February 21, 2008

By Email

Honorable Henry A. Waxman Chairman U.S. House of Representatives Committee on Oversight and Government Reform 2157 Rayburn House Office Building Washington, D.C. 20515-6143

Dear Mr. Chairman:

I am writing you in response to your request for answers to specific questions relevant to the Committee's investigation relating to whether the Executive Office of the President has complied with federal laws requiring the preservation of preservation and federal records.

I have provided my responses to your questions to Mr. Emmet Flood, Special Counsel to the President and to M. Elizabeth Medaglia, Office of Administration General Counsel. In recent weeks they have expressed to me their concerns about potential disclosures of deliberative discussions involving the participation of Office of the Chief Information Officer management, Office of Administration General Counsel, White House Counsel's Office and White House management. To address these concerns, I have provided my responses to them for their review. They have committed to me that they will review and identify any responses or other specific information that they wish to be redacted from my response prior to submission to the Committee. Any items they choose to redact should be addressed to them.

I realize that there are many complex issues related to this topic. If you or your staff have any additional questions, please feel free to contact me via email at the state of the state

Sincerely,

Steven McDevitt

Responses from Steven McDevitt (Part 1 of 2) February 21, 2008

General Background

1. During what time period did you work at the White House?

I was employed in the Office of the Chief Information Officer (OCIO) in the Office of Administration (OA) in the Executive Office of the President (EOP) from September 2002 through October 2006.

2. What position or positions did you hold at the White House? To whom did you report?

From September 2002 through July 2003, I was an Information Technology Specialist – Project Manager (GS-2210-14) in the Concepts, Requirements and Systems Engineering Directorate (CR&SE) in the OCIO. During this period I reported to Mr. Layton Clay, the Director of CR&SE.

In July 2003, the OCIO was reorganized and the Architecture and Engineering (A&E) Directorate was created. I was promoted to the position of Director of the A&E as a Supervisor Information Technology Specialist (GS-2210-15).

From July, 2003 through January 2005, I reported to Mr. Carlos Solari, the Chief Information Officer (CIO).

From January 2005 through May 2006, I reported to Mr. John Straub, the Director of the Office of Administration and acting CIO.

From May 2006 through the end of my tenure in the OCIO, I reported to Ms. Theresa Payton.

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3. What were your primary job responsibilities? If they changed over time, please describe your responsibilities over time.

As an Information Technology Specialist – Project Manager (GS-2210-14), from September 2002 through July 2003, I was responsible for managing various systems development and systems implementation projects. During this period, the majority of my efforts were focused on the implementation of a new records management system for the White House Office of Records Management. The primary purpose of this system was to manage the paper records and document of the President and his staff.

During this time, I was also assign to begin the process of implementing an electronic records management system to manage the email and other electronic communications records throughout the EOP.

When I was promoted to the new position of Director of A&E my areas of responsibility increased significantly. The primary responsibilities of A&E includes:

- Systems Engineering and Integration Responsible for the development and implementation of numerous custom developed applications and the implementation of commercial-off-the-shelf (COTS) based solutions.
- Business Applications Support Provided day-to-day management and support for a wide variety of applications that supported the mission of the components of the EOP. There were approximately sixty-five applications that support the critical business needs of the EOP.
- Website Management and Support The primary focus of this support was for whitehouse.gov. This included a team of web content management staff, web designers and technology specialists. Support for other websites was also provided. Including omb.gov, results.gov, wmd.gov and other White House related sites.
- Enterprise Architecture A&E was responsible for the development and maintenance of the Enterprise Architecture (EA) of the EOP.

4. Did you have any staff who reported to you? If so, please describe the size and role of your staff.

As Director of A&E, I had between 8 and 13 staff reporting to me. The staff was a mix of project manager, technical specialists, enterprise architect and web specialists. All were Information Technology Specialists or Supervisory Information Technology Specialists (GS-2210) grades 9 through 15.

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5. There were various contractors that worked with staff in the Office of the Chief Information Officer. Which contractors did you work with, and what was their role?

The contractors that supported the mission of A&E included:

- Boeing Enterprise architecture support for the development and maintenance of the EOP EA.
- Booz Allen Hamilton Was awarded the contract for the implementation of the White House Office of Records Management, records Management system (RMS). They were also awarded the contract for the initial requirements analysis and solution selection for the Electronic Communications Records Management System (ECRMS)
- Lockheed-Martin Support the for IntranetQuorum system used by the Office of Correspondence.
- MZM Provided support for the implementation systems related to the email infrastructure.
- Systems Management and Engineering Inc. Enterprise architecture support for the development and maintenance of the EOP EA.
- TKC Communications Provided systems engineering and technical assistance support on a wide variety of systems development and systems implementation projects.
- Unisys Provided systems analysis and systems implementation support. These were specific tasks under the larger multi-year information technology support contract that provided enterprise-wide services to the EOP. Unisys was tasked with the implementation and integration of the ECRMS system.

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E-mail Systems and Archiving

6. The Committee understands that, at some point in 2002, the White House began a migration of e-mail systems, switching from Lotus Notes to a Microsoft Exchange system. Do you know when the decision was made to make this migration? What was the rationale for the change? When did the migration begin and when was it completed?

There were multiple reasons for the desire to migrate from Notes to Exchange.

- Senior White House staff had a desire to migrate to Microsoft Outlook and Exchange because that is what they were used to on the campaign.
- The Outlook platform was widely used in commercial enterprises and provided better integration with the Microsoft Office suite of applications that was the standard within the EOP.
- Also, there were a number of features of Outlook that were not available in the Notes Mail environment.

The project to evaluate the migration to Outlook / Exchange began prior to the beginning of my employment with the EOP in 2002.

The migration for part of the Office of Administration occurred as early as September 2002. The reason I know this for certain is that when I began my employment, I was not provided a Notes Mail account, I was provided an Outlook/Exchange account.

7. Was there any particular order dictating how the migration proceeded? Was the migration done component by component or on a more individual basis?

With about two thousand people to migrate from Notes to Exchange, there was a formal process that was put in place to support the migration. As a general rule, the migration was done on a component by component basis with groups of individuals migrated at a time. The migration needed to be coordinated with the management of each component as it impacted email of each user.

I personally had no direct operational responsibility for this process. Detailed plans were created to support this migration. The OCIO should have detailed documentation on when each user or groups of users were migrated.

Those responsible for the planning and execution of the migration included Bruce O'Dell, the Deputy CIO during this period, Bart Hill, the Director of Information Systems & Technology and the OCIO email support team that provided operational support for the email systems.

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8. With the Lotus Notes e-mail system, the White House used an archiving system known as ARMS to preserve e-mails sent and received by White House staff. Are you familiar with this system? Were you aware of any concerns about the adequacy of the ARMS program? If so, please describe those concerns.

I was not involved in the implementation of the ARMS system as it was implemented in 1994, prior to my employment with the EOP. My knowledge of the ARMS system was the result of the analysis that I performed in 2002 as part of the project to implement a long-term solution to support the email records management of the EOP.

The ARMS system is really a set of systems that were developed in 1994 to meet a court mandated need to preserve E-mail records. At the time these systems were implemented, no commercial-off-the-shelf (COTS) system to support email records management existed in the marketplace.

The ARMS system was implemented using the staff, contractors, resources and technologies that were present-at-hand within the EOP at that time. The system used simple operating system utilities for the data management, access, search and retrieval of data and the file system for the storage and access control of the data.

During the Clinton administration there were a number of significant problems with ARMS and the associated supporting systems. These problems or anomalies (Mail 2, Letter D and Multi-Host) resulted in situations where E-mail was not appropriately archived by ARMS. These issues were corrected and various project were completed to recover the email that was not archived. The GAO has produced reports documenting these issues and the resolution and corrective actions that were taken.

During my analysis of the ARMS system, a number of operational and non-functional risks and limitations were identified. These were documented in the Concept of Operations (CONOPS) document that I created in 2002. This document was reviewed by OCIO staff, OA Records Management, OA Counsel, the White House Office of Records Management and White House Counsel. This document was the basis for the project to implement a COTS solution to support the email records management of the EOP.

To reduce or eliminate these risks, the ECRMS CONOPS outlined the need to implement a system that utilized current commercially trusted technologies to support the email records management needs of the EOP.

It is also important to note that by 2002 there were a number of COTS products that provided effective email records management solution that were designed to support seamless integration with the Microsoft Exchange platform.

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9. What was your role in planning how e-mails would be archived and preserved in the new system? Who else was involved with this and what were their roles?

My role was to lead the effort to perform the analysis, selection a solution and implement the solution to support the effective records management of EOP emails. This project is referred to in various documents and presentations as ECRMS. For a period of time, the project had the name EARS. These two names refer to the same project.

In 2002, there were two other projects that This project began in late 2002 when it was recognized that the first two attempts to use the ARMS system to support the Microsoft Exchange environment could not be the long term solution to support the records management of EOP emails.

Prior to the initiation of the ECRMS project there were two attempts to continue to use the ARMS solution.

The first project was an attempt to modify Windows XP and Microsoft Outlook interface to support integration with ARMS. There were numerous technical issues that prevented this approach from being successful. The OCIO should have documentation on this project.

The second project was an attempt to use an email integration solution to manage and archive email messages using the ARMS environment. The approach was to use Legato EmailXtender solution to provide a mechanism for all Outlook / Exchange E-mails to be managed in ARMS. The project was abandoned as the poor performance of the solution prevented it from supporting day-to-day email message volume requirements.

I believe that Mr. Howard Sparks was responsible for both of these projects.

10. How were e-mails sent to and from Microsoft Exchange accounts archived and preserved? Please describe the various steps involved and the individuals responsible for each step, including the process through which e-mails stored in journals were saved in .pst files.

I was not directly involved in the management decision to proceed with the implementation of Outlook / Exchange. I also did not have any operational responsibility for the archiving of email in either the Notes or Exchange environments.

The initial email retention process involved a manual process of copying messages from the Exchange journals to .pst files for storage and retention. This process was to be performed on a regular basis.

At some point, this process was partially automated using a utility designed for this purpose. The Mail Attender utility was used to automatically copy email message from the journals to the .pst files on a regular basis.

The details regarding the standard operating procedures should be obtained from the IS&T Directorate within the OCIO.

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11. As the migration took place, did you have any concerns about how e-mails were being archived and preserved under Microsoft Exchange? What were those concerns? Did you express them to anyone? When did you do this and with whom did you share your concerns?

There was a great deal of concern about proceeding with the migration to Outlook / Exchange without having an adequate email records management solution in place. By early 2003, an entire year had been spent trying to identify a solution that would support the email records management requirements of the EOP. There were four types of risk that were discussed on a number of occasions within the management ranks of the OCIO and OA. This risks included:

- Incomplete Data The process by which email was being collected and retained was primitive and the risk that data would be lost was high. In addition to this being a manual process, the risk was compounded by the fact that there was no mechanism to reconcile the messages that were retained in the .pst files and the messages that had been processed by the Exchange system. The potential impact: The system does not contain all required data.
- Data Reconciliation The use of .pst files for warehousing email records does not provide a mechanism to reconcile against what was originally retained by the system. This is there is no way to guarantee that all records are retained in their complete and unmodified state. The potential impact: It cannot be demonstrated that the data in the system is complete.
- Public Perception Given the issues that occurred during the prior administration, it should warrant extra caution on the part of the EOP before making any changes to the email retention process. Additional system problems would create a public perception that the EOP was unwilling or unable retain records that were required under current law. The potential impact: Increase scrutiny of the EOP and significant additional expense to correct any problems that might occur.
- User Accountability The approach of simply storing email message in .pst files provides no mechanism or audit trail that tracks changes to data files or the activities performed by users or system administrators. The integrity of the data could be called into question because it was not possible to ensure the inappropriate action, either intentional or unintentional, could not occur. Or, if they did occur, the actions would be logged and the user who performed those actions could be identified. The potential impact: No verification that data retained has not been modified or what activities have been performed by system users or administrators.

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In early 2003, prior to the large scale rollout of Exchange, these concerns we often discussed within the management ranks of the OCIO and OA. People involved in these discussion include Tim Campen (OA Director), Carlos Solari (CIO), Bruce O'Dell (Deputy CIO), Bart Hill (IS&T Director), Jaime Borrego (Information Assurance (IA) Director) and myself.

The reason for my involvement in these discussions was that I was leading the effort to identify and implement the long-term email records management solution.

12. Under this Exchange system, were you aware of any avenues through which email archiving could have been circumvented? If so, please describe those avenues as well as any steps you or others took to prevent the loss of e-mails.

Only those email messages sent and received using the EOP Outlook / Exchange and EOP Lotus Notes environments would be included in the EOP email retention process. Other avenues of electronic messaging included:

- Email message sent and received using non-EOP mobile devices (cell phones and PDA's) would not be retained within the EOP records.
- The use of non-EOP mobile devices to access other email service providers such as Hotmail, Gmail or Yahoo. These messages would not be retained with the EOP records.
- Peer-to-Peer Messaging, such as PIN-to-PIN Blackberry messages would not be retained within the set of EOP records.
- Use of non-EOP email sites from EOP computers, such as those hosted by political or other organizations. These records would not be retained within the set of EOP records.

The EOP Information Assurance Policy addressed each of these issues. Current OCIO employees should be able to address these questions.

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13. During your time at the White House, was there every any system put in place to audit or verify that e-mails were archived and preserved correctly? If so, when was this system put in place? Who was in charge of this audit and verification?

After the implementation of Microsoft Exchange in 2002 and 2003, and after the migration of users from Notes to Exchange began, there was no automatic audit system that was implemented to ensure that emails were archived and preserved.

It was also discovered in October of 2005 that there was no manual periodic accounting or reporting process.

After the issue of potential missing email was identified in October 2005, one of the corrective actions was to implement a standardized formal daily procedure to ensure that the daily process to copy email messages from the Exchange journals to .pst files occurred without error and was completed as defined by the standard operating procedure.

At the time, this process was conducted on a daily basis by staff that independent of the email operational support team. The results of this process would provide the basis of an audit trail that could be used to validate the number, size and number of messages retained in the inventory of .pst files.

14. Who had access to the servers that held the archived Exchange e-mails? Did these servers have any extra security protections? Would these files ever be opened or modified — for example in a search for records? Who would have had access? Were there any protections to prevent them from being modified or deleted — either intentionally or accidentally?

I had not operational responsibility for the email retention process and I do not know the answers to these questions.

Staff from the IS&T Directorate had operational responsibility for the EOP email systems and the email retention processes.

In mid-2005, prior to the discovery of the potential email issues, a critical security issue was identified and corrected. During this period it was discovered that the file servers and the file directories used to store the retained email .pst files were accessible by everyone on the EOP network.

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15. Was there any policy that prevented White House staff from accessing external e-mail accounts on their official White House computers? Was this policy applied universally?

In 2002 and 2003 the EOP Information Assurance Policy was drafted, reviewed and approved. The policy was approved by each component within the EOP.

The purpose of the policy was to address the wide array of information security and information assurance requirements of the EOP.

Relating to email, this policy specifically prohibited the following:

- Use of non-EOP email environments was prohibited because it would not provide a means for supporting records management requirements.
- Use of encrypted email was prohibited because there was no facility to manage records retention of encrypted email.
- Use of peer-to-peer messaging was prohibited.
- The use of instance messaging environments was prohibited.

Questions and information requests on the applications of this policy should be addressed by current OCIO staff.

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Potential Losses of E-mails

16. The Committee understands that, at some point in the fall of 2005, concerns arose at the White House that some e-mails may not have been properly archived. According to an e-mail exchange between you and Susan Crippen at the White House, it appears that those concerns may have first been raised on October 11, 2005. What precipitated these discussions about message storage issues? What was your role in these discussions, and who else was involved?

Actually, I believe that I and some members of the OCIO management team suspected there were issues and we discussed these issues within the OCIO management meetings a week or so prior October 11, 2005.

It was reported by the email support team to the OCIO management team that there were some issues related to the processing of the Exchange journals and creation of .pst files for each EOP component. At the time it appeared that because of server / application reconfiguration errors that occurred in August 2005, all EOP email for most of August and September were retained as OA email. It did not appear that any email was missing or not retained, but rather it appeared that all EOP email was retained in a single set of OA .pst files and not the .pst files associated with each component. It was also reported that they email support team attempted to take corrective action to correct the issues, but where unable to fix the problem and separate out the email into their respective components.

This precipitated a series of discussion within OCIO management and staff about how the .pst files were managed and inventoried. It became clear that these files were not being effectively managed.

Some of the issues that became known include:

- The EOP email retention .pst files were scattered across various servers on the EOP network.
- There was no complete inventory of all .pst files
- The processing of the Exchange journals to create the .pst files did not always complete during the normal processing cycle.
- There was no separation of duties or audit controls in place to ensure that the processing of these was being performed on a consistent basis.
- There was no well documented process
- There was no consistently applied naming convention for the component .pst files.
- There was no daily review to ensure that all processing was completed correctly. This point was emphasized by the fact that over a month had gone by before it was discovered that there was a problem in August and September 2005.

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17. The White House informed Committee staff that these message storage issues may have been first discovered during a search for documents that found several weeks of emails for certain White House components had been stored in the wrong files. Does this match your recollection? What was the circumstance of this search, what was found to have been misfiled, and how was the issue resolved?

Yes this does match my recollection. During my tenure in the OCIO, I was never directly responsible for performing email searches. I do not know about the circumstance of this particular search.

I do not believe that these misfiled email messages were ever separated out back to their associated components. The current OCIO staff should be able to answer this question.

18. At some point, the White House appears to have expanded its search for misfiled emails. At this point, the Committee staff understands that you undertook an analysis of emails preserved from the Microsoft Exchange environment breaking down the analysis by each of 12 components of the White House. When and why did this process begin? Who worked with you on the process? How did you conduct the analysis?

The process originated when it became apparent in October 2005 that OCIO staff and contractors were not effectively managing the .pst files used to retain the email records for the EOP. This set of issues was brought to the fore by the .pst file management problems that occurred in August and September of that year.

The initial set of actions was simply to organize and inventory the .pst files used for EOP email records retention and to put in place a formal process to manage these files. The primary issue was the .pst files were scattered across various servers on the EOP network. To the best of my recollection, these series of events included:

- Performed a search all servers on the EOP network for all .pst files to identify and locate all .pst files in the EOP environment
- Collect a data set that contains all relevant information about these files (Name, location, size, creation date, etc.)
- Create a secure and organized server environment in which these files could be stored.
- Copy all .pst files to this new secure and organized location
- Verify and validate that all actions to copy these files completed successfully.
- Create an inventory of all .pst files and verify all the information.

These activities were performed by a team of OCIO staff and contractors. Each step of the process was discussed and documented. The team met on a daily basis to plan activities and to report on actions that had been completed.

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In addition to this .pst file analysis, the team also began the development formal daily verification process that would support the effective management of these files and the process that created them.

While this process was taking place, I began to notice a few anomalies with these files. These included:

- .pst files that contained no data. The file size was zero bytes.
- Inconsistent naming of files that made it difficult to determine the associated component and date to which the file was associated.
- Obvious gaps in the date ranges represented in filenames of the file. As an example, one file may have been named "OA May 1-5" and another file "OA May 8-10" but there appears to be no file that represented May 6 and 7. This is just an illustrative example.
- There was a wide disparity of frequency of how often .pst files were created for each component.
- There was a wide disparity in size of files that represented similar periods of time.

Because of these issues and because there was no way to effectively determine what data was retained in each file, the team took on the task of performing an additional level of analysis.

If my recollection is correct, at that time there were over 5,000 .pst files with an average size of approximately 2 Gigabytes. Since each of these files contained messages one or more days and since it was not possible to determine what days were included in any given file, we needed to determine a method to perform this analysis. Prior to this effort, Microsoft had provided the EOP with a custom software application for performing searches on .pst files. This tool was commonly referred to as the "FindIt" tool.

Microsoft was contacted and was tasked to modify the FindIt tool so that it included the additional functionality of providing a message count for each day represented in a given .pst file. This process was performed on each .pst file in the inventory and the data was aggregated into a single data set. This is the data set that provided the basis for the analysis.

It took a couple week to perform the analysis on the thousands of .pst files. When the data was tabulated it became clear that a problem existed because there were days for which no email was retained. Extensive testing was performed at that time to ensure that the tools and the tabulation processed was performed correctly. An independent verification and validation was also perform by a different set of contractors to ensure that this analysis process was completed correctly and that the data was correctly analyzed and the accurately represented.

In addition to there being hundreds of days for which specific components had no email retained, there were a number of days for which it was clear that the number of emails retained was lower than expected.

There was a formal analysis to determine if the number of days for which the number of retained EOP emails was lower than what one would expect based on the email volume trends. The analysis determined that there was a clean pattern of email volumes. This analysis accounted for

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working days and non-working days (weekends and federal holidays). A multi-week moving average model was employed in various version of the analysis to account for normal fluctuations of normal email volume. Depending on the assumptions made in the analysis, the team identified hundreds of days for which the volume of email was inexplicably low.

Those who worked on this team are listed in response to question 19.

19. The White House provided the Committee with a 23 page color chart titled, "EOP Exchange Environment — All Components," with the subtitle, "Summary — Messages per Day." It lists the total days with zero messages and low messages for 12 components of the White House, as well as the actual message count for each of these components for the period from January 1, 2003 to August 10, 2005. The copy provided to the Committee is dated Feb. 6, 2006, at 4:13 p.m. Were you involved in the creation of this chart? If so, what was your role? Who else was involved in the development and production of the chart?

I was responsible for leading the team that created this chart. The chart to which you refer was the result of many weeks of analysis that involved over a dozen people. I was responsible for designing the chart and had a leading role in the definition and execution of the analysis.

To the best of my recollection, those involved in this effort, in addition to myself, included:

EOP Employees - Jaime Borrego (Acting IS&T Director), William Reynolds (Deputy Director, Information Assurance), Vic Bernson (OA General Counsel), Keith Roberts (Deputy OA Counsel), Howard Sparks (IS&T), Sue Crippen (IS&T), Bryan Reese (IS&T), Stephen Warshauer (IS&T), Keith Regatts (A&E), Aimee Felker (Director OA Records Management), Shaffers Rawlings (EOP Records Management)

Contractors - (Unisys), (Unisys), (Unisys), (Unisys), (SRA) and various contractors whose names I cannot recall from Microsoft and SRA.

20. Was this the final version of the chart? If not, when was the last version of the chart created?

I reviewed the chart provided to the Committee and I am not able to determine if the version provided is the final version. There were many version of this analysis. Each version was identified with a unique version number. Different version of the analysis included different assumption about date ranges and thresholds.

I do not recall the exact number of versions of this analysis, but I believe it was between 12 and 20. What can be said is that what was provided to the Committee is just the analysis summary report, not the complete analysis.

The complete analysis was approximately 250 pages in length. It included the complete background data and trend analysis.

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21. Please describe the steps you and others took to perform the analysis required for the production of this chart. What types of files did you search? Where did you look for these files? Did you face any challenges related to files being misnamed, too large, corrupted, or having other such problems?

In addition to the response to question 18.

During the process to organize and inventory the .pst files, there were a small number of files that appeared to be corrupted. Additional analysis was performed on these files. I do not recall the specific outcome of these analysis, but the data in there files were not for the periods for which data was missing.

22. Each of the 12 components has a different start date on the chart and a different end date. Can you explain why this is?

Each component has a different start date because components were migrated from Notes to Exchange over a several month period.

The OCIO should have detailed list of users and the schedule of when users and components were migrated.

23. Was this chart the only result of your analysis of messages from the EOP Exchange environment? If not, did you produce any other briefing materials or documents that explained your methodology or findings? What were those documents?

There were numerous documents, PowerPoint presentations and other memoranda that described the analysis that was performed, the actions taken to correct the process and the recommendations to improve the processing of .pst files. The team documented the details of each action taken to clean up and correct the identified issues.

There must be thousands of email messages between the team members that describe the actions of the team, the completion of specific tasks, analysis of issues and to provide status to OCIO management, OA Counsel and OA management.

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24. Did you or anyone with whom you worked, ever estimate the number of e-mails that might be missing? What was that estimate?

Yes, there were a series of estimates based on various assumptions. On the low end, there were about 470 days (as reported by the Committee) days with missing email for individuals component in the EOP. If other assumptions were taken into account, that number increased to over 1,000 days of missing email. This is because of days for which Exchange was used prior to January 2003 and some issues that may be been associated with the emails retained during the August and September 2005 timeframe.

I do not recall the exact number of estimated missing email, but I believe it was greater than 1,000,000. This estimate did not include the days for which the number of retained emails was a statistically low number compared to the predicted number of email that should have been retained for a particular day.

The statistical prediction was based on a six-week moving average that separated working days from non-working days. Non-working days included weekend and federal holidays and days that traditionally have a low number of messages. An example of this type of day is the Friday after Thanksgiving. The use of a six week moving average also accounted for the natural seasonal fluctuations in email volume. An example of low volume are weeks during the month of August when the President is on vacation. Also, using this moving average allowed for accounting for spikes in email volume as a result of world events.

25. Did anyone verify the findings of your analysis? If so, who performed that verification and when did it occur? What did the verification find?

During this analysis process, a high level of formality and review was performed on every step of the process. The team performing the analysis met daily and in some cases multiple times per day. Each activity was documented either in meeting notes or in emails distributed to the entire team.

As stated in a previous response, an independent verification and validation was performed by a separate set of contractors who were not members of the team that was performing the analysis effort.

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26. To whom did you present the results of your analysis? When did the presentation or presentations occur? Please describe in general what you told these individuals in these briefings and what materials you used.

The results of this analysis, both in preliminary and final form were presented on various occasions to OA management and OA counsel. I do not have any specific dates on when these meetings occurred, but they did occur often throughout the period of October 2005 through February 2006.

Outside of OA, there were other meetings with the purpose of presenting these issues to White House Management and White House Counsel and their staff.

The summary chart or other charts similar to it were used in the discussion along with other PowerPoint presentation that presented the critical facts and recommendations. The briefing described the problem and presented various option to prevent the issues from recurring and to correct the problems that had occurred.

27. The Committee understands that you and John Straub met with White House Counsel Harriet Miers to discuss issues related to e-mail preservation. Did you discuss your analysis at this meeting? Please describe when this meeting occurred, the agenda for the meeting, and your recollection of what was discussed.

I participated in a number of meetings in December 2005 and January and February 2006. Some of these meetings included White House Counsel Harriet Miers and members of her staff. These meetings also included other White House management and OA Counsel staff.

Given the nature of these discussions, I will defer to the current White House staff to characterize these meetings.

28. To your knowledge, were other presentations of the findings made when you were not in attendance? Who made those presentations? To whom did that person present the findings?

I would assume that other presentations of the findings of the email analysis team were made when I was not present. However, I cannot recall any specific details about any such presentations.

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29. Was any analysis conducted to determine how e-mail files could have been lost? If so, who took the lead on that, and what was the determination?

From October 2005 through August 2006, no analysis was conducted to determine the cause of these issues. No direction was given by OA management to undertake such an analysis.

The primary focus of the team addressing these issues was to create a proper inventory of ,pst files, analyze these files to determine if issues related to email retention existed.

30. Did the White House ever inform the National Archives of the results of your analysis? If so, when was this done? If not, did you or any others recommend that this be done?

During my employment with the EOP, I do not recall if anyone at NARA was informed about these issues.

Sometime during the Summer of 2006, I was directed by the CIO that I was not allowed to discuss the potential email retention issues and the analysis that was performed by OCIO with the NARA staff. I was to inform any NARA staff who contacted me about these issues to direct all inquires about email records management to White House Counsel and White House Records Management.

During my employment at the EOP, I worked closely with NARA staff on a number of issues related to records management. I had established good working relationships with them. I received a number of inquiries from them and in each case I redirected their inquires to the White House. I was very clear to them that I was directed not to share information with them.

Efforts to Develop New Archiving Systems

31. It appears that the White House took several steps toward developing a new system for archiving and managing e-mails during the Bush Administration, including a contract for Legato to build an Exchange Interface System that would enable the ARMS system to archive and manage Exchange e-mails. Were you involved in or aware of this contract? If so, what was your role in the preparation and oversight of the contract?

I was not directly involved in the contract or the management of the work associated with the creation of the Exchange Interface using the Legato EmailXtender product. This project was managed by Mr. Howard Sparks. I was involved in the evaluation of the solution that was implemented. Once the solution was created and was being tested it became clear that the system would not meet the performance requirements necessary to support the daily volume of email processed by the EOP. In early 2003, this project was abandoned.

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32. What do you understand to be the results of this contract? Was the Exchange-ARMS interface ever implemented? Why or why not?

It is my recollection that the interface was never fully implemented. The testing of the initial capability indicated that it would not meet the performance requirements necessary to support the normal daily email volume of the EOP.

The failure of this approach (the use of EmailXtender to move email message into ARMS) created the situation where if the migration from Notes to Exchange were to proceed, there would be not automatic email records management functionality. In spite of this situation, White House and OA management made the decision to proceed with the migration.

In order to meet basic records management requirements, White House and OA management also made the decision to retain all email messages processed through the EOP Exchange environment, using the Exchange journaling capability and copying message to .pst files for storage.

33. It also appears that the White House took steps to develop a new electronic archiving system known as the Electronic Communications Records Management System, or ECRMS. Were you involved in or aware of this contract? If so, what was your role?

34. When was the concept for ECRMS first developed? Who led the effort to plan for and design the system? If contractors were involved, please describe which contractors worked on the effort, when they became involved, and what their role was.

35. It also appears that the Office of Administration prepared a Statement of Work for an E-mail Archive Retrieval System. A draft Statement of Work, dated September 21, 2004, notes that, "the primary goal of this engagement is to provide EOP staff with a solution that allows them to archive, manage, search and retrieve E-mail they may want to store and preserve on a long-term basis." EARS is described as being related to ECRMS. You are listed as the author of this draft. Was a contract issued for EARS? If so, to whom was it granted, what was the time frame of the contract, and was the project implemented?

[Combined response to questions 33, 34 and 35]

It was recognized by OA and CIO management in 2002 that the EOP needed a long term solution for email records management. I was assigned the initial project management role in 2002. In July 2003, the project was managed by various staff in the A&E Directorate.

Because of the issues related to email records management that had occurred in the past, a high level of scrutiny and caution was applied to this project. This involved additional periods of review of various work products. These reviews include White House and OA Counsel, White House Office of Records Management and OA Records Management.

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My recollection of some of the specific dates may be off. The rough chronology for the ECRMS implementation is as follows:

- November December 2002 The initial draft of the Concept of Operations (CONOPS) for the ECRMS system was completed.
- December 2002 through May 2003 The ECRMS CONOPS was reviewed and approved by OA Counsel, White House Office of records Management and White House Counsel.
- April / May 2003 The Statement of Work for the initial phase of the project was drafted and the procurement process began. The scope of this effort was to complete a detailed systems requirements specification, evaluate commercial-off-the-shelf products and propose solutions that meet the government requirements. The government would then select the solution that provided best fit to the EOP environment and the contractor would complete and delivery the design for the implementation of that solution.
- September 2003 Vendor proposals were received and evaluated and a selection was made. Booz Allen Hamilton was awarded the contract for Phase 1 of ECRMS.
- November / December 2003 Initial phase of the ECRMS project began.
- December 2003 May(?) 2004 Requirements analysis was completed by the contractor. COTS solutions were evaluated against those requirements. A recommendation was made by the vendor and the Government selected a the solution. The design for the implementation of the solution was created by the contract and delivered. The solution selected was a combination of two COTS products, MDY FileSurf and KVS Enterprise Vault
- April May(?) 2004 The solution design was presented to OA Counsel, White House Records Management and White House Counsel for their concurrence.
- June September(?) 2004 ECRMS Phase 2, the systems implementation began. It was decided that the current Unisys contract could be used to support the installation and configuration of the system. The procurement and installation of the hardware and software also occurred during this time.
- November 2, 2004 Final configuration and completion of the File Plan used to archive records was drafted.
- January 2005 October 2005 System configuration, testing and tuning. Testing with large email volumes to ensure that system performance would satisfy the requirements. A number of issues were identified and the vendors corrected and testing continued.
- October 2005 February 2006 ECRMS project impacted as the contractor staff was supporting the clean up of the .pst file issues.
- January 2006 March 2006 Large volume testing continued. The ECRMS standard operating procedures were drafted and provided to staff for review and comment. Large scale testing was being performed using .pst files that contained OA email messages.

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- March 2006 White House Counsel, White House Office of Records Management and OA Counsel provided a detailed briefing on the solution.
- July 2007 White House Counsel, White House Office of Records Management and OA Counsel provided a detailed briefing on the search and retrieval capabilities of the ECRMS solution.
- August 21, 2006 ECRMS ready to go live.

36. Was ECRMS ever implemented? What was the status of ECRMS when you left the White House? Was there ever a pilot program to test the ECRMS system? What is your understanding of why it was not implemented? Who made the decision not to implement this system?

The ECRMS system was ready to be implemented. The hardware and software was procured, installed and configured. Extensive testing was performed in 2005 and 2006. This testing was performed to ensure that the system would work as designed and to ensure that it would support the performance requirements necessary to support the daily volume of EOP email.

When I left the OCIO in August 2006, the system was ready to be used. The only remaining tasks were to obtain approval from the OA Director and the CIO.

37. The White House also provided the Committee with documents indicating that you recommended changes to the e-mail archival process in November 2005. In what appears to be a draft memorandum from you to John Straub, dated November 14, 2005, you recommend the adoption of Standard Operating Procedures for e-mail archiving as well as "system monitoring of the archive process" in the interim. You also recommend a "long term risk mitigation plan" involving the adoption of ECRMS. Did you provide such a memorandum to John Straub? Why did you make these recommendations at this time? Were your recommendations approved? What is your understanding of why these recommendations were or were not approved?

It is my recollection that these recommendation were provided to the OA Director. I made these recommendation because of the various situations that had occurred over the prior three years with respect to the management of EOP email records. I felt that the procedures needed to be formalized and I also felt that if the appropriate resources were applied to the implementation of ECRMS, the project could be completed in a timely manner and could provide a good solution that would prevent the reoccurrence of these issues.

I do not recall the final disposition of these recommendations.

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38. A briefing document from October 2005 discusses the "operational risk in current email storage management processes." This document expresses concern that the current e-mail management systems may not meet the statutory requirements for document preservation and proposes several "risk mitigation" steps. Were you involved in the creation of this document? If so, please describe the purpose of the document, the individual or individuals who prepared it, and to whom it was presented.

If my recollection is correct, I was involved in the creation of this presentation but I do not recall the specific purpose of this presentation.

I do not recall to whom it was presented.

39. How was e-mail archived and preserved when you left the White House?

When I left my employment with the EOP, the semi-automated process of daily processing of Exchange journal files using the Mail Attender utility was being performed. The daily manual process of validating that the .pst creation process completed successfully was being performed and the status was being reported to the OA Records Manager on a weekly(?) basis.

40. What was the role of the National Archives in the process of planning for and developing new systems for archiving e-mail? Did officials with the Office of Administration or the EOP consult with officials at the Archives?

The staff from the National Archives and Records Administration (NARA) were briefed a number of times in 2003, 2004 and 2005 about the approach for email records management.

Searches of E-mails in Response to Investigative Requests

41. Were you ever involved in, or aware of, searches for e-mails in response to investigative requests? When? What was the subject matter? The most well known investigative request was for documents relating to the leak of the identity of CIA agent Valerie Plame. Were you involved in a search for documents responsive to this request? If so, what was your role?

During my tenure at the EOP, I did not have any operational responsibility for the performance of email searches.

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42. How did searches vary for e-mails saved in the ARMS system and for those sent and received through Exchange? For e-mails saved on Exchange, did the Office of the CIO search files preserved on servers, on disaster recovery tapes, or elsewhere? What was the basis for that decision?

During my tenure at the EOP, I did not have any operational responsibility for the performance of email searches.

The OCIO has specific search procedures that describe how searches are to be performed in both the ARMS environment and using the .pst files used for email retention. In both cases, the primary storage of these data set in on file servers in the EOP environment.

Searches are perform against these files.

43. Do you recall any concerns that the searches were not picking up all of the responsive emails? Or did you hear that the searches ever revealed errors in the way e-mails were preserved? If so, how did you respond?

The use of primitive search tools, both in the ARMS search and the search of the .pst files, was raised on a number of occasions. The tools that were used were both slow and primitive compared to current off-the-shelf search technologies.

Each time a search was performed it consumed an enormous number of staff and contractor resources to set-up and perform the search.

The fact that both the ARMS and .pst file search processes did not search the email attachments was raised on a number of occasions. At the time I believed that this was a short-lived problem as the ECRMS solution would provided fast and effective full search capabilities, including the search of attachments.

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44. At some point in late 2005 or early 2006, it appears that the White House alerted Special Prosecutor Patrick Fitzgerald that some e-mails may not have been provided to the prosecutor in response to his investigation. According to a January 23, 2006, letter from Mr. Fitzgerald to attorney representing former aide to the Vice President, Lewis Libby: "In an abundance of caution, we advise you that we have learned that not all email of the Office of the Vice President and the Executive Office of the President for certain time periods in 2003 was preserved through the normal archiving process on the White House computer system." According to court filings, the White House produced 250 pages of emails from the Office of Vice President to the Special Prosecutor in February 2006. When were you first made aware that not all e-mail responsive to the Special Prosecutor's investigation was preserved through the normal archiving process? Why weren't these pages included in the original document production? How were you made aware of this? What steps did the White House take to restore these e-mails? Where did these 250 pages of e-mails come from?

During the period in October through December 2005, when the .pst file organization and analysis was occurring, it became known that some of the periods for which not email was present in the retained .pst files were the same periods for which Special Prosecutor Patrick Fitzgerald had subpoenaed the White House for emails related to his investigation.

Most critical were a set of days in early October 2003 where it appears that all email for the Office of the Vice President was missing. A detailed plan was developed to attempt to recover the email for this period.

This plan was prepared by the OCIO staff and presented to White House Counsel. I do not recall the specific details of this plan. A number of the activities identified in the plan were undertaken and to the best of my recollection, the email from the period in question was never recovered.

I worked with OA Counsel and White House Counsel on efforts to provide an explanation to the Special Prosecutor. This included providing a briefing to the Special Prosecutor's staff on this subject.

There was a parallel effort to attempt to recover all email from this period. The results of this effort were the 250 pages of email. However, I was not directly involved in this process and am unable to provide any details relating to the 250 pages of email.

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45. The Committee was provided with an e-mail exchange between you and Susan Crippen, with copies to Jaime Borrego and William Reynolds that attached an "Exchange MST Activity Plan" dated November 28, 2005 and updated on January 20, 2006. The attached plan states: "The following outlines the planned activities to recover Office of Vice President e-mail from the target period of September 30, 2003 to October 6, 2003." Was this search relevant to the Special Prosecutor's investigation? Why was this period targeted? What was the role of each of the individuals on this e-mail with regard to the activity plan?

Yes, the attempt to recover these email was in response to the search associated with the Special Prosecutor's investigation.

The period was targeted because it was among the set of date which were of interest to the Special Prosecutor.

The individuals involved represented the OCIO management staff that was in place at that time. Susan Crippen was the Deputy Director of Information Systems and Technology, Jaime Borrego was the acting Director of Information Systems and Technology and the Director of Information Assurance, William Reynolds was the Deputy Director of Information Assurance and I was the Director of Architecture and Engineering. All the individuals identified were involved in both the activities to correct the .pst file management problems and with the activities associated with attempts to recover missing emails to support the response to the subpoena from the Special Prosecutor.

Disaster Recovery Tapes

46. According to the White House, until October 2003, the EOP disaster recovery back-up tapes were recycled and were not preserved. Were you involved in this decision? To your knowledge, who was involved in this decision? Did anyone ever express any concerns to you about the decision to recycle all of the tapes? If so, what were the concerns and who expressed them to you? Did you have any concerns about this recycling of tapes? If so, please explain.

During my tenure at the EOP, I did not have any operational responsibility for the management of backup tapes nor was I involved in decisions related to the recycling of backup tapes.

47. The White House has also told Committee staff that this recycling was temporarily stopped several times — in February 2002, July 2002, and September 2003 — before it was permanently stopped in October 2003. Do you know why these stops occurred, and why they were temporary? Were these stop-recycle orders related to discovery that searches of the .pst folders were not producing all of the documents relevant to the search request?

During my tenure at the EOP, I did not have any operational responsibility for the management of backup tapes.

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