

USACE Response to MM Reserved Comments

Mr. Merritt provided his “Reserved Comments” to the Tiger Team late March 2012. The responses to the reserved comments represent the opinions of the undersigned Tiger Team members. It is the opinion of the undersigned that many of Mr. Merritt’s comments are misrepresentative of the facts. A response to each of Mr. Merritt’s reserved comments is provided below. The responses below do not address every remark/anecdote/opinion expressed in the “Reserved Comments” but attempt to address our understanding of the primary issues represented.

Reserved Comment - Synopsis

See responses on individual comments below.

Reserved Comment #1 – Lack of a Written Plan

It should be understood that activities completed by the Tiger Team in the field and in the lab were documented and completed in a professional manner. A written plan was in-place before initiation and completion of each activity completed by the Tiger Team. For example, while all field/laboratory activities completed during the Tiger Team investigation were not in-place prior to initiation of the Phase I trenching activities, a written plan for the field procedures of Phase I trenching was in-place at the onset of Phase I trenching. All Tiger Team members, except for Mr. Merritt, agreed to proceed with the Phase I trenching plan with the understanding that changes to the plan may evolve during the field investigation. Mr. Merritt chose not to participate in Phase I trenching activities.

Any suggestion by Mr. Merritt that Phase I trenches were biased as to intentionally miss areas of known objectionable materials is completely false. The differences in the investigation methods used in the Phase I and Phase II trenches are documented in the Tiger Team report.

No Tiger Team activity was performed without an understanding of the field/laboratory protocols in-place at that time. Changes to work procedures did occur over the course of the investigation. Such changes were implemented to improve the investigation and to assure that areas of Non-Federal sponsor concerns were addressed. These changes did not invalidate or taint the results of previous activities.

Exhaustive efforts were made by the Tiger Team to develop the Phase II trenching plan. These efforts were completed with the full cooperation and agreement of all members of the Tiger Team, including Mr. Merritt. All members of the Tiger Team agreed to the Phase II trenching plan during face-to-face meetings prior to the beginning of Phase II trenching on October 25,

2011. At the request of the Non-Federal Sponsors the trench locations previously agreed upon were modified during field operations (including the rain-delay meeting held at Burger King). Each change was thoroughly vetted and agreed upon by the Tiger Team prior to implementation.

Field instructions and procedures did not substantially change during trenching operations as stated by Mr. Merritt regarding size of wood to be collected. Other than visual inspection, the primary intent of the large test trenches was to collect and measure the volume of objectionable or near-objectionable wood within the trenches. The Tiger Team exerted considerable physical effort to break up clay clods during trenching operations to attempt to locate and remove any objectionable or near-objectionable wood from the test trenches. The Tiger Team consistently removed all pieces of wood that could remotely be considered near-objectionable and thoroughly attempted so for every trench. Although specifically not the intent of the large test trenches, Tiger Team members removed obviously non-objectionable wood materials from the trenches. There was likely some variability in the size of the smallest size wood removed by some Tiger Team members (i.e. some members may not have collected small pieces of wood the size of a quarter or pinkie-finger sized pieces of wood while others did); however, any visible piece of wood remotely close to near objectionable was removed. Furthermore, it should be understood that the Bulk Samples were specifically obtained by the Tiger Team to investigate the small woody debris that was obviously non-objectionable.

After completion of “picking” of every trench the Tiger Team was asked as a group whether they were satisfied with the thoroughness of the picking. Only after all Tiger Team members were satisfied did we move to the next trench. It should be noted that at one trench a member of the Tiger Team expressed concern that the last trench was not as thoroughly picked as other trenches. Several Tiger Team members and a MVN representative remained at that location to perform additional picking until concerns were satisfied.

The Tiger Team discussed with MVN that proper backfilling of the inspection trenches would be required. There was some confusion early in the trenching process regarding the backfilling procedures. MVN engineering and construction divisions clarified the backfilling requirements with the Contractor and assured the Tiger Team that all trenches would be backfilled accordingly. While the Tiger Team did not search the entire QC record specifically for data regarding trench backfill, the team did find moisture/density testing results for at least some of the trench backfill operations.

The Tiger Team has documented any known sources of error during the investigation process. Any errors inferred to by Mr. Merritt in regards to the written plan have been documented to the best of our understanding and ultimately have had no impact on the professional engineering opinions rendered by the Tiger Team.

Comment #1 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #2 – Serious Outside Interference with Tiger Team

It is our firm opinion that there was no outside interference from the New Orleans District or the Contractor during performance of Tiger Team activities. The New Orleans District and the Contractor were cooperative throughout the investigation. During the course of the investigation communications between Tiger Team members and New Orleans District personnel occurred. These communications were a necessary part of the investigation and did not affect the ability of the Tiger Team members to render independent professional engineering opinions. Suggestions otherwise question the integrity of the Tiger Team members and are adamantly refuted and considered offensive.

Other than Mr. Merritt, no member of the Tiger Team was involved with the activities of SLFPA-W to collect samples from the trench cuttings after “picking” was complete. No member of the Tiger Team, other than Mr. Merritt, ever expressed any desire or need to perform any additional sampling of this post-inspection material. Furthermore, Mr. Merritt could not inform the other members of the Tiger Team of the plans of SLFPA-W regarding testing of these additional samples. It is our opinion that the trenching activities completed during Phase I and Phase II were completed following the procedures agreed to by the team and it is unlikely that objectionable sized debris remained in the cuttings after “picking”. Therefore, the volume of objectionable wood determined is considered to be accurate for each trench. It is noted that smaller than objectionable wood was to be measured by the Tiger Team in selective Bulk Samples.

The team was aware that SLFPA-W had obtained permission from MVN to collect these samples. And the collection of these companion samples is written into the Tiger Team Investigation Plan. However, it should be clarified that since the additional samples obtained by SLFPA-W were collected after inspection and sampling by the Tiger Team these samples cannot be considered “companion” samples. Consequently, the efforts on the part of Mr. Merritt to collect samples after “picking” are not considered to be part of any Tiger Team activities or of any real value. If anything, the activities on the part of Mr. Merritt to obtain these additional samples were a distraction to the Tiger Team. Regardless, the Tiger Team was unaware of any accusations by Mr. Merritt regarding interference to his efforts to collect these so called “companion” samples.

Safety was considered during all Tiger Team trenching activities. Daily safety briefings were held by the Contractor and MVN Construction Division representatives. The Contractor and MVN Construction representatives were vigilant in maintaining safe working conditions for the Tiger Team. Efforts to maintain safe activities were not considered to impact the functioning of the team. At a few trench locations the Tiger Team did not access the completed trench due to the depth of the excavation. However, cuttings were always inspected by experienced

geotechnical engineers at the completion of every trench. This inspection included an assessment of the shear strength of the material. Additionally, a verification boring program was implemented for the WBV 14C.2 project after completion of the trenching program to more accurately measure shear strengths of in-place materials.

Comment #2 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #2A – Tiger Team Was Lobbied For Outcomes

The Tiger Team was not provided with a fully defined scope of work at the onset of our investigation. The lack of the scope of work created significant inefficiency in the early stages of the investigation which necessitated more frequent interaction with New Orleans District officials.

Furthermore, some non-federal sponsor members of the tiger team had a prior history (in varying amounts) with this project, creating an unbalanced existing project knowledge base among the team. This prior history yielded apparent preconceived opinions that were voiced by some very early in the process. It appeared the New Orleans District wanted to provide their clarification and position to the entire team regarding existing issues so that all members of the team heard both perspectives during initial project orientation discussions. The continued presence of New Orleans District representatives during routine Tiger Team meetings extended past the point where their input was required. As this became more apparent New Orleans District officials were advised that the team would be meeting behind closed doors and they would be contacted as needed.

Mr. Merritt alludes to undue influences during field operations. He indicates that Mr. Kevin Wagner rushed the field investigations in such a manner that resulted in inadequate collection of objectionable wood. It is our opinion that Mr. Wagner in no way negatively impacted the trenching operations, including inspection of cuttings and collection of wood. In fact, Mr. Wagner was adamant that the Tiger Team take as much time as necessary to thoroughly inspect each trench. Mr. Wagner did on a few occasions try to facilitate improvement to the down-time that was occurring during movement between trenching sites, but in no way to the detriment of actual trenching and inspection efforts. In fact, his efforts to improve efficiencies were considered needed and appropriate. Mr. Wagner actively assisted in the inspection and collection process, and his efforts in the field improved the efficiency of the transition of the operation between trenches.

Mr. Merritt makes reference to “tag lines” being discussed onsite and included in the field log. The “tag lines” are in regards to seepage, stability, sand strata and good compaction. The Tiger Team agreed to include this information in the formal trenching log used for Phase II trenches because these are critically necessary observations that need to be considered during visual examinations. It would be obviously important to note any such concerns during the trenching so the issue(s) could be immediately discussed and investigated further if necessary. The geotechnical and construction experts selected for this team are all qualified to make these visual observations and render professional engineering opinions based on the observations. These observations and engineering opinions were clearly not final conclusions regarding the integrity of the entire levee but rather confirmation of any issues noted during visual inspection of each trench. It cannot be overstated that these observations and engineering opinions of trench

conditions based on the visual inspection are a critical factor in evaluating the overall performance of the levee.

It is our strong opinion that outside influences did not impact the professional engineering opinions rendered by USACE, USACE-consultant, CPRA, and CPRA-consultant Tiger Team members. While these team members have communicated with outside parties during the course of the investigation, each of these team members rendered independent professional opinions. They also conducted themselves in a professional manner as dictated by their professional engineering codes of conduct with each considering the health, safety and welfare of the public, first and foremost.

Comment #2A Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #3 – Haste Makes Waste

This opinion presented by Mr. Merritt is grossly exaggerated and misrepresents the facts. References should be made to rebuttal comments #1, #2, and #2A on closely related matters. It is our firm opinion that the team's investigation and report were not adversely impacted by any outside influences, including any alleged efforts to hasten the work of the team. The team itself was interested in making the investigation as efficient as possible so as to provide a timely response to the stakeholders, but never at the sacrifice of the quality of the investigation.

The references to alleged errors in surveying are not supported by any facts and to suggest that the use of a measuring wheel is more accurate than a surveying instrument is not justified.

The minor differences in trenching efficiency between operators were apparent to all members of the team, but ultimately did not impact the ability of the team to accurately complete sampling. Additional time and efforts were required by the team to thoroughly examine the trench cuttings during the one day with a different operator. However, it is our opinion that the methods used by the interim operator did not result in any undercounting of objectionable wood of any trench.

Comment #3 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #4 – Soft Levee Issues

A detailed response to Mr. Merritt’s comments regarding “soft levee issues” is unwarranted. These comments are a misrepresentation/misinterpretation of the data collected, a misapplication of fundamental engineering principals, and are inconsistent with the engineering analysis completed. Refer to Chapter 10 of the Tiger Team report for a discussion of the shear strength and stability of the levee. There are no “soft levee issues” revealed by this investigation.

Comment #4 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #5 – Snap Judgements

Mr. Merritt’s comments suggest tiger team members were making snap judgements during trenching operations, in particular regarding statements made in the field at the conclusion of each trench excavation. These post trenching comments are mentioned in several of his reserved comments. They are described as “tag lines” in comment #2a. See response above. No snap judgements were made by tiger team members. Visual inspection of the levee by qualified personnel was a critical part of the trenching operation, and discussion and documentation of those observations during the trenching was obviously appropriate.

It appears that Mr. Merritt considers his reservation of comments (until several months after trenching was completed) to be appropriate. However, the general theme of these comments appears to be an attack on the functioning of the team in perhaps an effort to discredit the work of the team. No evidence or technical argument is provided to support different findings than presented in the final report. Furthermore, “reserved” general statements by Mr. Merritt that the levee is too weak, too prone to seep, too wet, or too soft are simply not supported by the findings of this investigation.

Comment #5 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #6 - GPS Surveying

References to delays during use of the GPS survey equipment were minimal, only occurring on a few occasions over the course of weeks of inspections. These instances were manageable. Accuracy of the survey equipment utilized is discussed in Chapter 3 of the final report. This type equipment is commonly used for both vertical and horizontal control. While there may be other types of equipment or systems suited to perform this type investigation, the GPS equipment is considered a viable choice for use in this investigation. The reported 10” discrepancy between a measuring wheel (can be widely variable accuracy) referencing temporary station markers (which were not checked to see if this particular stake was still accurate) vs the GPS equipment was not considered a basis to question the use of this survey equipment.

Comment #6 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #7 – Levee Seepage Issues

Refer to Chapter 10, 11, and 12 of the report for detailed analyses, conclusions, and recommendations that serve as a response to these reserved comments.

Comment #7 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #8 – Operation and Maintenance Issues

Refer to Chapter 11 and 12 of the report for detailed conclusions and recommendations that serve as a response to these reserved comments, in particular sections on Safety and TRM. Additionally, the backfill of the inspection trenches was specified to the same standards as the earlier work performed under this contract and should not result in any additional operation and maintenance concern. It should also be noted that the example “debris was so prolific that attempts to complete one of a few bulk samples had to move to another location...” is not an accurate statement. This bulk sample was relocated when the excavation encountered the edge of existing geosynthetic fabric that was installed in prior levee construction. This fabric is not considered debris.

Comment #8 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #9 – Significance of Shells

This opinion presented by Mr. Merritt is of academic interest but has little or no practical application to the Tiger Team effort. As indicated by Mr. Merritt, it was not determined whether the shell derived from the natural deposits beneath the levee, from the fill materials in the old levee or from the off-site borrow source. An understanding of the geologic history of a site is important to the proper design of a levee and, accordingly, a geologic interpretation of site specific subsurface data was completed during the initial stage of levee design. The engineering properties of soils from the various depositional environments identified through geologic interpretation were evaluated based on laboratory testing. Deposits having the greatest impact on levee design and performance were identified through geologic interpretation and characterized by laboratory testing.

Comment #9 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz

Reserved Comment #10 – Geophysics

The selected method of geophysical investigation was determined by MVN with consultation with the USACE Engineer Research and Development Center. Results were furnished to the Tiger Team for our use during our investigation.

Comment #10 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #11 – Objectionable Material

The embankment specifications were discussed at much length among the tiger team as well as in meetings with the New Orleans District. It was determined that the specifications were lacking in regard to verification and enforcement of the 1% objectionable wood limitations. New Orleans District explained their interpretation and methods implemented during construction to assure compliance with the intent of the specifications. It was noted that 100% removal of all objectionable wood was not possible given the nature of earthen levee construction, and that if all visible objectionable sized pieces of wood were removed, the remaining wood should be within the 1% allowed by the contract. The tiger team's investigations established inspection and testing methods to evaluate the actual success of those efforts regarding the specified limit. Those results showed that the efforts did generally result in compliance with the contract requirements as interpreted by the New Orleans District, including the 1% allowable objectionably sized wood. This is discussed in detail in the final report. Furthermore, the team does recommend numerous changes to the current guide specification to address this matter, as reflected in Chapter 12 of the Final Report.

Regarding the acceptability of the as constructed and contractual 1% limit on this current project, the team performed extensive trenching inspections to verify the quality of the as constructed levee. While the worst woody debris locations were considered undesirable for a general guide specification limit for allowable wood, this levee was constructed with a heavy clay, well blended, well compacted, with all wood debris isolated and fully encapsulated in the clay. There were no performance issues related to objectionably sized wood identified either through observations or analysis.

Comment #11 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #12 – Careless and Inconsistent Construction Project Administration

Records reviewed by this team do not support the opinion that inattention, carelessness, and slack in the construction process occurred. See Chapter 8, 11, and 12 for analysis of QA/QC processes, conclusions and recommendations. Additionally, the on site observations by this team did not suggest any lack of commitment to safety standards by MVN or contractor personnel. In fact, daily safety meetings were conducted prior to starting work, and safety guidance was often issued during the course of daily events. The incident regarding the overhead telephone line being knocked down was a potentially serious matter; however, this operator had been observed working for numerous hours on numerous days without any hint of a lack of proper safety attitude and had exhibited excellent operator qualifications. This incident combined with other observations while on site did not support any conclusion that there was a poor effort by USACE or the contractor regarding safety standards or a lack of sound construction project administration. Alleged environmental “spill” concerns and that “contractor disposed of construction trash in Tiger Team trenches” were not observed by any other members of the team.

Comment #12 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #13 – Grubbing Issues

Reference is made to Chapter 11 of the report. The contract specifications, including the grubbing requirements, did not address removal of debris as now recognized in the area of station 39+00, as alluded to in this reserved comment. This debris field was not shown on the contract plans. The contract documents would have required additional information and details regarding area and depths of excavation and disposal of waste materials for removal of debris such as this. Additionally, Mr. Merritt’s reference to a “vertical pipe protrusion” was not recognized by other team members during the investigation, nor is it considered a basis to declare a violation of the grubbing specifications. No such pipe protrusion was identified on the contract drawings, and the contractor would have anticipated only stripping of grass to comply with grubbing specifications in this area. There is no indication anyone was aware during construction of this pipe protrusion reported by Mr. Merritt. Regarding the resolution of the debris field issues, a recommendation is included in Chapter 12 of the report advising that MVN should fully investigate to determine if any remedial actions are required. Furthermore, regarding the statement that the “contractor has abundantly incorporated rubbish as a building material in this project” is not supported by the findings of this team’s investigation. The levee degrade material was shown to be “cleaner” than the existing, undisturbed levee material, proving that the contractor did have a program for removal of objectionable debris.

Comment #13 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

Reserved Comment #14 – Levee Settlement Issues

Refer to Chapter 10, 11, and 12 of the report for detailed analyses, conclusions, and recommendations that serve as a response to these reserved comments. Also, it should be noted there are no failures of construction project management related to unit weight of fill. In fact, the increased unit weights are due to achieving compacted densities higher than the minimum specified contract requirements. Furthermore, the backfill of the inspection trenches was constructed to the same standards as the earlier work performed under this contract.

Comment #14 Undersigned: Brad Arcement, Tim Shows, Lanny Barfield, Eddie Templeton, Mike Wielputz, Patrick Conroy

CPRA Response to MM Reserved Comments

Mr. Merritt provided his “Reserved Comments” to the Tiger Team late March 2012. The responses to the reserved comments represent the opinions of the undersigned Tiger Team members. While the CPRA representatives may agree with the general basis of the USACE responses to the MM Reserved Comments the inflammatory tone and divisive language do not represent the opinion of the CPRA representatives of the Tiger Team. A response to each of Mr. Merritt’s reserved comments is provided below. The responses below do not address every remark/anecdote/opinion expressed in the “Reserved Comments” but attempt to address our understanding of the primary issues represented.

Reserved Comment #0 – Executive Summary

See responses on individual comments below.

Reserved Comment #1 – Lack of a Written Plan

It is the opinion of the CPRA representative and CPRA Consultants that the lack of a written plan was problematic in the outset of the WBV 14c.2 Investigation due to the serious nature of the issue in question. The initial trenching plan submitted to the NFS lacked many of the details required to form a technical opinion on the wood content of the levee and did not cover any of the logistics of the trenching operations. In order to validate the results of the trenching operations CPRA and SLPWA submitted technical recommendations to the USACE to include in the initial trenching operations. These recommendations were not immediately included into the trenching plan but most of the recommendations were eventually included after the first Tiger Team meeting. At this meeting it was determined that the best path forward was to create a Phase I plan that would be adjusted based on the field experience to create the Phase II investigation plan. The differences in the investigation methods used in the Phase I and Phase II trenches are documented in the Tiger Team report. After holding the initial meeting with the Tiger Team members and discussing the proposed path forward CPRA representatives were agreeable to proceeding with the Investigation Plan without having the Phase II finalized.

Comment #1 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #2 – Serious Outside Interference with Tiger Team

It is the opinion of the CPRA representatives that there is no evidence to support the idea that there was any outside interference from the USACE or USACE Contractor during the performance of Tiger Team activities.

Comment #2 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #2A – Tiger Team Was Lobbied For Outcomes

The Tiger Team was not provided with a fully defined scope of work at the onset of our investigation. The lack of the scope of work created significant inefficiency in the early stages of the investigation which necessitated more frequent interaction with New Orleans District officials.

Furthermore, some non-federal sponsor members of the tiger team had a prior history (in varying amounts) with this project, creating an unbalanced existing project knowledge base among the team. This prior history yielded apparent preconceived opinions that were voiced by some very early in the process. It appeared the New Orleans District wanted to provide their clarification and position to the entire team regarding existing issues so that all members of the team heard both perspectives during initial project orientation discussions. The continued presence of New Orleans District representatives during routine Tiger Team meetings extended past the point where their input was required. As this became more apparent New Orleans District officials were advised that the team would be meeting behind closed doors and they would be contacted as needed.

Mr. Merritt alludes to undue influences during field operations. He indicates that Mr. Kevin Wagner rushed the field investigations in such a manner that resulted in inadequate collection of objectionable wood. It is our opinion that Mr. Wagner in no way negatively impacted the trenching operations, including inspection of cuttings and collection of wood. In fact, Mr. Wagner was adamant that the Tiger Team take as much time as necessary to thoroughly inspect each trench. Mr. Wagner did on a few occasions try to facilitate improvement to the down-time that was occurring during movement between trenching sites, but in no way to the detriment of actual trenching and inspection efforts. In fact, his efforts to improve efficiencies were considered needed and appropriate. Mr. Wagner actively assisted in the inspection and collection process, and his efforts in the field improved the efficiency of the transition of the operation between trenches.

Mr. Merritt makes reference to “tag lines” being discussed onsite and included in the field log. The “tag lines” are in regards to seepage, stability, sand strata and good compaction. The Tiger Team agreed to include this information in the formal trenching log used for Phase II trenches

because these are critically necessary observations that need to be considered during visual examinations. It would be obviously important to note any such concerns during the trenching so the issue(s) could be immediately discussed and investigated further if necessary. The geotechnical and construction experts selected for this team are all qualified to make these visual observations and render professional engineering opinions based on the observations. These observations and engineering opinions were clearly not final conclusions regarding the integrity of the entire levee but rather confirmation of any issues noted during visual inspection of each trench. It cannot be overstated that these observations and engineering opinions of trench conditions based on the visual inspection are a critical factor in evaluating the overall performance of the levee.

It is our strong opinion that outside influences did not impact the professional engineering opinions rendered by USACE, USACE-consultant, and CPRA Tiger Team members. While these team members have communicated with outside parties during the course of the investigation, each of these team members rendered independent professional opinions. They also conducted themselves in a professional manner as dictated by their professional engineering codes of conduct with each considering the health, safety and welfare of the public, first and foremost.

Comment #2A Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #3 – Haste Makes Waste

References should be made to rebuttal comments #1, #2, and #2A on closely related matters. It is our firm opinion that the team's investigation and report were not adversely impacted by any outside influences, including any alleged efforts to hasten the work of the team. The team itself was interested in making the investigation as efficient as possible so as to provide a timely response to the stakeholders, but never at the sacrifice of the quality of the investigation.

The references to alleged errors in surveying are not supported by any facts and to suggest that the use of a measuring wheel is more accurate than a surveying instrument is not justified.

The minor differences in trenching efficiency between operators were apparent to all members of the team, but ultimately did not impact the ability of the team to accurately complete sampling. Additional time and efforts were required by the team to thoroughly examine the trench cuttings during the one day with a different operator. However, it is our opinion that the methods used by the interim operator did not result in any undercounting of objectionable wood of any trench.

Comment #3 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #4 – Soft Levee Issues

CPRA Representatives agree that a comprehensive engineering analysis has been performed on all data available for the WBV 14c.2 levee and have been adequately addressed in this report. Refer to Chapter 10 of the Tiger Team report for a discussion of the shear strength and stability of the levee. There are no “soft levee issues” revealed by this investigation.

Comment #4 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #5 – Snap Judgements

CPRA representatives do not believe that any snap judgements were made during the trenching operations, in particular regarding statements made in the field at the conclusion of each trench excavation. These statements were visual inspections of the levee by qualified engineers and appropriate to the investigation.

Comment #5 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #6 - GPS Surveying

References to delays during use of the GPS survey equipment were minimal, only occurring on a few occasions over the course of weeks of inspections. These instances were manageable. Accuracy of the survey equipment utilized is discussed in Chapter 3 of the final report. This type equipment is commonly used for both vertical and horizontal control. While there may be other types of equipment or systems suited to perform this type investigation, the GPS equipment is considered a viable choice for use in this investigation. The reported 10” discrepancy between a measuring wheel (can be widely variable accuracy) referencing temporary station markers (which were not checked to see if this particular stake was still accurate) vs the GPS equipment was not considered a basis to question the use of this survey equipment.

Comment #6 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #7 – Levee Seepage Issues

Refer to Chapter 10, 11, and 12 of the report for detailed analyses, conclusions, and recommendations that serve as a response to these reserved comments.

Comment #7 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #8 – Operation and Maintenance Issues

Refer to Chapter 11 and 12 of the report for detailed conclusions and recommendations that serve as a response to these reserved comments, in particular sections on Safety and TRM. However, USACE should confirm that all Tiger Team trenches were backfilled in accordance with appropriate standards and documented with QA/QC testing. It should also be noted that the example “debris was so prolific that attempts to complete one of a few bulk samples had to move to another location...” is not an accurate statement. This bulk sample was relocated when the excavation encountered the edge of existing geosynthetic fabric that was installed in prior levee construction. This fabric is not considered debris.

Comment #8 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #9 – Significance of Shells

This opinion presented by Mr. Merritt is of academic interest but has little or no practical application to the Tiger Team effort. As indicated by Mr. Merritt, it was not determined whether the shell derived from the natural deposits beneath the levee, from the fill materials in the old levee or from the off-site borrow source. An understanding of the geologic history of a site is important to the proper design of a levee and, accordingly, a geologic interpretation of site specific subsurface data was completed during the initial stage of levee design. The engineering properties of soils from the various depositional environments identified through geologic interpretation were evaluated based on laboratory testing. Deposits having the greatest impact on levee design and performance were identified through geologic interpretation and characterized by laboratory testing.

Comment #9 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #10 – Geophysics

The selected method of geophysical investigation was determined by MVN with consultation with the USACE Engineer Research and Development Center, however, no written justification was provided for the selection of the geophysical testing methods. In general, the trenches are more valuable and sufficient to identify the scope and nature of woody debris in the levee section. Results of the draft geophysical investigation were furnished to the Tiger Team for our use during our investigation.

Comment #10 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #11 – Objectionable Material

The embankment specifications were discussed at much length among the tiger team as well as in meetings with the New Orleans District. It was determined that the specifications were lacking in regard to verification and enforcement of the 1% objectionable wood limitations. New Orleans District explained their interpretation and methods implemented during construction to assure compliance with the intent of the specifications. It was noted by Mr. Glenn Gremillon that 100% removal of all objectionable wood was not possible given the nature of earthen levee construction, and that if all visible objectionable sized pieces of wood were removed, the remaining wood should be within the 1% allowed by the contract. The tiger team's investigations established inspection and testing methods to evaluate the actual success of those efforts regarding the specified limit. Those results showed that the efforts did generally result in compliance with the contract requirements as interpreted by the New Orleans District, including the 1% allowable objectionably sized wood. This is discussed in detail in the final report. Furthermore, the team does recommend numerous changes to the current guide specification to address this matter, as reflected in Chapter 12 of the Final Report.

Regarding the acceptability of the as constructed levee and contractual 1% limit of objectionable wood debris on this current project, the team performed extensive trenching inspections to verify the quality of the as constructed levee. While the worst woody debris locations were considered undesirable for a general guide specification limit for allowable wood, this levee was constructed with a heavy Clay, well blended, well compacted, with all wood debris isolated and fully encapsulated in the clay.

Comment #11 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #12 – Careless and Inconsistent Construction Project Administration

Records reviewed by this team do not support the opinion that inattention, carelessness, and slack in the construction process occurred. See Chapter 8, 11, and 12 for analysis of QA/QC processes, conclusions and recommendations. Additionally, the on site observations by this team did not suggest any lack of commitment to safety standards by MVN or contractor personnel. In fact, daily safety meetings were conducted prior to starting work, and safety guidance was often issued during the course of daily events. The incident regarding the overhead telephone line being knocked down was a potentially serious matter; however, this operator had been observed working for numerous hours on numerous days without any hint of a lack of proper safety attitude and had exhibited excellent operator qualifications. This incident combined with other observations while on site did not support any conclusion that there was a poor effort by USACE or the contractor regarding safety standards or a lack of sound construction project administration. Environmental “spill” concerns and that “contractor disposed of construction trash in Tiger Team trenches” were not observed by any other members of the team.

Comment #12 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #13 – Grubbing Issues

Reference is made to Chapter 11 of the report. The contract specifications, including the grubbing requirements, did not address removal of debris as now recognized in the area of station 39+00, as alluded to in this reserved comment. This debris field was not shown on the contract plans. The contract documents would have required additional information and details regarding area and depths of excavation and characterization of wastes for disposal of waste materials for removal of debris such as this. Additionally, Mr. Merritt's reference to a "vertical pipe protrusion" was not recognized by other team members during the investigation, nor is it considered a basis to declare a violation of the grubbing specifications. No such pipe protrusion was identified on the contract drawings, and the contractor would have anticipated only stripping of grass to comply with grubbing specifications in this area. There is no indication anyone was aware during construction of this pipe protrusion reported by Mr. Merritt. Regarding the resolution of the debris field issues, a recommendation is included in Chapter 12 of the report advising that MVN should fully investigate to determine if any remedial actions are required. Furthermore, regarding the statement that the "contractor has abundantly incorporated rubbish as a building material in this project" is not supported by the findings of this team's investigation. The levee degrade material was shown to be "cleaner" than the existing, undisturbed levee material, proving that the contractor did have a program for removal of objectionable debris.

Comment #13 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie

Reserved Comment #14 – Levee Settlement Issues

Refer to Chapter 10, 11, and 12 of the report for detailed analyses, conclusions, and recommendations that serve as a response to these reserved comments. Also, it should be noted there are no failures of construction project management related to unit weight of fill. In fact, the increased unit weights are due to achieving compacted densities higher than the minimum specified contract requirements. Furthermore, the backfill of the inspection trenches was constructed to the same standards as the earlier work performed under this contract.

Comment #14 Undersigned: Rickey Brouillette, Jas Singh, David St. Marie