spurred his curiosity. (ET 88.) This explanation makes no sense. There is no reason to think that a person examining a questioned writing can always tell from the writing itself whether any external influences were at play.

Miller's stubborn refusal to consider that any extrinsic or intrinsic conditions may have affected the appearance of the questioned signatures clashes with his attitude at other times during the hearing. For example, he explained the lack of variation in the request exemplars as being fairly typical because they would have been written under the same intrinsic and extrinsic conditions, unlike the rest of the exemplars. (ET 112.) Miller also immediately resorted to extrinsic and intrinsic conditions to explain the appearance of the two signatures he was confronted with for the first time at the hearing, testifying that the tremulous appearance of the word "Gray" in one of the signatures could have been caused by a rough writing surface or by the writer having too much coffee or being nervous. (ET 80-81.) When Miller's reluctance to admit that extrinsic or intrinsic conditions may have affected the questioned signatures is contrasted with his willingness to resort to such conditions as an explanation for the appearance of writing in other situations, the contrast suggests a certain defensiveness on his part. He seemed unwilling to admit he may have overlooked something.

Another factor Miller failed to address was the significance (or insignificance) of Gray's functional illiteracy. Presumably, an individual's particular style of writing is partly dependent

on fine muscle memory acquired through repetition. Illiteracy could disrupt this process. However, it is unclear whether Miller was aware that Gray was illiterate, and he did not say whether this factor had any impact on his analysis.

Miller also failed to analyze any aspects of the disciplinary warnings except the questioned signatures. The original warnings were not submitted to the record. Miller took digital photographs of the warnings but did not note the color of the ink or submit color copies of the photos, and at the hearing he could not recall the ink color or whether all the ink was the same color. (ET 39-42.) He at first testified the color of the ink was not important, but later conceded it could be relevant to an allegation that the documents had been written by the same person at the same time. (ET 42-43.) This is the precise allegation Gray has raised. Miller also did not test the type of ink on the warnings, although he had equipment he could have used for that purpose. (ET 40.) Ink type, similar to ink color, could have been relevant to Gray's allegation that the documents were written at the same time or to North Fork's allegation that they were written at different times by different people. Miller also did not analyze all of the handwriting appearing on the warnings. He was asked only to determine whether Gray's purported signatures were genuine, not to determine who actually wrote or signed the documents, and he could not offer any opinion as to when the documents were written or whether they were written by the same person. (ET 49, 91-92.) But an analysis of the different handwriting appearing on different parts of the disciplinary warnings could have been relevant to evaluating the parties' divergent accounts of how the warnings were written.

The indentations revealed by the ESDA films are also relevant to the parties' accounts of how and when the warnings were written. Miller testified that portions of the writing from the April 29, 2009 warning were indented onto the February 27, 2009 warning, as is evident from Exhibit R-30, but he failed to explain the significance of this finding. (ET 32-33.) The form on which each of the warnings were written consists of a set of boxes that can be checked to indicate the type of warning that is being issued, a section labeled "Explanation" where the issuing supervisor can write in a description of the offense, and a signature block with spaces for the supervisor, a witness, and the offending employee to sign and date the form. The February warning is marked as a verbal warning issued for substandard performance and bears Gray's undated signature and the signature of former mine superintendent Ison dated February 27.[11] (Ex. Compl.-B.) The April warning is marked as a final written warning for substandard performance and bears the signatures of mine superintendent Estevez, foreman Countiss as witness, and Gray, all dated April 29.[12] (Ex. Compl.-A.) The dates next to Estevez's and Gray's signatures seem to be written in the same handwriting. *Id.* The "explanation" sections of the

[11] The "explanation" section contains the following handwritten note: "Notified Mark that his performance was poor that other could bolt more with same machine and partner and that he is going to have to pick up on his job falling behind in his duties even had complaints from his foreman and partner of his lack of performance. Dayshift has shone [sic] lack of keeping up compared to other shift." (Ex. Compl.-B.)

[12] The "explanation" section states: "Mark has been warned in the past about his work performance and his job duties. His foreman Tom Cornett has brought it to my attention and Mark's that he would have to perform better on the job. With his experience at his job he should be one of our top performers and Tom feels like he isn't tring [sic] or doesn't care." (Ex. Compl.-A.)

two warnings appear to bear different handwriting, although Miller did not offer an opinion in this regard. The following handwriting from the April warning is indented onto the February warning: almost all of the handwritten "explanation" section; Estevez's partial signature and the date next to his name; the date next to Gray's name in the signature block, which is not perfectly aligned with the other indentations, indicating the paper was rotated; and another partial misaligned blurb, which Miller identified as part of Gray's signature but which actually appears to resemble part of Countiss's signature or some other unidentified writing. (ET 47-49, 97-98, 110; Ex. R-30, page 4.) Other unidentified indentations are present on both documents that read: "Copy these. Label as examples of documents viewed by handwriting expert Section #," and "Copy first two pages. Call them Section #7." (Ex. R-30.) Presumably these are from the litigation. Miller did not discuss them.

Gray contends that the indented writing from the April warning proves that (1) Estevez and Countiss lied about the circumstances surrounding the issuance of the April warning, and (2) the two warnings were not prepared on the dates they purport, but presumably after Gray was fired. (Posthearing Br. of Mark Gray, 24, 28.) However, the indented writing proves neither of these allegations.

With regard to the first allegation, Countiss' and Estevez's testimony was as follows. Countiss testified that he was called to Estevez's office for the disciplinary meeting; Estevez was sitting behind the desk and Countiss was beside it; Estevez spent about 15 to 20 minutes explaining the contents of the April disciplinary warning to Gray before handing it to him; Gray angrily signed it with a slashing motion and stomped out of the room; then Countiss signed it at the end of the meeting. (Tr. 109-14, 118-20, 135-36.) Estevez testified he believed he had filled out the boxes and explanation section at the top of the warning the day before calling Gray and Countiss into the office for the disciplinary meeting; afterward, he had handed the warning to Gray, who was standing in front of the desk, and asked him to read it and make sure everything they had discussed was written down; Gray had signed it and handed it either to Estevez or to Countiss, who was standing next to the desk; Countiss signed it and handed it back to Estevez; then Estevez signed it and dropped it into Gray's file in the drawer. (Temp. R. 278-90; Tr. 37-46, 50.) Estevez did not recall whether there was anything under the April warning when he filled it out, but he specifically denied that the February warning was under it. (Temp. R. 284; Tr. 44-46, 50-51.) Although the personnel files are in his office, he did not recall looking at Gray's file before writing the April warning or becoming aware of the February warning until later. (Temp. R. 286-90; Tr. 46-50.)

After reviewing the testimony, I find that Countiss and Estevez have given largely consistent and credible accounts of the purported disciplinary meeting. The only discrepancy is Estevez's testimony that the February warning was not underneath the April warning, which is disproven by the indentations. But I do not find this discrepancy fatal to Estevez's credibility. He indicated throughout his testimony that he did not recall the disciplinary meeting with perfect clarity and was basing his account in part on his knowledge of the way he usually conducted such meetings, and I find that his testimony was not inconsistent with what a supervisor would be expected to remember or forget about a routine disciplinary matter. He could have had Gray's personnel file or a piece of the file on his desk underneath the April warning and simply not remembered that fact when he was called to testify months later. The February warning

could have been under another piece of paper in the file, which would explain how the indentations were transferred to the February warning without his knowledge of that warning being on his desk. If I assume that Estevez was simply mistaken about the February warning not being on his desk at the time the April warning was executed, the indentations are entirely consistent with a scenario wherein Estevez filled out the top part of the April warning while it was sitting on top of the February warning, resulting in the transfer of the indentations from the "explanation" section; Estevez then passed it to Gray, who signed it without dating it, and Countiss, who signed and dated it; then Estevez signed and dated it, if he had not already done so, and wrote in the date next to Gray's name, transferring those indentations onto the February warning. The indentations do not decisively establish that this scenario occurred, but it seems at least as plausible as Gray's allegation of forgery, which would require me to assume that the warnings and the witnesses' testimony were all part of an elaborate, rapidly orchestrated conspiracy to frame Gray for poor performance.

As for Gray's allegation that the documents were not prepared on the dates they purport, the indented writing clearly does not prove this. It also fails to prove that the documents were prepared at the same time or that they were prepared after Gray was fired. In fact, the indentations do not reveal any information about the dates the warnings were written except to confirm that the April warning was probably written after the February warning, as it was lying on top of the earlier-dated document. (ET 49.) This does not advance Gray's forgery claim.

Another factor I have considered in assessing the weight of Miller's testimony is the objectivity of his analysis. North Fork argues that Miller was exposed to information which could cause bias in that he was hired by Gray's attorney and assumed Gray disputed the authenticity of the questioned signatures. (North Fork's Br., 10-11.) Miller's testimony confirms that he assumed his client was claiming the signatures were forged. (ET 34.) This knowledge exposed Miller to the risk of confirmation bias. Although it is impossible to tell whether or to what extent confirmation bias may have influenced his opinion, there were subtle signs that Miller may not have viewed the evidence in an appropriately objective light. One telling factor was his reluctance to consider the potential effects of the extrinsic and intrinsic conditions surrounding the execution of the questioned documents, discussed above. When North Fork's counsel confronted Miller with two previously unviewed signatures at the hearing, Miller's reaction raised further doubts about his objectivity. Miller appeared very reluctant to examine the signatures on the stand. He referred to the author of one of the signatures as "they" and seemed to assume it was forged, although it was not. (ET 75-81.) North Fork characterizes Miller's reaction to the new signatures as a "confusing monologue" that failed to generate confidence in his ability to analyze signatures. (North Fork's Br., 12.) I agree. I also find that his reaction evinced defensiveness and a lack of scientific objectivity, in that his demeanor suggested he was trying very hard not to say anything that would damage his client's position or undercut his own previously stated opinion. Defensiveness does not reflect favorably on Miller as an objective expert witness or as a scientist.

I also note that Miller did not keep any notes about his lab work other than the brief report he submitted to the court. (ET 73.) Thus, his conclusions were subject to post-hoc rationalization. This does not necessarily mean that he reached a conclusion first and conducted the analysis later, which obviously would be improper. However, it would have been reassuring

if at the time he issued his opinion he had provided something beyond the terse summary of his analysis that appears in his report.

Miller's conclusion that the signatures were forged was not definitive. He said his confidence level was to a "high degree of probability" or "a notch below certainty." (ET 32-33, 88-89.) He did not adequately explain how he reached this high degree of confidence. He did not identify any error rate for the methodology he applied. He noted that the wide range of natural variation in Gray's writing affected his confidence level, but he did not clearly explain how he accounted for the variation or exactly how it affected his degree of confidence. Miller also testified that as a statistician, he is opposed to ever saying he is 100% certain of any conclusion. (ET 89.) Presumably he meant to say that he tends to err on the side of caution, but this seems to be an arbitrary way of quantifying a confidence level and is inappropriate as a scientific opinion.

Miller testified his opinion was corroborated by two other FDEs, both of whom expressed a stronger opinion than Miller that Gray could be excluded as the writer of the questioned signatures. (ET 71-72, 102-03.) However, their purported corroboration of Miller's opinion is of limited probative value here, since their opinions are not before me, they were not subject to confrontation by North Fork, and I lack the information necessary to evaluate their credibility. Although hearsay is admissible I place very limited weight on it under these circumstances. The only other opinion before me is Peter J. Belcastro's report, which was submitted with Gray's offer of proof at the 2010 hearing. Belcastro found that inconsistencies between the known and questioned signatures indicated Gray "may not have prepared" the questioned signatures, but "[d]ue to the presence of unexplained characteristics, the nature of the questioned and known signatures, and characteristics of possible simulation, tracing, or distortion, a definite determination could not be reached." (Offer of Proof #2.) This opinion does not corroborate Miller's conclusion or his level of confidence.

A computer analysis could well have lent credibility to Miller's conclusions. Miller testified that computer programs like Cedar Fox, the software he uses, contain a database of thousands of handwriting specimens. (ET 68.) The examiner can enter a questioned signature into the database along with other similar signatures, and the computer will come up with three or four potential matches that the examiner then eyeballs to come up with a final match. (ET 68-69, 99-100.) The success rate or confidence interval is about 98%. (ET 69, 99.) However, Miller said that he did not need to conduct a computer analysis here because this was a simple case. (ET 107.) He further testified, "I know what the computer is looking for because … I've had training under Sargur Srihari, who designed the program," and thus it was more time-effective "to just do it the old fashioned way without the computer." (ET 107-08.) This may be true, but the value of a computer analysis is that the computer program has a known error rate and must apply the same algorithm in each case to reach its conclusion. This provides a measure of quality control and an assurance of consistency that are lacking from human judgment calls.

For all the reasons discussed above, I find that Miller's testimony does not establish to a high degree of probability that the questioned signatures were forged.

D. Conclusions

In weighing expert testimony, the Commission has stated that a judge may consider factors such as the expert's credentials, the scientific bases for the expert's opinion, and how objective and convincingly stated his testimony is. *In re: Contests of Respirable Dust Sample Alteration Citations*, 17 FMSHRC 1819, 1843 (Nov. 1995), *aff'd sub nom. Sec'y of Labor v. Keystone Coal Mining Corp.*, 151 F.3d 1096 (D.C. Cir. 1998); *Cyprus Tonopah Mining Corp.*, 15 FMSHRC 367, 372-73 (March 1993); *ASARCO, Inc.*, 14 FMSHRC 941, 949 (June 1992).

Miller's credentials are sound. His training and experience, particularly his completion of the U.S. Secret Service's training courses for forensic document examination and his decades of experience working as an FDE for the state of Tennessee, make him well-qualified to testify as an FDE in this case. However, I accord low probative weight to Miller's opinion for the following reasons.

First, the probative value of Miller's opinion is diminished to the extent its scientific bases have not been proven reliable. As detailed above, the evidence before me does not establish that the theories and techniques underlying handwriting analysis have been validated through rigorous empirical testing and peer review and publication. Although there is some support on the record for the common-sense principle that handwriting is individualistic, the evidence does not give me a clear sense of whether any FDE could reliably perform the task that Miller faced, namely, determining whether two signatures containing a total of just six distinct characters fall within Gray's very broad range of natural variation. The error rate for this task is unknown. Miller did not articulate the objective standards he followed in performing this task. It appears that handwriting analysis in general lacks generally accepted governing standards. This permits a troubling degree of subjectivity to enter into handwriting experts' opinions, giving rise to a potential for bias and somewhat obscuring the reasoning behind such opinions. In short, handwriting analysis is not the type of technique that produces scientifically reliable results.

Given my lack of confidence in the reliability of Miller's conclusions, the most helpful part of his testimony was not his ultimate opinion but the information he provided about how he reached that opinion, particularly his description of the differences he observed between the questioned signatures and the exemplars. But Miller did not convincingly explain how these differences, which included differences in letter formations and in traits such as slant, speed, and skill level, led to the conclusion that the questioned signatures were forged. He did not explain how he defined the normal curve of Gray's writing. It is not clear that the exemplars were sufficient to allow him to do so, especially considering the high degree of natural variation in Gray's writing. Miller did not adequately explain how he accounted for this problematic level of natural variation. He also did not identify the fundamental differences that he cited as signs of forgery or explain how he distinguished them from Gray's natural variation. He failed to consider potentially significant factors such as the effect of intrinsic and extrinsic conditions on the appearance of the handwriting. He did not explain the significance of his conclusions with regard to the indentations revealed by the ESDA films or how they support his finding of forgery. In addition, Miller was exposed to information that could cause bias and displayed subtle signs at the hearing that he did not view the evidence completely objectively. Finally, Miller also failed to adequately justify the high level of certainty he expressed in his opinion.

For all the reasons discussed above, I find that Miller's testimony does not establish that the February 27 and April 29 disciplinary warnings were forged. I find that these warnings are authentic and were issued to Gray on the dates alleged.

E. Effect on Prima Facie Case

A complainant alleging discrimination under section 105(c) of the Mine Act establishes a prima facie case of prohibited discrimination by presenting evidence sufficient to support a conclusion that (1) he engaged in activity that is protected under the Mine Act, (2) he suffered an adverse employment action, and (3) the adverse action complained of was motivated in any part by the protected activity. *Gray v. North Fork Coal Corp.*, 35 FMSHRC 2349, 2355 (Aug. 2013), *citing Turner v. Nat'l Cement Co. of California*, 33 FMSHRC 1059, 1064-67 (May 2011); *Sec'y on behalf of Pasula v. Consolidation Coal Co.*, 2 FMSHRC 2786, 2799 (Oct. 1980), *rev'd on other grounds sub nom. Consolidation Coal Co. v. Marshall*, 663 F.2d 1211 (3d Cir. 1981); *Sec'y on behalf of Robinette v. United Castle Coal Co.*, 3 FMSHRC 803, 817-18 (Apr. 1981). To rebut a complainant's prima facie case of discrimination, the mine operator may show either that no protected activity occurred or that the adverse action taken against the complainant was in no part motivated by his protected activity. *Gray*, 35 FMSHRC at 2355, *citing Robinette*, 3 FMSHRC at 818 n.20.

Gray takes the position that Miller's testimony impeaches the testimony of North Fork's witnesses, and requests that I now find that North Fork has violated the Mine Act. In making this argument Gray relies largely on the points set forth in the Commission's decision, wherein the majority speculated that Miller's testimony could lead me to overturn most if not all of my prior credibility determinations and thereby reach a different outcome.

I do not find that the disciplinary warnings or Miller's testimony play the central role Gray envisions in establishing his *prima facie* case although I have rejected Miller's testimony and found the written documents authentic. Aside from the expert handwriting evidence, the entirety of the evidence Gray has presented in support of his *prima facie* case is as follows: his own testimony; Exhibits Compl.-A and -B, which are the two disciplinary warnings; the testimony of Anthony Estevez and Stephen Countiss, who were called as adverse witnesses to discuss their signatures on the April disciplinary warning and the circumstances surrounding its issuance; Exhibit Compl.-C, which is a written statement given by Russell Ison to MSHA investigators to the effect that he issued the February warning to Gray for poor work performance; and the testimony of MSHA Inspector Kevin Doan, who said he did not recall making a comment about how slowly Gray was working the day he was fired. Of this evidence, the only direct evidence Gray has presented to support the first requisite element of his *prima facie* case, the element of protected activity, is his own testimony.

Gray notes that direct evidence of discriminatory motive is rarely available and theorizes that Miller's testimony regarding the alleged forgery is the essential cog proving that a violation of section 105(c) of the Mine Act occurred. (Posthr'g Br. for Mark Gray, 28-29.) It is true that direct evidence of discriminatory motive is rarely available, but the same cannot be said of direct evidence of protected activity. Assuming *arguendo*, Gray's theory – the theory that forgery corroborates his entire *prima facie* case – it would require me to reason that (1) because the

documents were forged, mine management must have been trying to cover up a hostile or retaliatory motive to fire Gray; (2) the hostility must have been provoked by protected activity under the Mine Act; and (3) therefore, Gray has established that the protected activities he alleges did in fact occur. This inferential line of reasoning is attenuated at best and fails to persuade.

The Commission opined in its majority decision having left open the possibility that the documents were forgeries found my evaluation of the witnesses' credibility was lacking and that the testimony of the expert witness may materially affect that evaluation. I will, therefore, set forth below a summary of each of the witnesses' pertinent testimony and address with greater specificity how I determined the credibility of each witness. My analysis of the credibility of the witnesses with regard to the written counseling warnings is set forth above and will not be repeated; it will be contained to the remained of the testimony provided by each witness. My analysis goes beyond a finding that each of the witnesses for North Fork corroborated one another although that is one factor always properly considered in such an analysis. My determination of credibility is based upon an exhaustive review of the record, my observations in hearing of each of the witnesses' comportment, and their possible biases and motivation to provide the testimony they gave. I have also compared the testimony to the documentary evidence (the witnesses' written statements) and considered the time at which the documents were prepared and under what circumstances.

Because the establishment of a *prima facie* case is inextricably interwoven with the assessment of Gray's credibility as well as that of North Fork's witnesses' claims of substandard performance, I will discuss their testimony regarding the alleged incidents of protected activity and Gray's performance without differentiating between the *prima facie* case and evidence of an affirmative defense. I find this necessary because there is no evidence of the protected activity alleged save for Gray's assertions, which makes his credibility essential. In order to find he has established a *prima facie* case, there must be sufficient evidence to support a conclusion that he engaged in protected activity which, at least in part, resulted in the adverse action alleged. *See Turner v. Nat'l Cement Co.*, 33 FMSHRC at 1064-67. I interpret the meaning of "sufficient evidence" to mean sufficient credible evidence.

III. SUMMARY OF TESTIMONY

Mark Gray

Gray testified at hearing that he has been a roof bolter for 17 years with mining experience totaling 29 years and has worked for 30 different mines during that period of time. (Tr. 166.)

Gray had worked the day shift on the 001 section since the summer of 2008 after being transferred from the night shift on the same section where he had worked since the winter of 2007. (Tr. 171-73.) The roof bolting machine he operated was a two-person bolter; he was on the operator's side which made it primarily his responsibility to hang the ventilation curtains as the bolter advanced. (Tr. 178.) The ventilation plan in effect at the time allowed for 40 foot cuts on a four foot bolting pattern. (Tr. 180.) He and his roof bolting partner, Chris Sheeks, would each install a bolt in the middle of the roof and then swing the boom of the bolter out installing

bolts on either side of the middle bolts and then tram the bolter four feet forward and repeat the process in subsequent rows. (Tr. 181.)

In the March 2009 time frame, Anthony Estevez was the mine superintendent and Steven Countiss was the mine foreman. (Tr. 176.) Thomas Cornett was the 001 section day shift foreman. Gray he could not recall how long he had been working for Cornett. (Temp. R. 24.)[13]

On June 15, 2009, Gray filed a discrimination complaint stating, "I feel I was terminated because I refused to roof bolt an entire cut through of about 60 feet plus in depth. I also made safety complaints." (Temp. R. Ex. R-1.) He told MSHA investigator Guy Fain that his complaint was based upon two alleged deep cuts of 60 feet that he was told to bolt; the first one he did, the second one he refused. (Temp. R. Ex. R-2.) He also later alleged a complaint about hanging ventilation curtains. (Temp. R. Ex. G-1.)

The First Deep Cut

Gray testified that he was told by his foreman, Tom Cornett, to bolt a cut that he estimated to be about 56 to 60 feet deep. (Tr. 182.) Although he never provided a date on which he bolted this deep cut, he stated that it was three days before a second alleged deep cut was made, which occurred one week before he was fired. (Tr. 188, 191, 203.) Gray was fired on May 15 which would indicate this first deep cut occurred on or about May 5. Cornett told him and Sheeks that the cut needed to be made for ventilation purposes and he told them to bolt it. (Tr. 184.) Gray stated that he was "job scared" and bolted the cut although he believed the roof was dangerous. (Tr. 183, 188.) He stated that it took 14 rows of bolts to complete the cut which would mean the cut was 56 feet deep on a four foot bolting pattern. (Tr. 182.) He testified that he told Cornett after bolting the deep cut that he was not going to do it anymore. (Tr. 183.) He described Cornett's reaction as walking off in a huff without saying anything. (Tr. 183.) Thereafter, he said, Cornett just ignored him. (Tr. 183-84.) He changed his testimony and stated later that he said nothing about bolting this first deep cut to anyone – not Sheeks, not Estevez, not Countiss and not Cornett. (Tr. 213-14.)

The Second Deep Cut

Gray testified that a few days after the first deep cut was made, a second one was mined on the 002 section. (Tr. 185.) He thereafter stated it was on the 001 section.[14] (Tr. 186.) The cut, he said, was 50 to 60 feet deep which he could tell just from looking at it. (Tr. 187.) He testified that it was in the #4 cross cut which had been punched all the way through. (Tr. 187.) He told Cornett to his face that he was not going to bolt it because the top had too much swing in it. (Tr. 188, 214.) Sheeks was with him and heard him refuse to bolt this cut. (Tr. 209.) Cornett then told him and Sheeks to bolt in another area beside this crosscut. (Tr. 185, 216.) Gray further said that Sheeks, like Cornett, would no longer speak to him after this incident. (Tr. 184-85.) Although there was only one other bolting crew on the day shift with Gray, he testified that he had no idea who would have bolted this alleged second deep cut if he and Sheeks did not.

[13] Cornett became Gray's foreman one month before Gray was fired. (Tr. 227.)
[14] Gray never worked in the 002 section which was located approximately 1½ miles away from the 001 section. (Tr. 169; Tr. II 53.)

(Tr. 217.) When asked who the other two roof bolters on his crew were, he initially answered by saying he could not even recall their names; he could only do so after their names were suggested by counsel for Respondent. (Tr. 216.)

Gray testified at the temporary reinstatement hearing that he did not see who made either of the deep cuts. He stated the miner man's name who would have made the cut was Steve. (Temp. R. 80, 91-92.)

When asked if Gray was aware of deep cuts being taken in Kentucky in his 30 years of mining experience in Kentucky, he said it was not unusual. (Tr. 189.) Upon further probing by the Respondent's counsel, Gray could not "recollect" how many mines he had worked in that took deep cuts. He never reported any of these violations to MSHA. (Tr. 202.) He stated he had bolted a deep cut but he did not have "a number that comes to mind" when asked how many times this occurred. (Tr. 202.)

Hanging Curtains

Gray testified at hearing that the issue of hanging curtains, which he alleges was part the general "other safety issues" he put in his original discrimination complaint, occurred on the same day as the second deep cut that he refused to bolt which was one week before he was fired. (Tr. 203.) Gray said he was not required to advance the curtain after each row of bolts was installed. He would do so every 2½ rows, or 10 feet. (Tr. 209-10.) He moved the curtain as required, he said, and was never criticized for failing to do so. Tr. 210.) Gray said that he had stopped to hang curtains and Cornett mumbled something to him and just walked off as he had done with regard to bolting the deep cuts. (Tr. 204.) Again, Gray could not identify what Cornett said, and had no idea if it was because Cornett did not want him to hang the curtains. (Tr. 204.) Nor did he know if he was fired in part because he hung a curtain that Cornett did not want him to hang. (Tr. 207.) Gray insisted that Cornett never got after him for not hanging curtains before. (Tr. 209.) In fact, he was never criticized by Cornett for anything concerning his work performance. (Tr. 210-12.) Gray told Investigator Fain that the mine is gassy and the methane sensors on the bolter would often shut it down at a reading of 2% which happened often if the curtain was not properly advanced. (Tr. 156; Temp. R. 26; Temp. R. Ex. G-1.)

When Gray was asked why he did not go higher up the chain of command than Cornett in reporting his complaints, he stated that "Mr. Cornett was the one that I needed to go to first." When asked why he did not report his complaints to Estevez, he responded, "Because Mr. Cornett would have handled it. I thought Mr. Cornett would have handled it." (Temp. R. 95-96.) Gray confirmed that he had known Investigator Fain for 20 years from attending the same church. (Temp. R. 89.) He also testified that he knew Inspector Harris, Fain's supervisor, for about 10 years. (Temp. R. 89.) He explained Harris called him as a witness in a federal court case where a mine was charged with "mining out of law" and ventilation violations. (Temp. R. 96-97.)

Gray confirmed that MSHA inspectors were in the mine every other day but he said nothing to them about the deep cuts. (Tr. 220.) In addition to being acquainted with Fain and

Harris, he was also acquainted with MSHA inspector Silas Brock and spoke to him quite often at the mine. (Temp. R. 32, 78.) He did not report his safety concerns to any of them.

Gray's Termination

At the end of the shift on May 15, Gray was approached by a scoopman as he was coming out of the drift and was told Estevez wanted to see him in his office. (Tr. 191.) When he got there Estevez told him he needed his rescuer because he had to let Gray go. When Gray asked why, Estevez replied that it was because "people had complained about him." Gray asked who had complained and Estevez replied he could not tell him but he would believe his foreman over Gray. Gray then walked out, got into his truck and went home without comment. (Tr. 192.)

Guy Fain

MSHA Investigator Guy Fain was assigned to investigate Gray's claim of discrimination by his superior, Gary Harris. (Temp. R. 101.) He testified that Gray did not mention curtains in his initial complaint. (Temp. R. 102.) In pursuit of his investigatory duties, Fain interviewed Anthony Estevez on June 23, 2009. (Temp. R. 108; Ex. R-11A.) Among other things, Estevez told Fain that he and Cornett had discussed problems with Gray's performance such as slowing down, burning up bits and not putting pressure on the drill to install bolts. (Temp. R. 109.) These issues led to Gray's termination. (Temp. R. 110.) Fain did not ask Estevez anything about the curtain complaint. (Temp. R. 111.)

Fain also interviewed Thomas Cornett, the section foreman. (Temp. R. 111.) Cornett told Fain that Gray never made the alleged safety complaints to him about bolting deep cuts. He denied deep cuts ever being taken in the mine. Cornett stated that he had given Gray a verbal warning for not spot-bolting and not hanging curtains. (Temp. R. 113.) He said Gray was a slow worker and was off task when he was supposed to be moving the drill or putting up curtains. (Temp. R. 113.)

The other crew members on the 001 section, William Peak, William McFarland and Jerry Lynn Hall, also provided information that Gray was not a good worker. They denied ever seeing or hearing about deep cuts or hearing Gray complain about safety issues. (Temp. R. 116-22.)

After interviewing Cornett, Fain returned to Gray's home on July 31 to ask him if he had any other safety complaints. (Temp. R. 124-25.) Specifically, it was Tom Cornett's comments about Gray not hanging curtains that first brought up the question about curtains and caused Fain to return to ask Gray about them. (Temp. R. 124-26.) At no time prior did Gray mention curtains to Fain. (Temp. R. 126.)

At trial, Fain was asked to elaborate on Gray's comments about the curtains. Fain stated that Gray told him he had to rehang curtains because the curtains would be pulled down sometimes when tramming the bolter and it would shut the miner off due to a buildup of methane. (Temp. R. 138-39.) Gray further told Fain that he was directed by his foreman to hang the curtains. (Temp. R. 139.) Fain stated that if the curtains were not put back up, there would be a safety issue and confirmed that if the foreman told them to reinstall them, as Gray said, it

would be to improve safety. (Temp. R. 140.) When Fain was asked how Gray's statement that Cornett directed him to hang the curtains could be construed as a safety complaint, he could not do so. (Temp. R. 141.) Fain had reported in his summary of interview from July 31 that Gray said "he had complained several times about mine ventilation curtains not being up to Tom Cornett, the section foreman." (Temp. R. 142; Temp. R. Ex. G-1.) Gray further said he had complained to two other foreman about the curtains, one of whom he could only identify as "Moondog" who told him to just shut down the machine and hang the curtains. Gray went on to say, Cornett seemed to get mad if Gray shut down to hang them but the machines would shut off by themselves if he did not. (Temp. R. 142-43.) Fain testified that he thought Gray must have had a dispute about whether he should shut the machine down or let the methane monitor shut it down when he did his curtain work to explain how the curtain issue could be interpreted as a safety complaint. (Temp. R. 156.)

Fain also spoke to other regular mine inspectors William Clark, Kevin Doan and Silas Brock as to whether they had ever seen deep cuts in the mine. None had. (Temp. R. 128-29.) Doan had reported to Investigator Sturgill that he (Doan) was at the mine and watched Gray roof bolting on the day Gray was fired. (Temp. R. 132.)

Stephen Countiss

Stephen Countiss was the day shift mine foreman from November 2008 to March 2010. (Tr. 123.) He observed Gray on an occasional basis and found him to be a slow worker. He saw Sheeks waiting for Gray to catch up. (Tr. 124.) Sheeks complained to him about Gray's work performance because he was concerned it might affect his job as well. (Tr. 125.) The other bolting crew complained because they had to shoulder more of the load when Gray and Sheeks would not do as much. Cornett also complained to him about Gray. (Tr. 126.) Cornett had asked Countiss to speak with Gray about hanging the curtains because Gray was not doing it as required. (Tr. 126.)

Countiss stated that he was underground almost every day and never saw a 56 foot cut nor had anyone ever told him about or complained of a deep cut. The mine was on a 40 foot plan but it had been a long time since anyone had attempted a cut of that depth because the roof was in poor condition. (Tr. 126.) Gray had never made a complaint about a deep cut nor did he ever complain to him about anything regarding ventilation curtains. (Tr. 128.) Once Gray was fired and replaced, the production picked up considerably. (Tr. 129.)

Countiss was aware of Gray having been counseled by Russell Ison on February 27, 2009 for his performance. Ison told him that it was a verbal warning so it was not signed by a witness. (Tr. 116; Ex. Compl.-B.) Countiss stated that Ison was mistaken if he said that he (Countiss) was not present when this verbal warning was given to Gray. Countiss recalled an additional written warning given to Gray a couple months before Ison issued the verbal warning in February. It was for substandard performance. (Tr. 121.) Countiss, Ison and Gray signed this document but Countiss did not know what happened to it. (Tr. 121-22.) This warning should have been in Gray's personnel file but it could not be located. (Tr. 133-35.) Countiss believed Ison gave Gray a copy of this warning. (Tr. 120.)

Countiss was a witness to the final counseling given to Gray on April 29, 2009. (Tr. 118; Ex. Compl.-A.) He did not recall Estevez speaking to Gray about any of the prior warnings at this meeting. Countiss could not recall whether he had informed Estevez of Gray's prior counseling before or after Gray's termination, but he did tell Estevez about it at some point in time. (Tr. 117.) Countiss did not know if there were any documents on Estevez's desk when he had Gray sign the April warning. (Tr. 118.) What he did recall was that Estevez was at his desk when he talked to Gray about his performance. (Tr. 111, 114.) Countiss watched Gray sign the document. Gray was standing over the document and signed his name with a slashing motion at the end, threw the pen down and stomped out the door. (Tr. 120.) As Countiss recalled, Gray did not take a copy of the letter with him. (Tr. 120.) After Grey left the room, Countiss signed the document as a witness. (Tr. 110-11.)

Following Gray's termination and filing of the discrimination complaint, Countiss was interviewed by Fain and signed a written summary of interview. (Ex. R-12.) In his statement, he did not mention the earlier written warning to Fain. (Tr. 131.) He also did not tell Fain that the other crew and Cornett complained about Gray's performance because he was not asked that question. (Tr. 132. He did state that Sheeks complained about Gray, however. (Tr. 132.) He was asked if he had any personal issues with Gray to which he responded in the negative. (Tr. 133.)

Countiss stated that there was no progressive disciplinary system at the mine that he knew of. He had never personally been asked to fill out the pre-printed disciplinary form and did not know how they were to be filled out. (Tr. 136-37.)

Chris Sheeks

Sheeks had been employed by North Fork since 2005 and was trained as a roof bolter by Mark Gray. (Tr.II 61, 81.) He and Gray operated a dual-headed bolter. (Tr.II 62.) The other roof bolter on the shift was operated by William Peak and "Snappy." (Tr.II 62-63.) It was the roof bolters' responsibility to hang curtains within four feet of the back of the drill. (Tr.II 63.) It was primarily Gray's responsibility to do this. (Tr.II 63.) As Sheeks trammed the drill forward, the curtain had to be rolled up and then dropped back down which was Gray's responsibility but he did not do it; Sheeks had to. (Tr.II 68-69.) He would have to drive the drill, throw the miner cable over, and roll up the curtain himself while Gray would be standing around talking. (Tr.II 80.)

Sheeks testified that Gray was lazy and very slow. (Tr.II 64.) He and Gray bolted about 1½ places to every five or six done by the other team in the same amount of time. (Tr.II 64.) Sheeks had observed Gray spin the drill without putting pressure on it on a few occasions. (Tr.II 65.) Cornett had often spoken to them about picking up production and moving faster. (Tr.II 66.) Estevez and Countiss had also spoken to them about their production being too slow. (Tr.II 67.) This led to Sheeks asking both Countiss and Estevez to change bolting partners so he would not get fired for Gray's poor performance. (Tr.II 67-68.) Gray's performance resulted in the other bolting team having to bolt more places to pick up their slack, the third shift having to finish the job or their having to finish the following day. (Tr.II 68.)

Sheeks testified that Gray told him that he had been written up three or four times, once by Estevez and the other times by Russell Ison. (Tr.II 69, 90.) Gray said he was written up once for not having enough cable to move the drill which would stop production until the cable was pulled and hung up so the rest of the equipment could operate. (Tr.II 70-71.) On another occasion, Sheeks and Gray were brought to Estevez's office with Steve Countiss for disciplinary reasons. (Tr.II 71.) Cornett was present as well. (Tr.II 71.) Estevez showed them a production report that tracked the number of bolts installed by the other bolting team compared to their numbers. They were told to pick up their pace. Gray remarked to Sheeks that the other team was lying about their numbers and he could not work any faster. (Tr.II 72.) Sheeks met with Estevez a second time without Gray to ask Estevez to move him to another crew or give him a new roof bolting partner because he did not think it was right that he was being reprimanded for Gray's poor performance. (Tr.II 72-73.)

Gray had told Sheeks that the company could not fire them because it had a bad name and they could not get anyone else to work for them. Gray further stated that he would sue them if he could not get unemployment. (Tr.II 74.) Gray stated that he kept an attorney on retainer. (Tr.II 75.)

Sheeks had never seen a cut of 50 feet or deeper in the mine, he had never heard Gray refuse to bolt a cut of 50 feet or deeper and he had never heard Gray make any complaints about the company not keeping the curtains up. (Tr.II 76.)

Sheeks had observed Gray put up four foot rope bolts which are designed to allow the roof to move. It took Gray 30 to 45 minutes to install one bolt whereas it should take two or three minutes. (Tr.II 79.) Sheeks described Gray as being able to do his job well if he chose to but he was lazy. (Tr.II 105-07.)

On the day Gray was fired, Estevez and an MSHA inspector came to the 001 section while Sheeks and Gray were in the number one entry installing the first row of bolts. The drill they were using had a new feature on it; it was the only one in the mine with rock guards. (Tr.II 78.) A few hours later Estevez and the MSHA inspector returned at which time Sheeks and Gray had installed about seven bolts. They should have had about 70 bolts installed in that amount of time. (Tr.II 77.)

Jerry Lynn Hall

Hall was the continuous miner operator for North Fork on the 001 section day shift for approximately three years. (Tr.II 13.) He had been a miner operator for seven or eight years with 26 years of mining experience. Hall testified that he was the only miner operator on the day shift. (Tr.II 9.) Hall was not specifically aware of Gray being written up and warned however he had heard "hearsay" to that effect. (Tr.II 15.) Hall had never heard Gray complain about or refuse to bolt a deep cut. The typical cuts in that mine were 20 feet. (Tr.II 7.)

William "Snappy" McFarland

McFarland was a roof bolter on Gray's shift. (Tr.II 22.) The depth of the cuts in the mine was never in excess of 20 feet. (Tr.II 22-23.) He had never seen cuts in excess of 50 feet nor had he heard of anyone saying there had been any such cuts. (Tr.II 23.) He described the general condition of the roof as pretty bad. If a cut of 50 feet had been made, there would be a lot of draw rock falling down. (Tr.II 23-24.)

There were times when they had to cross the cable of the other bolter to tram to their next entry because Gray's team was lagging behind them. (Tr.II 25-26.) Once Jim Pennington replaced Gray, the speed picked up. (Tr.II 26.)

William Peak

Peak was McFarland's roof bolting partner on the 001 day shift. He observed that Gray and Sheeks did not bolt at the same pace; they would bolt five to six places for every one or two places Gray and Sheeks bolted. The effect would be that production would slow down and it would put more work on him and his partner. He complained to Cornett about it. (Tr.II 32.) When Pennington was hired, they two teams bolted equally fast. (Tr.II 33.) The typical depth cut was 20 feet or less. (Tr.II 33.)

Peak had never seen a cut of 50 feet. The top was real bad and a cut of that depth would have been extremely dangerous. He never been asked to bolt a deep cut or heard anyone else say they were asked to bolt one. He never heard Gray said he had been asked to bolt a deep cut. He had heard Gray had bolted a deep cut at some other mines but not at North Fork. (Tr.II 34-35.) Peak told Fain that he had never seen a crosscut mined all the way through without being bolted. He also told Fain that the deepest cut he ever saw was 40 feet deep and that was two years prior in a different coal seam where the roof conditions were better. (Ex. R-9.)

Peak was no longer working for North Fork as he was out on long term disability. (Tr.II 32.) He had been terminated because his disability was permanent. (Tr.II 38.)

Marty Bates

Marty Bates was the 001 section second shift foreman in May 2009. (Tr.II 42.) The first and second shifts were production shifts where the third shift was only maintenance. (Tr.II 43.) The depth of the cuts being taken were 18 to 20 feet and no more. (Tr.II 43.) Had a cut of 50 feet been taken, the roof would cave in. (Tr.II 44.) There were no cuts taken of 50 feet or more, no one ever asked him to make a cut of that depth and no one ever complained about taking such a cut. (Tr.II 44.)

Kevin Doan

Kevin Doan is an MSHA roof control specialist of five years. (Tr. 149.) He visited the mine in the day Gray was fired. (Tr. 142.) Doan had no present recollection of the events; he testified from his notes. (Tr. 146. He traveled with Estevez to the section. (Tr. 146.)[15] He

[15] Doan testified that he went to the 002 section; however, it was clear from the testimony that he went to observe the only roof bolting machine that had the rock deflector shields (ATRS)

entered the mine with Estevez sometime around eight or nine. (Tr. 151.) He made an imminent danger run across the working section starting at the number one heading and going across to six. (Tr. 152.) He was interested in seeing the Automatic Temporary Roof Support system (ATRS) that had been installed on one of the roof bolters as he had never seen one before. (Tr. 152-53.) The machine was in the number one heading. (Tr. 153.) Doan was extremely reluctant to state how long it took for him to travel from entry one across to six and come back again. He finally estimated one hour or more. (Tr. 158.) He cited a rib roll as well as an improper test hole along the way. (Tr. 156.) Estevez was with him the entire time. (Tr. 158.) When they came back to the number one entry, the roof bolter was still in the same entry bolting the same cut as they had been when they first saw it. (Tr. 158-59.) Doan testified, however, that he could not recall making a comment about how slow they were bolting as Estevez stated. (Tr. 159.)

Doan stated that no roof control plans in District 7 allowed for cuts as deep as 50 feet. (Tr. 161.) Doan stated that he had never seen 56 foot unbolted cuts in this mine nor had he ever written a citation for deep cuts in the mine. (Tr. 161.) No miner had ever told him deep cuts were being taken in the mine. (Tr. 161.) Doan confirmed that he had seen and issued citations for cuts exceeding the roof control plan in other mines which he discovered during his inspection. (Tr. 163.)

Thomas Cornett

Cornett had been a section foreman for 26 years. He started on the 001 day shift in April 2009. (Tr. 227.) He was Gray's immediate supervisor. (Tr. 227.) His responsibility was to ensure safety and production and to supervise the crews underground involved with cutting and hauling the coal and bolting the roof. (Tr. 228-29.) In his observations of Gray, he felt Gray started out as a good worker for the first few days but then started to slow down in his job and not hang the ventilation curtains as required. (Tr. 229.) It was Gray's duty to keep the curtain within four feet of the bolter at all times. (Tr. 229.) Every time the bolter moves up four feet, the curtain is to be moved up four feet as well. (Tr. 230.) Gray would at times use the wrong size bolts as well. (Tr. 229.)

In comparison to the other bolters, Gray and Sheeks bolted two places to every five the other team bolted. The other crew was made up of William McFarland and Bill Peak. (Tr. 232.) Cornett spoke to Sheeks and Gray about their performance and kept a personal notebook in which he entered notations about speaking with these two bolters about their performance.[16] (Tr.

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installed which was Gray's machine. Additionally, he testified that he recognized "Tom" in the courthouse as the foreman on the section. (Tr. 153.) He also confirmed that he spoke with Gray during the inspection. The 002 section was located 1½ miles away from the 001 section. (Tr.II 53.) Additionally, Estevez testified that the citation Doan issued that day was corrected during the termination inspection by putting the spad number from the mine map on the paperwork which coincided with the 001 section. (Tr.II 59.) I conclude Doan was on the 001 section where Mark Gray was working.

[16] Counsel for Gray objected to the photocopied notes being entered into evidence under the best evidence rule, there being no originals by which to test their authenticity or his credibility. (Tr. 235.) The objection was overruled as the strict rules of evidence do not apply in administrative hearings before this Commission. Additionally, as Gray alleges that these notes could have been

233; Ex. R-3.) Cornett testified that he personally photocopied the pages from his notebook and produced all notes pertaining to Gray and Sheeks. (Tr. 236.) As he stated, Gray only worked for him for a month or so. (Tr. 255.) His notes document numerous instances of Gray's misbehavior. Some examples are: (1) 4-14-09 Gray was not putting pressure on the drill, meaning he was not putting up pressure on the drill to install the bolt. Cornett observed this when Gray was unaware he was being watched; (2) 4-22-09, Gray was making remarks that "the men could f*** over a boss and cut coal run down," and it took him 25 minutes to spot one bolt. Sheeks was listed as a witness to this; (3) 4-23-09 he spoke to Gray and Sheeks about doing a safe job bolting because they had installed too wide a bolt; (4) 4-28-09 curtains were not hung as required in #6 and #4 and a 6-foot bolt instead of a 12-foot rope bolt was installed in the corner; (5) 4-28-09 Gray was told to quit holding up production, he did not hang the two curtains and spot bolted again with a 6-foot bolt; and, (6) 5-11-09 it took Gray three hours and twenty minutes to install nine bolts. (Tr. 237-44.) Cornett testified that he had to speak to Gray on a daily basis for a while about keeping up with hanging curtains. (Tr. 240.) On April 29, 2009 he gave Gray a verbal warning about curtains and spot bolting, which was similar to the warning Gray had received the day before. (Tr. 243.) He was warned on three subsequent days to pick up the pace of bolting. It took Gray over three hours to spot bolt nine bolts when it should have taken about twenty minutes. (Tr. 244.) Cornett did not inform Fain, when interviewed, that he had these notes. (Tr. 272.) He stated that he did not think to produce the notebook until counsel for North Fork asked for any notes he may have on Gray. (Tr. 233.) He could not recall what Fain asked him but he did tell Fain that he had problems with Mark Gray. (Tr. 273.)

Cornett testified that typically cuts of about 18 feet were being taken in the April to May 2009 time frame because there was draw rock on the roof that could come down, creating a safety hazard. (Tr. 245-46.) No one took a cut deeper than 30 feet in the mine. Had a 50 or 60 foot cut been taken, the roof would have fallen in. (Tr. 246.) He had not seen a deep cut in many years. (Tr. 262.) A deep cut would also have been observed by the bolters, car drivers, the miner man and the foreman. (Tr. 248.) Gray never mentioned deep cuts to him, he never pinned a deep cut, he was never asked to bolt a deep cut and he never refused to bolt a deep cut. (Tr. 248.) Gray never complained about wanting to hang curtains, it was the other way around; he complained because Cornett told him he had to do it. (Tr. 248.) Gray's response was that he complained about it and said it was somebody else's job. (Temp. R. 227.)

Cornett was not aware Ison had counseled Gray. (Tr. 262.) He did not tell Estevez about Gray not putting pressure on his drill although it was serious thing. (Tr. 266.) Countiss,

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written at any time after Gray's termination, having the originals would not tend to prove or disprove this allegation. If there was a grand design as Gray alleges to fabricate documents to prove poor performance after his termination, Cornett could have just as easily have fabricated the entire notebook after the fact as well. Additionally, Cornett produced the same photocopied entries at the Temporary Reinstatement hearing at which time counsel for Gray did not object to their admission. (Temp. R. 224.) Counsel stated that the court advised Cornett to maintain the originals for trial but that comment was not contained in the record of trial from the earlier hearing. What is contained in the record is counsel for Gray asking Cornett to hold on to the originals because he intended to subpoena them. (Temp. R. 252-53.) He never did so. (Tr. 234.) I have considered the fact that the original notebook was not produced in my assessment of the credibility of the witness and the authenticity of the notes themselves.

however, was aware of it. (Tr. 266.) At the temporary reinstatement hearing Cornett also testified that he had discussed Gray not putting pressure on the drill on April 14 with Ison. (Temp. R. 232.) He also told Ison that he verbally counseled Gray on April 22 for not spot bolting. At one time Cornett recommended to Ison that Gray be fired but nothing came of it. (Temp. R. 250.) He did speak to Estevez about Gray's performance but not the specifics and never told Estevez to fire Gray. (Tr. 267-69.)

Cornett testified that Gray had made threats to sue the company from time to time as far back as when he worked on the night shift about one year prior to his termination. (Temp. R. 246-48.)

On the day Gray was fired, two inspectors were at the mine. (Tr. 251.) Kevin Doan was one of them who accompanied Estevez to the section Gray was working on that day. (Tr. 252.) Cornett's notes indicated that both Gray and Sheeks took 2½ hours to bolt the #4 right break. Sheeks was verbally counseled by Cornett but he was not fired because Cornett saw that Sheeks was bolting faster and waiting for Gray to put his bolts up. (Tr. 260.) After Gray was fired and his replacement was put in place, production evened out between the two bolting teams. (Tr. 249.) Prior to Gray's termination Cornett spoke to Estevez about Gray being the reason why that bolting team was slow. (Tr. 250.)

Anthony Estevez

Estevez had become the superintendent at the North Fork #4 mine in late March 2009. (Tr. 36, 61.) Upon taking control of the mine, he traveled the entire mine, observed the different shifts and evaluated every aspect of the mine. (Tr. 611.) He studied production reports for the various sections and established a cut sequence to be followed for ventilation and methane issues. (Tr. 63.) Soon after taking control, he noticed that the 001 day shift under Cornett was not complying with the plan. When he asked Cornett why there was a problem, Cornett stated that he had problems with the roof bolters staying caught up. Specifically, he indicated it was the Gray/Sheeks bolting team that was the problem. (Tr. 63.) Cornett told Estevez that he felt Gray was the problem. He was slowing down, burning up bits, spinning the drill without putting up pressure on it, not bringing enough cable to move the equipment and not hanging the curtains according to the ventilation plan. (Ex. R-11A.) Estevez observed them every time he was on the section. (Tr. 64.) Not only did he see that they were always behind in bolting but he observed on two occasions they did not have enough cable to move the bolter from one place to another. On the first occasion, the entire section was down because their machine blocked all the other equipment while they were trying to pull enough cable to get them out of the way. (Tr. 65.) On the second occasion, the same thing happened but Estevez told them to move out of the way and Estevez and some other miners pulled the cable. (Tr. 66.) Another time he was on the section he observed a cable jumping up and down as the bolter was exiting the entry. When he approached the bolter, he found Sheeks backing out on his own. When asked where Gray was, Sheeks said he did not know. Estevez helped Sheeks back out of the entry as two operators are required when doing so. (Tr. 66.)

Having observed the bolting on the shifts, Estevez found the Gray/Sheeks machine to bolt well below the pace of the other crew; they were moving two to three times slower than the

crew. In early April Estevez called Gray and Sheeks into his office to show them production reports and explained to them that they were below standard. They stated they would do better. (Tr. 67-68.) Gray stated that he felt like he was doing a good job. On that particular day, Sheeks and Gray bolted 1½ rows during that shift while the other team had bolted 5½ rows. (Ex. R-11A.) When performance had not improved, they were called into Estevez's office one at a time. Sheeks said if he had a better partner he could do a better job. He said it was Gray's fault because Gray was often missing when he needed to move the machine, he was always waiting on Gray and Gray was not hanging the curtains. (Tr. 68-69.) When Gray was questioned and given an opportunity to explain his performance, he said he could do better but said nothing else. (Tr. 69.) This was before any disciplinary letters were issued. (Tr. 70.)

Estevez held weekly safety meetings and daily meetings before or after each shift when he was at the mine. All miners were present at the meetings. He also maintained an open door policy. (Tr. 70.) Gray had never made any safety complaints at any meeting nor did he ever mention any deep cuts in excess of 20 feet or anything about curtains. (Tr. 71, 76.) Had a deep cut been taken, those responsible would have been terminated, Estevez said. (Tr. 73.) A deep cut would endanger the miner operator, two shuttle car men and the roof bolters. (Tr. 73.) Cuts in excess of 20 feet were not being taken. (Tr. 74.) There were three or four MSHA inspectors are at the mine almost every day traveling in the working areas looking for things such as deep cuts and unsupported top. (Tr. 74-75.)

Estevez testified that he accompanied MSHA inspector Doan on his inspection of the 001 section on the day Gray was terminated. They traveled to where Gray and Sheeks were bolting the first row of bolts. They left the area to make a run across the entire section. When they returned about two hours later Gray and Sheeks had only advanced to the second row of bolts in that time. (Tr. 51-52.) That would have been a total of about 12 bolts which was extremely slow. Doan had wanted to see the reflector pads on the bolter which Gray and Sheeks operated. (Tr. 50-51.) Estevez had expected them to be done bolting by the time they returned so that Doan could look at the front end of the bolter. When they found Gray and Sheeks still bolting the same entry upon their return, Doan said something to the effect of "I can't believe they're still in it." Estevez replied that he realized he had a problem that he was going to take care of. (Tr. 50, 54-55.) Estevez testified that Doan's comment played no part in his decision to fire Gray. (Tr. 57.) At the temporary reinstatement hearing, he stated that he had decided if there was no improvement in Gray's performance firing was inevitable but when an outsider commented on it, he felt like it had gone too far. (Tr. 57.)

When Estevez fired Gray, Gray did not mention deep cuts, curtains or any safety complaints. (Tr. 76.) Gray asked why he was being fired and Estevez told him it was because he had been warned about his poor performance already and it had not improved. It was now a safety issue. Gray responded, "That's okay, I'll have a job tomorrow." (Tr. 77.)

IV. CREDIBILITY OF WITNESSES

Mark Gray

Gray testified that up until the day he was terminated, he had never been disciplined by any one in management, he had never been called into Estevez's office with Sheeks for any reason and he had never been told he was performing too slowly nor was he ever shown production reports. He had never failed to secure enough cable on the miner to tram it to a new location. (Tr. 221-24.) He denied that he told Sheeks that he had been written up by Ison on previous occasions. (Tr. 222.) He denied that he told Sheeks he could not be fired because North Fork could not get other roof bolters. (Tr. 222.) He denied that he told Sheeks that if he was fired, he would file an unemployment claim and if that was denied, he would sue the company. (Tr. 222.) He denied that any foreman had ever kept after him for hanging curtains as required, he never ran his drill without putting upward pressure on it, he did not tell Estevez on the day he was fired that he would have a job the next day and he was never fired or received any written warnings from any of the 30 mines he had worked in in 29 years. (Tr. 209-12.) Most importantly, Gray denied ever having seen, received or signed any written counseling warnings given to him by Russell Ison in February or by Estevez in April, 2009. (Tr. 192.) Gray claims his purported signature on the documents are forgeries made by someone on behalf of North Fork.

Essentially, if Gray is to be believed, all of the witnesses for North Fork, management and non-management alike, have conspired against him and have created an intricate and detailed fabrication of performance down to the last detail to which they all testified under oath. I find that not only do the witnesses for North Fork provide credible testimony that contradicts Gray's assertions, but also the statements and admissions made by disinterested parties directly contradict or cast significant doubt on Gray's testimony. I further find Gray's own testimony contradictory and lacking credibility on its face.

Deep Cuts and Hanging Curtains

There are several troubling omissions in detail, inconsistencies and lapses in memory in both Gray's testimony at trial and the temporary reinstatement hearing held in September 2009 and his statement to Investigator Fain.

Gray's account of what protected activities he engaged in and when evolved over time. His initial complaint mentioned only one deep cut and did not provide any details as to when that cut was made. (Temp. R. Ex. R-1.) Subsequently Gray told Investigator Fain that this cut was made about a week before he was fired, then he added that he had bolted a similar deep cut "a couple of days prior." (Temp. R. Ex. R-2.) At the temporary reinstatement hearing he initially said that the first deep cut was made two days before the second deep cut. (Temp. R. 38.) He later said that it was three days before. (Temp. R. 56, 79; Tr. 188.) In his second statement to Investigator Fain, Gray for the first time said he had also made complaints about ventilation curtains. He said he had made these complaints to two foremen "since the first of 2009." (Temp. R. Ex. G-1.) He later testified that there was one specific incident in which he complained about curtains to Cornett and Cornett appeared to be angry, walked off, and thereafter exhibited a cold attitude toward Gray. (Temp. R. 27-28, 71-72.) At the temporary reinstatement hearing he testified he was sure that the alleged curtain incident he complained of occurred about two weeks before he was discharged. (Temp. R. 28, 69.) Gray testified at trial, however, that the curtain incident occurred on the same day he refused to bolt the second deep

cut, which was one week before he was fired. (Tr. 203.) Gray never gave a date on which any of these events occurred.

Gray testified at the earlier proceeding that Sheeks was not with him when he refused to bolt the second cut and he could not recall where Sheeks was at the time. (Temp. R. 42-43.) Later in his testimony when questioned by the court he stated that Sheeks was with him when he told Cornett he was not going to bolt the second cut; Sheeks was sitting on the drill. (Temp. R. 57.) Sheeks heard him refuse to bolt the second cut. (Temp. R. 86.) At hearing he testified unequivocally that Sheeks was with him at the time he refused to bolt the second cut. (Tr. 209.)

At the temporary reinstatement hearing, Gray was asked directly why he bolted the first deep cut. He said that he did so because "Tom" told him he needed it for air so he bolted it. (Temp. R. 49.) He then stated several times that directly after bolting this cut, he told Cornett that he bolted this one but he would not bolt another one. (Temp. R. 37-39, 52-53, 55-56.) It was not until the hearing some fifteen months later that he testified that he bolted the first deep cut because he was "job scared." (Tr. 183.)

At trial Gray acknowledged that he stated in his complaint to MSHA that the deep cuts were 60 feet deep. (Temp. R. Ex. R-2.) At the earlier proceeding and at trial, he said he knew the first one was 56 feet by counting the bolts installed and he could tell the second one was the same as the first just by looking at it. (Temp. R. 38, 74; Tr. 182, 187.) He took no notes of the incidents to help recall the number of bolts he installed and could not recall the bolting pattern in the other mines he worked in but he was certain about his recollection here even though he could not provide a date certain on which any of the three alleged incidents occurred. (Temp. R. 75.) He could not recall, moreover, the name of the miner man who made the deep cut although there was only one on the shift. (Temp. R. 75.) He later identified the miner man who made both cuts as "Steve." (Temp. R. 80.) The miner man's name was, in fact, Jerry Lynn Hall. (Tr.II 6.) Nor could he recall the names of the other two roof bolters on his section until provided their names by counsel for Respondent.

Gray repeatedly called his section foreman "Tom Caudill" at the earlier proceeding. (Tr. 23-24.) Despite being given Cornett's name by counsel several times, Gray continually referred to Cornett as Caudill although he later stated that there was no one by the name of Caudill that worked with him. (Tr. 37, 39, 42, 43, 47.) Gray also could not identify the area in the mine he was working in May 2009, only that he was on the 001 section. (Tr. 35-36.)

I find the inconsistencies in Gray's testimony and his inability to recall the dates on which the events took place or even the sequence of events to be extremely perplexing at best. The stark contrast between his testimony at the earlier hearing that he bolted the first cut because he was asked to so he just did it and his assertion of being "job scared" is difficult to attribute to anything but having had many months to embellish his story. The vacillations between his statements whether his roof bolting partner did or did not hear his refusal to bolt the alleged second deep cut, along with his inability to properly identify his day to day foreman or the one and only miner man on his shift or the two other roof bolters with whom he had worked for months or anyone who would have seen the second deep cut are inexplicable. These events are the crux of the alleged protected activity yet he cannot recall such obvious and important details

or keep his story straight having had one year and seven months from the time of his termination to trial to prepare. It would stand to reason that he should have a far clearer recollection and more believable account of the events, if they did in fact occur. These apparent lapses and inconsistencies make his testimony seem disingenuous and fabricated.

Gray's testimony does not withstand reasonably objective scrutiny. For example, Gray trained his roof bolting partner, Chris Sheeks. At trial he said the reason he bolted the first alleged deep cut was because he was "job scared" and he said nothing to anyone including Sheeks or Cornett about bolting the area. (Tr. 183.) But he further stated that immediately after he bolted the cut he faced off with Cornett and told him that he would not bolt another one. (Tr. 182-83; 213-14.) This is particularly incredible taking into consideration that at the earlier hearing just a short time after the alleged events, he utterly failed to mention that he was fearful of Cornett or losing his job. His explanation for bolting the cut was because he was told to. (Temp. R. 38, 49.) And, despite his claim that Cornett was angry with him for refusing to bolt the second cut, Cornett just told him and Sheeks to bolt another place. (Tr. 185.) Had Gray been "job scared" it apparently lasted only for a few seconds as he faced up to Cornett immediately after bolting a deep cut and refused to Cornett's face to bolt another deep cut just three days later. And had Cornett been angry with him, as Gray asserts, Cornett's reaction was surprisingly mild in merely directing him to bolt another area and bringing in another crew to bolt this allegedly illegal deep cut. It is also difficult to believe that despite being the highly experienced bolter responsible for his partner's safety as well as his own, Gray allegedly entered into unsupported roof in a 56 foot cut without saying a word to Sheeks or anyone else in this momentary period of being job scared.

As another example, Gray confirmed Estevez's testimony that he held weekly safety meetings that Gray attended yet Gray said nothing about the deep cuts that he was allegedly so concerned about. Estevez also testified that he held informal safety talks before or after a shift when he was down in the mines but Gray never raised the issue there either. Estevez was new as superintendent of the mine and there was no allegation by Gray that Estevez harbored an animosity towards Gray which would prevent him from speaking up at these meetings. When Gray was asked at the temporary reinstatement hearing why he did not complain to someone up the chain of command, he lamely responded that Cornett was the one he needed to tell and who would have handled it. (Temp R. 95-96.)

As a third example, Gray could not identify who would have bolted the second cut although there was only one other bolting duo on the shift. When asked by Respondent's counsel if someone bolted up the second alleged deep cut, Gray responded as follows:

> Q. And somebody bolted up that 56 foot place you're telling the Judge about?
> A. I suppose so.
> Q. What do you mean, you suppose so? You saw it bolted up, didn't you? Later on?
> A. I didn't see nobody bolt it up.
> Q. You saw it bolted up after it was –
> A. Yes, it was bolted up.

(Tr. 216-17.) Counsel for Gray attempted to explain this oddity by establishing anyone else could fill in on a bolting machine if the regular crew was absent. However, there was no evidence to suggest such an occurrence despite the opportunity to ask the other roof bolters who appeared at trial if that was possible. Gray also testified that he had no idea who would have seen the second cut besides Sheeks. (Temp. R. 79.) Obviously, Cornett would have seen the cut as he allegedly directed that it be made and that Gray and Sheeks bolt it. The car drivers who would haul the cut coal away would also see it, not to mention the other bolters who bolted it. Gray's inability to state even the obvious lacks an objectively logical explanation and leads to the conclusion that he was having difficulty thinking on his feet while spinning a tale.

Gray asserted that deep cuts were "not unusual" in Kentucky yet when he was asked which mines he worked in that took deep cuts or how often this occurred he could not come up with any answer whatsoever. He stated that he never reported any of these illegal cuts to MSHA over the 30 years of his career as a miner despite being so concerned with safety and being acquainted for years with Fain, Harris and Brooks whom he could have approached outside of the mine environment had he been truly "job scared" about making a safety complaint. And then, suddenly on or about May 12, 2009, he squared off with his section foreman the first time when was asked to bolt a deep cut and refused to bolt a second one.

Gray's allegations that these two deep cuts were made is completely unsubstantiated aside from his own testimony which is contradicted by the rank-and-file miners as well as non-company witnesses alike. As Fain testified, not one of the regular inspectors of North Fork reported ever seeing any deep cuts. (Temp. R. 128-29.) Doan did an imminent danger run across the entire 001 section on the day that Gray was fired and saw no dangerous roof conditions. (Tr. 160-63.) Every miner on the 001 day shift testified that no such cut had been made. There was not a single witness that had ever heard Gray refuse to bolt a deep cut or make any type of safety complaint to anyone.

Counsel for Gray asserts that a deep cut would never be reported to MSHA voluntarily and therefore it would never be known to have occurred. However, Doan, a roof specialist, testified that he was aware that deep cuts had been made in Kentucky in the past and they were in fact discovered during inspections at the mines. Despite having cited North Fork for a rib roll on the day he was there, Doan had not seen evidence of a deep cut at North Fork. (Tr. 160-64.) Fain testified that during the investigation of Gray's complaint, William Clark and Silas Brock, two other inspectors who frequented the mine, were asked if they had ever seen deep cuts. None had despite the frequency with which they were on site. I find that Gray's allegation that deep cut would not be discovered by MSHA is without merit. I also find it would be highly unlikely that a foreman would order an illegal cut in a mine with a roof in extremely poor condition that is crawling with MSHA inspectors on almost a daily basis for the sake of "ventilating the face" as Gray claims Cornett did.

I find that the Gray's assertion that two deep cuts had been made in the months preceding his termination is unsubstantiated, contradicted by credible evidence from MSHA inspectors as well as management and rank-and-file witnesses and is lacking credibility.

With regard to the curtain allegation, Gray's assertion that Cornett appeared to become angry and walked off in a huff when he stopped to hang curtains is highly subjective and questionable. Gray could not say what if anything Cornett said or what exactly he did that Gray interpreted as anger towards him on Cornett's part. Gray's theory of the case is that Cornett acted perturbed because it would slow production when Gray stopped bolting to hang ventilation curtains. However, the methane sensors on the roof bolter would often shut the machine down when methane rose. (Tr. 156, 179.) The only way to prevent this from happening was to advance the curtain once a new row of bolts was installed. Each time the bolter shut down due to a rise in methane, production would cease. There is no objectively logical explanation for why Cornett would be upset with Gray for not hanging the curtains in this scenario if his goal was to keep the mine producing. The more logical explanation is Cornett's testimony that he had to tell Gray repeatedly to keep up with hanging his curtains because he was not doing so as he stated and recorded in his notes. (Tr. 240; Ex. R-3.) Gray testified that he had to advance the curtain after every 2 ½ rows of bolts installed which would be every 10 feet. (Tr. 210.) However, Cornett stated that the curtain was to be advanced after each row of bolts was installed which would be every four feet. (Tr. 229-30.) This was also confirmed by Sheeks. (Tr. 63.) So, by Gray's own testimony, he was not following the ventilation plan. All of these factors would be an objectively reasonable basis for Cornett to be annoyed with Gray each time he had to tell Gray to hang the curtains.

Casting further doubt on Gray's credibility with respect to hanging the curtains is the fact that Gray never mentioned anything about curtains in his initial complaint to MSHA. (Temp. R. 102.) Nor did he mention anything about curtains to Investigator Fain when first interviewed by him. (Temp. R. 126; Temp. R. Ex. R-1.) Moreover, when he did provide a statement to Fain regarding the curtains, it made no sense. Fain testified that he was the one who asked Gray on a subsequent interview if he had anything to say about hanging curtains. (Temp. R. 124-25. Fain confirmed that he got the idea of asking Gray about curtains only after his interview with Cornett who told Fain that he had a problem with Gray not hanging the curtains as required. (Temp. R. 126.) When finally questioned by Fain about the curtains, Gray made some very vague comment which Fain did not readily understand. As Fain testified, Gray told him his foreman directed him to hang the curtains. Fain could not state how hanging the curtains as directed could be interpreted as a safety complaint. He confirmed, in fact, that this would promote safety. (Temp. R. 139-41.) Fain then stated that the only statement Gray made that he could interpret as a complaint was that Gray told him "he had complained several times about ventilation curtains not being up to Tom Cornett, the section foreman." (Temp. R. 140-42.) One objective interpretation of Gray's statement that it was not "up to Tom Cornett" would be that Gray was saying Cornett had no business telling him to hang the curtains. This interpretation is supported by Cornett's testimony that when he got on Gray about hanging curtains, Gray responded by saying it was not his job. (Temp. R. 227.) It is further supported by Gray's overall negative attitude toward management as Sheeks had testified.

Gray told Fain during the second interview that he made similar complaints to two other foreman, one he could only identify as "Moondog" who told him to go ahead and hang the curtains. He stated that he made these complaints since the first of 2009 yet he never mentioned this in his initial complaint nor did he mention it at trial. (Temp. R. Ex. G-1.) He again provided no dates, time frames or details to support this allegation. (Temp. R. Ex. G-1.)

Complainant posits that Gray raised the issue of curtains in his initial complaint when he said that he had made "other safety complaints." However, it is not sufficient to say Gray mentioned "other safety complaints" to overcome this very important and telling omission on Gray's part. The time to identify what "other complaints" he was referring to would have been at his first interview with Fain, not after Fain had provided him with a suggestive opportunity to do so. And yet, when Fain had done so, Gray still could not articulate a scenario in which his hanging curtains could be interpreted as having brought about the animus of Cornett for engaging in safety-related behavior.

I find this allegation of having made any sort of safety complaint concerning ventilation curtains (in any sense of the discrimination context) wholly unsupported by the evidence. It flies in the face of Gray's own statement to Fain that he was directed by his foreman to hang the curtains. (Temp. R. 139.)

Counseling Issues

Gray denied ever having been counseled for his performance by anyone at any time. He categorically denied that he had been presented with the two written counseling documents at issue here. Most notably, Gray testified at hearing that the first time he was aware of the written counseling warnings, Exhibits Compl.-A and -B, was at his second interview with Fain in late July. He said Fain brought them to him after speaking with management and said, "I thought you wasn't wrote up for nothing." Fain then showed him the two documents, at which time Gray simply responded by saying he had never seen them before. (Tr. 194.) At the earlier temporary reinstatement hearing in September 2009, however, Gray testified that Fain came back to talk with him in late July and showed him "some papers" but he could not remember what those papers were. (Temp. R. 68-69.) Considering the alleged forgeries are the epicenter of Gray's case[17] it is incredible that just two months after being confronted by Fain with the allegedly forged documents, he would forget what the documents were. And yet somehow he recalled in detail at trial, nearly two years later, being shown the counseling documents in July and denying he had seen them before. (Tr. 193.) It is difficult to fathom how someone who is confronted with two false counseling documents would not remember very clearly the details just two months later. It is also extremely difficult to believe that when confronted with forged personnel records one would reply as Gray did rather than vehemently and immediately deny their authenticity. Yet Gray said "I've never seen this before." (Tr. 194.)

For the reasons set forth herein and those discussed above regarding my analysis of the handwriting expert's testimony, I find Gray's assertions that he never received the counseling on February 27 and April 29 not credible.

[17] I find the entire issue of the alleged forgeries to be a red herring. The crucial point is that there is no credible testimony to support Gray's allegation that he engaged in protected activity and he has failed to establish a *prima facie* case. There is more than substantial evidence provided by MSHA inspectors, rank-and-file miners and Gray's statements themselves to establish that Gray had been verbally counseled repeatedly by several managers for poor performance that led to his termination.

Gray's counsel makes much of the fact that Gray worked for North Fork for over a year before being fired. Counsel suggests that if Gray's performance were as poor as the witnesses indicated, it would have been absurd to keep him on the payroll. But Cornett, Sheeks, and Estevez have explained that Gray escaped being fired sooner only because there were a number of management changes around the time he was switched to the production shift and began having trouble keeping up. For one thing, Gray's immediate supervisor was fired and replaced by Cornett. (Temp. R. 192.) Cornett began noting problems with Gray's performance almost immediately, but he did not have firing authority. (Tr. 265-71.) He testified he complained about Gray to the former superintendent, Ison, but no action was taken until Estevez had stepped in as new superintendent and evaluated the situation. (Temp. R. 192-93, 239-40, 251, 270-71.) I do not find it suspicious that mine management took the time to assess the situation carefully before deciding to terminate Gray's employment.

As discussed above, I find that Gray harbored a resentment towards management providing a motive for his allegations of discrimination. His attitude is exhibited by his inability to remember or disinterest in remembering any of his supervisors' names or how long he worked for them, his telling his partner that they could not be fired because the mine had a bad reputation, using profanity when stating what he could do to management by working slowly,[18] deliberately not putting pressure on his drill, not carrying enough cable to tram the bolter, causing the entire section to stop production, not using the correct size or type of bolt, advancing his curtain every 10 feet rather than every 4, being off task, and telling the foreman that it was not his job to hang the ventilation curtains.

Most telling of his attitude is his comment to Sheeks that if he was denied unemployment, he would sue the company. Gray confirmed that he had been involved in a federal court case in which management was charged with illegal mining and ventilation violations. (Temp. R. 96-97.) He was called as a witness in that hearing by Harris. Gray was aware, therefore, of the results he could bring about by making such a claim against North Fork. This lends credence to Sheeks' testimony and it would explain why each of his allegations regarding the deep cuts, the curtains and the forged counseling documents are such general allegations which do not hold up to objective reasonable scrutiny. Moreover, it explains why there is not a single witness who could support his allegations even among the MSHA investigators and non-management personnel that these events took place during between March and May 2009.

Chris Sheeks

I find Sheeks' testimony to be credible. Sheeks came across as an unsophisticated person who was relatively new to the mining industry at the time of these events. He was trained as a roof bolter by Gray and thereafter they worked together every day for over one year. (Tr.II 81.) I find it likely that Gray would share his thoughts and comments with Sheeks as his roof bolting partner more freely than with anyone else. I also find Sheeks would have been in a better position to observe Gray's work habits and his attitude toward management than anyone else. That Gray would make the comments Sheeks attributed to Gray, therefore, does not come as a surprise.

[18] Gray did not deny making this profane comment.

Sheeks testified that Gray told him he had been written up on three or four occasions; once by Estevez and the other times by Ison.[19] (Tr.II 69, 90.) Gray told him one was for production and another for not having enough cable pulled when tramming the bolter. (Tr.II 70.) Neither of these counselings were for issues related to the two allegedly forged documents involved here, meaning that any doubts Gray has raised about the authenticity of the questioned documents does not affect the credibility of Sheeks' testimony on this point. Sheeks stated he had seen Gray fail to pull the proper amount of cable several times which had stopped production. (Tr.II 71.)

Sheeks stated that he and Gray were reprimanded for poor performance before Gray was fired. He testified that Gray had mentioned being written up at least three or four times, including once by Estevez for not pulling enough cable and three times by Ison for poor performance. (Temp. R. 170, 197-201; Tr.II 69-70, 91.) Although Sheeks did not see any of the written warnings, he knew that Ison had spoken to Gray in the mine office because "You'd be in the office getting your supplies for the day, and you'd hear Doe [Ison] talking to him [Gray]." (Temp. R. 205-06.) Countiss also testified that he was aware of Ison counseling Gray on February 27, 2009 for poor performance because he was present, but Ison had said it was a verbal warning so he did not need to sign as a witness. (Tr. 116.) Countiss recalled one additional written warning given by Ison to Gray two months prior to the February one which he did sign as a witness. This document could not be found in Gray's file and Countiss had no idea what had happened to it. (Tr. 121-22.) Countiss' statement lends credence to Sheeks' testimony that Gray said he had been counseled by Ison on more than one occasion as Countiss was witness to two of them. In addition, Estevez's testimony confirms that he counseled Gray for the cable issue. (Temp. R. 259, 296-97; Tr. 65-66.) The final warning written by Estevez in April 2009 would make at least four warnings that Gray would have been referring to in his conversations with Sheeks. In addition, Estevez testified he had found in Gray's personnel file a note written on yellow paper by former section foreman Eddie Cox referencing problems with Gray. (Temp. R. 293.) I find this testimony credible. Estevez had not been the superintendent when Cox worked at the mine and therefore had no personal knowledge of what problems the note referenced, but the existence of the note lends additional credibility to Sheeks' testimony that Gray had been in trouble with mine management before.

Sheeks testified to an attitude Gray held toward management. Gray's comments to Sheeks about the mine having a bad reputation and filing for unemployment and suing the company exemplified this attitude. These comments had nothing to do with the alleged forgeries. Gray in fact did file for unemployment and then sued when denied as Sheeks had

[19] Russell Ison was called as a witness by the Complainant at trial but asserted his Fifth Amendment rights based upon the advice of independent counsel and refused to testify regarding the counseling documents at issue. I do not draw a negative inference from this. Ison was represented by counsel at hearing and was instructed by him to take the Fifth which is entirely understandable. His attorney would not have been worth the retainer had he allowed Ison to testify. It appears MSHA sent the questioned documents to the US Attorney to investigate Gray's allegations of forgery. After receiving Belcastro's handwriting analysis report of August 31, 2009, the US Attorney declined to pursue Gray's claim sometime thereafter.

testified he would do. (Temp. R. 87-88; Tr. 222-23.) I find it doubtful that Sheeks would have the savvy to make up this testimony after the fact.

Sheeks' testimony is also corroborated by non-management and MSHA witnesses on several issues. Fain corroborated the fact that the regular MSHA inspectors who were at North Fork on an almost daily basis reported no signs of deep cuts. Doan, a roof control specialist, corroborated that he was on the section Gray was on the day Gray was terminated to view the reflector shields as Sheeks stated. He observed them bolting the very entry that Sheeks testified they were in and confirmed that after approximately one and one half hours, Sheeks and Gray were still bolting the same entry. (Tr. 158-59; Tr.II 77-78.) This corroborates Sheeks' testimony regarding the slow rate at which Gray performed and Gray's overall attitude towards management and his job. Doan also testified that no roof control plans allowed for cuts near the depth Gray alleged and that he had never seen one or cited North Fork for one. He had, however, discovered such cuts in other mines during his inspections. And although he spoke with Gray on the day he was fired, Gray never mentioned any deep cuts to him. (Tr. 161-63.) This independent testimony from an MSHA inspector corroborates Sheeks' testimony as well as all the other witnesses' testimony that no such deep cuts were taken and Gray never made any safety complaints about deep cuts in the period Gray alleges.

As a general matter, in order for Sheeks to have made up all of the comments and actions he attributed to Gray he would have had to have been thoroughly coached, rehearsed and informed of the intended testimony of each of North Fork's managers down to such minute details as being shown production reports by Estevez when called into his office, asking both Estevez and Cornett for a new partner, Gray being counseled for not having enough cable pulled to tram the bolter, Gray not putting pressure on the drill to drive in the bolt, installing the wrong sized bolts, and so forth, in order to be as consistent in his testimony as he was. I find this extremely unlikely. This is especially true considering that Sheeks testified in a similar manner at the reinstatement hearing just three months after Gray filed his discrimination complaint. Such a plot as that alleged by Gray would likely take significantly longer to successfully orchestrate. Objectively consistent is the fact that Gray acknowledged that he did file for unemployment upon discharge and filed this complaint immediately upon being denied those benefits just as Sheeks testified Gray had said he would do. Also objectively supported is the fact that the mine roof by all accounts was in poor condition and no deep cuts were allowed in District 7. Shallow cuts, spot bolting with rope bolts that enable the roof to move, and a four foot bolting pattern were being used to help control the top. Under such circumstances, cuts of 56 feet would create an unreasonable danger of a significant roof fall, exposing several miners to injury or death. Yet, no such occurrence took place.

The Commission majority felt it was significant that Sheeks described being "written up" as being presented with a written document on which one was asked to sign. If the two written documents are forgeries then, the majority opined, Gray never made the statements to Sheeks about having been "written up" two or three times and Sheeks was lying. As discussed above, I find credible support for Sheeks' testimony that Gray told him he had been counseled three or four times. Additionally, while Sheeks may have interpreted being "written up" as requiring a signed document, he was merely repeating what Gray had told him. Gray may have an entirely different perception of what written up means to include verbal counseling. Furthermore, one of

the counseling sessions Gray told Sheeks about concerned not having enough cable to tram the bolter which has nothing to do with the content of the two questioned documents but was corroborated by Estevez's testimony. Estevez testified that on two occasions he witnessed the bolter being moved without enough cable pulled. On one occasion, he told Gray and Sheeks to keep moving and had other miners assist him in pulling the cable as the entire section was unable to move. Estevez had also observed Sheeks attempting to move the bolter by himself against mine policy when Gray was not to be found. (Tr. 66**.)** I do not find the majority's concern with Sheeks' credibility to be founded.

Hall, McFarland, Peak

The testimony of these rank-and-file miners is not in any way affected by the allegation that the counseling documents were forged. They were not involved in any way with disciplinary measures taken against Gray or the counseling documents Gray alleges are forgeries.

Hall testified that except for hearsay statements, he was not even aware that Gray had been counseled. His testimony was most relevant with respect to the fact that he would have been the miner man who made the deep cut. He denied that he or anyone else was making cuts deeper than 20 feet due to the condition of the roof. (Tr.II 7-12.) This was confirmed by roof specialist Doan who said no mine in District 7 was allowed to take cuts of the depth Gray alleged and he had never seen or heard of any at North Fork being taken. (Tr. 161.) I find Hall credible.

Peak testified that he and McFarland were bolting five to six places to Gray's and Sheeks' two and he had complained about it to Cornett. (Tr.II 31-32.) He stated that the pace picked up after Tim Pennington replaced Gray. (Tr.II 33.) Also confirmed by McFarland was Peak's testimony that the top was in very poor condition, making a deep cut extremely dangerous. (Tr.II 22-24, 33-34.) Neither Peak nor McFarland had ever heard Gray or anyone else complain about deep cuts at the mine. (Tr.II 23, 33-34.) Again, Doan's testimony with regard to never having seen deep cuts in the North Fork mine lends credibility to Peak's as well as the other bolters' and miner man's credibility. Doan also confirmed that Gray and Sheeks had not finished bolting a cut in more than one hour on the day of his inspection. Peak was receiving long-term medical disability and no longer employed by North Fork at the time of trial and, therefore, had no reason to testify on behalf of North Fork. (Tr.II 33-36.) I find his testimony credible.

McFarland testified similarly with respect to the condition of the roof and the depth of the cuts being taken in the mine in 2009. He also confirmed that Gray and Sheeks were slower bolters and he had had to cross their cable to advance his equipment. (Tr.II 25-26.) I find McFarland's testimony credible also based upon Doan's testimony as stated above.

Marty Bates

Bates also confirmed that the roof at North Fork was extremely bad and a deep cut of 60 feet would cause it to cave in. As the second shift foreman on the 001 section, he knew that no deep cuts were taken for that reason; they were limited to 18-20 feet. (Tr.II 43-46.) As a foreman, he would lose his card if he violated the roof control plan which I find makes his

testimony more credible in view of the fact that inspectors were at this mine constantly, making discovery of a deep cut an unreasonably high risk. (Tr.II 46.)

I find Bates has nothing at stake here in providing false testimony. He was not involved in any counseling of Gray. The fact that he could lose his license as a foreman if he was involved in making deep cuts is far outweighed by the fact that he would expose himself to death if the roof caved in. In fact it provides an additional motivation not to make such dangerous cuts in this mine.

Thomas Cornett

I find Cornett's testimony that Gray was a slow worker who failed to advance the curtains as directed to be credible. I also find his testimony that deep cuts were not taken in the mine and Gray never made any complaints to him about bolting deep cuts to be credible.

The curtains would often be knocked down when moving the equipment requiring them to be rehung. According to Gray, the curtains had to be hung every two and one-half rows of bolts which would be every ten feet. (Tr. 209-10.) Like Sheeks, Cornett testified that they were required to move the curtain after every four foot row of bolts was installed, not every ten feet, to be compliant with the mine's plan. (Tr. 230; Tr.II 63.) Fain corroborated Cornett's testimony that Gray did not hang the curtains as required in that he testified that when interviewed, Gray told him that Cornett directed him to hang the curtains. (Temp. R. 113; Temp. R. Ex. R-8.)

Cornett elaborated on his assessment that Gray was a poor performer. He stated that Gray and Sheeks bolted about two places for every five other bolting team did. (Tr. 232.) He documented many instances of Gray's performance in his notebook. (Ex. R-3; Tr. 233.) As set forth above, the notes reference occasions when Gray failed to put pressure on the drill, made an obscene comment about management, used the wrong size and type of bolt, placed the bolts too far apart and did not hang the curtains. (Tr. 240-43.)

The Commission majority casts doubt on the authenticity of the notebook for two reasons: first, because the complete original notebook was not produced, and second, because the notes do not include any mention of a verbal warning being issued to Sheeks on the day Gray was fired. Taking the second objection first, to the extent that the majority believes that the notes did not mention Sheeks, this factual finding is absolutely incorrect. As Gray's attorney pointed out, the notes from May 11, 12 and 15 specifically state that Sheeks and Gray were bolting too slowly. (Tr. 260; Ex. R-3.) Gray's counsel asked why Sheeks was not counseled along with Gray. Cornett's response was that he was already aware that Sheeks bolted faster than Gray and was waiting on Gray to finish. (Tr. 260.) Cornett testified that when he spoke to both Gray and Sheeks it was because they were a team but he was well aware from his own observations that it was Gray holding up production. It was also Gray who made the obscene comment about management, which Gray did not deny. It was also Gray who was primarily responsible for moving the curtains as Gray acknowledged himself. Cornett need not have included Sheeks' name in each of the notes when he was aware Gray was the problem and not Sheeks. I find the lack of Sheeks being mentioned as having been counseled does not detract from the authenticity of the notes.

Addressing the former of the majority's concerns, the majority also mistakenly states that the judge at the temporary reinstatement hearing instructed Cornett to maintain the original notebook. There is no such instruction by Judge Melick in the transcript from that hearing. Gray's counsel asked Cornett to keep the original because he intended to subpoena it. (Temp. R. 252-53.) However, as counsel for North Fork stated at trial, Gray's counsel never issued any discovery. (Tr. 234.) Also of note is the fact that the pages Cornett produced were introduced at the earlier hearing without objection from Gray. (Temp. R. 244.) As set forth in footnote 15 above, I find having the original notebook would not lead to a different finding of authenticity.

I find there are other indicia of authenticity. Despite the fact that Cornett testified he did not mention the notebook to Fain when interviewed, he related the essential contents of the notes to Fain in saying that he had repeated problems with Gray including Gray not hanging the curtains as required, spinning his steel, and working slowly. (Ex. R-8.) Significant entries in the notebook were confirmed by other witnesses. The pace at which Gray bolted was confirmed by Doan on the day Gray was fired. The failure to hang the curtains as directed was confirmed in part by Gray's statement to Fain and his testimony that he hung the curtains every ten feet rather than every four as required. Gray's overall attitude towards doing as told was confirmed by Gray's comments to Fain. That the other roof bolters testified similarly with respect to these issues is not a product of collusion but independent observations by witnesses who had no involvement with the alleged forged counseling documents or Cornett's notebook entries. And lastly, as Cornett stated, Gray had only worked for Cornett since about April. (Temp. R. 212; Tr. 227, 256.) The first note is dated April 14, 2009 which would coincide with Cornett having had the opportunity to observe Sheeks and Gray for a few weeks and having drawn the conclusion that Gray was a poor worker. The date also coincides with Estevez's statement that he called Sheeks and Gray in to his office the first week of April to warn them about their poor performance. (Ex. R-11A.) It also tracks Estevez's testimony that he had told his foremen to take notes of significant events that take place during their shift. (Tr.II 53-54.)

I find the entries from Cornett's notebook were made on the dates indicated and are authentic.

Cornett's testimony that Gray never made any safety-related complaints to him about deep cuts or hanging curtains is also sufficiently substantiated and more credible than Gray's assertions that he did. I make this finding based upon my discussion of Gray's credibility above. I also consider the fact that Cornett testified that the condition of the roof was such that a deep cut as Gray alleges would have caused a roof fall exposing the entire mining crew as well as himself to a very dangerous situation. Had such a cut been taken, it would have been seen by the car drivers, the other bolting crew, the miner man and the foreman. Cornett would have called the superintendent had he seen a deep cut. (Tr. 247-48.) Although these statements may be self-serving, I find it extremely unlikely that a foreman would expose himself and his entire crew to such a dangerous situation and would do so with the presence of MSHA inspectors at the mine on an almost daily basis. As stated above, that the subject of curtains was not raised as an alleged safety complaint by Gray until Cornett told Fain he had a problem with Gray hanging the curtains. Only then did Fain return to Gray and ask him if he had something to say about hanging curtains at which time Gray made the statement that it was not up to Tom Cornett. I

find this lends credence to Cornett's testimony as well. I note that Cornett's credibility on these issues is not affected in anyway by the alleged forgery of the counseling documents as suggested by the majority in its remand decision.

Anthony Estevez

Estevez had become the superintendent of the mine just two months prior to Gray's termination. There is no reason to believe he had any prior knowledge of Gray before March 2009 nor did Gray allege any animus on Estevez's part towards Gray. As he testified, he made rounds in the mine and observed the miners at work and reviewed production reports from each shift to familiarize himself with the operation. It was his personal observations and review of records that alerted him to the problems on the 001 section day shift. When he asked the shift foreman, Cornett, what the problem was Cornett stated that he had problems with Gray and Sheeks. They were bolting one or two places to every five to six places the other bolting team was per shift. Cornett further identified Gray as the primary problem as he had observed Gray spinning his steel, burning up bits and not replacing the ventilation curtain when moving the drill. Estevez then made his own observations of Gray not keeping up with Sheeks. He also observed two occasions where Gray had not pulled enough cable to tram the machines and one occasion when Sheeks was backing the equipment on his own when Gray was nowhere to be seen against mine rules. (Tr. 63-67.) During the first week of April Estevez confronted Gray and Sheeks in his office and warned them to pick up the pace and then brought them in separately shortly thereafter, which is when Sheeks asked for a new partner. (Tr. 67-69.) Estevez then gave Gray the written counseling warning on April 29, 2009 which Gray signed. On the day Gray was fired, Estevez observed Gray and Sheeks had bolted less than two complete rows in a new cut during the time that he and Doan traveled the 001 section and returned, which took in approximately two hours. (Ex. R-11A; Tr. 52-55.)

Many of Estevez's observations as related to Fain and as he testified to in court have nothing to do with the subject matter of the purportedly forged warnings. His observations were confirmed by Cornett and the notations in Cornett's notebook and by the testimony of Chris Sheeks. Most notably, Estevez's testimony regarding Gray's slow performance was also confirmed by Doan's testimony that upon returning to inspect the roof bolter after making the run over the 001 section, Gray and Sheeks were still bolting a cut that should have been completed. While Doan said he did not recall making a comment about how slow they were bolting, he did confirm they had not completed bolting the entry in a significantly long period of time. (Tr. 159.)

Gray confirmed Estevez's testimony that he was not hanging curtains as required. As previously stated, Gray testified that he advanced the curtain every ten feet when he was required to advance it every four feet. Estevez's testimony that he held safety meetings on a regular basis at which Gray was in attendance but never made any complaints was also confirmed by Gray. (Temp. R. 84-86.)

On the day Gray was fired, he did not make any mention of curtains or deep cuts. Gray testified that Estevez told him someone had complained about him and he (Estevez) believed his foreman and Gray then left without saying a word. Estevez testified that Gray was told he was

fired because his performance had not improved despite being told numerous times he needed to improve. He said Gray's response was "It's okay, I'll have another job tomorrow." (Tr. 77.) Whether Gray said nothing or said he would have another job the next day, the fact that he did not react by raising the issue of being forced to bolt a deep cut or being treated unfairly by his foreman for hanging curtains is odd, at best. Gray's reaction would make sense, however, if he was well aware of his substandard performance, had been counseled several times and his being fired was not unexpected. Whether or not Gray was counseled in writing or verbally before he was fired is immaterial. Estevez had made personal observations of Gray's performance, had spoken to Gray about it and had spoken with Cornett about it as well which formed the basis for his decision to terminate Gray. It was Estevez's observations of Gray's performance when Doan was in the mine that solidified Estevez's decision to fire him. The mine had no progressive disciplinary program and Estevez had the right to terminate Gray on the spot had he chosen to do so.[20] (Tr. 136-37, 273.)

I find Estevez's testimony credible.

Stephen Countiss

Countiss, the mine foreman, testified that he had observed Gray on an occasional basis and found him to be a slow worker and observed Sheeks waiting for Gray to catch up. (Tr. 124.) Sheeks had complained to Countiss about Gray as he was afraid of losing his job based upon Gray's performance. The other bolting crew also complained about Gray's slow bolting and Cornett told Countiss that Gray was not hanging curtains as required. (Tr. 125-26.) I find this testimony credible based upon the fact that Countiss was not alleged by Gray to harbor any ill will towards Gray.

Countiss' confirmation that no 40 foot cuts had been made in North Fork for a long period of time due to poor roof conditions was corroborated by all other witnesses, including the rank-and-file miners. It was also corroborated by Fain's and Doan's testimony that none of the regular inspectors who frequented the mine had ever seen any indication of deep cuts. The testimony that no deep cuts were taken corroborates his testimony that Gray never made any complaints to that effect.

By Countiss' account, he was present when Ison gave the February verbal warning to Gray about his performance. While Ison told Fain that Countiss was not present on this occasion, Ison and Sheeks both confirmed that a counseling session had taken place and Sheeks testified Gray had been written up by Ison on more than one occasion. (Ex. Compl.-C; Temp. R. 199-201, 205; Tr. 69-70.) Countiss recalled a previous counseling by Ison that was signed by Gray and Ison and him for poor performance that was not found in Gray's personnel file. (Tr.

[20] It is not Commission's place to decide whether the operator's disciplinary program is fair. In analyzing an operator's asserted business justification for taking adverse action against an employee, the Commission is limited to a "restrained" analysis and may not substitute its own business judgment for that of the operator. *Cumberland River Coal Co. v. FMSHRC*, 712 F.3d 311, 319 (6th Cir. 2013); *Haro v. Magma Copper Co.*, 4 FMSHRC 1935, 1937-38 (Nov. 1982); *Sec'y of Labor on behalf of Chacon v. Phelps Dodge Corp.*, 3 FMSHRC 2508, 2516-17 (Nov. 1981), *rev'd on other grounds*, 709 F.2d 86 (D.C. Cir. 1983).

121-22, 133-35.) The only way Sheeks would know of the multiple counseling sessions would have been through Gray himself as Sheeks was not present at those counseling sessions. Sheeks' testimony that Gray told him he had been written up more than once by Ison is then consistent with Countiss' testimony, which corroborates Sheeks' testimony that Gray told him he had been written up more than once by Ison. Had management engaged in a concerted effort to manufacture evidence, particularly documentary evidence, after Gray was fired to justify their actions as the Complainant asserts, it would stand to reason that they would have "found" this earlier signed counseling document as well which they did not. I find this lends credence to Countiss' testimony on the issue.

Countiss testified that when Gray signed the April counseling letter, Gray appeared angry and made a slashing motion at the end of his signature and then stomped out of the room. (Tr. 120, 135-36.) As discussed above, this would account, in part, for the appearance of Gray's signature being inconsistent with some of his known exemplars. It also stands to reason that Gray would have been angry.

While Countiss confirmed that he did not tell Fain during his interview about the earlier counseling warning, he did tell Fain that Sheeks had asked for another roof bolting partner because Gray was making him look bad and that when "we got on Gray" about his slow bolting he would improve for a few days and then revert to bolting slowly again. (Ex. R-12; Tr. 132-33.) Countiss stated that Fain did not ask questions regarding the other issues. Fain confirmed that he did not investigate the ventilation curtain complaint when he conducted his initial interviews. (Temp. R. 123-24.) It is apparent from the brevity of the written summary that the Countiss interview lacked any detail and I therefore do not find Countiss' omissions detract from his credibility.

Summary

Overall, I find Gray's credibility to be lacking. I find that he did not engage in protected activity by making any sort of safety complaints at the North Fork mine. His allegations were likely contrived and fabricated as a result of being denied unemployment benefits and hatched out of a disdain and animosity he harbored for persons in positions of authority. I find that there is more than substantial credible evidence presented by not only management but rank-and-file miners and MSHA personnel as well to prove that no deep cuts were taken in this mine during Gray's employment and that he did not make a safety complaint regarding the hanging of ventilation curtains. In sum, I find for the reasons set forth above that Gray has failed to produce a scintilla of credible evidence that he engaged in protected activity and has not established a *prima facie* case.

My evaluation of the evidence as set forth in my earlier decision stands as written. As the majority indicated in its remand decision, it is important to consider "the nature of the evidence" and "the integrity of our proceedings." 35 FMSHRC at 2362. The nature of the evidence is that Gray was counseled numerous times for poor performance by his supervisors. When he failed to respond appropriately, he was formally counseled and eventually fired. Gray thereafter embarked on a crusade against North Fork raising broad and nondescript accusations of discriminatory behavior by his foreman and the mine superintendent that are simply not

substantiated by credible evidence. His attempt to prevail was not fortified by the expert testimony of Dr. Miller whose substandard methods of analysis and his apparent bias make his inconclusive findings lacking in probative value.

For the reasons set forth herein and as set forth in my original decision incorporated by reference herein, I dismiss Mark Gray's discrimination complaint.

ORDER

It is hereby **ORDERED** that the Complainant's discrimination claim be **DISMISSED.**

Priscilla M. Rae
Administrative Law Judge

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