

Comment Report: All Comments

Project: East St. Louis Flood Protection

Review: East St Louis IEPR for LRR

Displaying 20 comments for the criteria specified in this report.

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Id	Discipline	Section/Figure	Page Number	Line Number
3434889	Environmental	n/a'	Comment #1	n/a
<p>(Document Reference: Significance - High)</p> <p>Potential hazardous, toxic, and radioactive waste (HTRW) considerations could affect cost, scheduling, and implementation of the tentative recommended plan and should be addressed prior to construction.</p> <p>(Attachment: East St Louis Final Panel Comment 1.doc)</p> <p>Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10</p> <p>Revised 04-Aug-10.</p>				
1-0	<p>Evaluation Concurred</p> <p>CONCUR: Unanticipated HTRW conditions have the potential to impact project costs, schedule, and implementation. The Phase 2 Environmental Site Assessment (ESA) will be completed and applicable HTRW design considerations will be addressed prior to construction. However, the LRR will not be expanded at this time as the details of the assessment have not been finalized. Therefore, the responses to the Recommendation(s) for Resolution to expand the LRR state "NOT ADOPT", but provide additional details of current HTRW efforts on the Phase 2 ESA. 1 a. NOT ADOPT: As described in Appendix H of the LRR, a portion of the project runs just west of one and through a second Superfund site (Sauget Area 1 and Sauget Area 2), and west of a RCRA site. As stated in the LRR, the flow from the 13 relief wells planned for this part of our project area will be conveyed to a treatment facility. Based upon the Phase I ESA and coordination meeting with IEPA, USEPA, and IDNR, the extent of potential HTW in the area extends from the East St. Louis Pump Station (1110+00) to the south flank (1312+60). The primary area of concern is within decision segments 1144+30 to 1193+80, in these areas the HTRW design is to convey discharges to a treatment facility as described in the LRR. While the number of contaminants in this area have been reduced to include primarily chlorobenzenes, benzene, chlorophenols, p-chloroaniline, 2,4-D, and PCBs, the approach being taken is to screen the entire area of potential concern (1110+00 to 1312 +60) for the myriad of historic contaminants identified. The Phase 2 ESA will have 24 monitoring wells (8 clusters) of sampling wells, There will be three wells in each cluster that will allow soil and groundwater sampling in the shallow, medium-depth and deep parts of the aquifer. The Phase 2 ESA will be completed prior to construction. 1 b. NOT ADOPT: Specific disposal options for contaminated soils and groundwater will be identified as part of the Phase 2 ESA prior to construction as needed. HTRW disposal will be the responsibility of the local sponsor. 1 c. NOT ADOPT: HTRW design details will be completed prior to construction based upon results of Phase 2 ESA as needed. 1 d. NOT ADOPT: As described in Appendix H, the Corps is coordinating HTRW issues with EPA (state and federal), other regulatory agencies (IDNR, USFWS), and local stakeholders (American Bottoms issues including the Phase 2 ESA (locations, Sampling and Analysis Plan, Site Safety and Health Plan, etc.). In addition the Phase 2 ESA is being coordinated with local stakeholders (MESD, ABRWTF, and SWIFPD).</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>			
1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>			
Current Comment Status: Comment Closed				
3434989	Geotechnical	n/a'	Comment #2	n/a
<p>(Document Reference: Significance - High)</p> <p>All potential modes of levee failure and the transition between various levee system components need to be evaluated in the design.</p> <p>(Attachment: East St Louis Final Panel Comment 2.doc)</p>				

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0 Evaluation Non-concurred
 Final Panel Comment #2: DO NOT CONCUR CEMVS' experience at the MESD levee (as well as all other levees within the District's boundaries) during the 1993 300-yr Mississippi River flood was that the vast majority of problems were related to underseepage. Few if any issues of slope stability were reported in the district. This Limited Reevaluation Report is approved to address seepage related issues described in a previous General Design Memorandum. The local sponsor has hired a private engineering firm to evaluate the levee for compliance with FEMA 100-year flood certification. That firm will be responsible for evaluating other failure mechanisms 1a. Adopted: Levee through seepage was not observed to be universal problem through the MESD project during the 1993 flood. Discussion of observations and potential solutions for through seepage observed at the 'Phillips Reach' will be added to Geotechnical appendix and to the main report. 1b. Do Not Adopt: Although some minor instabilities have occurred on the landside slope of the MESD main stem and upper flank levees, CEMVS does not believe that these rise to a significant enough level to warrant full study status. But in a portion of the MESD lower flank (station 1390+00 to 1530+00), CEMVS believes a significant slope stability problem does exist and this reach is addressed in the "Alton to Gale Deficiency Study". This study is referred to in paragraph 4.4 of the main report. 1c. Do Not Adopt: I-wall issues are beyond the scope of this LRR. Although no issues related to T-wall or I-wall distress were reported during the 1993 flood, the project I-walls were inventoried and analyzed in the aftermath of Katrina in 2006 per the Corps revised interim I-wall guidance. In the summer of 2006, the St. Louis District, under a Phase I inspection, visually inspected and identified all I-walls with heights 6 feet or greater on the protected side. The inspections found nothing of concern relative to conditions that caused failures in New Orleans for the I-walls greater than 6 feet in height. The CEMVS report (in the subsequent Phase II study) concluded that the evaluation of the I-Walls in the East St. Louis Floodwall Project indicated no issues or deficiencies for the St. Louis District existing I-Walls using the "Phase II Interim Guidance for Evaluating Existing I-Walls." 1d. Do Not Adopt: See response to previous recommendation. 2. Adopt in the Future: CEMVS will identify and include additional remedial measures as appropriate in the plans and specifications phase of this project.

Submitted By: [Jessica Nies](#) (314-331-8034) Submitted On: 19-Aug-10

1-1 Backcheck Recommendation Close Comment
 Concur The Panel concurs that the issues identified in the recommendations for resolution are not within the scope of the LRR. Nonetheless these are important issues relative to levee safety. The Panel also concurs that the private engineering firm performing evaluations in support of the FEMA 100-year certification will be responsible for evaluating failure mechanisms other than under seepage.

Submitted By: [Julian Digialleonardo](#) (561-656-6303) Submitted On: 27-Aug-10

Current Comment Status: Comment Closed

3435066	Civil	n/a'	Comment #3	n/a
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(Document Reference: Significance - High)

The Chain of Rocks levee is not included in the Limited Reevaluation Report (LRR), although it is part of the overall levee system protecting the Metro East Area and must be able to be certified as providing 100-year flood protection.

(Attachment: [East St Louis Final Panel Comment 3.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0 Evaluation Concurred
 Final Panel Comment 3: CONCUR The Chain of Rocks levee was described on drawings and in the text in the June 2010 Draft Limited Reevaluation Report. It states that the Chain of Rocks levee is Federally owned. However the draft LRR did not include a description of the construction and operation of the Chain of Rocks levee, problems at the levee, or the status of studies and projects to address these problems. We agree that additional information will improve the LRR and have revised the final LRR. 1. ADOPT IN PART. The Recommendation is to add one all-encompassing section on the Chain of Rocks levee to the report. We added additional information in two locations of the final LRR, a paragraph on the Chain of Rocks Design Deficiency Correction Project in the section entitled DISCUSSION OF PRIOR STUDIES, REPORTS, AND EXISTING WATER PROJECTS, and additional discussion in the section entitled NEED FOR 100-YEAR CERTIFICATION IN METRO EAST AREA. The paragraph discusses the Federal construction of the Chain of Rocks levee and its operation and maintenance responsibilities, the 1997 Design Deficiency Report, the problems with the levee, and the status of the ongoing Federally-funded project to

		correct the deficiencies. The other discussion covers the relationship of the Chain of Rocks levee with the effort to get 100-year flood certification in the Metro East area to comply with the FEMA program. The St. Louis District believes that this new information, along with the drawings showing the Chain of Rocks levee and other references to the levee in the report, give the reader sufficient information to understand how the work on the Chain of Rocks levee fits in with the proposed design deficiency correction project for the MESD levee.		
		Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10		
1-1	Backcheck Recommendation Close Comment Concur			
		Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10		
		Current Comment Status: Comment Closed		
3435096	Geotechnical	n/a'	Comment #4	n/a
(Document Reference: Significance - High)				
Constructability of the clay-filled trench option needs to be reconsidered relative to adverse subsurface conditions as they potentially affect construction risk.				
(Attachment: East St Louis Final Panel Comment 4.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1-0	Evaluation Concurred	Final Panel Comment #4. CONCUR Existent conditions described by the panel will certainly adversely affect the construction of the clay-filled trench. 1. Adopt: A section dealing with potential impacts of high water table conditions on the construction of the shallow clay cutoff will be included in the Geotechnical Appendix. 2. Adopt in the Future. During the plans and specifications phase, CEMVS will determine the conditions existent at this site. If conditions remain problematic for use of the shallow clay filled trench, CEMVS will consider a slurry trench cutoff dug with hydraulic excavator.		
		Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10		
1-1	Backcheck Recommendation Close Comment Concur			
		Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10		
		Current Comment Status: Comment Closed		
3435099	Geotechnical	n/a'	Comment #5	n/a
(Document Reference: Significance - High)				
The selection of a cement bentonite (CB) wall as compared to other cut-off wall types is not well supported.				
(Attachment: East St Louis Final Panel Comment 5.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1-0	Evaluation Concurred	Final Panel Comment #5: CONCUR 1. Do Not Adopt: The 'Site R' SB wall was designed by private AE for the purpose of confining ground water borne contaminates, not for reducing underseepage. Design of this wall is proprietary and its details are unavailable to the Corps. 2. Adopt in Future: Paragraph 'm' in section 5.6 of the Main Report provides proposals accepted by the VE study. Proposal 2 of the VE study recommends moving the slurry trench cutoff from the levee centerline to the area beyond the riverside, levee toe. The evaluation of this VE proposal is on-going and will ultimately consider constructability issues of various wall alternatives. 3. Adopt in Future: As part of the evaluation of the VE Proposal #2, slope stability analyses of the slurry trench located riverside of the levee are on-going. 4. Adopt in Future: Depth of cutoffs located riverside of the levee will be 80 to 110-feet deep. Current, practical limits for DSM are apparently 100-feet. CEMVS is very familiar with the success of DSM in the soft, marine clay environment in New Orleans. It was that success that prompted CEMVS to use DSM to correct an issue in a project located 20-miles south of the MESD project on the Mississippi River. The		

prime contractor, Hayward-Baker encountered significant problems with the stiff, CH clays and the cobbles/boulders present in the Mississippi riverine environment. New, emerging technology for wall construction such as DMM (Deep Mixing Methods), TRD (Trench Re-Mixing and Cutting Deep Wall method), and CSM (Cutter Soil Mix) will be considered. 5. Already Adopted: The levee construction pre-dates most of the industrial development in the area and the proposed centerline location of the cutoff wall eliminates contact with contaminated soils. Costs of disposal of clean soils and an assumed percentage of contaminated soils excavated from the slurry trench are considered in the M-CASES estimate. Although the proposed centerline location of the cutoff wall eliminates contact with contaminated soils, there is a chance that contaminated groundwater will be encountered during the wall excavation. The Phase II environmental groundwater study will reveal more information on this potential. These costs will be considered in future design phases.

Submitted By: [Jessica Nies](#) (314-331-8034) Submitted On: 19-Aug-10

1-1 Backcheck Recommendation Close Comment
Concur

Submitted By: [Julian Digialleonardo](#) (561-656-6303) Submitted On: 27-Aug-10

Current Comment Status: **Comment Closed**

3435163	Cost Engineering	n/a'	Comment #6	n/a
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(Document Reference: [Significance - Medium](#))

The assumptions and rationale used to perform the cost analysis for the LRR need to be more specific and detailed to fully understand the basis for their development.

(Attachment: [East St Louis Final Panel Comment 6.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0 Evaluation Non-concurred

Non-concur The contingency factor of 80% confidence is a directive by Headquarters. Although the confidence level percentage can be waived by the District Commander under normal circumstances the guidance from headquarters is an adapted standard. The Cost Engineering Directory of Expertise for Civil Works has completed the ATR review for the LRR Cost Estimate and Cost and Schedule Risk Analysis and has certified the project costs presented in the total project cost summary (TPCS). ER 1110-2-1150, ER1110-2-1302, and ETL 1110-2-573 govern the civil works contingency development using risk-based principles. Established contingency values must be risk based. The Cost Engineering DX developed and maintains a risk analysis guidance document that presents an acceptable CSRA process. The formal CSRA is required for project estimates greater than the current established cost threshold. The CSRA process includes the efforts of the PDT and considers risks and opportunities, both internal and external, which can potentially affect the project execution success related to budget and schedule. The recommended contingency schedule length of 87 months is based on the 80% confidence level. The basis of all cost and schedule risks are described on the risk register. The risk register is the basis for the development of the cost and risk models that determine the level of risk. All of these documents were provided to the reviewers for their information. Detailed project specific engineering and cost estimating assumptions are documented in the detailed cost estimate. The decision not to show the detailed notes in the published document is based on COE Cost Estimating guidance of what level of detail to include in a document out for public review. Some of this information is considered proprietary and should not be released to the public. The MII file that included the detailed assumptions was provided to the reviewers for their information. 1. NOT ADOPT As stated above detailed project specific cost information may contain sensitive or proprietary information, is considered FOUO and will not be shown in cost documents released to the public. Any specific cost information required for the review of the cost estimate will be provided upon request. 2. NOT ADOPT There is no relationship between the Primavera project schedule and the schedule risk analysis. 3. NOT ADOPT All information related to the risk analysis and cost contingencies is documented in the Cost and Schedule Risk Analysis Report.

Submitted By: [Jessica Nies](#) (314-331-8034) Submitted On: 19-Aug-10

1-1 Backcheck Recommendation Close Comment
Concur After reviewing the additional information provided, the assumptions were listed in the MII file by the appropriate activity. The Panel understands there is no direct relationship between the project schedule and the risk analysis schedule; however, prudence requires a reality check to verify the viability of the analysis to the planned work effort. Further, the Panel acknowledges that there is information related to the risk analysis and cost

	contingencies in the Cost and Schedule Risk Analysis Report.			
	Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10			
	Current Comment Status: Comment Closed			
3435177	Civil	n/a'	Comment #7	n/a
(Document Reference: Significance - Medium)				
The LRR needs to address the rationale for the use of semi-pervious berms or the possibility of using other types of berm fill.				
(Attachment: East St Louis Final Panel Comment 7.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1-0	Evaluation Concurred			
	Final Panel Comment #7: CONCUR CEMVS-EC-G is certainly aware of the other classes of seepage berms including impervious-berms, sand-berms, and free-draining berms. 1. Adopt: The following discussion will be added to the Geotechnical Appendix: CEMVS traditionally only designs/constructs semi-pervious berms. The impervious berms will be much larger/wider than the semi-pervious berms considered by the report and are known to be much more expensive and thus be economically infeasible. To meet the assumptions implicit in Mansur/Kaufmans sand-berm theory, the sand-berm must be constructed of a very clean sand that causes little or no head loss to internal flow in the berm. CEMVS considers this to be nearly impossible to achieve and thus does not design sand-berms. Free-draining berms require very permeable layers (gravel or sand) or perforated-pipe collection systems to be installed at the base of the berm. The trade-offs in smaller berms will be offset by higher design and construction costs. CEMVS anticipates that berm construction will be done using commercially available sands. These sands will include a certain amount of silty fines that easily fall within the permeability assumptions implicit in the semi-pervious berm analyses. 2. Adopt: A discussion of the assumed location of the sand borrow (commercially available) will be included in the Geotechnical Appendix. CEMVS-EC-G is assuming that these sands are appropriate for use in semi-pervious berms.			
	Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10			
1-1	Backcheck Recommendation Close Comment			
	Concur			
	Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10			
	Current Comment Status: Comment Closed			
3435179	Geotechnical	n/a'	Comment #8	n/a
(Document Reference: Significance - Medium)				
The subsurface exploration program supporting the seepage analysis should be expanded prior to final design to supplement the available subsurface information.				
(Attachment: East St Louis Final Panel Comment 8.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1-0	Evaluation Non-concurred			
	Final Panel Comment #8. DO NOT CONCUR Additional geotechnical exploration will be completed to supplement the final design of the underseepage control measures suggested by the report. No exploration will be completed to support slope stability analyses of the existing MESD levee (see response to Comment #2). 1. Do Not Adopt: Additional exploration and testing (including strength testing) will be completed riverside of the levee to support final design of the slurry trenches recommended by evaluation of the VE comments. Additional exploration is on-going and will be completed to determine if the flow line of the Cahokia Diversion Canal (adjacent to the MESD Upper Flank) and the Prairie DuPont Canal (adjacent to the Lower Flank) is/is-not directly connected to the American Bottom Aquifer. Additional landside exploration to support the final design of the landside seepage berm in the vicinity of the "Dead Creek". Additional exploration to complete final design of relief wells recommended in the report.			

	Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10			
1 -1	Backcheck Recommendation Close Comment Concur Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10			
	Current Comment Status: Comment Closed			
3435244	Economics	n/a'	Comment #9	n/a
(Document Reference: Significance - Medium)				
It is unclear how the benefits were derived for each alternative, and the methods for performing the benefit analysis were not fully described and supported.				
(Attachment: East St Louis Final Panel Comment 9.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1 -0	Evaluation Concurred Comment #9 CONCUR: Report will be expanded with additional explanation of benefit estimation and methodology used to further support the Recommended Plan. #1: Adopt: Three 'classes' of outcomes will be explained in detail within UNSATISFACTORY LEVEE PERFORMANCE AND ECONOMIC CONSEQUENCES Section #2: Adopt: First-floor evaluation will be detailed and inventory of property by category provided in table form within INDUSTRIAL, COMMERCIAL, RESIDENTIAL AND RELATED INUNDATION DAMAGES Section. #3: Adopt: Depth-damage tables used in HEC-FDA and aggregate stage vs. damage relationship will be discussed in detail within INDUSTRIAL, COMMERCIAL, RESIDENTIAL AND RELATED INUNDATION DAMAGES Section. #4: Adopt: Omission of potential benefit categories Agriculture and Future Development will be explained within INDUSTRIAL, COMMERCIAL, RESIDENTIAL AND RELATED INUNDATION DAMAGES Section. #5: Adopt: Further explanation of terms (development and purposes) will be provided throughout report where necessary. Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10			
1 -1	Backcheck Recommendation Close Comment Concur While the focus of the remedial work to be performed should be upon the recommended actions, some attention should be paid to the list of concerns that gave rise to the comment. It is expected that the additional work will suffice to alleviate these concerns. However, should that not prove to be the case, additional work should be performed for any item that was not included in the recommended actions. Specifically, those items are the flood fighting costs, risk and uncertainty, and total damage estimates for rare events. Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10			
	Current Comment Status: Comment Closed			
3435249	Environmental	n/a'	Comment #10	n/a
(Document Reference: Significance - Medium)				
The cumulative effects analysis has been restricted to the project along with its operation and maintenance; the broader consequences of the project need to be considered.				
(Attachment: East St Louis Final Panel Comment 10.doc)				
Submitted By: Julian Digialleonardo (561-656-6303). Submitted On: 04-Aug-10				
1 -0	Evaluation Concurred CONCUR. We added a discussion about the broader cumulative effects consequences of the project in the Environmental Assessment. 1. Adopt - A description of the economic development that could reasonably be expected to occur or continue once the 100-year level of protection is restored, based on the local municipalities 10-20 year comprehensive land-use plans has been added to the revised cumulative effects analysis of the Environmental Assessment. Portions of this response will also be added to the Economics section in the main report in Section 6.7.1. 2. Adopt - A discussion and list of ordinances currently enforced or proposed for future enforcement by local municipalities that guide development within the 100-year floodplain has been added to the revised cumulative effects analysis of the Environmental Assessment. Portions of this response will also be added			

to the Economics section in the main report in Section 6.7.1. 3. Adopt - A discussion that there is still flood risk even with a repaired levee, and a list of the nonstructural measures that can be taken by local municipalities and individuals to help reduce damages in the event of a flood, regardless of the percent of occurrence, has been added to the revised cumulative effects analysis of the Environmental Assessment. Portions of this response will also be added to the Economics section in the main report in Section 6.7.1. 4. Adopt - A discussion explaining that increased or continued development could have negative impacts on the social, structural, natural, and economic environment and the steps or measures that are being implemented by local municipalities to help mitigate those negative impacts has been added to the revised cumulative effects analysis of the Environmental Assessment. Portions of this response will also be added to the Economics section in the main report in Section 6.7.1.

Submitted By: [Jessica Nies](#) (314-331-8034) Submitted On: 19-Aug-10

1-1 Backcheck Recommendation Close Comment
Concur

Submitted By: [Julian Digialleonardo](#) (561-656-6303) Submitted On: 27-Aug-10

Current Comment Status: **Comment Closed**

3435260

Environmental

n/a'

Comment #11

n/a

(Document Reference: **Significance - Medium**)

The Finding of No Significant Impact (FONSI) portion of the Environmental Assessment (EA) should be revised to expand on areas requiring further study where environmental effects are not completely understood.

(Attachment: [East St Louis Final Panel Comment 11.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0 Evaluation Concurred

CONCUR. The Finding of No Significant Impact (FONSI) should discuss areas or issues requiring further study where environmental effects are not completely understood. 1. Adopt – A description of the data gaps has been added to the main report in Section 6.8.2 and Section 7. In turn data gaps have been summarized in the revised FONSI. 2. Adopt – A description of the steps that are being or will be undertaken to fill the data gaps has been added to the main report in Section 6.8.2 and Section 7. Likewise, these steps have been summarized in the revised FONSI. 3. Adopt – A description of how new information gathered during construction to fill these gaps will be evaluated with respect to NEPA has been added to Section 7 of the main report, and a summary of this plan for future evaluation has been added to the revised FONSI. 4. Adopt - A contingency plan describing how the NEPA process may or will continue if new information leads to the conclusion that one or more environmental effects may indeed be significant has been added to Section 7 of the main report, and a summary of this contingency plan has been added to the revised FONSI. 5. Adopt – A discussion of how unexpected and unaccounted for potential negative environmental effects that manifest after construction has commenced will be mitigated (especially with respect to the HTRW issues but including air quality, cultural resource, and hydrologic issues) has been added to Section 7 of the main report. Likewise, the plan for mitigation of such effects has been summarized in the revised FONSI.

Submitted By: [Jessica Nies](#) (314-331-8034) Submitted On: 19-Aug-10

1-1 Backcheck Recommendation Close Comment
Concur

Submitted By: [Julian Digialleonardo](#) (561-656-6303) Submitted On: 27-Aug-10

Current Comment Status: **Comment Closed**

3435266

Geotechnical

n/a'

Comment #12

n/a

(Document Reference: **Significance - Medium**)

The supplemental exploration program should include strength testing of embankment and shallow underlying layers to support slope stability analyses.

(Attachment: [East St Louis Final Panel Comment 12.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Non-concurred</p> <p>Final Panel Comment #12. DO NOT CONCUR. See responses to Comments #2 and #8. 1. Do Not Adopt: Stationing of all exploration is clearly evident on the D-1 plates. 2. Do Not Adopt: The CPT exploration was only used to determine the Soil Behavior Types for evaluation of riverside blanket thicknesses. No strength interpretations of the CPT are being used. Determination of the shear strength for slope stability analyses will be the responsibility of the private engineering firm certifying the levee system. 3. Adopt in Future: Cross-Sections (based on LIDAR survey) were created and results of conventional and CPT exploration were superimposed on the sections. These were used to determine various distances required for the Mansur/Kaufman and Seep/W seepage analyses. CEMVS decided against including these 319 sections in the report. Appropriate cross sections will be included in the Plans and Specifications phase. 4. Adopt in Future: LS and RS fence diagrams of exploration obtained on 330-ft centers are included in the D-2 plates. Appropriate interpreted, geological profiles will be provided during the plans and specification phase. 5. Do Not Adopt: Strength testing of the embankment and foundation are beyond the scope of this LRR. Determination of the embankment shear strength will be the responsibility of the private engineering firm certifying the levee system.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
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1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
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Current Comment Status: **Comment Closed**

3435271	Real Estate	n/a'	Comment #13	n/a
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(Document Reference: **Significance - Medium**)

The relocations and potential relocation conflicts and costs need to be described in greater detail.

(Attachment: [East St Louis Final Panel Comment 13.doc](#))Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Concurred</p> <p>Final Panel Comment 13: CONCUR Appendix G (Relocations) contains basic information on known conflicts with utilities, roads, and other properties. More detailed information on relocations and affected properties will be developed during the Preconstruction Engineering & Design (PED) process. 1. ADOPT in FUTURE. The PDT will provide detailed right-of-way requirements drawings to the sponsor, and the sponsor will accomplish the necessary property surveys and title searches to accurately describe affected properties. 2. ADOPT in FUTURE. During the development of plans and specifications, the PDT will obtain more detailed information and coordinate with utility owners to develop more detailed cost estimates on relocations and provide them to the sponsor. 3. ADOPT in FUTURE. During the development of plans and specifications, the PDT will obtain more detailed information and coordinate with utility owners to determine how these conflicts will impact proposed project features. 4. ADOPT in FUTURE. An evaluation of both the costs and schedule impacts of utility relocations will be addressed early in the phase that plans and specifications are developed. The construction schedule currently spans nine years, and the project will be built in phases. This will allow adequate time for coordination of relocations prior to construction of any given segment.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
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1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
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Current Comment Status: **Comment Closed**

3435279	Cost Engineering	n/a'	Comment #14	n/a
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(Document Reference: **Significance - Low**)

Operations, maintenance, repair, replacement, and rehabilitation (OMRRR) considerations have not been fully described.

(Attachment: [East St Louis Final Panel Comment 14.doc](#))Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Concurred</p> <p>CONCUR. With some minor additions to the LRR, it now adequately describes operations, maintenance, repair, replacement and rehabilitation (OMRRR) considerations. The LRR states that the sponsor is responsible for OMRRR, gives information on the requirements for OMRRR, and the cost estimate for OMRRR provides enough detail to show the types of OMRRR activities involved. 1. ADOPT IN PART IN FUTURE. The report states that the sponsor is responsible for OMRRR for the design deficiency correction project in accordance with an OMRRR manual, and that the manual will include design requirements. During the current situation with no design deficiency correction project the sponsor already does inspections during storm events and they should inspect the entire levee system after major seismic events. The Corps will consider including in any future OMRRR manual the requirement that the sponsor inspect their entire levee system after major seismic events. 2. ADOPT. The LRR has been revised to say that the MESD levee is in the USACE Levee Inspection Program, and the requirements for inspections are now describe in the report.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
	Current Comment Status: Comment Closed

3435292	Operations	n/a'	Comment #15	n/a
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(Document Reference: Significance - Low)

The project operation manual should include a recommended levee inspection and monitoring plan for local sponsors for periods when there is a high water event.

(Attachment: [East St Louis Final Panel Comment 15.doc](#))Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Concurred</p> <p>CONCUR. The project has several operation and maintenance manuals and they should be reviewed to be sure they include a levee inspection and monitoring plan. The levee system has been in place for 50 years and is inspected frequently by the Corps of Engineers and the sponsor, including annual inspections and ratings for maintenance, separate inspections of the pump stations, and periodic inspections that check the design functionality of the system. The levee system frequently experiences high water, and the sponsor has an experience staff that monitors the levee, operates the pump stations, etc. When a flood emergency is declared, the Corps of Engineers provides assistance and advice to the sponsor staff. 1. NOT ADOPT. A high water inspection plan should be included in one or more of the O&M manuals but it is not appropriate to include this information in the LRR. The LRR has been expanded to include a description of Corps of Engineers Flood Control Regulations for Maintenance and Operation of Flood Control Works and a summary of the results of annual levee inspections conducted by the Corps of Engineers in cooperation with the sponsor. The Regulations are already well known and have been used for many years by the sponsor management and staff. 2. ADOPT. A procedure is already in place for USACE geotechnical engineers to inspect the project both during high water events and during dry periods to verify design assumptions. That procedure will continue in the future and will include any design deficiency project features that are implemented. The project is in the Corps of Engineers Periodic Inspection Program because of the extensive development protected by the levee and the catastrophe that would result from a levee failure. Periodic Inspections are completed at least every 5 years and provided to the sponsor.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>

Current Comment Status: **Comment Closed**

3435299	Planning - Plan Formulation	n/a'	Comment #16	n/a
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(Document Reference: **Significance - Low**)

USACE should use the current flood profiles for the hydraulic analysis of the flank levees instead of the Mississippi River backwater curves.

(Attachment: [East St Louis Final Panel Comment 16.doc](#))Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	Evaluation Non-concurred See attached for response. Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10 (Attachment: Final Panel Comment 16.docx)
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1-1	Backcheck Recommendation Close Comment Concur A summary would enable the reader to have a better understanding of the graphics. Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10
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Current Comment Status: **Comment Closed**

3435306	Design Team Leader	n/a'	Comment #17	n/a
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(Document Reference: **Significance - Low**)

The recommended design should be refined prior to construction with regard to relief well penetration and spacing.

(Attachment: [East St Louis Final Panel Comment 17.doc](#))Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	Evaluation Concurred Final Panel Comment #15: CONCUR CEMVS traditional practice has been to design/construct 50% penetrating wells. Agree that it is possible to analyze and design wells with larger percentage penetrations. Also agree that EM 1110-2-1914 presents a method of optimization. Given the number of reaches with different stratigraphic conditions, the magnitude of the optimization process would be enormous. 1. Do Not Adopt: Concur that greater penetration rates allow larger well spacing to be utilized. But many times this larger well spacing advantage is eliminated by the physical length of the well reach being analyzed. The larger well spacing must be revised downward in order to install an integer number of relief wells that are spaced to fit the topography. Also, during the final design of the relief wells, CEMVS will increase the design well screen length to accommodate assumptions on how much of the well screen will be clogged resulting in longer well screens. Many times, a 50% penetration design with an extra length to accommodate the clogging results in wells constructed to a much larger penetration. Use of larger design penetration and the extra length (for clogging) results in screen lengths that exceed the aquifer depth. But CEMVS will optimize the well design for those well reaches containing 10 or more relief wells. Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10
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1-1	Backcheck Recommendation Close Comment Concur Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10
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Current Comment Status: **Comment Closed**

3435308	Planning - Plan Formulation	n/a'	Comment #18	n/a
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(Document Reference: **Significance - Low**)

The plan formulation process should describe the trade-off analysis used to select the tentative recommended plan.

(Attachment: [East St Louis Final Panel Comment 18.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Concurred</p> <p>CONCUR. The plan formulation process did include a trade-off analysis to select the tentative recommended plan, and this trade-off analysis will be described in the main report of the LRR. 1. NOT ADOPT. Additional information for each decision segment in a table or a listing is not necessary. The additional general discussion on the trade-off analysis added to the main report, plus existing information in the plan formulation appendix on the alternatives considered for each decision segment, drawings showing these alternatives, and cost estimates for these alternatives by decision segment is sufficient.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
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1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
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Current Comment Status: Comment Closed	
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3435316	Design Team Leader	n/a'	Comment #19	n/a
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(Document Reference: **Significance - Low**)

Several design assumptions or local conditions need to be resolved during final design.

(Attachment: [East St Louis Final Panel Comment 19.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Concurred</p> <p>Final Panel Comment # 19: Concur. 1. Adopt: Due to all of the industrial development that has occurred on the seepage berm (between project stations 1165+00 to 1210+00), the seepage analyses assumes that the seepage berm does not contribute to seepage controls. CEMVS will inquire with the sponsor on the disposition of the abandoned wastewater pipes and culverts observed during the 1993 flood. A summary of these findings will be included in the Geotechnical appendix. Floodwall analyses is beyond the scope of this LRR. But see the response to Panel Comment #2 for results of I-wall analyses completed in 2006. The results of the seepage analyses included in this report were obtained using Seep/W when the topographical or stratigraphic conditions did not meet the assumptions implicit in the Mansur/Kaufman leaky blanket theory.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
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1-1	<p>Backcheck Recommendation Close Comment</p> <p>Concur</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
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Current Comment Status: Comment Closed	
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3435319	Real Estate	n/a'	Comment #20	n/a
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(Document Reference: **Significance - Low**)

The LRR does not address all real estate interests and requirements and therefore does not allow for full comparison across all alternatives.

(Attachment: [East St Louis Final Panel Comment 20.doc](#))

Submitted By: [Julian Digialleonardo](#) (561-656-6303). Submitted On: 04-Aug-10

1-0	<p>Evaluation Non-concurred</p> <p>Final Panel Comment 20: NON-CONCUR All real estate interests and requirements are addressed in the LRR. 1. NOT ADOPT. A summary (roll-up) document identifying the recommended plan next to the other considerations for each decision segment will not be prepared. Producing such a document may potentially mislead reviewers because the recommended plan was selected based on many criteria, not Real Estate alone. The best overall plan was selected for each decision segment; this plan may or may not utilize the lowest cost Real Estate. 2. NOT</p>
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	<p>ADOPT. The St. Louis District has yet to have a local sponsor acquire property in less than a year. It is important to note that there may be more factors involved than price or size of the property. For example, the property may have been in the family for generations and they do not want to sell for any amount of money. This would cause us to condemn the property which would take nearly a year anyway. The acquisition of Right-of-Way timeframe will remain at 1 year. 3. NOT ADOPT. The statement "No persons, farms, or businesses will require relocation assistance as a result of this project" will remain as it is a true statement. The recommended plan notes these costs as N/A on the current tables. Part of the reason the recommended plan was chosen was because of the avoidance of relocations.</p> <p>Submitted By: Jessica Nies (314-331-8034) Submitted On: 19-Aug-10</p>
<p>1 - 1</p>	<p>Backcheck Recommendation Close Comment</p> <p>Concur The summary roll-up of all categories used in the selection process would materially aid the reader in understanding the justification for selecting the Tentatively Recommended Plan. The recommendation for resolution did not isolate Real Estate as a separate issue; rather, it requested all related cost categories. By providing a roll-up, it would validate the selection process as being sound, founded in logical choices and based on specific analysis. In addition, sufficient time must be allocated for the appropriate activities when acquiring property that must be tied directly to the project schedule. The Panel understands that, per the USACE Response, the cost projections were correlated with Appendix F.</p> <p>Submitted By: Julian Digialleonardo (561-656-6303) Submitted On: 27-Aug-10</p>
	<p>Current Comment Status: Comment Closed</p>

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