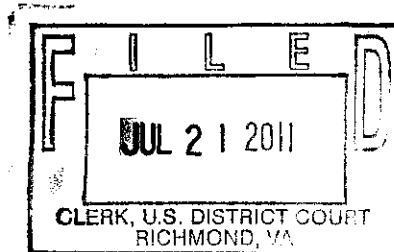


IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Richmond Division



E.I. DU PONT DE NEMOURS
AND COMPANY,

Plaintiff,

v.

Civil Action No. 3:09cv58

KOLON INDUSTRIES, INC.,

Defendant.

MEMORANDUM OPINION

This matter is before the Court on the Plaintiff E.I. du Pont de Nemours and Company's ("DuPont") MOTION FOR SANCTIONS RELATING [sic] KOLON'S SPOILIATION OF EVIDENCE (Docket No. 393). DuPont alleges that, upon learning of the filing of this action by DuPont, key executives and employees of Kolon Industries, Inc. ("Kolon") deliberately deleted relevant evidence and then engaged in prolonged efforts to conceal that conduct. Because the record shows that to be true, and, for the reasons that follow, the motion will be granted.

STATEMENT OF BACKGROUND FACTS

1. Background of the Litigation

On February 3, 2009, DuPont filed a Complaint against Kolon claiming that Kolon, a South Korean company, and its United States subsidiary, Kolon USA, Inc., "engaged in concerted and

persistent actions to wrongfully obtain DuPont's trade secrets and confidential information about [DuPont's] KEVLAR[] aramid fiber." Compl. ¶ 1. "DuPont designs, manufactures, and sells complex science-based materials," including Kevlar, which is "an innovative high strength" para-aramid fiber "used in ballistics applications and protective apparel by the military and law enforcement and used to strengthen various items such as automotive and industrial products." Id. ¶ 2. "DuPont protects certain information relating to its KEVLAR[] aramid fiber products as trade secrets." Id. In sum, DuPont's Complaint against Kolon alleges trade secret misappropriation, theft of confidential business information, conspiracy, and other business torts related to Kevlar.

This action against Kolon was prompted in the first instance by the activities of Michael Mitchell ("Mitchell"), a former DuPont employee who had worked in sales and technical positions from 1982 until February 2006, when DuPont terminated his employment. Mitchell's last position at DuPont related to sales and marketing of Kevlar. After the termination of his employment, Mitchell, in violation of DuPont internal policies and agreements between him and the company, kept numerous documents and files containing DuPont proprietary information related to Kevlar.

Shortly after the termination of Mitchell's employment with DuPont, Kolon approached Mitchell about the possibility of a consulting arrangement. Only a year earlier, in 2005, Kolon had announced that it would enter the para-aramid fiber market with its product, Heracron, to compete directly with Kevlar. For several years before entering the market, Kolon had sought to develop a para-aramid product, but had encountered difficulties. Thus, in order to assure its successful entry into the market, Kolon began searching actively for individuals with an understanding of Kevlar's technology and marketing.

Eventually, after a year or so of negotiations, Mitchell and Kolon entered into a formal consulting arrangement in April 2007 relating to the production and marketing of Heracron. Kolon also engaged other former DuPont employees as consultants during the relevant time period in which DuPont alleges Kolon misappropriated DuPont trade secrets, including Edward Schulz, George Hoover, and Atsushi Sumida. At one point, it also attempted to engage a DuPont employee who then was currently employed by DuPont.

Over the course of Kolon's relationship with Mitchell, he admittedly ferried from DuPont to Kolon at Kolon's invitation much information which DuPont alleges to be trade secrets or

confidential business information.¹ DuPont learned of Mitchell's consulting arrangement shortly after he executed it, and, in late spring 2007, DuPont began to investigate Mitchell's actions. Shortly thereafter, it reached out to the Federal Bureau of Investigation ("FBI") and the Department of Commerce, each of whom launched its own investigation.²

2. Events Precipitating this Motion

In February 2010, Kolon produced to DuPont nearly 1.2 million pages of discovery. During its review of the production, DuPont discovered hard copies of a series of "screenshots"³ taken in the days following the filing of the Complaint by three Kolon employees, Chang-Bae Lee ("C.B. Lee"), Yoon-Suk Choi ("Y.S. Choi"), and Oh-Hwan Kim ("O.H. Kim"). The screenshots taken by C.B. Lee and Y.S. Choi appeared to mark numerous files on the screenshots taken of their personal email accounts with instructions such as "Delete," "Need to Delete," "Remove All," and "Get Rid Of." The screenshot taken by O.H.

¹ Mitchell eventually pled guilty to theft of trade secrets, in violation of 18 U.S.C. § 1832, and to obstruction of justice, in violation of 18 U.S.C. § 1512(c)(2), in December 2009.

² For further discussion of the events that precipitated DuPont's Complaint, see the Court's discussion in E.I. Du Pont De Nemours & Co. v. Kolon Indus., Inc., Civ. Action No. 3:09cv58, 2011 WL 1597528, at *1-3 (E.D. Va. Apr. 27, 2011).

³ A screenshot is simply an image taken by the computer to record the visible items displayed on the computer's monitor screen.

Kim showed the results of a search for documents containing any variation of the word "consult."

Armed with these screenshots and suspiciously low document production totals for other key Kolon employees, DuPont, in a letter to Kolon dated July 9, 2010, explained its concerns, and requested Kolon to advise of any other known destruction or attempted destruction of documents or email by Kolon employees. DuPont also sought confirmation that Kolon's Rule 30(b)(6) witness on document preservation would be able to address DuPont's concerns. Pl.'s Ex. 17 to Post-Hr'g Mem. in Supp., Letter from B. Riopelle to J. Randall (July 9, 2010). Kolon's counsel ignored the letter.

On July 30, 2010, DuPont deposed Kolon's Rule 30(b)(6) witness on document preservation, Jong-Tae Park. Mr. Park provided evasive and incomplete testimony on the subjects of document preservation and the meaning of the screenshots. Pl.'s Ex. 18 to Post-Hr'g Mem. in Supp., Dep. Jong-Tae Park 412:1-433:21.

Unable to ascertain from Mr. Park or Kolon's counsel whether, and to what extent, Kolon employees had engaged in the deletion of information from computers or destroyed documents in the days after this action was instituted, but knowing about the information on the screenshots, DuPont filed the pending motion on August 19, 2010. That marked the beginning of a long, and

oftentimes tortuous, journey on the part of DuPont to get to the bottom of the alleged deletion of files and email items by key Kolon employees in the days after DuPont filed its Complaint. That task was complicated by the numerous objections (many of which lacked substantive merit) lodged by Kolon and by its overall obfuscatory conduct throughout the ensuing proceedings.

DuPont's initial allegations of spoliation rested on three categories of evidence: (1) the computer screenshots; (2) suspiciously low document production totals from other key Kolon custodians, which DuPont argued was strong circumstantial evidence of spoliation of other additional, but unknown, documents; and (3) deposition testimony of Kolon employees, which assertedly showed that Kolon failed to instruct key employees on their preservation duties, and, thus, that Kolon's production efforts were, on the whole, inadequate.

In its response to DuPont's motion, Kolon did disclose that a former Vice-President of the Heracron division, Jong-Hyun Choi ("J.H. Choi"), had deleted DuPont documents from his computer in the days following DuPont's Complaint. However, Kolon characterized J.H. Choi's actions as "isolated" and "not representative of Kolon and its efforts to preserve and gather documents." Def.'s Mem. in Opp'n, at 17.

After reviewing the parties' initial papers, the Court ordered targeted discovery into the apparent spoliation of

evidence. That discovery included a special interrogatory, depositions, and forensic analysis by an independent third-party. Order, Sept. 21, 2010, Docket No. 595. Eventually, after needlessly dragging its heels, asserting trivial, or meritless objections, and wrangling over details of the depositions and the meaning of "independent" forensic analyst, Kolon responded to DuPont's interrogatory and produced seven Kolon employees in Richmond, Virginia for depositions over several days in October 2010.

DuPont engaged Stroz Friedberg ("Stroz") to perform "a forensic analysis of the servers and personal computers imaged" by Kolon. Id. at 2. To date, Stroz has conducted deletion analyses of the computer data associated with thirteen Kolon employees, out of the twenty-one employees whose personal computers were imaged by Kolon,⁴ one file server, and the deleted emails retrieved from the "dumpster" of Kolon's Microsoft Exchange servers for the same thirteen custodians.⁵

⁴ DuPont explains that Kolon, after resisting complete production of all twenty-one custodians' drives, reversed course and offered to produce data for the remaining eight custodians on January 13, 2011. Pl.'s Post-Hr'g Mem. in Supp., at 14 n.53. DuPont declined Kolon's offer, citing the fact that, by that point, it was far too late to conduct any meaningful review of the data before the February 2, 2011 evidentiary hearing. Id.

⁵ Because of errors in certain Exchange Server log files containing the incremental backup data, Kolon was unable to extract email data from the incremental backups from February 10-13, 2009 and February 16-20, 2009. Pl.'s Ex. 31 to Post-Hr'g

In October 2010, Stroz received data from the computers of the six Kolon employees (Ju-Wan Kim ("J.W. Kim"), O.H. Kim, Y.S. Choi, C.B. Lee, J.H. Choi, and Young-Soo Seo ("Y.S. Seo")) who were the subjects of DuPont's initial motion papers. Stroz issued reports setting forth its findings in late October and early November 2010. The parties then filed supplemental briefs in early November 2010.

On November 9, 10, and 11, 2010, the Court held an evidentiary hearing that addressed, inter alia, the pending motion. At the conclusion of the hearing, the Court ordered further forensic analysis of the computer data of seven other custodians, including Dae-Sik Kang ("D.S. Kang"), and of Kolon's Microsoft Exchange server "dumpster" data. Stroz received the computer data for D.S. Kang and issued a report on November 29, 2010. Also, in late November 2010, Stroz received the computer data of the remaining six custodians: In-Sik Han ("I.S. Han"), Kyeong-Hwan Roh ("K.H. Roh"), Jae-Bum Park ("J.B. Park"), Hee-Seung Choi, Kyung-Su Yoo, and Kwan-Sik Lee ("K.S. Lee"). Stroz

Mem. in Supp., Letter from S. Flicker to J. Gonzalez (Jan. 22, 2011), at 1. Kolon was able to extract full backups of the email dumpster information from a different Exchange Server -- Exchange-03 Server -- that hosted Y.S. Choi and J.B. Park's data on February 15 and 18, 2009. Id. However, with respect to the Exchange-03 Server, Kolon's backup tapes did not capture emails deleted from February 4 through February 11, 2009, one of the crucial periods for Y.S. Choi and J.B. Park, and these backup emails may have yielded more information about possible destruction of email items. Id.

issued a report on December 20, 2010, in which it noted that, apart from its findings related to the deletion of files from the hard drives of these employees, it could not perform a complete analysis of possible email destruction without information extracted from Kolon's Microsoft Exchange server "dumpster."

Indeed, it became obvious that Kolon had not complied with the Court's instructions to counsel (at the end of the November evidentiary hearing) to expedite the remaining production and analyses of the dumpster data and custodian images. In late December 2010, Stroz received dumpster data, but only for six custodians. Stroz issued another report on January 11, 2011. Thereafter, on January 12, 2011, Stroz received the dumpster data associated with the remaining seven custodians, and issued another report on January 24, 2011. However, in that last report, Stroz advised that, because Kolon had failed to provide any logs or documentation relating to the extraction and recovery of the emails in the dumpsters, Stroz was unable to independently confirm: (1) the actual source of the emails; (2) the precise method of their recovery; (3) whether they represent all emails for the thirteen custodians from Kolon's Microsoft Exchange Server deleted after February 1, 2009; or (4) the type and timing of the backups made by Kolon's backup tapes. Pl.'s

Ex. 34 to Post-Hr'g Mem. in Supp., Stroz Friedberg ("SF") Second Report Regarding Kolon "Dumpster" Data, at 3.

The Court re-convened the evidentiary hearing on February 2 and 3, 2011, after which the parties filed post-hearing briefs. The issue is now ripe and ready for decision.

3. Background Information for Spoliation Analysis

In its reports, Stroz categorized deleted electronically stored information ("ESI")⁶ as either (1) recoverable files, or (2) unrecoverable files. According to Stroz, "recoverable files" are retrievable and viewable by forensic software "because, in the Microsoft Windows operating system, a deleted file does not truly 'disappear,' at least initially." SF Supplemental ("Suppl.") Report Regarding Deletion Activity, at 4. Rather, "the computer leaves the deleted file untouched, but makes the space the file occupies available to be overwritten by new, active files." Id. Consequently, "[a] deleted file [] can be recovered and reviewed until it is overwritten." Id. Once overwritten, though, the original deleted file is gone. "Traces that may remain include any portion of the file that did not get overwritten, as well as an index entry in the computer's catalogue that points to where the file used to reside in the computer." Id. "Because the content of the original

⁶ The recoverability of ESI and ESI metadata apply only to the electronic files analyzed by Stroz, and do not apply to its analysis of the email items.

'overwritten' file is gone, such files are not searchable using keywords." Id. For all practical purposes, these overwritten files are lost.

In this case, metadata also provides critical information respecting when deletions likely occurred and the types of documents deleted. The metadata identifies three relevant events: (1) the "File Created" date; (2) the "Last Written" date, which reflects the date the deleted file was last edited; and (3) the "Last Accessed" date, which reflects the likely time frame for deletion.

4. The Conduct of Key Kolon Employees Following DuPont's Complaint

Kolon has admitted that, in the days after DuPont filed its Complaint, Kolon employees engaged in conduct (holding a meeting wherein the attendees discussed identifying documents on their computers for later deletion, marking email items for possible deletion, deleting folders that contained DuPont proprietary information) that Kolon "has reason to understand, beyond the mere presence of files in unallocated space, was in response to this litigation." Pl.'s Ex. 1 to Post-Hr'g Mem. in Supp., Def.'s Second Supplemental Resp. to DuPont's Interrog. Pursuant to the Court's Order of Sept. 21, 2010 ("1/31/11 Suppl. Interrog. Resp."), at 2-3. Kolon noted, correctly in the Court's view of the record, that the computer of "virtually

every custodian" from which documents are collected in response to litigation "will include items in unallocated space that may have been deleted for a host of reasons unrelated to litigation."⁷ Id. at 3. Kolon also stated that, in this case, the hard drives of twenty-one custodians that were imaged in February and March 2009 "contained items in their unallocated space that were apparently placed in unallocated space after Kolon learned of this litigation," and that some undisclosed number of the custodians "may have" done so "in response to the litigation." Id. "Placed in unallocated space" is another way of saying that custodians deleted items. See, e.g., id. (explaining that the "computer of virtually every custodian . . . will include items in unallocated space that may have been deleted" (emphasis added)).

DuPont filed its Complaint in this Court on February 3, 2009.⁸ Because South Korea is in a time zone different from that in which the Complaint was filed, the Complaint apparently came

⁷ Such examples include "the automated clearing of internet cache files, creating disk space on a computer, clearing backup copies, deletion of spam emails or files deemed unrelated to the litigation or to a custodian's current work." Pl.'s Ex. 1 to Post-Hr'g Mem. in Supp., 1/31/11 Suppl. Interrog. Resp., at 3.

⁸ All dates in this opinion are intended to reflect the date at the location where the referenced event took place.

to Kolon's attention on February 4, 2009.⁹ Kolon's legal department issued a litigation hold order on February 6, 2009, but it was issued only to certain upper-level employees, four of whom, Y.S. Seo, I.S. Han, K.H. Roh, and J.T. Park, are custodians whose computer hard drives and dumpster data have been analyzed by Stroz. The hold order instructed the recipients to retain and preserve records -- both electronic and hard copy -- respecting Heracron and Mitchell. Although the text advised that recipients might want to provide the order to other personnel, there is nothing in the record showing that the contents, or the subject matter, of the hold order was communicated to the other employees whose conduct formed the basis for this motion.¹⁰

Kolon issued a second hold order on February 10, 2009 to all employees of Kolon Industries, Inc. and Kolon USA, Inc. Def.'s Ex. 24 to Post-Hr'g Mem. in Opp'n. Written in English, but distributed mostly to non-English speaking employees, the

⁹ As Kolon explained, "[d]ates in Korea, where Kolon and its employees are primarily located, are a portion of one day ahead of those in the United States (e.g., close of business February 3, 2009 in Richmond was early morning February 4, 2009 in Seoul)." Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., Def.'s Objections & Resp. to DuPont's Interrog. Pursuant to the Court's Order of Sept. 21, 2010 ("10/4/10 Interrog. Resp."), at 4 n.1.

¹⁰ Y.S. Seo testified during his deposition: "I'm not even sure I read [the litigation hold order] at the time I received it in the in-box, so I don't exactly remember if I forwarded this e-mail to the team members." Pl.'s Ex. 6 to Post-Hr'g Mem. in Supp., Y.S. Seo Dep. 29:10-13.

second order advised employees that DuPont had filed a lawsuit against Kolon in the United States, claiming that Kolon "has or is trying to misappropriate trade secrets and confidential business information from duPont relating to duPont's KAVLAR [sic] aramid fiber manufacturing process," is "working with . . . Michael Mitchell to take duPont's trade secrets," and is "trying to recruit other DuPont employees to work for Kolon so that Kolon can misappropriate duPont's trade secrets." Id. The second hold order instructed employees to preserve hard copy and electronic documents related "in any way to the development, manufacture, marketing . . . competitive analysis, sale or revenues of Kolon's aramid fiber products, or the hiring of or communications with any potential employees" or Mitchell. Id. In addition, it advised that Kolon's computer and email systems should be backed up and explained that Kolon's attorneys would be coordinating with employees to collect documents. According to Kolon, the leader of the Heracron Business team further "explained the importance of the litigation hold and instructed members of the Business team not to delete any documents." Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., Def.'s Objections & Resp. to DuPont's Interrog. Pursuant to the Court's Order of Sept. 21, 2010 ("10/4/10 Interrog. Resp."), at 4.

**A. Stroz's Overall Conclusions Respecting Deletion
by the Thirteen Custodians**

Stroz concluded that, after February 1, 2009, Kolon employees deleted a total of 17,811 files and email items. This included 12,836 unique¹¹ email items, of which 9,010 were keyword-responsive email items. The employees deleted 4,975 electronic files. Of that group, 1,918 files were overwritten, 78 files were partially overwritten, and 145 files were encrypted, totaling 2,141 overwritten or otherwise inaccessible files,¹² of which 991 are likely relevant to this litigation, according to DuPont. The number of deleted files could very well be much greater because 134 of the overwritten files are email containers, so-called DBX container files, which "could potentially have contained hundreds of emails." Pl.'s Ex. 37 to Post-Hr'g Mem. in Supp., SF Second Suppl. Report Regarding Deletion Activity, at 2. DBX files cannot be opened to determine the volume or titles of emails inside each container,

¹¹ Unique, in this context, means that when Stroz analyzed deleted email items, it counted items as duplicates if the item appeared more than once in the psts associated with a particular custodian. Pl.'s Ex. 34 to Post-Hr'g Mem. in Supp., SF Second Report Regarding Kolon "Dumpster" Data, at 2 n.1.

¹² One day before DuPont's Post-Hearing Memorandum was due, Kolon's counsel made available to Stroz 89 of the 145 encrypted files. Pl.'s Ex. 38 to Post-Hr'g Mem. in Supp., Email from A. Stowell to K. Ruffing (Feb. 23, 2011). Kolon provided the remaining encrypted files the day the Memorandum was due to the Court. Pl.'s Ex. 50 to Post-Hr'g Mem. in Supp., Email from K. Ruffing to A. Stowell (Feb. 24, 2011).

but the available metadata show the titles of the deleted DBX files, their size, and the date of deletion.

Of the remaining 2,834 accessible files, 1,669 were keyword-responsive. That is: they contain words that DuPont's counsel determined were relevant to issues in this case or that reasonably could be expected to lead to the discovery of relevant information. The metadata also indicates that many of the deleted files were last written, or last edited, years earlier. That evidence indicates that Kolon employees did not engage in regular deletion of new files in the course of their day-to-day business activities over the years, but, instead, that, in February 2009, they deleted relevant pre-existing files, dating as far back as 1997. Against that macro-background, the Court considers below the conduct of the individual employees following the filing of DuPont's Complaint on February 3, 2009.

B. The Meeting Led by Young-Soo Seo and the Deletion of Email Items by Chang-Bae Lee and Y.S. Choi

Y.S. Seo was the General Manager of Kolon's Heracron Business Center. He had "sustained involvement" in Kolon's recruitment and relationship with Mitchell, and was involved in Kolon's broader efforts to recruit "consultants" who possessed knowledge about Kevlar. E.I. DuPont de Nemours & Co. v. Kolon Indus., Inc., 268 F.R.D. 45, 52 (E.D. Va. 2010). Shortly after

learning of this action, Y.S. Seo gathered members of the Heracron Business Team, i.e., the sales team, still present at work that day for a meeting, during which the employees discussed "identifying documents on their computers that they may want to consider deleting at a later date."¹³ Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 4.; see also Pl.'s Ex. 5 to Post-Hr'g Mem. in Supp., C.B. Lee Dep. 83:11-16 (recalling that, during the meeting, Y.S. Seo said that the Business Team members were to search their computers for documents or materials concerning DuPont because there "might be a possibility that [such materials] may end up getting deleted" at some point in the future).

Present at the meeting were C.B. Lee and Y.S. Choi. C.B. Lee was a member of the Heracron Business Team and former researcher, and Y.S. Choi was a supervisor in the Heracron Business Team. C.B. Lee testified that Y.S. Seo "never gave any orders that documents be destroyed or deleted," though "he did

¹³ The date of the meeting is unclear from the record. Kolon has indicated that the meeting happened on or before February 6, 2009 -- the date of the first litigation hold order issued to Y.S. Seo, among others. Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 4. Y.S. Seo testified that the meeting occurred after he received "the litigation related documents." Pl.'s Ex. 6 to Post-Hr'g Mem. in Supp., Y.S. Seo Dep. 40:13-19. The Court finds that the Y.S. Seo-led meeting occurred before he received the first litigation hold order on February 6, 2009. Receiving "litigation related documents," means, to the Court, that Y.S. Seo gathered his team members and held the meeting after he received notice, and possibly a copy, of DuPont's Complaint.

allude to the possibility that some may get deleted hereinafter in the future." Pl.'s Ex. 5 to Post-Hr'g Mem. in Supp., C.B. Lee Dep. 83:22-25. During his deposition, Y.S. Seo claimed that he had "no recollection of mentioning the possibility of deleting any document" but, "in the passing, we might have discussed of the possibility of returning the documents, so I think that was the extent of the discussion we had." Pl.'s Ex. 6 to Post-Hr'g Mem. in Supp., Y.S. Seo Dep. 33:13-18. Y.S. Seo also said that he recalls "instruct[ing] the people to look for any documents relating to Michael Mitchell or DuPont." Id. 34:9-11. Rounding out the inconsistent recollections of the subject matter of the meeting is Y.S. Choi, who testified that Y.S. Seo "gathered around those of us who still happened to be there and said, okay, guys, why don't we try to gather up related files." Pl.'s Ex. 4 to Post-Hr'g Mem. in Supp., Y.S. Choi Dep. 72:22-73:2.

Taking the deposition testimony as a whole, the Court finds that, contrary to his deposition testimony, Y.S. Seo discussed in the meeting the deletion of documents and email items related to DuPont and Mitchell. That analysis of the deposition testimony is confirmed by the record of events that occurred shortly after the meeting.

For example, after the meeting, C.B. Lee and Y.S. Choi created screenshots in which they identified documents related

to DuPont and Mitchell and marked them with instructions such as "Delete," "Need to Delete," and "Remove All." Pl.'s Ex. 4 to Post-Hr'g Mem. in Supp., Y.S. Choi Dep. 95:10-13; Ex. 7, Y.S. Choi Screenshots; Ex. 8, C.B. Lee Screenshots.¹⁴ C.B. Lee created his screenshots on February 6, 2009; and thereafter, between February 6 and 9, 2009, continued to identify on his computer documents for deletion. Using C.B. Lee's format, Y.S. Choi created his screenshots on February 7, 2009; and, between February 7 and 8, 2009, he identified documents for deletion.

Among the documents that Y.S. Choi marked for deletion was an email from Y.S. Seo identified as "FW: RE: Mr. K meeting Summary" that had been sent to the "Heracron Business Team" on August 31, 2007. Mr. K was Kolon's pseudonym for Michael Mitchell. He also marked for deletion emails entitled "RE: FW: RE: Mr. K meeting summary," "Mr. K's consulting summary -- Chungin," "Mr. K's consulting summary -- Gumi Factory," and Mr.

¹⁴ Kolon's rebuttal forensics expert, John F. Ashley, submitted a report for the November 2010 evidentiary hearing, wherein he opined that the screenshots actually "depicted collection activity relating to the locating of files and emails that could be potentially relevant in this matter." Pl.'s Ex. 22 to Post-Hr'g Mem. in Supp., John F. Ashley Decl. in Supp. of Def.'s Opp'n, ¶ 21. The Court rejects Mr. Ashley's conclusion that the screenshots evidenced preservation efforts, rather than the employees' intent to delete email items at a later date. The Court, too, is familiar with preservation efforts undertaken by litigants in response to the filing of a lawsuit, and it appears rather unrealistic that employees would preserve relevant email items by circling them on screenshots with directives to "Delete," "Removal All," or "Need to Delete."

K meeting summary," all sent to him from J.W. Kim and received on August 30-31, 2007. Among the items marked for deletion in C.B. Lee's screenshots was a folder entitled, "[CVC]'s Directives,"¹⁵ that C.B. Lee marked, "Need to delete folder." The "CVC," or Chief Vision Creator, is Woong-Yeul Lee, Chairman of Kolon. C.B. Lee also marked for deletion, among others, files entitled "Mr. Sumida_Question (090203).xls" and "consulting report (070320).xls." Mr. Sumida is a former employee of DuPont-Toray, a joint venture for producing para-aramid fiber. He was later retained as a consultant to Kolon.

Both C.B. Lee and Y.S. Choi testified during depositions that they did not delete anything at the time they were marking the screenshots. See Pl.'s Ex. 4 to Post-Hr'g Mem. in Supp., Y.S. Choi Dep. 94:20-95:1 ("I wasn't marking things for being candidates -- you know, subject to deletion. Rather, I was marking off related or relevant files."); Ex. 5, C.B. Lee Dep. 87:10-11 (explaining that the marking of the email items was "not for deletion purposes"). And, Kolon previously declared that "there [was] no forensic evidence whatsoever that any of the files identified by [C.B.] Lee" had been deleted. Def.'s

¹⁵ Many of the emails marked for deletion referred to "CVCfup," which stands for Follow Up on the CVC Instructions. This is "a unit within Kolon dedicated to monitoring the company's progress on directives" from Kolon's Chairman/CVC, Woong-Yeul Lee. Pl.'s Mem. in Supp., at 11 n.20 (citing Yang Dep. 25:14-27:10; 90:2-7).

Opp'n to Pl.'s Suppl. Br. in Supp., at 11. Forensic analysis by Stroz, however, confirms that C.B. Lee and Y.S. Choi deleted email items after February 3, 2009 and after receiving the second litigation hold order on February 10, 2009.¹⁶

C.B. Lee deleted 395 unique email items in February 2009, and, according to the keywords counsel provided to Stroz, 365 of these were unique keyword-responsive email items. The overwhelming majority of these email items relate to Kolon's consulting relationship with Mr. Sumida, the former DuPont-Toray employee who has a substantial amount of knowledge about para-aramid fiber, including Kevlar. Examples of deleted relevant email items include:

- February 20, 2007 email from C.B. Lee to Mr. Sumida attaching questions regarding pulp, Kevlar, Nomex¹⁷, DuPont's Ireland plant, Toray-DuPont, etc. for Mr. Sumida's upcoming consultation. There is an attachment to the email that contains a spreadsheet of Mr. Sumida's eleventh consultation meeting agenda.
- September 27, 2007 email chain between C.B. Lee and J.W. Kim discussing whether to ask Mr. Sumida about the current status of Kevlar and its current price. J.W. Kim states: "I think it might be a difficult task for Mr. Sumida, however we should first ask and see."

¹⁶ Contrary to Kolon's argument, it is not correct that recovery of a deleted email forecloses a finding that it had been deleted. The fact of deletion has evidentiary significance, and Kolon's expert, Mr. Ashley, is simply wrong in asserting that recovery of a deleted email negates the fact that it was deleted. Of course, recovery is pertinent to whether there has been prejudice as a consequence of spoliation.

¹⁷ Nomex is another DuPont aramid fiber.

- November 2006 email from C.B. Lee to I.S. Han, Y.S. Seo, J.B. Park, K.S. Lee, and D.S. Kang forwarding answers from Mr. Sumida to questions posed by their team.
- December 2008 email chain from C.B. Lee to Mr. Sumida and I.S. Han regarding Mr. Sumida's visit to the Gumi plant and Kolon's problems with developing aramid.
- October 30, 2007 email from J.W. Kim to C.B. Lee with file name, "Inquiry Important!," requesting consultant to check on sales for DuPont, Teijin, and Technora.
- May 26, 2008 email from K.H. Roh to C.B. Lee, et al., forwarding Mr. Sumida's consultation meeting minutes.
- October 28, 2008 email from D.S. Kang to K.S. Lee and O.H. Kim forwarding an attachment that contained DuPont's 2003 spreadsheet related to staff organization and production analysis.
- September 2007 email from I.S. Han to Jae-Young, C.B. Lee, et al., entitled "[CONFIDENTIAL] Regard securing consultant," regarding retaining consultants and consulting methods.
- September 17, 2008 email from D.S. Kang to Y.S. Seo, et al., entitled "[[D] company consultation summary] - Confidential," regarding notes from a conversation with "D's" General manager that included organizational structure, marketing strategy, and T and H's company status.
- June 7, 2007 email from J.B. Park to Y.S. Seo, C.B. Lee, K.S. Lee, D.S. Kang, Y.S. Choi, et al., entitled "6/6 U.S. business trip mid-report," regarding information from US business meeting with Mr. K that included notes on DuPont production, personnel, types of product, MRG, marketing strategy, and manufacturing.
- March 15, 2007 email with schedule attached for March 18-21, 2007 consultation with Mitchell, listing topics such as "DuPont, Teijin Status," "Aramid Market Status & Forecast," and "Technical Session," and including a detailed "Questionnaire" covering technical topics for the meeting.

Pl.'s Ex. 29 to Post-Hr'g Mem. in Supp., Summary of Relevant Recovered Files and Email Items for C.B. Lee, Entries 49, 53, 87, 135, 187, 195, 207, 297, 363, 411, 414-15. The email items date back as far as June 2006 -- only a few months after Kolon first approached Mitchell -- and continue up through the end of 2008, thereby spanning the entire relevant time period at issue in DuPont's Complaint.

In addition, C.B. Lee deleted an August 30, 2006 confidential email that he received from Jae-Young Kim entitled, "Technology Consultation Report (Reference)." Pl.'s Ex. 44 to Post-Hr'g Mem. in Supp. The email contained two attachments. The first attachment is a summary report that appears to make reference to three consultants, Messrs. Sumida, Schulz, and Hoover, and that provides the "progress status" of each consultant, including the number of times the consultant has met with Kolon employees, the date of the next consultation meeting, a description of the consultant's special area of consultation, the "results" of the consultant's meetings with Kolon to that point, and Kolon's future utilization plans with respect to the consultant. DuPont is referred to in the "results" portion of the report.

The second attachment contains more detailed reports for each consultant. In what appears to be Mr. Sumida's report, for example, Kolon notes that it obtained information related to:

(a) Toray-DuPont/DuPont's "process/product"; and (b) a comparison of Kolon's "equipment/process/condition" with that of Toray-DuPont. In what appears to be Mr. Hoover's report, Kolon notes, for example, that it: (a) obtained DuPont's "core facility information" and DuPont's schematic dimensions of its polymerization reactor, spinning dissolver, spinning pack, and spindle; (b) confirmed DuPont's filament operation method, winder maker, and the type of its heat treatment equipment; and (c) planned to "[s]earch on engineers" from DuPont in the United States related to production/operation or materials. Finally, in what appears to be a report on Mr. Schulz's consultations, Kolon observes that Mr. Schulz possessed valuable information about the whole Kevlar process. Furthermore, the report notes that Kolon: (a) obtained, for example, DuPont's "polymerization/spinning information" to compare to its own process; (b) confirmed the authenticity of information about DuPont that it had obtained thus far; and (c) learned that DuPont "takes molecule weight distribution seriously." Id. The report also notes that Kolon needed to apply the latter piece of information to its work site.

The consultations and information obtained by Kolon from Messrs. Sumida, Hoover, and Schulz and evidenced in these two attachments are highly relevant to DuPont's claims of alleged trade secret misappropriation. Indeed, DuPont claims that these

two deleted attachments contain "direct evidence of extensive theft and use of DuPont's trade secrets." Pl.'s Post-Hr'g Mem. in Supp., at 18.

Stroz's analysis also concluded that, during February 2009, Y.S. Choi deleted 251 unique email items, of which 202 were unique keyword-responsive email items. Some of the deleted email items date as far back as December 2008. Stroz also found that Y.S. Seo deleted 38 email items, of which 30 were keyword-responsive.

C. Oh-Hwan Kim "Consult" Screenshot

As Manager in the Quality Assurance Unit of the Heracron Technology Team, O.H. Kim was responsible for "ensuring that Kolon's Heracron product met a high standard of quality." DuPont, 268 F.R.D. at 52. Therefore, he "had some involvement in Kolon's dealings with Mitchell during the period in which DuPont alleges that Kolon stole its trade secrets, including soliciting meeting topics, attending meetings, and corresponding with Mitchell." Id. When O.H. Kim heard about DuPont's lawsuit, he became "curious as to what documents he had on his computer that might relate to the lawsuit." Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 5. To that end, "[o]n February 9, 2009, Mr. Kim searched the files on his computer for a variation of the term 'consult,'" id., and created a screenshot reflecting his efforts to identify relevant

files, Pl.'s Ex. 10 to Post-Hr'g Mem. in Supp., O.H. Kim Screenshot. Among others, the search located the following documents: "Consulting questions.pcm," "Questions for Mr. K, consultant.xls," and "Mr. [k consultant] question materials.[xls]." Id.

After conducting its analysis, Stroz concluded that O.H. Kim deleted 7 files, none of which were keyword-responsive. He also deleted 184 unique email items -- dating as far back as September 2008 -- of which 132 were keyword-responsive.

D. Jae-Bum Park Deletions

J.B. Park, a General Manager in Kolon's Heracron Business Center, initially was Mitchell's primary contact at Kolon. In fact, he and Y.S. Seo "arranged Mitchell's original visit to Korea, [and] he negotiated Mitchell's contract." DuPont, 268 F.R.D. at 53. He also attended the meeting that Y.S. Seo led shortly after DuPont filed its Complaint. He left Kolon in March 2009, and for some time the circumstances surrounding his departure were unclear to DuPont and the Court. See id. (noting that, while Kolon asserts his current whereabouts to be unknown, he is rumored to be in Canada). DuPont later learned through documents provided as a result of this motion that J.B. Park left Kolon and moved to Canada a few months after DuPont filed its Complaint.

At some point, on or after February 9, 2009, J.B. Park began deleting files from his computer. Overall, he deleted a total of 1,341 files and email items. He deleted 560 files, of which 308 were overwritten and 4 were unsearchable due to encryption, yielding a total of 312 unrecoverable files. Of the remaining 248 recoverable files, 35 were keyword-responsive. Stroz further determined that J.B. Park deleted 781 unique email items, of which 505 were unique keyword-responsive emails. Examples of relevant recovered files and email items include:

- Document last modified on March 6, 2008 containing test results that compare the physical properties of various aramid fiber products, including Kevlar and Heracron.
- Document last modified on August 19, 2008 and labeled "delete immediately after reading" and "protected as trade secret of Kolon," containing "June '08 Strategic Meeting Minutes" that included notes respecting research into raw material development, experimental tasks of 3000 denier development, discussion of color control research, "air entanglement problem," and competitive intelligence on competitors, including DuPont and Teijin. It also contained a chart entitled, "Countermeasure to secure core technology chart," which frequently states "Use Mr. K."
- PowerPoint presentation last modified on May 13, 2008 providing physical property information for various Heracron products, and attaching charts that compare physical properties of Heracron products with Kevlar and Twaron products. Attachments last modified on January 31, 2008 related to the same.
- December 29, 2008 presentation describing Kolon's development of Heracron, the "polymerization process," and the molecular structure of Heracron and its properties compared to Kevlar for various deniers. Attachments related to the same. For example, this PowerPoint presentation compared Kevlar and Heracron in

some of the following categories at HF200 1000Denier: density, decomposition temperature, strength at break, elongation at break, and finish oil content.

- Report from October 2003 business trip to "investigate supply/demand" and "understand competitor (including DuPont) company's aramid technology and marketing trend."
- February 16, 2009 email from K.S. Lee to J.B. Park forwarding and attaching the November 2008 strategy meeting minutes, which were labeled "delete immediately after reading," and contained information respecting development of 3000 denier, competitive intelligence on DuPont demand-supply status, and projected 2010 expansion.

Pl.'s Ex. 29 to Post-Hr'g Mem. in Supp., Summary of Relevant Recovered Files and Email Items for J.B. Park, Entries 1, 15, 3-11, 22-25, 43, 74-75; Pl.'s Ex. 56 to Post-Hr'g Mem. in Supp., at Stroz199284.

Of the files that J.B. Park deleted in February 2009, 312 are unrecoverable because they are either overwritten or encrypted. Stroz cannot run a keyword search of the unrecoverable files, but the file names and metadata show the relevance of some of these files to the litigation:

- Document entitled, "(20080814) Sharing of Company H's patent status and the need to share information (Strategic meeting material).ppt" (last accessed on February 9, 2009 but last written on August 19, 2008).
- Document entitled, "Fabric defects.xls" (last accessed February 13, 2009 but last written on March 21, 2008).
- Document entitled, "Comparative comparison of fabric (080326).xls" (last accessed on February 13, 2009 but last written on April 4, 2008).

- Document entitled, "Heracron Strategy by Vision.docx" (last accessed on February 9, 2009 but last written on July 14, 2008).

Pl.'s Ex. 30 to Post-Hr'g Mem. in Supp., Entries 301, 335, 338, 344.

E. Ju-Wan Kim Deletions

Mitchell's primary contact at Kolon after J.B. Park was J.W. Kim. One of J.W. Kim's responsibilities was to retain paramid "consultants" allegedly as part of Kolon's efforts to misappropriate technology. In discharging that responsibility, Kim once sent detailed questions respecting Teijin's manufacturing process to a former Teijin employee whom Kolon was attempting to recruit as a "consultant." After Teijin learned of the communication, its counsel sent a letter to Kolon describing Kim's efforts as "straightforward evidence of Kolon's asking questions related to trade secrets and offering money to have those trade secrets disclosed." Pl.'s Ex. 18 to Mot. for Sanctions, Letter from J. Schwartz of Gibson, Dunn & Crutcher to H. Lee of Kolon Industries, Inc. (Feb. 28, 2008).

As a member of the Heracron Business Team, J.W. Kim attended the meeting led by Y.S. Seo shortly after DuPont filed its Complaint. On February 11, 2009, a day after receiving a litigation hold order and instruction concerning the importance of the order and employees' obligations to preserve relevant materials, J.W. Kim "created a folder entitled 'delete' to

identify documents on his computer." Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 4.

Kolon insists that "[t]here is no indication that any of the documents identified by . . . [J.W.] Kim were deleted as a result of the identification activity." Id. Stroz's analysis, however, establishes that J.W. Kim did delete files and email items after February 3, 2009. The available metadata reveals that he began deleting files on February 10, 2009, continuing on February 13, 26, and 27. In total, he deleted 1,417 files and email items. He deleted 245 files, of which 121 were overwritten. Of the remaining 124 recoverable files, 53 were keyword-responsive. Forty-six of the overwritten files are DBX container files, deleted on or after February 26, 2009, and the size of which was over 720 megabytes -- the equivalent of 72,000 pages of email.¹⁸ One of the overwritten DBX container files was entitled "Inbox.dbx," which suggests that J.W. Kim deleted his entire email inbox, the size of which was over 115 megabytes, or approximately 11,500 pages of email. In addition, J.W. Kim

¹⁸ See Pl.'s Post-Hr'g Mem. in Supp., at 23 n.100 (citing LexisNexis Discovery Services, Fact Sheet, How Many Pages in a Gigabyte?, http://www.lexisnexis.com/applieddiscovery/lawlibrary/whitePapers/ADI_FS_PagesInAGigabyte.pdf (noting that one gigabyte (GB) equals about 100,099 pages of email files). Because, one gigabyte contains approximately one thousand megabytes, when you divide 100,099 by 1,000, then one megabyte equals approximately 100.99 pages. This number multiplied by 720 megabytes equals approximately 72,071 pages.

deleted 1,172 unique email items, of which 929 were unique keyword-responsive email items.

Examples of relevant recovered files and email items include:

- November 22, 2007 email from Mitchell to "Kolon" (no email address), providing updated DuPont and Teijin retail pricing, but including likely actual prices based on Mitchell's explanation that major purchasers never pay the retail price because of the rebate system.
- PowerPoint template comparing Heracron properties to "K" properties.
- Email chain from September 24, 2007 - February 17, 2009 between J.W. Kim, D.S. Kang, and Mitchell, et al., in which Mitchell advises regarding pricing for Heracron products "to get business."
- Email chain from July 8, 2008 - February 24, 2009 between J.W. Kim, Y.S. Seo, and Heracron Business Team regarding security efforts at Heracron facilities, and an August 8, 2008 attachment thereto, wherein Kolon indicates that the purpose of the "policy is to strengthen the security of our manufacturing technology to prevent leak our [sic] technology asset out to outside of our company."
- June 2008 meeting minutes listing Y.S. Seo, J.B. Park, K.S. Lee, Y.S. Choi, O.H. Kim, I.S. Han, J.Y. Lee, and S.Y. Yeo as participants, wherein numerous technical details about Kevlar were discussed with an attachment appended thereto entitled, "Attachment: Bullet resistant usage [Product Mix] comparison," that compares technical properties of Heracron, Kevlar, and Twaron.
- February 21, 2008 email chain between J.W. Kim, Mitchell, and Y.S. Seo in which J.W. Kim asks questions, on behalf of "Mr. Han," such as: "How does the competitor treat or manage waste sulfur? Do they only make gypsum? Don't they do concentration or neutralization together with making gypsum? If they only turn waste sulfur into gypsum, what made them decide to do so? I wonder what the background was." Mitchell provides answers based on knowledge about

DuPont's Spruance Plant in Virginia and Maydown Plant in the United Kingdom.

- February 23, 2008 email from Mitchell regarding market overview of MRG for Y.S. Seo and that also includes Mitchell's questions related to his continued role with Kolon going forward.

Pl.'s Ex. 29 to Post-Hr'g Mem. in Supp., Summary of Relevant Recovered Files and Email Items for J.W. Kim, Entries 1, 7, 19, 55-56, 67, 77, 78; Pl.'s Ex. 59 to Post-Hr'g Mem. in Supp., at Stroz110625_translated, Stroz203678-9.

J.W. Kim also deleted files that are now partially or completely overwritten. Though their contents are lost, potentially relevant overwritten files, based on file names and metadata, include:

- Document entitled, "2008 Heracron Business Plan_1203.ppt" (last accessed February 12, 2009 but last written January 7, 2008).
- Document entitled, "Heracron 6-1.ppt" (last accessed February 12, 2009 but last written October 8, 2007).
- Document entitled, "Pricelist.xls" (last accessed February 12, 2009 but last written August 13, 2008).
- DBX container entitled, "Competitor.dbx" (last accessed and last written on February 26, 2009).
- DBX container entitled, "Inbox.dbx" (last accessed and last written on February 26, 2009).
- DBX container entitled, "Outbox.dbx" (last accessed and last written on February 26, 2009).

Pl.'s Ex. 30 to Post-Hr'g Mem. in Supp., Entries 349, 397, 400, 414, 419, 421.

F. Jong-Hyun Choi Deletes Folder Containing DuPont Proprietary Information

From early 2006 until the end of 2007, J.H. Choi was the Vice-President in the Industrial Materials and Tire Cord Divisions of Kolon. He was, in effect, the senior executive within the hierarchy of Kolon's Heracron business. In late 2007, he transferred out of this division to a separate division unrelated to Heracron.

However, before his transfer, J.H. Choi oversaw the entire Heracron Business Unit, directing and managing the "employees engaged in Heracron product development and manufacturing." DuPont, 268 F.R.D. at 51. Part of his management included directing "Kolon's industry intelligence-gathering efforts." Id. To that end, he presented to Kolon's Chairman on February 22, 2006, the plan to seek out "consultants," and he oversaw the recruitment of, and solicitation of information from, the consultants. Consequently, he is a key witness in the case. Indeed, J.H. Choi executed Mitchell's consulting agreement on Kolon's behalf in spring 2007 and attended meetings with Mitchell in Korea. In sum, he "worked with Mitchell during the time period at issue in [this] litigation and had responsibility in securing information from Mitchell." Id.

On February 10, 2009, J.H. Choi received the second litigation hold order directing employees to preserve relevant

materials. Notwithstanding his receipt of this notice, J.H. Choi deleted a folder containing 283 Heracron "consulting documents"¹⁹ that had been copied to his computer in March 2007 when he was managing the Heracron division.²⁰ In fact, Kolon has admitted this conduct, explaining in its initial response to DuPont's motion that "[s]hortly after the litigation was filed, . . . it appears that Mr. Choi -- in derogation of the document preservation notices that were distributed -- attempted to delete documents." Def.'s Mem. in Opp'n, at 17. At the time, however, Kolon sought to minimize J.H. Choi's conduct, stating that his actions "are not representative of Kolon and its efforts to preserve and gather documents." Id.

¹⁹ C.B. Lee also marked these documents in a screenshot for possible deletion at a later date, a fact Kolon disclosed days before the February 2, 2011 evidentiary hearing, explaining that "the spreadsheet created by Mr. Chang Bae Lee containing screenshots of his computer identified in Kolon's prior responses . . . included a second active sheet that was not previously produced." Pl.'s Ex. 1 to Post-Hr'g Mem. in Supp., 1/31/11 Suppl. Interrog. Resp., at 3. Due to a technical error, only the first active sheet, labeled "Deletion List," was produced in February 2010. The second sheet, labeled "Relevant Materials," and the screenshots therein, "are not annotated and no files or folders are circled within the screenshots. The folders selected within the screenshots themselves include 280 substantive files, none of which were deleted and all of which were produced during discovery (256 from CB Lee's computer and 24 from other sources)." Id.

²⁰ Kolon asserts that J.H. Choi deleted the materials before he read the second litigation hold order that had been sent that very day. Given J.H. Choi's explanation for having made the deletion (he did not want to get involved in a lawsuit), the Court does not credit that assertion.

The Stroz analysis confirmed that J.H. Choi deleted the folder after February 1, 2009. Deleted were 237 files, 211 of which were keyword-responsive. Four files are overwritten, and thus were not searchable by keyword. He also deleted 173 unique email items, of which 120 were unique keyword-responsive email items.

The folder containing the files that J.H. Choi deleted from his computer contained 283 Heracron "consulting documents." DuPont claims that these documents are some of the most important documents in this case. Indeed, this is not surprising given the events that led to the documents being uploaded on J.H. Choi's work computer. In March 2007, Mitchell traveled to Korea for a meeting with Kolon. With him, he brought a CD containing DuPont proprietary documents that he then used during a presentation to Kolon executives and employees on March 20, 2007. At some point, the meeting broke for lunch, during which time one of the Kolon employees at the meeting directed another employee surreptitiously to make a copy of the CD. The Kolon employee made the copy and returned the CD to Mitchell's laptop computer. Pl.'s Ex. 12 to Post-Hr'g Mem. in Supp., Def.'s First Suppl. Resp. to Special Interrog. of the Court, ¶ 36. Mitchell later returned and continued his presentation, never realizing that Kolon had copied the documents from the CD. He would later testify that he never

authorized anyone to make a copy of anything on his laptop during that trip. Pl.'s Ex. 13 to Post-Hr'g Mem. in Supp., Mitchell Dep. 238:10-14. The documents were uploaded to J.H. Choi's computer on March 23, 2007.

The titles of those documents reflect that they contain DuPont proprietary information, and thus are extremely relevant to the litigation: "AFS²¹ Town Hall Jun 29 04 Appendix.ppt," "Belts & Hoses Growth Sheet.xls," "_US price volume projection 2001 v3.xls," "Product Data.xls," "Bogaz Den Economics.xls," "Maydown 03 Item Economics.xls," "Maydown Denier Economics V2.xls," and "Spruance Denier Economics.xls." Pl.'s Ex. 14 to Post-Hr'g Mem. in Supp., Entries 6, 8, 25, 88, 113, 115, 116, 119. All told, the folder contained numerous documents related to pricing and customers, and numerous spreadsheets related to Denier Economics.²²

J.H. Choi explained that he deleted the documents after learning that DuPont had filed this action because he "did not

²¹ "AFS" refers to DuPont's Advanced Fiber Systems, the business unit within the company that produces Kevlar. It is now known as the DuPont Protection Technologies business unit. DuPont, 2011 WL 1597528, at *2 n.2.

²² "'DuPont produces Kevlar[] in a variety of fiber sizes, known as denier, which is a term used to describe the weight per unit length (linear density) of a continuous filament or yarn.'" Id. at *2 n.4 (citation omitted). The Denier Economics spreadsheets "'contain[] highly sensitive information related to DuPont's production capacity for Kevlar[] yarn in a variety of denier types.'" Id. at *2 (alteration in original) (citation omitted).

want to get involved" "in some lawsuit for some documents that [he] didn't even look at." Pl.'s Ex. 11 to Post-Hr'g Mem. in Supp., J.H. Choi Dep. 187:7-9. Shortly after deleting the files, J.H. Choi notified Kolon officials about what he had done. Kolon claims to have produced 208 of the files from the unallocated space of J.H. Choi's hard drive. It also asserts that any copies of files it was unable to recover from his hard drive were collected and produced to DuPont from other sources within Kolon.

G. Kyeong-Hwan Roh Deletions

K.H. Roh²³ has worked at Kolon for over twenty years. At the time DuPont filed its Complaint, he was the head of the Heracron Technology Team. In that position, K.H. Roh was involved in Kolon's efforts to obtain information about Kevlar. In fact, "[h]e attended at least fifteen meetings from May 2006 to August 2008 that involved DuPont's Kevlar product or production processes, and was involved in recruiting at least one then-current and one former DuPont employee to 'consult' about DuPont's products and production." DuPont, 268 F.R.D. at 52. Befitting his position as head of the Technology Team, on February 6, 2009, K.H. Roh received the first litigation hold order.

²³ He also is known as Kyeong-Hwan Noh.

The Stroz analysis shows that K.H. Roh deleted a total of 940 files and unique email items. He began deleting documents on February 17, continuing on February 20 and 23, and then deleting even more documents, mere seconds apart, for several minutes, on February 27. In total, he deleted 512 files after February 1, 2009, of which 128 were deleted from the "Recycle Bin." Furthermore, 283 files were overwritten and 145 were "protected" with a type of encryption or rights-management software and therefore could not be searched by Stroz. Of the remaining 84 files, 11 were keyword-responsive. Seventy of the overwritten or protected files had file names that were keyword-responsive. The metadata indicates that K.H. Roh targeted older documents for deletion, with last written dates in June 2005, March 2007, November 2007, December 2007, among others.

K.H. Roh also deleted 60 email items from his Exchange Email container -- specifically his EDH-2.pst file, which is akin to the recycle bin -- and 40 of those email items were keyword-responsive. After analyzing the dumpster data for Roh's deleted files, Stroz concluded that he deleted another 368 email items, of which 298 were keyword-responsive. Examples of relevant, deleted, but subsequently, recovered email items and files include:

- Document from March 28, 2005 containing detailed plans for establishing laboratory for "Polymer IV measurement and other general analysis," including "pulp analysis."

- Email chain among J.T. Park, I.S. Han, Y.S. Seo, et al., sending a request from the CEO to make a list of all former Kolon employees who have worked on the production, research, and business teams at Heracron, and then to track their current job location continuously in order to "prevent our former employee[s] [from] contact[ing] Hyo Sung in any circumstances."
- January 30, 2009 email chain among K.H. Roh, Jae-Yuk Yoo, and Seong-An Hong, in which Mr. Noh (Roh) states: "As for the Heracron, unlike [PET] or [Nylon], . . . the quality of raw material itself is very important [Know-How]. Although our company searched all over for the raw materials of [DuPont] and [Twaron], we still haven't obtained those. . . . At the current stage, we can't provide our company's raw material to Ihara. . . . Preparation of secrecy agreement is needed at the time of providing raw material [sample]."
- Email chain among K.H. Roh, Jae-Young Kim, et al., regarding secrecy agreement with TSK machinery company ahead of visit to TSK related to modifications to the Gumi plant to transform wasted sulfuric acid to gypsum, and noting that information "such as material balance or Machine size" would not be discussed for purposes of secrecy.
- December 24, 2008 - January 5, 2009 email chain between K.H. Noh, Kyeong-Su Yoo, Young-Su Seo, D.S. Kang, O.H. Kim regarding results of customer's quality tests of Heracron filament, and noting that Heracron had same abrasion resistance but lower tensile modulus and friction coefficient than customer's "existing product" and discussing comparison of Heracron's qualities to those of Kevlar and Twaron.

Pl.'s Ex. 29 to Post-Hr'g Mem. in Supp., Summary of Relevant Recovered Files and Email Items for K.H. Roh, Entries 4, 13, 15, 18, and 36. Examples of relevant, deleted and overwritten or protected files, based on the file names and metadata only, include:

- Document entitled, "P-Mix Rev070927.xls" (last accessed on February 27, 2009 but last written on September 27, 2007).
- Document entitled, "Our company and other companies' Aramid TGA-Air.pdf." (last accessed on February 27, 2009 but last written on June 14, 2008).
- Document entitled, "CVC report_Production.ppt" (last accessed on February 27, 2009 but last written on March 28, 2008).
- Document entitled, "DuPont_aramid.hwp" (last accessed on February 27, 2009 but last written on June 13, 2005).
- Document entitled, "Mr. K consulting_10708Important.doc" (last accessed on February 27, 2009 but last written on December 9, 2007).
- Document entitled, "The 6th Mr. Sumida Consultation Minutes (To be sent to Production Team_080526).hwp" (last accessed on February 27, 2009 but last written on June 13, 2008).
- Document entitled, "November Strategic Meeting Minutes Revised.xls" (last accessed on February 27, 2009 but last written on December 11, 2007).
- Document entitled, "Company D Raw Material Cost 070323.xls" (last accessed on February 27, 2009 but last written on March 23, 2007).

Pl.'s Ex. 30 to Post-Hr'g Mem. in Supp., Entries 59, 69, 92, 93, 96, 104, 128, 150.

H. In-Sik Han Deletions

I.S. Han has worked at Kolon for over 25 years. In February 2009, he was the Deputy Vice-President of the Heracron Research Institute, a position he still holds. As head of the Research Institute, he was "responsible for directing Kolon's research efforts as they related to improving its Heracron

product." DuPont, 268 F.R.D. at 51. In that role, he had "considerable involvement" with Mitchell during the relevant time period. Id. When DuPont filed its initial motion papers, it noted that I.S. Han had produced only 57 documents, including marginally relevant materials such as press articles and Google alerts. Kolon claimed that I.S. Han received a document hold -- which he did on February 6, 2009 -- after which he "no longer continued to purge his e-mail inbox of messages that may have been related to DuPont's lawsuit." Def.'s Mem. in Opp'n, at 14.

The Stroz analysis shows that, after February 1, 2009, I.S. Han deleted 688 files, of which 306 were overwritten. Of the remaining 382 files, 110 were keyword-responsive. Only one of the overwritten files was keyword-responsive. The metadata associated with the files deleted indicates that, during a 32-minute period on February 6, 2009, he deleted nearly 400 files that were "Last Accessed" during this time. Then, on February 26, 2009, he deleted, second-by-second, in the course of only a few minutes, an additional 256 files. After analyzing I.S. Han's dumpster data, Stroz found that I.S. Han deleted 395 unique email items, of which 371 were keyword-responsive. Examples of relevant recovered files and email items that Han deleted include:

- Email chain between Byoung-Joon Lee, I.S. Han, Y.S. Seo, et al., attaching "Heracron terminated/registered roster" and discussing the CEO's instruction to list all former

Kolon employees who worked on Heracron for the purpose of preventing these former employees from contacting Hysoung, and attachment thereto.

- Email chain among Jae-Young Lee, I.S. Han, et al., summarizing and forwarding resumes of "Mr. R and Mr. S."
- February 6, 2009 email from Heiri Lee to I.S. Han, Y.S. Seo, K.H. Roh, and Jong-Tae Park, et al., consisting of litigation hold order regarding "all records concerning Kolon Heracron business and/or Mr. Mitchell's work related documents."
- December 2008 email from I.S. Han to Dae-Sik Kim, Jae-Young Lee and Jae-Young Kim regarding a consultation meeting with Mr. Sumida.
- December 3, 2008 email from I.S. Han to Suk-Jung Song labeled, "confidential," that references an attachment entitled, "Response to Dr. Han.doc," which is a "reply from President Chang-Ho Lee of US regarding the [Heracron] consultation, North America sales, carbon consultation," and stating "Let's delay the consultations for the time being."
- November 17, 2008 email chain among I.S. Han, Mr. Sumida, et al., regarding Mr. Sumida's upcoming visit to Seoul.
- December 2008 email chain between I.S. Han and C.B. Lee requesting that I.S. Han attend the "consultation meeting with Mr. Sumida from the [prepeg] explanations next week," with I.S. Han responding, "[O]f course I will attend."
- October 2008 email chain among I.S. Han, Mr. Sumida, et al., in which Teruo Koseki sends I.S. Han a document entitled, "Revised Formula of Polymerization Rate.xlsx."
- July 2008 email chain between I.S. Han, Dae-Su Kim, Jae-Young Lee, Jae-Young Kim regarding the "president['s] directive [to] 'summarize/report the technical [Consulting] progress and results so far' at the [R&D] discussion meeting on 2008, 6, 27" and the president's request for "all technical [Consulting] results that were done and completed since 1/1/2004" and "status of the on-going technical [Consulting]."

- November 2008 email chain between I.S. Han, Mr. Sumida, and Joon-Young Yoon respecting proposed schedule and content for Mr. Sumida's next consultation in Seoul, including discussion of pilot plant, results of tests for polymerization, oxidation, evaluation facility of tensile test of CF, etc.

Pl.'s Ex. 29 to Post-Hr'g Mem. in Supp., Summary of Relevant Recovered Files and Email Items for I.S. Han, Entries 1-2, 7, 9, 20, 21, 27, 35, 43, 45, 48.

I. File Server 4 Deletions

Each employee also had access to the "Administrator" account on File Server 4, which, after the litigation started, Kolon's counsel had imaged at the same time it imaged the employees' hard drives. Stroz concluded that 7,311 email items were deleted from File Server 4, of which 5,129 were keyword-responsive. Stroz's analysis also found that, after February 1, 2009, 2,673 files were deleted from File Server 4, of which 890 files were overwritten. Of the remaining 1,783 files, 1,230 were keyword-responsive.

Stroz also determined that 291 Microsoft Outlook DBX container files on File Server 4 had been deleted, of which 134 were overwritten. Deletions of the DBX containers would have included deletion of any active emails located in the DBX container files. Stroz noted, however, that any deleted emails in these DBX container files may not have been necessarily deleted after February 1, 2009; rather, an email item could have

been deleted earlier and simply resided in the DBX deleted items container until the DBX container itself was deleted at some point after February 1, 2009.

One of the topics addressed at the November evidentiary hearing was the deletions from File Server 4. At that time, Kolon offered two declarations of D.S. Kang to account for the deleted files and email items. In these declarations, D.S. Kang recounted that, on February 3, 2009, he uploaded back-up copies of files from his desktop computer to File Server 4, and then transferred those files from File Server 4 to his newly-purchased laptop. He claims to have done so because he was going to be transferred for work from Korea to the United States and could not take his desktop computer with him. Thus, he "dragged and dropped" work-related files from his desktop to the file server, and then copied those same documents from the file server to the laptop. He then claims to have deleted the back-up copies of the files on File Server 4. He did not delete the files from his desktop computer.

To support his version of events, Kolon produced a receipt for purchase of the new laptop. It also presented a service ticket from Kolon's IT Department documenting D.S. Kang's request for IT assistance after the laptop performed sluggishly subsequent to the first transfer. To troubleshoot the laptop's performance issue, Kolon's IT department installed a new

operating system onto the laptop before returning it to D.S. Kang, who then proceeded to re-copy the same files he copied previously onto the laptop. D.S. Kang is unsure, however, whether he used File Server 4 during this transfer, and believes he may have used a USB drive instead to facilitate the transfer.

After reviewing this evidence at the November evidentiary hearing, the Court ordered Kolon to produce an image of D.S. Kang's laptop to Stroz to be analyzed in conjunction with his desktop image and the File Server 4 image. Stroz then conducted further analysis to assess the veracity of D.S. Kang's version of the source and reason for the deletions from File Server 4. It issued its finding in a report on November 29, 2010.

Stroz found the existence of 3,094 files on D.S. Kang's desktop that had files names that matched the names of the files Stroz previously identified as deleted from File Server 4. Stroz had concluded previously that 2,673 files and 7,311 email items were deleted from File Server 4. In the November 29, 2010 report, Stroz determined that "the forensic evidence is consistent with there being a mass copy in early February 2009 of files from Kang's desktop computer to File Server 4, similar to the process Kang describes in his declarations." SF Suppl. Report Regarding Deletion Activity, at 9. Stroz further determined that "[t]hese files were not subsequently deleted

from the desktop, which also is consistent with Kang's declaration." Id.

However, because Kolon's IT department reformatted the laptop on February 11, 2009, there was "insufficient evidence to determine whether the files were subsequently transferred from File Server 4 to the laptop"²⁴ before the reformatting. Moreover, the evidence "does not appear to support Kang's claim that, after the reformatting, he re-copied onto the laptop all of the same files he previously transferred from his desktop," though there was evidence supporting a smaller mass copy onto the laptop, post-reformatting, of some files that were also found on the desktop. Id. Furthermore, Stroz confirmed that, "somewhat similar to what Kang describes, a[] USB device was connected to the laptop in mid-February." Id.

²⁴ On this point, Stroz searched the laptop's entire disk image for the names of the files identified as deleted from File Server 4. Stroz then reviewed the search results for any references that may "indicate that the entire set of files was copied to the laptop before the operating system was reinstalled." SF Suppl. Report Regarding Deletion Activity, at 8. Ultimately, Stroz found no references to such files being created on the laptop. Stroz continued with further testing to determine whether any data could be recovered relating to the use of the laptop before it was reformatted, but it was unable to identify any information about the earlier operating system usage on the laptop. Stroz cited potential reasons for this inability: (1) that the laptop's hard drive was wiped completely prior to the reformatting; (2) that the reformatting completely overwrote all data from the former installation; or (3) that at some point before the reformatting, the laptop had a new hard drive installed. Id.

The Court finds that D.S. Kang did copy files from his desktop computer to File Server 4 in early February 2009. He then copied those files on to his laptop, which he was going to take with him to the United States. He did not delete the files that remained on his desktop, but he did delete the back-up copies of the files he had copied to File Server 4 after transferring them to his new laptop. Sometime shortly after the transfer, his laptop began to act sluggishly, so he brought it to Kolon's IT department, where they reformatted the laptop's hard drive on February 11, 2009. After the reformatting, D.S. Kang transferred the files again, but Stroz found only 242 files on the laptop that had names that matched the names of the files deleted from File Server 4. There is also evidence, consistent with D.S. Kang's claim, that a USB device was connected to the laptop in mid-February. The Court further finds that Stroz's inability to identify any information about the earlier operating system usage on the laptop computer could be for a host of reasons, none of which appear to evidence bad faith motives of D.S. Kang or Kolon as to the deletions made by D.S. Kang. The Court, therefore, will take this into consideration when assessing the overall scope of the deletion by Kolon employees and executives.

5. Kolon's Preservation and Recovery Efforts

After issuing the first two litigation hold orders, Kolon issued a third litigation hold order on February 23, 2009 that was aimed at the company's IT department. It instructed Kolon's IT staff to "safeguard documents stored on Kolon's server by backing up material on tapes and suspending the routine, good faith operation of Kolon's document retention practices regarding [ESI], which they did the very same day." Def.'s Post-Hr'g Mem. in Opp'n, at 4. Indeed, Kolon personnel ensured that all backup tapes in rotation were preserved, resulting in nearly a full months' work of backup tapes.

On February 27-28, March 10-11, March 19, and April 20-22, 2009, Kolon made images of: the drives of custodians with potentially relevant materials; enterprise email servers; business file servers; and a number of removable media (USB drives).²⁵ Id. at 5; see also Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 5 (stating that, by April 2009, Kolon had "imaged the entire hard drives, including unallocated disk space, of every employee (more than 20) from

²⁵ Kolon imaged the drives of the following custodians: J.H. Choi, J.W. Kim, Y.S. Seo, O.H. Kim, C.B. Lee, Y.S. Choi, I.S. Han, K.H. Roh, J.B. Park, Hee-Seung Choi, Kyung-Soo Yoo, D.S. Kang, K.S. Lee, Jong-Tae Park, Sung-Joong Kim, Dae-Su Kim, Jae-Young Lee, Hee-Jeong Cho, Seung-Jae Lee, Jae-Young Kim, and Seung-Hwan Lee. Pl.'s Ex. 1 to Post-Hr'g Mem. in Supp., 1/31/11 Suppl. Interrog. Resp., at 3-4.

whose computers documents were collected"). By April 2009, Kolon had transferred the imaged data to its discovery vendor, Epiq. Kolon claims that "[a]ll files that could be recovered from the custodians' unallocated space were restored and placed into Kolon's process for screening, review, and production along with all other documents collected." Pl.'s Ex. 3 to Post-Hr'g Mem. in Supp., 10/4/10 Interrog. Resp., at 5.

"Shortly after" deleting the documents on February 10, 2009, J.H. Choi informed Kolon of his actions. Kolon previously represented that it retained Kroll, a computer forensics firm, to "assist with any recovery efforts" related to J.H. Choi's conduct. Def.'s Mem. in Opp'n, at 17. But Kolon now claims that it separately engaged Kroll to assist in Kolon's efforts "to search for and quarantine copies of documents obtained from Michael Mitchell . . . existing on Kolon's computers," and, "[a]s part of this process, certain documents obtained from Mr. Mitchell were located in J.H. Choi's unallocated space." Def.'s Post-Hr'g Mem. in Opp'n, at 9-10 n.12. Kolon claims to have collected other copies of all the documents in the folder J.H. Choi deleted from other custodians, and all but a handful of the documents were intact on J.H. Choi's computer, too. Id.

6. The Parties' Arguments

A. DuPont's Claims in Support of Sanctions

DuPont argues that, upon learning that this action had been filed, "Kolon executives and employees engaged in a widespread effort to delete relevant documents in order to deprive DuPont of useful evidence." Pl.'s Post-Hr'g Mem. in Supp., at 1. In other words, DuPont claims that Kolon engaged in bad faith deletion of files and email items. Furthermore, according to DuPont, Kolon was aware, or should have been aware, of this conduct after it had the employees' hard drives imaged in spring 2009, yet it engaged in "persistent efforts to conceal and deflect inquiry into its misconduct" for almost two years and "even now refuses to be forthright in its disclosure to DuPont and this Court," thereby compounding the harm to DuPont and the judicial process. Id. Accordingly, given Kolon's egregious bad faith conduct, the resulting severe prejudice inflicted on DuPont as a result of this conduct, and the harm suffered by the judicial process, DuPont asks the Court to impose the harshest of sanctions, entry of default judgment against Kolon, as a sanction for its spoliation. Alternatively, DuPont asks for an adverse inference instruction to the jury and for its costs and fees in getting to the bottom of Kolon's deletion of electronically stored information.

B. Kolon's Defenses to Allegations of Spoliation and Motion for Sanctions

Kolon argues that the conduct of its employees does not warrant any sanction, much less the drastic sanctions DuPont has proposed. With respect to spoliation, the crux of Kolon's defense is that the deletion of files or email items from one employee's computer does not mean the file or email item, ultimately, was destroyed. Specifically, Kolon maintains that for there to be a finding of spoliation "evidence must be lost or destroyed and therefore unavailable for a parties' use in litigation," and, because multiple copies of documents alleged to have been deleted in this case exist in either the custodian's folder or in another custodian's folder, and Kolon produced at least one copy of many files and email items alleged to have been deleted by DuPont, then "it cannot be said that evidence has been lost and that it is unavailable to a party." Def.'s Post-Hr'g Mem. in Opp'n, at 36. Kolon thus urges the Court to adopt the view that attempted, but ultimately unsuccessful, destruction of electronically stored information does not support a finding of spoliation or sanctions, notwithstanding that its employees and executives deleted that information from their computer files.

Alternatively, Kolon appears to contend that the conduct of J.H. Choi and C.B. Lee -- the only two employees Kolon appears

to have conceded engaged in deletion of relevant files and email items -- should not be attributed to Kolon because their actions were unauthorized, were outside the scope of their employment, and were not taken with intent to aid Kolon or further its business interests.

Finally, Kolon argues that the sanctions which DuPont seeks, entry of default judgment against Kolon or an adverse inference instruction to that effect, are unwarranted because they are neither proportionate to Kolon's conduct nor necessary to cure any prejudice to DuPont. In fact, according to Kolon, not only has DuPont failed to show the substantial level of prejudice required for entry of default against Kolon as a sanction, but it has failed to make a convincing argument that it has suffered any legally meaningful prejudice as a result of the alleged spoliation.

DISCUSSION

1. Legal Principles for Spoliation and Sanctions Analyses

A. Kolon's Duty to Preserve

"Spoliation refers to the destruction or material alteration of evidence or to the failure to preserve property for another's use as evidence in pending or reasonably foreseeable litigation." Silvestri v. Gen. Motors Corp., 271 F.3d 583, 590 (4th Cir. 2001) (citing West v. Goodyear Tire &

Rubber Co., 167 F.3d 776, 779 (2d Cir. 1999)).²⁶ To make a finding of spoliation, the court must be satisfied that the party alleged to have spoliated evidence had a "duty to preserve" relevant evidence, which the party then "breach[ed] . . . through the destruction or alteration of the evidence." Victor Stanley, Inc. v. Creative Pipe, Inc., 269 F.R.D. 497, 521 (D. Md. 2010).

First, the movant must show that the adverse party had a duty to preserve documents or materials that may be relevant to the litigation or pending litigation. The Court recognizes that litigants are not required to preserve "every shred of paper, every e-mail or electronic document, and every back up tape." Zubulake v. UBS Warburg LLC, 220 F.R.D. 212, 217 (S.D.N.Y. 2003). Indeed, "[s]uch a rule would cripple large corporations." Id. A party that anticipates litigation, however, is "under a duty to preserve what it knows, or reasonably should know, is relevant in the action, is reasonably calculated to lead to the discovery of admissible evidence, is reasonably likely to be requested during discovery, and/or is

²⁶ Issues of spoliation and sanctions are resolved under principles of federal law. Hodge v. Wal-Mart Stores, Inc., 360 F.3d 446, 449 (4th Cir. 2004). Furthermore, "spoliation is not a substantive claim or defense but a 'rule of evidence,' and thus is 'administered at the discretion of the trial court.'" Id. at 450 (quoting Vodusek v. Bayliner Marine Corp., 71 F.3d 148, 155 (4th Cir. 1995)).

the subject of a pending discovery request." Samsung Elecs. Co. v. Rambus, Inc., 439 F. Supp. 2d 524, 543 (E.D. Va. 2006), vacated on other grounds, 523 F.3d 1374 (Fed. Cir. 2008) (citation and quotation marks omitted). Consequently, upon anticipation of litigation, parties "must suspend [their] routine document retention/destruction polic[ies] and put in place a 'litigation hold' to ensure the preservation of relevant documents." Zubulake, 220 F.R.D. at 218. "Relevant documents" include:

[A]ny documents or tangible things (as defined by [Fed. R. Civ. P.] 34(a)) made by individuals "likely to have discoverable information that the disclosing party may use to support its claims or defenses." The duty also includes documents prepared for those individuals, to the extent those documents can be readily identified (e.g., from the "to" field in e-mails). The duty also extends to information that is relevant to the claims or defenses of any party, or which is "relevant to the subject matter involved in the action." Thus, the duty to preserve extends to those employees likely to have relevant information -- the "key players" in the case.

Id. at 217-18 (emphasis added) (footnotes omitted); see also E.I. Du Pont De Nemours & Co. v. Kolon Indus., Inc., Civ. Action No. 3:09cv58, 2011 WL 1597528, at *11 (E.D. Va. Apr. 27, 2011) (same); Goodman v. Praxair Servs., Inc., 632 F. Supp. 2d 494, 511-12 (D. Md. 2009) (same).

B. Breach of the Duty to Preserve

Once a court concludes that a party was obliged to preserve relevant materials and documents, it must then consider whether the party breached this obligation, either by failing to preserve, or by destroying or altering, relevant materials or documents with a culpable state of mind. In the Fourth Circuit, any level of fault, whether it is bad faith, willfulness, gross negligence, or ordinary negligence, suffices to support a finding of spoliation. See Victor Stanley, 269 F.R.D. at 529 ("In the Fourth Circuit, for a court to impose some form of sanctions for spoliation, any fault . . . is a sufficiently culpable mindset."); Goodman, 632 F. Supp. 2d at 518 (listing bad faith/knowing destruction, gross negligence, and ordinary negligence as three states of mind to satisfy culpable deletion element); Pandora Jewelry, LLC v. Chamilia, LLC, No. CCB-06-3041, 2008 WL 4533902, at *9 (D. Md. Sept. 30, 2008) ("The Fourth Circuit requires only that the party seeking sanctions demonstrate fault, with the degree of fault impacting the severity of sanctions." (citing Silvestri, 271 F.3d at 590)); Samsung, 439 F. Supp. 2d at 540 (noting that spoliation can occur when destruction of evidence is willful or the result of inadvertent, albeit negligent, conduct). The relevant documents or materials "may have been lost or destroyed inadvertently, 'for reasons unrelated to the litigation,' or the loss may

result from intentional acts, calculated to prevent the other party from accessing the evidence." Victor Stanley, 269 F.R.D. at 529 (quoting Rimkus Consulting Grp., Inc. v. Cammarata, 688 F. Supp. 2d 598, 613 (S.D. Tex. 2010)).

"Destruction is willful when it is deliberate or intentional," whereas bad faith destruction occurs when a party engages in destruction "for the purpose of depriving the adversary of evidence." Powell v. Town of Sharpsburg, 591 F. Supp. 2d 814, 820 (E.D.N.C. 2008) (emphasis added); see also Buckley v. Mukasey, 538 F.3d 306, 323 (4th Cir. 2008). In other words, willful destruction need not rise to the level of bad faith, but conduct that is in bad faith, must be willful. Buckley, 538 F.3d at 323 (explaining that document destruction, though not conducted in bad faith, could still be intentional, willful, or deliberate); Victor Stanley, 269 F.R.D. at 530 ("Conduct that is in bad faith must be willful, but conduct that is willful need not rise to bad faith actions."); Trigon Ins. Co. v. United States, 204 F.R.D. 277, 287 (E.D. Va. 2001) (explaining that "intentional destruction of documents does not imply that bad faith is necessary" for imposition of sanctions for spoliation).

The Fourth Circuit's decision in Vodusek v. Bayliner Marine Corp., 71 F.3d 148 (4th Cir. 1995) illustrates this principle. In Vodusek, the plaintiff's expert and her sons -- considered

the plaintiff's agents -- in an attempt to discover the cause of a boat explosion and fire, "employed destructive methods which rendered many portions of the boat useless for examination by the defendant and their experts." Id. at 155. When the district court instructed the jury on the spoliation of evidence (the boat), the plaintiff objected, arguing that there was no evidence that she, or her agents, acted in bad faith in examining the boat. Id. In rejecting her legal argument, the Fourth Circuit explained that, while the plaintiff may "be correct in concluding that she and her [agent] did not act in bad faith in destroying portions of the boat, she does not dispute that those portions were permanently destroyed as part of [her agent's] deliberative investigative efforts." Id. at 156.

In contrast to conduct that is "'intentionally, wantonly, or willfully disregarding of others' rights,'" is negligent conduct, or "'culpable carelessness,' [which] is '[t]he failure to exercise the standard of care that a reasonably prudent person would have exercised in a similar situation[.]'" Victor Stanley, 269 F.R.D. at 529 (second and third alterations in original) (quoting Black's Law Dictionary 846 (Bryan A. Garner ed., abridged 7th ed., West 2000)). Gross negligence "is something more than carelessness, [and] 'differs from ordinary negligence only in degree, and not in kind.'" Id. (quoting

Pension Comm. of Univ. of Montreal Pension Plan v. Banc of Am. Sec., 685 F. Supp. 2d 456, 464 (S.D.N.Y. 2010)).

Assessing the quantum of fault becomes appropriate when determining the appropriate sanction, not in deciding whether spoliation has taken place. Victor Stanley, 269 F.R.D. at 529 (“[T]he nuanced, fact-specific differences among these states of mind become significant in determining what sanctions are appropriate”); Goodman, 632 F. Supp. 2d at 518 (“The degree of fault impacts the severity of the sanction”); Sampson v. City of Cambridge, 251 F.R.D. 172, 179 (D. Md. 2008) (“Although, some courts require a showing of bad faith before imposing sanctions, the Fourth Circuit requires only a showing of fault, with the degree of fault impacting the severity of sanctions.” (citing Silvestri, 271 F.3d at 590)); Samsung, 439 F. Supp. 2d at 540 (“[T]he appropriate place to assess the effect of the spoliator’s state of mind is in ascertaining an appropriate sanction, not in assessing whether spoliation has occurred.” (citing Silvestri, 271 F.3d at 593-95)); Trigon Ins., 204 F.R.D. at 286 (“The degree of culpability and the prejudice suffered by the moving party will guide a Court in its formulation of remedial and punitive action.”).

Related to the culpability requirement is the requirement that the documents or materials the alleged spoliator failed to preserve, destroyed, or altered be relevant to the litigation or

pending litigation. This logically flows from the obligation of litigants to "preserve what [they] know[], or reasonably should know, is relevant in the action, is reasonably calculated to lead to the discovery of admissible evidence, is reasonably likely to be requested during discovery, and/or is the subject of a pending discovery request." Samsung, 439 F. Supp. 2d at 543 (quotation marks and citation omitted).

The party alleging spoliation has the burden to prove that the spoliated material falls into one of those categories. Id. That burden must be met by offering probative evidence, not the hyperbole of argument. And, the record must show the Court that the spoliated matter was likely to have been favorable to its case. That can be done by establishing that the spoliated material addressed topics, or falls into categories of documents, that would be favorable to the movant's case.

Of course, a party moving for sanctions based on spoliation "cannot be expected to[] demonstrate with certainty the content of destroyed documents." Id. at 561. Rather, that responsibility falls on the shoulders of the adverse party. Id.

Thus, once the moving party shows that the spoliated material "is [or is likely to be] relevant in the action, is reasonably calculated to lead to the discovery of admissible evidence, is likely to be requested during discovery, and/or is the subject of a pending discovery request," id. at 543, the

burden to show otherwise falls on the party charged with spoliation.

However, if the record shows that a party destroyed or materially altered documents or materials in bad faith, that establishes, without more, that the destroyed documents or materials were relevant. Victor Stanley, 269 F.R.D. at 532; Sampson, 251 F.R.D. at 179; Samsung, 439 F. Supp. 2d at 561-62; Thompson v. U.S. Dep't of Hous. & Urban Dev., 219 F.R.D. 93, 101 (D. Md. 2003). "The reason relevance is presumed following a showing of intentional or willful conduct is because of the logical inference that, when a party acts in bad faith, he demonstrates fear that the evidence will expose relevant, unfavorable facts." Sampson, 251 F.R.D. at 179 (citing Vodusek, 71 F.3d at 156); see also Samsung, 439 F. Supp. 2d at 561 (explaining that "[i]n the case of intentional misconduct, as where concealment was knowing and purposeful, it seems fair to presume that the suppressed evidence would have damaged the non-disclosing party'" (alteration in original) (citation omitted)). Though this presumption is rebuttable, "[a] party who is guilty of, say, intentionally shredding documents in order to stymie the opposition, should not easily be able to excuse the misconduct by claiming that the vanished documents were of minimal import.'" Samsung, 439 F. Supp. 2d at 562 (quoting Anderson v. Cryovac, Inc., 862 F.2d 910, 925 (1st Cir. 1988)).

Thus, in order to rebut the presumption of relevance, the alleged spoliator must present clear and convincing evidence demonstrating that the spoliated material or documents were of minimal or little import. Id. Absent such a heavy burden, "spoliators would almost certainly benefit by having destroyed the documents, since the opposing party could probably muster little evidence concerning the value of papers it never saw." Id.

C. Once a Finding of Spoliation is Made, the Court May Impose a Sanction

Once a movant has shown that the adverse party had both a duty to preserve documents or materials and culpably breached that duty, then the court may impose sanctions. The power to sanction derives from the court's inherent power "to control the judicial process and litigation." Silvestri, 271 F.3d at 590. Accordingly, it should be wielded "to redress conduct 'which abuses the judicial process.'" Id. (quoting Chambers v. NASCO, Inc., 501 U.S. 32, 45-46 (1991)); see also Suntrust Mortg., Inc. v. AIG United Guar. Corp., Civ. Action No. 3:09cv529, 2011 WL 1225989, at *14 (E.D. Va. Mar. 29, 2011) (explaining that "spoliation of evidence is an abuse of the judicial process that is sanctionable under the inherent power" of the court). Courts have "broad discretion" to choose an appropriate sanction, but "the applicable sanction should be molded to serve the

prophylactic, punitive, and remedial rationales underlying the spoliation doctrine.'" Silvestri, 271 F.3d at 590 (quoting West, 167 F.3d at 779). To that end, sanctions should "level[] the evidentiary playing field" and "sanction[] the improper conduct." Vodusek, 71 F.3d at 156.

When assessing what sanction to impose, courts consider the degree of culpability and the extent of the prejudice, if any. See Samsung, 439 F. Supp. 2d at 541 ("Silvestri instructs that prejudice, like willfulness, is a factor to be considered in deciding on an appropriate sanction."). If the Court finds that Kolon's employees spoliated evidence, then DuPont requests, as relief, that the Court enter default judgment against Kolon in DuPont's favor. Imposing a sanction that terminates a case is "severe" and is "the ultimate sanction for spoliation." Silvestri, 271 F.3d at 593. Generally, entry of default judgment, or other like sanction, is "justified only in circumstances of bad faith or other 'like action,'" id. (quoting Cole v. Keller Indus., Inc., 132 F.3d 1044, 1047 (4th Cir. 1998)), "and courts should impose sanctions that dispose of a case only in the most egregious circumstances," Goodman, 632 F. Supp. 2d at 518-19.

In some circumstances, however, imposing a sanction that terminates a case "may be necessary if the prejudice to the [movant] is extraordinary, denying it the ability" to adequately

pursue its case. Silvestri, 271 F.3d at 593; see also Samsung, 439 F. Supp. 2d at 540 (explaining that "the Fourth Circuit has noted that, while the ultimate sanction of dismissal is generally reserved for instances of spoliation involving bad faith by the [adverse party], some instances of negligent spoliation will require dismissal because of the resulting prejudice to the [movant]" (citing Silvestri, 271 F.3d at 593)). Consequently, at minimum, "to justify the harsh sanction of [default judgment], the district court must consider both the spoliator's conduct and the prejudice caused and be able to conclude either (1) that the spoliator's conduct was so egregious as to amount to a forfeiture of his [case], or (2) that the effect of the spoliator's conduct was so prejudicial that it substantially denied the [aggrieved party] the ability to [prove its] claim." Silvestri, 271 F.3d at 593.

2. Application of the Legal Principles to the Facts

A. Kolon's Duty to Preserve Relevant Documents or Materials

The Court finds that Kolon's duty to preserve arose no later than February 4, 2009, the date Kolon learned that this action had been filed. From that point forward, Kolon was under a duty to comply with its preservation obligations, which included issuing a litigation hold order to those "key employees" likely to have relevant documents or materials and

ensuring that these employees followed such instructions. Kolon did issue three litigation hold orders after DuPont filed its Complaint, though for purposes of resolving this motion, only the first two litigation hold orders appear to be relevant. Kolon issued the first hold order on February 6, 2009, but only to certain upper-level employees, who, from all indications, did not forward the order to other employees whom they believed to be in possession of relevant information related to Heracron or Mitchell. It was not until four days later, nearly a week after Kolon learned of DuPont's Complaint, that a second hold order was issued, this time to all employees.

Kolon, however, breached its duty to preserve when key employees, who were directly implicated in Kolon's efforts to recruit consultants, including Mitchell, and obtain information about Kevlar for use in developing Heracron, deleted files and email items from their personal computers in the days after DuPont filed the action and after being apprised of their duty to preserve relevant information.

B. Key Kolon Employees Deleted Relevant Files and Email Items with a Culpable State of Mind

DuPont asserts that Kolon breached its duty to preserve when key employees intentionally destroyed relevant material, much of which DuPont alleges is now unrecoverable. According to DuPont, this deletion of relevant materials was willful because

it was deliberate and intentional, and it was in bad faith because the purpose of the deletion was to deprive DuPont of relevant information. To support its claims, DuPont points to Stroz's forensic analysis and Kolon's admission that the imaged computer drives contained evidence of deletion following the filing of DuPont's Complaint. This evidence confirms, says DuPont, that at least seven Kolon employees targeted relevant evidence for deletion.

Apart from the "attempted deletion" of files and email items by J.H. Choi and C.B. Lee, Kolon argues that, in response to DuPont's allegations, the remainder of the electronically stored information "rendered in a 'deleted' state" (a euphemism for the act of deletion) resulted from "entirely non-culpable conduct." Def.'s Post-Hr'g Mem. in Opp'n, at 1. Furthermore, Kolon asserts a "no harm, no foul" defense, arguing that even intentional deletion is not spoliation if the deleted information is not lost or destroyed, and thus unavailable for a party's use, especially if multiple copies of a document exist and at least one copy is produced to an adversary.

After reviewing the record developed throughout these proceedings, the Court cannot agree with DuPont that Kolon encouraged and countenanced a policy of widespread deletion by key employees, or that widespread, concerted deletion among key employees was afoot in the days following the filing of the

Complaint. The record does not support a finding of a conspiracy to delete relevant files and email items among Kolon's employees. However, the Court finds that key employees, who were likely to have relevant evidence, intentionally deleted relevant files and email items from their personal computers after Kolon's duty to preserve had been triggered and with knowledge of the filing of DuPont's Complaint.

First, the Court notes that Kolon issued two litigation hold orders within a week of learning of DuPont's Complaint. However, there was not sufficient instruction given to employees about the importance of preserving relevant files and email items. In fact, the first hold order, issued on February 6, was issued only to upper-level employees, including I.S. Han, Y.S. Seo, and K.H. Rho. The record does not show that they forwarded the instructions to their team members. The second hold order, issued on February 10, 2009 to all employees was in English, and for a company in Korea that admittedly is unfamiliar with litigation in the United States, its counsel and executives should have affirmatively monitored compliance with the orders.

Second, the Court finds that key employees intentionally, and in bad faith, deleted files and email items from their personal computers after they learned of DuPont's Complaint. After learning of the lawsuit, Y.S. Seo led a meeting of the Business Team, during which discussions ensued respecting the

possible deletion of relevant files and email items. After this meeting, C.B. Lee and Y.S. Choi marked items in their personal email accounts for deletion by taking screenshots, circling relevant materials, and notating the documents with directions such as "Delete," "Need to Delete," and "Get Rid of." As noted previously, many of these email items related to Mitchell, to consultant questions, and to CVC (Kolon's top executive) directives and follow-ups, all of which are relevant to issues in this litigation.

C.B. Lee was a key player in the events underlying the allegations made by DuPont, having worked in both the research and sales teams of Heracron. The record also reflects that he was intimately involved in Kolon's efforts to recruit consultants, and, then once the consultants were working for Kolon, he remained involved in all aspects of Kolon's relationship with them. While he may not have deleted the items he marked in the screenshots, he intentionally deleted a not insubstantial amount of relevant email items -- even Kolon admits that the number of email items he deleted was "not small" -- related to Mr. Sumida, a consultant for Kolon with vast knowledge of para-aramid fiber, Kevlar, and DuPont. The fact that C.B. Lee deleted a substantial amount of documents that discussed substantive topics relevant to DuPont's action, shortly after it had been filed, was not refuted by Kolon or its

own rebuttal expert, Mr. Ashley, though Kolon argues, for many reasons, that this conduct was not intentional.

The few examples of relevant deleted email items that the Court has listed show their relevance to, and discoverability in, the litigation, because they refer to technical aspects of Kevlar, to consultation agendas and to meeting minutes, to directives regarding securing consultants, and to reports documenting the progress of Kolon's efforts to secure information from Messrs. Sumida, Schulz, and Hoover about the technical aspects of Kevlar and the details of that information. The emails, discussed at length above, contain "direct evidence of extensive theft and use of DuPont's trade secrets," according to DuPont. Pl.'s Post-Hr'g Reply Mem., at 10. Tellingly, while Kolon "does not contend that Mr. Lee's deletions of these communications was appropriate," and it acknowledges that "the contents of some of them do extend beyond non-substantive logistics . . . ," Def.'s Post-Hr'g Mem. in Opp'n, at 27, its rebuttal expert, Mr. Ashley, agreed that C.B. Lee's conduct "constitute[d] a pattern of widespread deletion," Pl.'s Ex. 9 to Post-Hr'g Mem. in Supp., Feb. 2, 2011 Hr'g Tr. 225:5-7.

After reviewing the deleted email items, the inescapable conclusion is that C.B. Lee deleted these emails in order to keep their existence from becoming known to DuPont because he realized they could be helpful to DuPont. Though DuPont's

Complaint may only have referenced Mitchell by name, it described Kolon's efforts to recruit other current and former DuPont employees who possessed information about DuPont's aramid manufacturing process. Compl. ¶¶ 43-51.

C.B. Lee was intimately involved in recruiting other consultants, including Mr. Sumida, and he knew that Mr. Sumida, like Mitchell, was asked to help Kolon's efforts in developing Heracron using information from other companies. That C.B. Lee deleted a vast amount of Sumida email items that dated back to 2006 and 2007 indicates to the Court that he did not want DuPont to have those email items because he believed that they contained potentially harmful information to Kolon, and helpful to its adversary.

There is no doubt that, when he deleted the Sumida email items, C.B. Lee understood their potential relevance because the contents of an overwhelming majority of the deleted email items include questions and answers on a wide-range of topics related to Kevlar, DuPont, and Toray-DuPont, and Kolon's status with respect to implementing its new knowledge. Moreover, he had been instructed during the Y.S. Seo-led meeting to begin the process of gathering potentially relevant documents and email items for deletion, which he proceeded to do by marking many items related to Mr. Sumida, consultants, and Kevlar on his screenshots. C.B. Lee knew precisely the action he was taking

when he ultimately deleted the email items from his computer and understood their relevance to DuPont's allegations, and the Court simply cannot agree with the contention of Kolon that C.B. Lee did not engage in willful and bad faith deletion of relevant information. Accordingly, the Court finds that C.B. Lee deleted relevant email items in bad faith, and DuPont has demonstrated the relevance of the deleted information.

J.H. Choi was the highest-ranking individual in the Heracron hierarchy during part of the relevant time period during which DuPont alleges that Kolon misappropriated DuPont trade secrets. He too was intimately involved in Kolon's decision to recruit not only Mitchell, but also other consultants. After learning of DuPont's action, J.H. Choi deleted a folder of 283 files containing DuPont proprietary information copied surreptitiously from Mitchell's CD during Mitchell's presentation to Kolon executives and employees on March 20, 2007.

The deleted files are highly relevant to allegations about DuPont's trade secret misappropriation and its other claims because they contain much DuPont proprietary information. Though J.H. Choi has insisted that he only deleted the folder because he did not want to personally become involved in this action, the Court finds this reasoning unpersuasive when accounting for his position within the Heracron division, his

intimate role in recruiting consultants, including Mitchell, and the fact that the folder he deleted was stolen from Mitchell and then later uploaded to his computer. Given his high-ranking position and the part he played during the relevant time period, J.H. Choi could not have reasonably thought that he would not be involved in this litigation. Thus, the Court finds that J.H. Choi deleted the folder containing the Mitchell CD files willfully and intentionally, and in bad faith because the files' very existence on his computer implicated Kolon and J.H. Choi in the allegations in DuPont's Complaint and contained information that was harmful to the interests of Kolon and J.H. Choi.

The Court also concludes that J.B. Park and J.W. Kim, both of whom, at different times, served as Mitchell's primary contacts at Kolon during the relevant time period, intentionally and willfully, and in bad faith, deleted relevant files and email items after learning of DuPont's Complaint. J.B. Park was a member of the Business Team; he negotiated Mitchell's contract on behalf of Kolon and attended the meeting led by Y.S. Seo shortly after the Complaint was filed. He then deleted many relevant files and email items from his computer, some even after having been apprised of his duty to preserve relevant information on February 10.

The record shows that J.B. Park deleted this information willfully and in bad faith because of the potentially harmful

information contained in the emails and files, of which he wanted to prevent DuPont from learning. Indeed, some of the recovered files and email items refer to physical properties of Kevlar in comparison to Heracron, to strategic meeting minutes discussing technical aspects of the development of Heracron, and to directions to use "Mr. K" for core technology. These documents could be relevant to both claims and defenses in the litigation. Furthermore, many of the files J.B. Park deleted were overwritten and therefore unrecoverable, but the file names and last written dates show their relevance to the litigation. These overwritten, but potentially relevant, files include: "(20080814) Sharing of Company H's patent status and the need to share information (Strategic meeting material).ppt," "Fabric defects.xls," "Comparative comparison of fabric (080326).xls," and "Heracron Strategy by Vision.docx." Many of the overwritten files contained last written dates in 2008, and J.B. Park waited many months before deleting these files. In fact, it was not till shortly after learning of DuPont's action that he deleted them in quick succession. Those facts underscore that the deletion was intentional and in bad faith, rather than ordinary-course deletion, as Kolon now contends.

J.W. Kim was a member of the Heracron Business Team. He was Mitchell's primary contact with Kolon after J.B. Park changed jobs. He was involved with recruiting other

consultants, and attended the meeting led by Y.S. Seo in February 2009. After receiving the second litigation hold order on February 10, J.W. Kim created a "delete" folder the next day, and then proceeded to delete relevant files and email items on February 13, 26, and 27, 2009. After reviewing the recovered deleted email items and files, and the file names of the unrecoverable files, the Court finds that J.W. Kim intentionally, and in bad faith, deleted relevant information. Many of the email items include communications with Mitchell -- directly relevant to DuPont's claims -- in addition to other email items and documents referring to confidential meeting minutes, presentations comparing technical aspects of Kevlar and Heracron, and security efforts at Kolon facilities. J.W. Kim also deleted relevant, but now overwritten files. The Court concludes that based on the timing of the deletions, the content of the recoverable information, and the file names of the unrecoverable files, J.W. Kim, intimately involved with recruiting consultants, deleted this information because it contained potentially damaging information that he did not want DuPont to have.

Finally, the Court finds that I.S. Han and K.H. Rho intentionally deleted relevant information after learning of the Complaint and after receiving the first litigation hold order on February 6, 2009. K.H. Roh headed Heracron's Technical Team,

and thus was actively involved in acquiring information related to his area of Heracron development. The importance of his position within the Heracron hierarchy, the fact that he began deleting files after being apprised of his duty to preserve, the fact that he targeted many files for deletion that were last written years before the Complaint, and the content of the recovered files and the file names of the unrecoverable files shows that he was deleting these items willfully, and in bad faith, again because he was concerned about their contents implicating Kolon, and potentially himself, in wrongful behavior. The contents of the recovered files and email items, many relating to technical aspects and problems with Heracron, and the file names of the overwritten files, such as "Company D Raw Material Cost 070323," and "Mr. K consulting_10708 Important.doc_", underscore the conclusion that the deleted information was relevant to the litigation.

I.S. Han was the head of Heracron's Research Institute, responsible for research efforts aimed at improving the Heracron product. Even though I.S. Han received the first litigation hold order on February 6, he deleted many files that day, and then deleted more files on February 26. Examples of relevant information deleted by I.S. Han include: emails that refer to the resumes of consultants, Mr. R and Mr. S; to consultation meetings; to his attendance at consultation meetings; and to the

progress of the technical aspects of the consultations. Given his high position at Kolon with respect to procuring research information from Mitchell and other consultants, and considering the topics in the files and email items he deleted, the Court finds that I.S. Han deleted this information intentionally, and in bad faith.

In sum, the Court finds that, although it does not appear that Kolon engaged in the widespread effort to delete relevant information alleged by DuPont, the deletions, which occurred after the duty to preserve was triggered, were nonetheless significant in substance and number. Furthermore, the company failed to stress the importance of preservation to certain key employees with highly relevant information. The key employees discussed herein all were intimately involved in Kolon's efforts to hire consultants and obtain information about DuPont's Kevlar para-aramid fiber, which Kolon allegedly then used to improve Heracron.

Upon learning that DuPont had filed this action, and realizing the potential that they would be implicated in the alleged unlawful conduct, key employees set out to willfully and intentionally, and in bad faith, delete from their computers relevant documents, files, and emails that contained what they believed to be, possibly damaging information to Kolon. Many deleted files are not recoverable. After reviewing the record,

the Court can come to no other conclusion. DuPont, therefore, is entitled to a presumption of relevance of the unrecoverable files, though the Court notes that DuPont provided more than ample evidence of the relevance to the litigation (both to DuPont's claims and Kolon's defenses) of many of the recovered files and email items and the unrecoverable files.

Kolon has attempted to rebut this presumption by arguing, unconvincingly, that many of the files and email items were of little import to the litigation. Kolon appears to take the position with respect to many of the files and email items that, if there is no direct mention of DuPont, any of the alleged trade secrets, or consulting, for example, then the information is not relevant to the litigation. While the Court recognizes that Kolon has the right to attempt to rebut the presumption of relevance, simply condensing the list of relevant topics to a small number ignores the fact that this litigation involves a substantial volume of trade secrets. And, it ignores extensive evidence of Kolon's substantial efforts to acquire the trade secrets and confidential information from DuPont and other competitors in the para-aramid market. And, the argument turns a blind eye to the fact that many of the deleted emails are linked by title or kind to rather clearly pertinent aspects of DuPont's claims. Further, the argument does not salute the circumstances of the deletions, which point strongly to a guilty

state of mind, particularly in perspective of what is known about the deleted emails and documents.

Furthermore, for Kolon to argue that the deleted information was of little relevance from its view, ignores the possibility that DuPont might have entertained different views to which the deleted information may have been relevant. Vodusek, 71 F.3d at 156; see also Goodman, 632 F. Supp. 2d at 518 n.12 ("The argument of an accused spoliator that it did not violate its duty to preserve evidence because it retained the 'relevant' information and only deleted 'irrelevant' information rings particularly hollow. The ultimate decision of what is relevant is not determined by a party's subjective assessment filtered through its own perception of self-interest.").

The Court also notes that the second litigation hold order instructed employees to preserve all information related to Heracron, which should have signaled to the employees that everything needed to be preserved, whether DuPont or Kevlar were specifically mentioned or not. As discussed above, the clear and convincing evidence standard to rebut the presumption of relevance is the standard for a specific reason, especially as it concerns the overwritten, unrecoverable files, and the Court cannot allow Kolon to profit from its employees' actions simply by claiming that the information was of little import.

DuPont also has presented a chart, see Pl.'s Ex. 4 to Post-Hr'g Reply Mem., which quite clearly illustrates how the deleted information satisfies the relevance factor of the spoliation analysis. That chart is quite accurate and the Court finds that its conclusions are supported by the record.

Kolon also contends that there can be no spoliation finding because many documents were recovered. It is true that many deleted documents were recovered, but many were not. Those, by definition, qualify as spoliated evidence.

Moreover, when the electronically stored information was deleted, there was alteration of evidence. Alteration of evidence is spoliation. See Silvestri, 271 F.3d at 590 ("Spoliation refers to the destruction or material alteration of evidence . . . for another's use as evidence in pending or reasonably foreseeable litigation." (emphasis added)); Suntrust Mortg., 2011 WL 1225989, at *15 (concluding that employee of plaintiff spoliated evidence by altering a number of emails that were potentially relevant evidence in the anticipated litigation between plaintiff and defendant). And, of course, from the perspective of the deleting Kolon executives and employees, the deleted, but later recovered, electronically stored information was destroyed when it was deleted. For when they deleted the files and email items, they did not know that copies would be available in other custodians' hard drives or email accounts.

When electronically stored information is deleted, it is altered from the form that it was in before deletion. It certainly is no longer part of the deleting person's document base. And, of course, if not recovered, that electronically stored information is destroyed in the traditional sense as well. Hence, upon deletion, electronically stored information is spoliated.

That, of course, is exactly what occurred in Trigon v. United States, 204 F.R.D. 277, 289-91 (E.D. Va. 2001). The fact that technology permits the undoing of spoliation does not change at all the fact that spoliation has occurred even as to the recovered information.

Of course, recovery is at issue in determining a sanction for the act of spoliation of the recovered documents. And, in Trigon part of the sanction was to require recovery to the extent possible and to charge the defendant with the cost of recovery. Id. at 291.

Moreover, here, many documents were not recovered. Thus, they were permanently destroyed in the traditional sense, and thus were spoliated.

In an attempt to disassociate itself from the acts of its executives and employees, Kolon argues that their conduct should not be attributable to the company because their actions were unauthorized, were outside the scope of their employment, and

were not taken with intent to aid Kolon or further its business interests. In fact, according to Kolon, their actions directly contradicted corporate directives and were taken for personal reasons and contrary to the interest of Kolon. DuPont disputes Kolon's argument. It argues that neither case law nor logic supports Kolon's attempt to separate itself from those who act for it and destroyed evidence that could harm it.

Standard principles of agency law govern the attribution of employees' spoliation to the company. See Victor Stanley, 269 F.R.D. at 516 n.23 ("[A]gency law is directly applicable to a spoliation motion, and the level of culpability of the agent can be imputed to the master."); Goodman, 632 F. Supp. 2d at 523 n.16 ("A party may be held responsible for the spoliation of relevant evidence done by its agents."). "An employer is liable for any acts committed by employees acting within the scope of their employment." Nucor Corp. v. Bell, 251 F.R.D. 191, 196 (D.S.C. 2008) (citation omitted). "An act is within the scope of a servant's employment [where] reasonably necessary to accomplish the purpose of his employment and in furtherance of the master's business." Id. (quotation marks and citation omitted).

Kolon attempts to support its position by citing to Nucor Corp. v. Bell, 251 F.R.D. 191, 196 (D.S.C. 2008), wherein the district court declined to hold the defendant-company liable for

the destruction of a USB thumb-drive by its employee. In that case, the plaintiff asserted that defendants John Bell, former employee of the plaintiff, and SeverCorr, LLC ("SeverCorr"), Bell's new employer, had intentionally destroyed the USB thumb-drive, which the district court found to contain relevant evidence related to the plaintiff's trade secret allegations. Id. The Court refused to impute Bell's discarding of the USB thumb-drive to SeverCorr, finding that Bell had thrown it away to protect himself and that he had never disclosed its existence to SeverCorr, nor consulted with anyone there about discarding the device. Id. Thus, according to the district court, he was not acting within the scope of his employment, but for his own benefit. Id.

Kolon's use of this case to bolster its argument ignores the fact that the district court held SeverCorr liable for allowing the continued use of Bell's work laptop after SeverCorr's duty to preserve was triggered, which resulted in data loss and significant alteration of data. Id. at 197-99. The district court determined that the defendants acted intentionally because they knew that the work computer contained relevant evidence. Id. at 198-99. Furthermore, the district court found Bell to be SeverCorr's agent "because the laptop was his work computer, he certainly used the computer in the course

of employment and 'in furtherance of the master's business.'" Id. at 199 (citations omitted).

The circumstances in this case are more akin to the district court's ruling in Nucor related to the continued use of the work laptop. Here, each of the key employees -- including one former Vice-President and two Team leaders -- deleted relevant files and email items from their work computers, which they used in the course of their employment and in furtherance of Kolon's business. No other conclusion can be drawn from the record, and the Court will not entertain suggestions that short of a corporate policy or directive encouraging spoliation of relevant materials, then employees' spoliation of relevant evidence should not be imputed to Kolon.

C. The Appropriate Sanction

Having found intentional and bad faith deletion of relevant files and email items by key employees, the Court must now assess the appropriate sanction to be imposed upon Kolon. DuPont would have the Court enter default judgment against Kolon for this conduct, arguing that, in anticipation of Kolon's defense, this Court should not focus as much on the prejudice suffered by DuPont -- though it claims it has suffered great prejudice -- and instead focus on Kolon's employees' egregious bad faith conduct. Apart from this conduct, DuPont also claims that it has been severely prejudiced because:

(1) [there are] an unknown but substantial number of relevant documents, as well as relevant metadata, [that] were deleted and cannot be recovered; (2) even where deleted documents have been recovered, Kolon failed to produce many of them, depriving DuPont of the opportunity to pursue full discovery of the facts; (3) it is likely, and can reasonably be inferred, that Kolon's spoliation extends beyond what has been revealed to date; and (4) Kolon's campaign to conceal its spoliation has altered the course of this litigation, all to DuPont's severe detriment.

Pl.'s Post-Hr'g Mem. in Supp., at 33. If the Court is not inclined to enter default judgment, then DuPont requests imposition of alternative sanctions, including striking affirmative defenses, precluding witness testimony, adverse inference instructions, and assessing attorneys' fees and costs.

Kolon argues that entry of default judgment is unwarranted because the sanction is neither proportionate to Kolon's conduct nor necessary to cure any prejudice to DuPont. Kolon maintains that, under the relevant case law, entry of default judgment is limited to those cases where the movant has been deprived of the only evidence from which it could develop its case, and DuPont has failed to show any legally meaningful prejudice it has suffered as a result of the spoliation, let alone deprivation of evidence central to the development of its case. Instead, Kolon states that the facts in this case are "much closer to those in cases where courts have found that little or no prejudice was

caused by the destruction of evidence, and where the resulting sanctions were either the imposition of costs and fees associated with spoliation discovery, a rebuttable adverse inference instruction, or both." Def.'s Post-Hr'g Mem. in Opp'n, at 43.

The Court agrees that default judgment against Kolon in favor of DuPont is not an appropriate sanction. In determining the appropriate sanction, the Court considers the culpability of the spoliator and the prejudice to the movant. And, in the Fourth Circuit, to justify entry of default judgment, the Court must conclude either that Kolon's actions were so egregious as to amount to forfeiture of its defense, or the spoliation's effect was to inflict such prejudice on DuPont that it denied DuPont the ability to prosecute its case. Silvestri, 271 F.3d at 593. On this record, neither showing has been made. Though the actions taken by the key employees discussed herein were intentional, in bad faith, and quite serious, they are not such as to warrant a forfeiture of Kolon's ability to defend itself against DuPont's allegations.

The deletions that Kolon's executives and employees made were numerous and were made intentionally and in bad faith. Kolon, however, did attempt to put in place two litigation hold orders, and it implemented a widespread effort to preserve files. And, Kolon was aided by good fortune in that many

deleted items were recoverable because of the preservation of Kolon's back-up tapes. The recovery of the deleted information has provided DuPont with much information to help prove its case and to meet Kolon's defenses.

Considered as a whole, the circumstances attending the spoliation are not such as to warrant forfeiture of such defenses as Kolon may have. Nor can the Court find that DuPont has suffered the degree of prejudice required under the case law to enter default judgment against Kolon. In Silvestri, for example, the Fourth Circuit agreed with the district court's assessment that the plaintiff's failure to preserve the automobile at the center of the plaintiff's product liability suit against General Motors denied General Motors "access to the only evidence from which it could develop its defenses adequately." Silvestri, 271 F.3d at 594 (emphasis added). Without access to the automobile, General Motors could not develop a "crush" model to prove that the airbag properly failed to deploy, nor could it resolve "the critical question of how [the plaintiff] injured his head." Id. The Fourth Circuit further found that the evidence that had been preserved was "incomplete and indefinite," and to require General Motors to rely on it in lieu of what it could have collected "would result in irreparable prejudice." Id.

DuPont has not shown that, as a result of Kolon's spoliation, it has been unable to develop its case against Kolon. The record does show that DuPont has lost access to certain relevant files that were overwritten of which Kolon has no other copy and certain email items that have been produced from custodians other than the ones who deleted them, but in the overall context of the mass of litigation that this case has become, that loss cannot be said to equate to the type of prejudice that General Motors suffered in Silvestri. And, with respect to the email items deleted, an overwhelming majority were preserved through Kolon's back-up tapes and produced to DuPont.

While Kolon's conduct has not foreclosed DuPont's ability to present its case, DuPont has suffered other types of prejudice, namely the substantial costs that it incurred in investigating and determining the extent of the spoliation, delay of the trial while the sanctions issue was sorted through by the parties and the Court, and delay in production of many of the preserved records because it was not until DuPont brought the motion and Stroz conducted its forensic analysis that Kolon learned of the extent of the deletions and the volume of unrecoverable files. These other forms of prejudice have impacted DuPont, the Court, and the judicial process.

Moreover, the record shows that DuPont has in fact lost the ability to present some relevant evidence as a result of the actions taken by the Kolon employees discussed herein. Thus, while default judgment is not appropriate, it is necessary to sanction Kolon for partially compromising, and thus limiting, DuPont's ability to present its case.

The most effective way to do that is by way of an instruction to the jury. "The spoliation of evidence rule allows the drawing of an adverse inference against a party whose intentional conduct causes not just the destruction of evidence, . . . but also against one who fails to preserve or produce evidence" Hodge, 360 F.3d at 450. To impose this sanction requires a finding of bad faith, or a finding that the party willfully deleted or destroyed evidence known to be relevant to an issue in the litigation. Vodusek, 71 F.3d at 156. Having found both bad faith and intentional deletion of relevant materials, the Court will inform the jury that certain Kolon executives and employees, after learning that DuPont had sued Kolon, deleted much electronically stored information that would have been available to DuPont for use in presenting its case. The jury then should be allowed to infer that the unrecoverable deleted information would be helpful to DuPont and harmful to Kolon. The jury also should be told that the fact of deletion, without regard to whether the deleted material was

recovered, may be taken into account in assessing the element of Kolon's intent and knowledge.

Had DuPont not pressed this motion, the truth respecting the nature, extent, and consequences of the spoliation, as shown by the Stroz reports, would not have been known. Nor, without the work of Stroz, would DuPont have been able to establish its entitlement to, or the proper scope of, an adverse inference instruction to help level the playing field after the spoliation.

DuPont was thus forced by the spoliation to incur attorneys' fees, investigative expense, and the expense of a hearing and briefing. That was made necessary by Kolon's violation of its obligation not to spoliolate evidence. It is proper to afford DuPont recompense for the consequences of that violation in the form of an award of expenses, costs and attorneys' fees. See Suntrust Mortg., 2011 WL 1225989, at *28 (awarding attorneys' fees and expenses to party who brought a motion for sanctions for alteration of evidence because the party had suffered prejudice, in part, by incurring significant legal fees and expenses "to set the record straight"); see also United States v. Shaffer Equip. Co., 11 F.3d 450, 462 (4th Cir. 1993) (noting that bad faith or abuse of the judicial process can form a basis for an award of attorneys' fees as a sanction

pursuant to a court's inherent power (citing Chambers, 501 U.S. at 45 (1991)).

Further, where spoliation occurs and material is not made unavailable (such as with the recoverable information), there still has been a violation of duty: one owed to the Court and the judicial process. As the court explained in Victor Stanley:

That the duty is owed to the court, and not to the party's adversary is a subtle, but consequential, distinction. A proper appreciation of the distinction informs the Court's decision regarding appropriate spoliation sanctions. Where intentionally egregious conduct leads to spoliation of evidence but causes no prejudice because the evidence destroyed was not relevant, or was merely cumulative to readily available evidence, or because the same evidence could be obtained from other sources, then the integrity of the judicial system has been injured far less than if simple negligence results in the total loss of evidence essential for an adversary to prosecute or defend against a claim. In the former instance, the appropriateness of a case-dispositive sanction is questionable despite the magnitude of the culpability, because the harm to the truth-finding process is slight, and lesser sanctions such as monetary ones will suffice. In contrast, a sympathetic though negligent party whose want of diligence eliminates the ability of an adversary to prove its case may warrant case-dispositive sanctions, because the damage to the truth-seeking process is absolute.

Victor Stanley, 269 F.R.D. at 526. The Court agrees with this view, and it affords an additional reason to impose attorneys' fees, expenses, and costs associated with this motion on Kolon

as a sanction. See Pension Comm., 685 F. Supp. 2d at 467 (noting that, in assessing whether to impose attorneys' fees and costs, a court should focus "more on the conduct of the spoliating party than on whether documents were lost, and, if so, whether those documents were relevant and resulted in prejudice to the innocent party"). This type of less severe sanction, while compensating the prejudiced party, also "'punish[es] the offending party for its actions' and 'deter[s] the litigant's conduct, sending the message that egregious conduct will not be tolerated.'" Victor Stanley, 269 F.R.D. at 536 (quoting Pension Comm., 685 F. Supp. 2d at 467, 471); see also Rimkus, 688 F. Supp. 2d at 647 ("Like an adverse inference instruction, an award of costs and fees deters spoliation and compensates the opposing party for the additional costs incurred.").

For the foregoing reasons, the Court finds intentional and bad faith spoliation by Kolon employees, and as a result, the Court imposes sanctions in the forms of attorneys' fees, expenses, and costs related to this motion, and an adverse inference instruction.

