# ATTACHMENT 4: Type II IEPR (SAR) AND DESIGN QUALITY CONTROL PLAN FROM REQUESTER

# Type II Independent External Peer Review Plan (IEPR)/ Safety Assurance Review Plan (SAR)

(Revision-01)

# **Yazoo Hydroelectric Projects**

Prepared for the

US Army Corps of Engineers
Vicksburg, District

## Submitted By:



January 2017

## **TABLE OF CONTENTS**

1.0	Introduction	1
2.0	Type II IEPR Objectives	6
3.1	Independent External Peer Review and SAR Charge	7
3.2	IEPR Panel Responsibilities	13
4.0	Milestones and Schedule	13
5.0	Contacts and Communication	14
6.0	Reporting, Documentation, and Adequacy of the SAR	14
7.0	References	15

Appendix A

IEPR Panel Resumes

#### 1.0 Introduction

On December 28, 2015 the Federal Energy Regulatory Commission (FERC) issued FFP Missouri 2, LLC 50-year licenses to construct and operate four new Hydroelectric Projects on existing US. Army Corps of Engineer Dams in Mississippi. Referred to as the Yazoo Hydroelectric Projects, the specific US Army Corps of Engineers (USACE) Dams licensed for new hydropower include the Enid, Sardis, Arkabutla, and Grenada Dams. Rye Development is the successor entity to the FFP corporation and is the manager of FFP's new hydropower portfolio. The purpose of this document is to fulfil the requirements for a Type II Independent External Peer Review/Safety Assurance Review Plans (IEPR/SAR) for the Yazoo Hydroelectric Projects, Sardis FERC No. 13701, Grenada No. 13702, Enid Project No. 13703, and Arkabutla No. 13704 in Mississippi. On February 25, 2016 USACE requested that Rye Development prepare a Type II IEPR review plan and submit it to the Vicksburg District by March 31, 2016.

Type II IEPR/ SAR is completed for projects where potential hazards pose a significant threat to human life and ensure the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health, safety, and welfare. The Yazoo Hydroelectric Projects are in the 30% design stages with construction scheduled to begin in 2018. The proposed Yazoo hydroelectric projects will be constructed on existing US Army Corps of Engineers (USACE) Flood Control Dams within the Vicksburg District of the USACE. The total project cost is estimated to be 78 million dollars and no Federal funds are being used for the design and construction of the project. An overview of the primary features for each of the existing US Army Corps of Engineer Dams and proposed new hydropower features is included below:

#### Enid Hydroelectric Project (FERC No. 13703)

The project will be located at the U.S. Army Corps of Engineers' (Corps) Enid Dam, on the Yocona River, near the town of Enid in Yalobusha County, Mississippi. The project will occupy 30 acres of federal land administered by the Corps. The Yocona River flows in a westerly direction from its headwaters near Randolph, Mississippi, and enters the Panola Quitman Floodway (a flood control channel) before it joins the Tallahatchie River near Sharkey, Mississippi. The Tallahatchie River joins the Yalobusha River to form the Yazoo River, which in turn flows into the Mississippi River. Enid Dam impounds the 6,100-acre Enid Lake, which is maintained by the Corps in accordance with its Master Water Control Manual for the Yazoo Basin Lakes. Enid Dam is an 8,400-foot-long, 85-foot-high, earth-fill embankment dam that includes a 200-foot long, concrete-lined, uncontrolled spillway located toward the northwest end of the dam. The outlet works, located in the southern portion of the embankment, consist of a concrete intake tower and two, 8-foot-wide by 16-foot-high intake tunnels with a control gate at each intake tunnel entrance. The intake tunnels transition to two, 370-foot long, 11-foot by 18.25-foot outlet conduits that pass under the dam. Flows, including a minimum flow of 50 cubic feet per second (cfs), are released through the outlet conduits and pass into a stilling basin with baffle blocks. The stilling basin is at the head of a riprap-lined outlet channel that leads to the Yocona River. The total capacity of the two outlet conduits is about 9,400 cfs.

The hydroelectric project will use the existing outlet works, with the addition of a new steel liner within the outlet conduit to enable pressurization of the outlet conduit, a steel-lined concrete bifurcation chamber constructed at the end of the outlet conduit, a powerhouse, and a composite steel and reinforced-concrete forebay structure integral with the powerhouse.

The bifurcation

chamber will contain two hydraulically-operated gates: (1) a discharge gate leading to the existing outlet channel; and (2) a diversion gate that will direct flow, via a new steel penstock, to the forebay structure. The forebay structure will contain a 3-inch, clear-spaced trashrack with an adjacent surface-release fish bypass outlet gate, which will spill into a new concrete 19-foot-long, 10-foot- wide plunge pool. The powerhouse will contain two identical vertical Kaplan turbine-generator units with a combined installed capacity of 4.6 MW. A tailrace, lined to prevent crosion and scour, will convey flows from the powerhouse to the existing outlet channel. Power will be transmitted via a 181-foot-long, buried transmission line from the powerhouse to a new substation. From the new substation, a 2,036-foot-long, 12.5-kilovolt (kV), overhead transmission line will transmit power along Enid Dam Road to an interconnection point at an existing distribution line owned by a local utility.

#### Sardis Lake Hydroelectric Project (FERC No. 13701)

The Sardis Hydroelectric Project will be located at the U.S. Army Corps of Engineers' (Corps) Sardis Dam, on the Little Tallahatchie River, near the town of Sardis in Panola County, Mississippi. The project will occupy 56.1 acres of federal land administered by the Corps. The project will be located on the Little Tallahatchie River at river mile 69, approximately 7 miles southeast of the town of Sardis, Mississippi. The Little Tallahatchie River flows in a southwesterly direction from its headwaters near Dumas, Mississippi, and enters the Panola Quitman Floodway (a flood control channel) before it joins the Tallahatchie River near Sharkey, Mississippi. The Tallahatchie River joins the Yalobusha River to form the Yazoo River, which in turn flows into the Mississippi River.

Sardis Dam impounds the 10,700-acre Sardis Lake, which is maintained by the Corps in accordance with its Master Water Control Manual for the Yazoo Basin Lakes. Sardis Dam is a 15,300-foot-long, 97-foot-high, earth-fill embankment dam that includes a 400-foot long, concrete-lined, uncontrolled spillway. The outlet works, located in the southeastern portion of the embankment, consist of a concrete intake tower and four, 6-foot-wide by 12-foot-high intake tunnels with a control gate at each intake tunnel entrance. The intake tunnels transition to a single, 560-foot long, 16-foot by 18.25-foot outlet conduit that passes under the dam. Flows, including a minimum flow of 100 cubic feet per second (cfs), are released through the outlet conduit and pass into a stilling basin with baffle blocks. The stilling basin is at the head of a riprap-lined outlet channel that leads to the Little Tallahatchie River. The capacity of the outlet conduit is about 10,000 cfs.

The Sardis Lake Hydroelectrict will use the existing outlet works, with the addition of a new steel liner within the outlet conduit to enable pressurization of the outlet conduit, a steel-lined concrete bifurcation chamber constructed at the end of the outlet conduit, a powerhouse, and a composite steel and reinforced-concrete forebay structure integral with the powerhouse. The bifurcation chamber will contain two hydraulically operated gates: (1) a discharge gate leading to the existing outlet channel; and (2) a diversion gate that will direct flow, via a new steel penstock, to the forebay structure. The forebay structure will contain a 3-inch, clear-spaced trashrack with an adjacent surface-release fish bypass outlet gate, which will spill into a new concrete 45-foot-long, 10-foot- wide, 10-feet deep plunge pool. The powerhouse will contain two identical vertical Kaplan turbine- generator units with a combined installed capacity of 14.6 MW. A tailrace, lined

to prevent erosion and scour, will convey flows from the powerhouse to the existing outlet channel. Power will be transmitted via an 887-foot-long, buried transmission line from the powerhouse to a new substation.

#### Arkabutla Lake Hydroelectric Project (FERC No. 13704)

The Arkabutla Lake Hydroelectric Project will be located at the U.S. Army Corps of Engineers' (Corps) Arkabutla Dam, on the Coldwater River, near the town of Arkabutla in Tate and Yalobusha Counties, Mississippi. The project will occupy 48.2 acres of federal land administered by the Corps. The Coldwater River flows in a southwesterly direction from its headwaters near Holly Springs, Mississippi, to its mouth at the Tallahatchie River near Marks, Mississippi. The Tallahatchie River joins the Yalobusha River to form the Yazoo River, which in turn flows into the Mississippi River.

Arkabutla Dam impounds the 5,100-acre Arkabutla Lake, which is maintained by the Corps in accordance with its Master Water Control Manual for the Yazoo Basin Lakes. Arkabutla Dam is a 10,000-foot-long, 65-foot-high, earth-fill embankment dam that includes a 300-foot long, concrete-lined, uncontrolled spillway located toward the north end of the dam. The outlet works, located in the southern portion of the embankment, consist of a concrete intake tower and three, 8.5-foot-wide by 17-foot-high intake tunnels with a control gate at each intake tunnel entrance. The intake tunnels transition to a single, 355-foot long, 16-foot by 18.25-foot outlet conduit that passes under the dam. Flows, including a minimum flow of 50 cubic feet per second (cfs), are released through the outlet conduit and pass into a stilling basin with baffle blocks. The stilling basin is at the head of a riprap-lined outlet channel that leads to the Coldwater River. The capacity of the outlet conduit is about 10,000 cfs.

The proposed hydroelectric project will use the existing outlet works, with the addition of a new steel liner within the outlet conduit to enable pressurization of the outlet conduit, a steel-lined concrete bifurcation chamber constructed at the end of the outlet conduit, a powerhouse, and a composite steel and reinforced-concrete forebay structure integral with the powerhouse. The bifurcation chamber will contain two hydraulically operated gates: (1) a discharge gate leading to the existing outlet channel; and (2) a diversion gate that will direct flow, via a new steel penstock, to the forebay structure. The forebay structure will contain a 3-inch, clear-spaced trashrack with an adjacent surface-release fish bypass outlet gate, which will spill into a new concrete 19-foot-long, 10-foot-wide, 10-foot-deep plunge pool. The powerhouse will contain two identical vertical Kaplan turbine-generator units with a combined installed capacity of 5.1 MW. A tailrace, lined to prevent erosion and scour, will convey flows from the powerhouse to the existing outlet channel. Power will be transmitted via a 1,574-foot-long, buried transmission line from the powerhouse to a new substation.

#### Grenada Lake Hydroelectric Project (FERC No. 13704)

The Grenada Lake Hydroelectric Project will be located at the U.S. Army Corps of Engineers' (Corps) Grenada Dam on the Yalobusha River, near the town of Grenada in Grenada County, Mississippi. The project will occupy 35.5 acres of federal land administered by the Corps. The Yalobusha River flows in a southwesterly direction from its headwaters near Houston, Mississippi, to where it joins the Tallahatchie River to form the Yazoo River near Greenwood, Mississippi. The Yazoo River in turn flows into the Mississippi River.

Grenada Dam impounds the 9,800-acre Grenada Lake, which is maintained by the Corps in accordance with its Master Water Control Manual for the Yazoo Basin Lakes. Grenada Dam is a 13,900-foot-long, 80-foot-high, earth-fill embankment dam that includes a 200-foot long, concrete lined, uncontrolled spillway. The outlet works, located in the southern portion of the embankment, consist of a concrete intake tower and three, 7.5-foot-wide by 14-foot-high intake tunnels with acontrol gate at each intake tunnel entrance. The intake tunnels transition to a single, 377.5-foot long, 17-foot diameter outlet conduit that passes under the dam, Flows, including a minimum flow of 100 cubic feet per second (cfs), are released through the outlet conduit and pass into a stilling basin with baffle blocks. The stilling basin is at the head of a riprap-lined outlet channel that leads to the Yalobusha River. The capacity of the outlet conduit is about 10,700 cfs.

The proposed hydroelectric project will use the existing outlet works, with the addition of a new steel liner within the outlet conduit to enable pressurization of the outlet conduit, a steel-lined concrete bifurcation chamber constructed at the end of the outlet conduit, a powerhouse, and a composite steel and reinforced-concrete forebay structure integral with the powerhouse. The bifurcation chamber will contain two hydraulically operated gates: (1) a discharge gate leading to the existing outlet channel; and (2) a diversion gate that will direct flow, via a new steel penstock, to the forebay structure. The forebay structure will contain a 3-inch, clear-spaced trashrack with an adjacent surface-release fish bypass outlet gate, which will spill into a new concrete 35-foot-long, 10-foot-wide plunge pool. The powerhouse will contain two identical vertical Kaplan turbine- generator units with a combined installed capacity of 9 MW. A tailrace, lined to prevent erosion and scour, will convey flows from the powerhouse to the existing outlet channel. Power will be transmitted via a 670-foot-long, buried transmission line from the powerhouse to a new substation.

#### 2.0 TYPE II IEPR OBJECTIVES

The Type II IEPR will be used to demonstrate adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring public health, safety, and welfare. IEPR team reviews will address the questions outlined in section 3.0 below in response to design and construction submittals provided by Rye Development's design engineer. The submittals will include but not be limited to construction drawings, specifications, geotechnical investigations/reports, detailed design reports, quality control and inspection plans, and the operations & maintenance manuals.

IEPR team reviews will address the SAR Charge questions in section 3.0 below as they pertain to the submitted design and construction products. These products include the construction drawings, specifications, Geotechnical Interpretive Report, Detailed Design Report, Quality Control & Inspection Plan, and Operations & Maintenance Manual. The Detailed Design Report will include a discussion on the design and construction assumptions, methodologies, and procedures as well as the supporting analyses and design computations for each of the project components.

The following scope of work will be utilized in the IEPR/SAR review:

- 1) Review of existing USACE documentation/reports for the Yazoo projects evaluating existing conditions
- 2) Review of geological risks

- 3) Evaluate Overall Consistency of Project
- 4) Review of Project design and design requirements
- 5) Review of construction approach/risks and associated mitigation
- 6) Review Hydraulics
  - 7) Review Construction Approach
  - 8) Review proposed commercial operation
    - a) Operations and maintenance (O&M) Manual
  - 9) Prepare Independent Engineer's Reports:
    - a) 60% Design Review Report
    - b) 100% Design Review Report
    - c) Critical milestones during construction Documentation summarizing any changes in their evaluation resulting in action items/alterations during construction
    - d) End of Construction A comprehensive report will be prepared summarizing the construction and changes in their evaluation from alterations in the construction phase

#### 3.1 TYPE -II IEPR/SAR CHARGE

The Type II IEPR will be completed by individuals who are distinguished experts in civil/structural engineering, geotechnical engineering, dam safety engineering and construction risk at Engineering Innovations, LLC. The IEPR panel has been selected using Nation Academies of Science selection policy. Engineering Innovations (EI) was formed in 2008 and has been engaged in the development of modeling techniques for dams and the review of design, constructability, and construction of retrofits for numerous dam projects. EI's highly experienced three-engineer team has over 130 years of experience in the area of structures, hydraulies, and geotechnical aspects of dams. The extensive experience is founded in support of the Corps of Engineers from research and development, district execution, division oversight, and headquarters vision missions and though general private consulting. EI can support all aspects of design, constructability, and construction or retrofitting for any dam project.

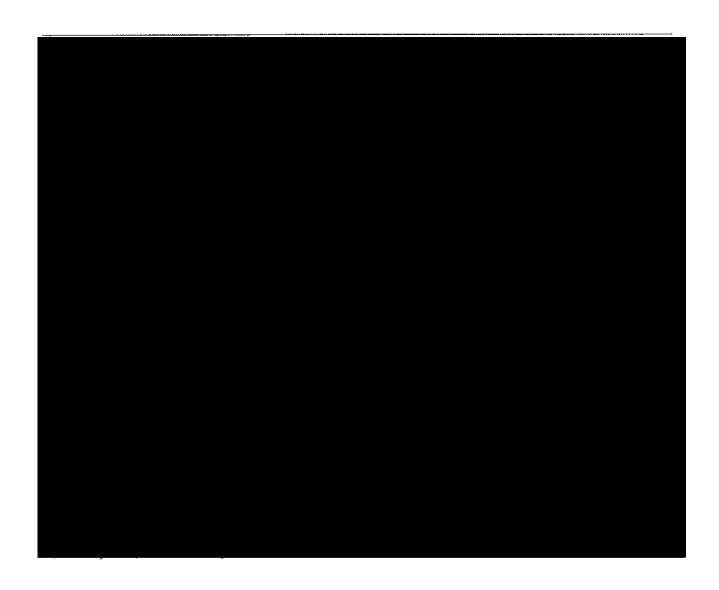
The IEPR does not include a member of the Federal Government and will not advise or make recommendations to the Federal Government regarding the Yazoo Hydroelectric Projects. The IEPR does not meet the criteria of a Federal Advisory Committee and is therefore compliant with Federal Advisory Committee Act(FACA).

The Independent External Review Panel includes the following individuals from EI:

a) b)	
a)	
1. \	
D)	
c)	
~/	

These three individuals are experts in hydroelectric power development, dam safety engineering, construction risk, geology, geotechnical engineering. The panel members' qualifications are described in their resumes included in Appendix A and summarized below. The members of the panel have no conflicts of interest with respect to the Licensee. Each individual has had no involvement or interaction with any aspect of the proposed Yazoo Hydroelectric Projects. Their fields of expertise and practice are in geotechnical adequacy of designs and construction, and civil/structural design.





#### **SAR Charge**

The Charge provides guidance to the IEPR skill set requirement, the objective of the SAR, and the specific advice sought. The Charge for this project is described in the below paragraphs.

IEPR will identify, examine, and comment upon assumptions that underlie analyses (i.e. public safety, economic, engineering, environmental, real estate, and others) appropriate to the "charge", as well will evaluate the soundness of models and analytic methods. IEPR will also be able to evaluate whether the interpretation of analyses and conclusions are reasonable. However, the IEPR does not present a final judgement on whether a project should be constructed or whether an operations plan should be implemented, as chief of Engineers is ultimately responsible for the final decision. In terms of both usefulness of results and credibility, IEPR will be given flexibility to bring important issues to the attention of decision maker.

The independent experts selected to review the design are not involved in the original design, and have no conflict of interest. The independent panel of experts will evaluate and inform the design team on the adequacy, appropriateness, and acceptability of the design and construction activities for assuring public health, safety, and welfare. In addition, the panel will evaluate if the assumptions made during designs

remain valid through construction as additional knowledge is gained. The panel of independent experts will be available both during the design phase and construction phase.

The SAR should not be expected to resolve fundamental disagreements and controversies. The reviews will focus on assumptions, data, design methods, models, and conformance to guidance. Frequent communication between USACE and IEPR will help the IEPR understand the technical and practical implications of its recommendations. Review panels should highlight areas of disagreement and controversies that may need resolution.

SAR will assist USACE in making decisions, but SAR should not be asked to make decisions. Reviewers should avoid findings that become "directives" in that they call for modifications or additional studies or suggest new conclusions and recommendations. In such circumstances the reviewers may have assumed the role of advisors as well as reviewers, thus introducing bias and potential conflict in their ability to provide objective review later in the project. Reviewers engaged in the review process should be selected based upon their independence and professional expertise and should not be "stakeholders". It is important that SAR panelists focus on their review, and not become defenders of their recommendations.

The MSC's choice about the appropriate level of review should be informed by deliberation with the vertical team.

USACE shall make all written recommendations of a reviewer or panel of reviewers and related USACE responses available to the public, including through electronic means on Internet.

The following SAR Charge Questions will be used in the evaluation and final report. These questions are based on the guidance provided in the reference documents in Section 11.0, specifically by the USACE in EC 1165-2-209, Appendix E.

#### **General Questions**

- 1. Are the design methodologies and assumptions made to assess hazards appropriate?
- 2. Is the quality and quantity of the surveys, investigations, and engineering for the design sufficient to support the models and assumptions made for determining the hazards?
- 3. Does the design analysis adequately address the uncertainties given the consequences associated with the potential for loss of life for this type of project?
- 4. Do the project features adequately address redundancy, robustness, and resiliency with an emphasis on interfaces between structures, materials, members, and project phases?
- 5. From a public safety perspective, are the project designs appropriate or should alternatives be considered?

- 6. Has the Licensee demonstrated that the design is technically sound and operationally functional?
- 7. Are the assumptions underlying the engineering analyses sound and complete?
- 8. Has it been demonstrated quantitatively that the assumptions underlying engineering analyses—are reasonable, sound and complete? Have the assumptions been confirmed based on experience—with similar projects?
- 9. Are the engineering methods, models, and analyses used adequate and acceptable for the complexity of the project?
- 10. Are the interpretations of analysis and conclusions based on the analysis reasonable, sound and complete?
- 11. Have Dam safety concerns changed with the addition of the proposed design?
- 12. Has the overall operational functionality and flexibility of the Dam changed with the addition of the proposed new project features?
- 13. Have all load cases and assumptions been clearly identified and adequate for the proposed designs. Does the Detailed Design Report or Design Memoranda reflect this?
- 14. Do the remote controls and operations plan meet the Army Corps of Engineers EC 1130-2-6071, Remote Control and Operation of WaterControl Systems?
- 15. Do the O&M \requirements adequately maintain the conditions assumed during design and validated during construction; and will the project monitoring adequately reveal any deviations from assumptions made for performance and is sufficient to evaluate the change in project effectiveness?
- 16. Has anything significant been overlooked in the development of the design?

#### Structural Questions

- 1. Is the scope, function and analysis of the engineering features clearly described?
- 2. Has the analysis been adequately performed and documented to support the proposed changes to the dam structure, associated structures and appurtenances? Has stability as well as strength of materials been considered?

- 3. Has the analysis been adequately performed and documented to support all load cases associated with unit load rejection or water hammer?
- 4. Has the analysis been adequately performed and documented to support all load cases associated with varying reservoir levels?
- 5. Has the system been fully designed and provided sufficient redundancy to prevent release of uncontrolled flow?
- 6. Has the analysis been adequately performed and documented to support the penstock tunnel design and size?
- 7. Has the analysis been adequately performed and documented to support and/or demonstrate the construction load cases and the projects ability to maintain flow and flood pool requirements during the construction work?
- 8. Has the review noted that alternatives were considered?

#### **Geotechnical Questions**

- 1. Is there sufficient subsurface information to adequately develop a reasonable model of subsurface conditions?
- 2. Has the analysis been adequately performed and documented for the change in load condition of the dam structures and embankments attributable to the hydroelectric project?
- 3. Are drainage facilities functioning and adequate?
- 4. Have all construction load cases been adequately preformed and documented?
- 5. Is overall safety and stability of the dam structure compromised with the new proposed features? i.e. slope stability, foundation liquefaction, piping, settlement?

- 6. Has the overall seepage control been compromised by the addition of the new proposed features?
- 7. Does the excavation design adequately address stability, seepage, and dewatering concerns?

#### **Hydraulic Questions**

- 1. Has the analysis been adequately performed and documented to support the penstocks tunnels and all the forces, both static and transient, associated with their configuration?
- 2. Have all the outlet works been adequately evaluated and documented for all flow conditions and the impact to structures and embankments?
- 3. Has the overall hydraulic erosion/scour potential increased with any part of the proposed design?
- 4. Have all the outlet works been adequately evaluated and documented to avoid vibration, cavitation, abrasion and excessive O&M?

#### **Mechanical Questions**

- 1. Has the analysis been adequately performed and documented for the gate control systems? And is it adequately redundant to prevent mis-operation and able to meet flow requirement and ramp rates? Is the alarming system adequate?
- 2 Are the assumptions and engineering analyses sound and complete for the intake structure and operating equipment?

#### **Dam Safety Questions**

- 1. Has the analysis properly considered project safety and dam safety? Have the proposed changes not caused any increased level of risk to structures or people?
- 2. Has recent seismic information and codes been incorporated into analysis?

- 3. Have the latest geotechnical information and drill logs been included?
- 4. Have Interim Risk Reduction considerations been included in the review?
- 5. Have all characteristics, conditions, and scenarios leading to potential failure, along with the potential impacts and consequences, been clearly identified and described?

#### **Hydroelectric Project Operations Questions**

- 1. Has the input from the USACE Operations Manual been incorporated into drawings, specifications, operation manuals and other documents?
- 2. Have the USACE Operations been consulted to insure proposed changes have not or will not impact their ability to run and maintain the dam facilities?
- 3. Has the review considered insuring the original project function remains intact and is not compromised?

#### 3.1 IEPR PANEL RESPONSIBILITIES

#### The IEPR shall:

- a. Conduct the review for the subject project in a timely manner in accordance with the Milestones and Schedule;
- b. Follow the Charge, but when deemed appropriate by the IEPR lead, request other products relevant to the project and the purpose of review;
- c. Receive from USACE any public written and oral comments provided on the project;
- d. Provide timely written and oral comments throughout the development of the project, as requested;
- e. Assure the review focuses on questions included in the Charge. However, the IEPR panel may recommend additional questions for consideration;

- f. Offer suggestions to improve the review process;
- g. Submit reports in accordance with the review plan schedule; and
- h. The panel lead shall be responsible for ensuring that comments represent the group, be non-attributable to individuals, and where there is lack of consensus, note the nonoccurrence and why.

#### 4.1 MILESTONES AND SCHEDULE

IEPR panel design review will be completed as necessary but, at a minimum, will occur at 60 % design, 100 % design, during critical construction milestones and at the end of construction. The 60% review will focus on the questions included in the Type II IEPR. The 100% review will focus on whether the design documents address the IEPR concerns raised during the 60% review. IEPR reviews during construction will focus on whether the assumptions made during design remain valid during construction.

The following is the proposed schedule for these milestones:

#### 60% Design

- Licensee Design Submittal
- Licensee 60% Design Review Meeting with IEPR, USACE, FERC, and the Licensee
- IEPR Report

### 100% Design

- Licensee Design Submittal
- Licensee 100% Design Review Meeting with IEPR, USACE, FERC, and the Licensee
- IEPR Report

#### **Critical Milestones During Construction**

- Milestones to be determined by the IEPR, USACE and FERC (i.e., cofferdam installation, tunnel lining, etc.)
- Meeting and site visit with affected members of the IEPR, USACE, FERC, and the Licensee for each milestone
- IEPR Findings Report.

#### Completion of Construction

- Meeting and site visit with IEPR, USACE, FERC, and the Licensee
- IEPR Final Report

In advance of each meeting, the Licensee will prepare an agenda containing important topics, questions for the IEPR, as well as provide supporting reports and meeting materials. At the conclusion of each meeting, the IEPR will prepare a formal report or letter describing the need if any to obtain additional information, perform additional analysis, and/or potentially modify the design.

#### 5.1 CONTACTS AND COMMUNICATION

The points of contact are:

Communication will be directly between the Licensee and USACE. The IEPR will communicate directly with the Licensee. The Licensee will forward the IEPR reports to the USACE with a copy to FERC.

# 6.0 REPORTING, DOCUMENTATION, AND ADEQUECY OF THE SAR

The Licensee assumes that USACE's Dr. Checks will be the official system for review reports and other pertinent project design materials. Dr. Checks will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. The IEPR will input their comments and the Licensee and/or the Licensee's design engineer will input responses to comments. These comments and responses will be included in the reports as discussed below.

IEPR reports will be prepared following each review. IEPR reports will contain the panel's evaluation, including the panel's assessment of the adequacy and acceptability of the methods, models, and analyses used. All review panel comments shall be entered as team comments that represent the group and be non-attributable to individuals. The IEPR team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. The Licensee shall prepare a written proposed response detailing any action undertaken or to be undertaken in response to the comments and the reasons those actions are believed to satisfy any concerns that may be raised.

The information provided in this document demonstrates Rye Development's effort to ensure good science, sound engineering, and public welfare are the most important considerations during the development of the Yazoo Hydroelectric Projects. The Type II IEPR/ SAR Plan is a living document and as presented can be modified in the future, as needed.

#### 7.1 REFERENCES

 Office of Management and Budget (OMB) (2004). Final Information Quality Bulletin for Peer Review. Executive Office of the President, Office of Management and Budget, Washington, DC. Memorandum M-05-03 dated December 16.

- 2. USACE (2007). Peer Review Process. U.S. Army Corps of Engineers, Washington, DC. CECW-CP Memorandum dated March 30. Assessment of IEPR Final Panel Comments 30 Enclosure 3, November 5,2010.
- 3. USACE (2008). Review of Decision Documents, U.S. Army Corps of Engineers, Washington, DC. CCEW-CP Circular Number. EC 1105-2-410, August 22.
- 4. USACE (2010). Civil Works Review Policy U.S. Army Corps of Engineers, Washington, DC. CCEW-CP Circular Number. EC 1165-2-209, January 31.
- 5. USACE (2012). Civil Works Review Policy U.S. Army Corps of Engineers, Washington, DC. CCEW-CP Circular Number. EC 1165-2-214, December 2012.
- 6. USACE (2016). Civil Works Review Policy U.S. Army Corps of Engineers, Washington, DC. CCEW-CP Circular Number. EC 1165-2-216, June 2016