FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426
March 8, 2018

OFFICE OF ENERGY PROJECTS

Project No. 14867-000 – Virginia
Scott's Mill Hydroelectric Project
Scott's Mill Hydro, LLC

Scott's Mill Hydro, LLC
Attn: Mark Fendig
P.O. Box 13
Coleman Falls, VA 24536

Re: Staff Comments on Draft License Application for the Scott's Mill Hydroelectric Project

Dear Mr. Fendig:

On February 8, 2018, you filed a draft license application (DLA) with the Federal Energy Regulatory Commission for the proposed 4.5-megawatt Scott's Mill Hydroelectric Project. We have reviewed the DLA, and provide our comments in the enclosed Schedule A.

If you have any questions concerning this letter, please contact Jody Callihan at (202) 502-8278 or jody.callihan@ferc.gov.

Sincerely,

John B. Smith, Chief
Mid-Atlantic Branch
Division of Hydropower Licensing

Enclosures: Schedule A

General Content Requirements

1. Section 4.38(g)(1) of the Commission's regulations requires an applicant to publish, at least 14 days in advance of the joint agency meeting, a notice of the purpose, location, and timing of the joint meeting in a daily or weekly newspaper published in each county in which the proposed project is situated. There is no proof of this newspaper notice in the public record for this proceeding under docket number P-14867. Therefore, when you file the Final License Application (FLA), please include, in the consultation record, proof of publication for the newspaper notice of the joint agency meeting.

2. Pursuant to section 4.38(b)(3)(i)(3) of the Commission's regulations, an applicant must file with the Commission, at least 15 days in advance of the joint agency meeting, an agenda for the meeting which indicates the time and place of the meeting and issues that will be discussed. No agenda has been filed in the public record for this proceeding under docket number P-14867. If the agenda was filed under the prior proceeding for this project (under docket number P-14425), please re-file the agenda for the joint agency meeting under the correct docket number P-14867.

3. Under section 307(c)(3)(A) of the Coastal Zone Management Act, 16 U.S.C. § 1456(3)(A), the Commission cannot issue a license for a project within or affecting a state's coastal zone unless the Coastal Zone Management agency concurs with the license applicant's certification of consistency with the state's Coastal Zone Management Act program, or the agency's concurrence is conclusively presumed by its failure to act within 6 months of its receipt of the applicant's certification. On page E-12 of the draft license application (DLA), you state that the proposed project would be located outside of Virginia's Coastal Program Resource Management Area, but did not indicate that you consulted with the Virginia Department of Environmental Quality (Virginia DEQ) to confirm this, nor did you document that you self-certified. Although the project may not be located in a coastal zone, the project discharges flow into the Chesapeake Bay via the James River. Therefore, the project could affect the coastal zone. To help staff determine the effects of the project on Virginia's designated coastal zone, please consult with Virginia DEQ on whether the project would affect the coastal zone and what steps you need to take, if any, to comply with the state's coastal zone management program. In the FLA, please provide a copy of your correspondence with, and any responses from, Virginia DEQ.

General Comments

4. When you file the FLA, please use project number P-14867 throughout the document (including any appendices such as study reports) when referring to this project instead of P-14425, which was the docket number for a prior project at this site under a different applicant.

5. Several study reports are included as appendices in the DLA, including those for the: mussel survey, terrestrial habitat assessment, and phase II architectural survey. However, the DLA contains no study reports for the following studies that were conducted as part of your study plan developed through consultation with project stakeholders: (1) Assessment of Pre- and Post-Project Water Levels Upstream and Downstream of Scott's Mill Dam, (2) Bathymetric Survey, (3) Water Quality Study, (4) Sediment Chemical Analysis, (5) Impoundment Fish Species Presence, (6) Evaluation of Entrainment Potential and Turbine Passage Survival, (7) Project Effects on Fish Habitat, (8) Evaluation of Fish Passage, (9) Wetlands Assessment, (10) Recreation Resources Study, and (11) Visual Resources Study. In the FLA, please provide a complete study report for each of these 11 studies—each report can be included as a separate appendix. Similar to the report you provided for the mussel survey, a complete study report should include an introduction section that provides background on the issue being addressed; a method section that includes sampling location maps, a description of your methodology, sampling instrumentation used, and an explanation of any calculations; a results section; and a discussion section focused on associated project effects. These completed study reports are necessary so that staff can better interpret the results of the completed studies and enable us to assess potential effects of the construction and operation of the proposed project on various resources.

6. Appendix D includes a complete listing of all water quality standards for the entire state of Virginia. Many of these water quality parameters and locations do not pertain to the Scott's Mill Project. Therefore, when you file the FLA, please consider deleting, or at least consolidating, this information to only include those water quality standards [e.g., temperature, dissolved oxygen (DO), pH, and PCBs] that are relevant to the proposed Scott's Mill Project in terms of location and project operation.

Exhibit A – Project Description and Proposed Mode of Operation

7. Several of your proposals including mode of operation, turbine choice, and the number, type, and location of fishways to be installed at the project do not appear to be finalized at this time. For instance, you propose to operate the project in run-of-river mode, but on page A-4, state that "…a future option would be to operate the Scott's Mill Project in conjunction with the upstream Reusens Project, which operates as a peaking

project…." It is also unclear which type of turbines you propose to install at the project. On page A-3, you state that "…for the purposes herein, you would install LPS/Rickly axial flow turbine units…but may reconsider the use of Natel's hydroEngines…." Regarding fishways, it is unclear whether a vertical slot fishway, nature-like fishway, or trap and transport would be utilized at the project in addition to the proposed eel ramp(s). Please note that for the purposes of our analysis under the National Environmental Policy Act (NEPA), we must be able to evaluate and analyze the potential effects of the proposed project on various resources, which requires a specific proposal from the applicant regarding the facilities they propose to install and maintain at the project and how the project would be designed and operated. Therefore, in the FLA, please specify a proposed mode of operation, the type of turbines you propose to install, and the number, type, and location of fishway(s) you propose to install at the project. If a license is issued for the project, potential future changes to the operation or design of the project (e.g., changing to the Natel turbines or coordinating project operation with Reusens) could be addressed through the Commission's license amendment process.

8. On page A-2 you state that a 2-foot-high concrete cap would be added to the main spillway, which is 735 feet in length, to help divert water to the opposite side of the river (river right[1]) where the arch dam (140 feet in length) is currently located. However, throughout the consultation record in Appendix A, flashboards, rather than a permanent concrete cap, are presented as an option for diverting flow to the proposed powerhouse. Therefore, please clarify whether you propose to add a 2-foot-high concrete cap to the main spillway, or the flashboards described in Appendix A.

9. When you file the FLA, please specify in Table A-2, the minimum and maximum capacity of each individual turbine unit as well as the minimum and maximum hydraulic capacities of the plant, as required by section 4.61(c)(1) of the Commission's regulations.

10. In Table A-3 you indicate that the plant would be shut down at a flow of 25,100 cubic feet per second (cfs). However, the flow range over which the plant would operate is not specified. Therefore, in the FLA, please indicate the lowest flow at which the plant would start operating (brought online) and the high flow at which the plant would shut down.

11. Section 4.61(c)(9) of the Commission's regulations requires a statement of measures taken or planned to ensure safe management, operation, and maintenance of the project. In the FLA, please provide a more detailed statement of measures taken or planned to ensure the safe management, operation, and maintenance of the proposed

[1] River orientations (left and right) reference the side of the river when looking downstream.

project.

12. On page A-6, you state that the project will be operated "…by an experienced company that operates four other hydropower project on the James River." In the FLA, please specify the company that would operate the project.

13. The map provided in Figure A-1 is small and the text is difficult to read. Please provide a more legible map in the FLA; also indicate on the map, which of the dams on the James River are breached, notched, and/or have fish passage facilities (if so, what type) as this would aid staff's analysis of the need for fish passage in our NEPA document.

14. In the FLA, please include a legend for Figure A-19 that indicates what the two blue lines and set of dots represent.

15. Section 4.61(c)(8) of the Commission's regulations requires a detailed single-line electrical diagram. You state that a detailed single-line electrical diagram will be provided in the FLA. Please provide a detailed single-line electrical diagram in the FLA.

Exhibit E – Environmental Resources

Need for Power

16. On page E-5, you state a need for power. However, your statement is insufficient to prepare a NEPA document. In the FLA, please provide more details regarding the need for power.

Environmental Measures

17. On page E-8, you list as a proposed environmental measure to "…provide up to a ½-inch veil of water over the dam, to preserve downstream environmental water quality." In the FLA, please explain how this measure could be achieved given that the proposed project would involve two uncontrolled spillways (the main spillway and the arch dam), neither of which currently, or are proposed to contain, gates or water control structures.

18. As stated on page E-52, you indicate that about 50 percent of the turbine discharge would be directed towards the east side of the river (river left) below the main spillway. If this is a proposed environmental measure, please list it as such in the *Environmental Measures* section of the FLA (currently section 4.2.2 in the DLA) and provide further details on how this measure would be implemented (i.e., how turbine flow would be directed towards the left side of the river below the main spillway).

Geology and Soils

19. Throughout the DLA, you indicate that "best management practices" would be used to mitigate erosion and control sediment during the construction of the project. However, given the extent of proposed construction and excavation activities, please provide a more detailed explanation of the actual measures you would take to control erosion, sediment mobilization, and turbidity during each of the following activities: (1) the removal of up to 0.25 acre of land from the southern tip of Daniel Island to increase flow to the powerhouse, (2) the removal and dismantling of the top 4 to 10 feet of the existing arch dam, (3) construction of the new powerhouse, and (4) excavation of a tailrace channel to accommodate the turbine units.

Sediment Chemical Analyses

20. Please explain in the FLA why no sediment samples were taken from the proposed downstream tailrace excavation area as proposed in study plan 4. On page E-132, you state there may not be enough sediment in this downstream area for a deeper composite sample, but that a surficial sample would still be taken.

Monthly Flow Duration Table

21. The period of record for the flow data presented in table E-6-1 is from 1928-2002, for the Holcomb Rock gage. However, more recent data is also available from this gage for years 2003-present. Therefore, please re-calculate the statistics in this table using the entire flow record for the Holcomb Rock gage (i.e., from years 1928-present); provide the updated table in the FLA. Also, please ensure that the flow duration curves (annual and monthly) presented in figures A-6 through A-18 of the DLA are based on the entire flow record for the Holcomb Rock gage (i.e., 1928-present).

Pre- and Post-Project Water Elevations

22. In applying the weir equation to predict changes in upstream water elevations resulting from the addition of a 2-foot-high concrete cap on the main spillway, you assumed a constant discharge coefficient (C) of 3.5 across flows of 700 cfs to 255,000 cfs. However, it appears that the discharge coefficient varies considerably across flows and is not constant, which could affect your estimates and assessment of post-project changes in upstream headpond elevations. As a case in point, staff used the weir equation to calculate the discharge coefficient for each flow (table A-3) at which you

measured headpond elevations. Staff used the equation $C=[Q/(L*H^{1.5})]$ where C is the discharge coefficient, Q is flow, L is the length of the main spillway (735 feet), and H is the height of water above the existing dam crest. Based on these calculations, the discharge coefficient ranged from 1.3 to 4.3 across the flow range of 700 cfs to 25,100 cfs. Therefore, please provide in the FLA your rationale for assuming a constant discharge coefficient across the flow range of 700 cfs to 255,000 cfs; or, if you opt to utilize a flow-specific discharge coefficient (which appears more appropriate in this case), then please re-calculate and provide new estimates of post-project headpond elevations.

23. In applying the weir equation to estimate post-project headpond elevations, it appears that you have assumed that when the project would be operating, there would be no flow over the main spillway and that all flow (up to 4,500 cfs, or the maximum hydraulic capacity of the project) would be diverted through the powerhouse. In the FLA, please confirm this assumption and provide a more detailed explanation of all calculations involving the weir equation.

24. Staff were not able to locate, on the web, a copy of the 2008 FEMA Flood Insurance Study for the City of Lynchburg that you used, in part, to estimate potential changes in water elevations due to construction and operation of the proposed project. Please include a copy of this FEMA report with the FLA filing.

Bathymetry Survey

25. During first-stage consultation, Virginia Department of Game and Inland Fisheries (Virginia DGIF) recommended that the bathymetry survey extend upstream (from Scott's Mill Dam) to the base of Reusens Dam and downstream to the mouth of Blackwater Creek. Although neither of these features are labeled on figures E-6-1 or E-6-2, it appears the survey did not cover the stretch of river (especially downstream) that Virginia DGIF recommended for sampling. Please explain this discrepancy in the FLA.

26. The figure legends in figures E-6-1 and E-6-2 are cut off and not readable. Please ensure these legends are readable in the FLA.

Water Quality

27. The water quality data provided in the DLA are insufficient to characterize existing baseline conditions at the project and evaluate the potential effects of project operation on upstream and downstream water quality. Only two days of water quality

sampling were conducted in the reservoir—one day of continuous monitoring with a sonde (September 9, 2016) and one day of vertical profile collections (September 12, 2016). This level of effort is insufficient to capture daily variations in water quality (e.g., temperature, DO) that occur due to weather changes and/or peaking operations of the Reusens Project which is immediately upstream of the proposed Scott's Mill Project. Furthermore, it is unlikely that the existing water quality data from nearly 1 mile downstream of the project (at Percival's Island) is representative of conditions immediately downstream of Scott's Mill Dam, as noted by Virginia DGIF. Accordingly, please provide in the FLA, any available water quality data that is based on longer-term sampling and is representative of existing conditions at the proposed project site. If such data are not readily available, then Commission staff may request, during our review of the FLA, a water quality monitoring study be conducted during the low-flow, high-temperature season.

Fisheries Data

28. On page E-54 you note that American eel catch-per-unit effort (CPUE) data are available for locations immediately upstream and downstream of Scott's Mill Dam. In the FLA, please provide these site-specific catch data (i.e., for the reservoir and immediately downstream of Scott's Mill Dam) for eels and any other key migratory or resident fish species (e.g., American shad, smallmouth bass) along with any available size distribution data. This information will aid staff's assessment of entrainment mortality and the need for fish passage at the project.

Entrainment Mortality

29. Please re-calculate your turbine survival estimates based on the characteristics of the specific turbine units (rotational speed, runner diameter, etc.) that you intend to install at the proposed project. Please include these project-specific estimates of turbine survival in the entrainment report that is submitted with the FLA.

Fish Passage

30. On page E-160, you state that a "Hydro Fish Passage Initial Assessment Report" was prepared for the proposed Scott's Mill Project by Alden. Please include a copy of this report in the FLA.

Terrestrial Resources

31. On page E-7 of the DLA, you state that you intend to dredge an existing channel at the southern end of Daniel Island, just upstream of the dam, to allow flow from the main channel to the proposed powerhouse. You state that dredging dimensions have yet to be finalized, but the width of the channel is expected to be about 130 feet with a length of about 100 feet. So that staff can better understand the effects this dredging will have on terrestrial resources and wetlands, please provide, in the FLA, a map that labels the existing channel, the vegetation around the channel, and the location of any wetlands near the channel. Also, please describe how the dredging will occur and where the dredged material will be disposed.

32. In study plan 10 (pages 34-38), you state that a Wetland Assessment will be completed and that includes wetland maps and an impact assessment. In section 6.3.4.1.1, *Wetlands*, of the DLA, you state that the U.S. Army Corps of Engineers has verified the presence of a jurisdictional wetland area on Daniel Island and that some portions of the alluvial island downstream of Scott's Mill Dam may be potentially jurisdictional wetlands (though much of the island is rocky).[2] However, the DLA does not include the results of the proposed Wetland Assessment, including the wetland maps and impact assessment. So that staff can analyze the effects of the proposed project on the identified wetlands, please provide, in the Wetlands Study Report filed as part of the FLA, the results of the Wetland Assessment, including the described wetland maps for wetlands located both upstream and downstream of Scott's Mill Dam.

33. On page-360, you state how much shoreline upstream of the dam would experience increased inundation if 3-foot-high flashboards were added to the main spillway and that the amount of inundation would decrease or 'taper' with increased distance (upstream) from the dam. If your final proposal is to add a 2-foot-high concrete cap to the main spillway rather than flashboards, please re-calculate the inundation levels upstream of the dam based on the 2-foot-cap and also provide an accompanying map, as part of your Wetlands Study Report in the FLA, that illustrates how shoreline inundation would decrease as a function of distance upstream from the dam.

Threatened and Endangered Species

34. In section 6.3.5 of the FLA, *Threatened and Endangered Species*, you state that the northern long-eared bat, a species listed as threatened under the Endangered Species Act, has the potential to occur in the vicinity of the project.[3] However, while you state on page E-62 that the project should not significantly reduce the extent of mature forest or

[2] Draft License Application, page E-60.
[3] *Ibid.*, page E-61.

alter natural hibernacula for bat species, you provide no information to support this claim, nor do you describe whether any northern long-eared bat habitat exists in the vicinity of the project. As required by section 4.61(d)(2) of the Commission's regulations, please provide, in the FLA, a description of any northern long-eared bat habitat located within the area studied for the terrestrial resources assessment. Also, please provide, in the FLA, any information on consultation with the U.S. Fish and Wildlife Service about the northern long-eared bat.

Recreation

35. On page E-66, you referenced studies of recreation use on the James River that were published in 1991 and 2000. However, recreation use and needs on this stretch of river may have changed in the past 20 years and the results of those studies may be obsolete. In your study plan, you indicated that you would conduct a recreation resources study in 2016 to assess the need for recreation enhancements, however, that study report was not included in the DLA. If you did complete the study please provide the final report in the FLA as requested in item 5 above.

If you did not complete the study, please provide your rationale. At a minimum, you should include in the FLA (1) a map and description of all regional recreation and existing recreation in relation to the project boundary, including who operates and maintains each site or facility; (2) recreation capacity and use at all project recreation sites and facilities, if available; (3) any agency-recommended recreation enhancements; (4) any proposed enhancements to existing recreation sites or facilities or new sites and facilities; (5) information on who would own and operate any proposed recreation sites; (6) the capital and annual cost of ongoing and proposed recreation operation and maintenance; and (7) an anticipated construction schedule. Please be advised that if staff is unable to describe the recreation sites and facilities and recreation use within the proposed project boundary and vicinity of the proposed project and assess potential project-related effects on existing and future recreation use and capacity at the project, staff may require a recreation assessment after review of the FLA. Typically, such an assessment would: (1) identify the condition of all informal and formal recreation sites and facilities within and or adjacent to the project boundary, including any erosion that may exist due to recreational use; (2) determine the current and projected capacity at each recreation site and/or facility; (3) identify who owns, operates, and maintains each recreation site and/or facility; (4) describe each recreation site and or facility in relation to the project boundary; and (5) conduct visitor surveys during the recreation season to determine the adequacy of project recreation facilities and if changes or upgrades are needed.

Further, on pages E-108 to E-111, the James River Association provides comments for enhancing public boating and fishing access, as well as providing trails,

camping, and historical interpretation. Please indicate if you propose to include any of these comments as proposed protection, mitigation, or enhancement measures in the FLA.

36. In the FLA, please describe how the construction of the project, and consequent removal of dam structures, would affect recreation access to the dam.

37. On pages E-67 and E-68, you describe boat access and other recreation sites along the stretch of river upstream of the project. Please provide a map in the FLA that indicates where these sites are located and where the public has access to the river.

38. On page E-68, you describe a private shoreline that the public uses as a popular shoreline fishing area. You further state that there is an informal parking area along River Road, adjacent to the dam. Is this parking area used to access the shoreline fishing described above? In the FLA, please indicate on a map where the shoreline fishing occurs, any facilities used to support fishing, and where the informal parking area is in relation to the shoreline fishing. Further, please describe who owns and maintains these sites and if you propose to own and maintain these properties during the term of any license issued for the project.

39. Similarly, on page E-70, you propose to "work with the private boat ramp owner" to provide public boat access. Is this the same land used for shoreline fishing? In the FLA, please indicate where this boat ramp is located and describe how you intend to acquire, or obtain the property rights to this land, and maintain the site during the term of any license issued for the project.

40. On page E-69, you state that landowners would be adversely affected by up to a 2-foot increase in elevation, relative to existing conditions, 5 percent of the time during high-flow conditions. However, you state that this would be mitigated by the steep shoreline. Please describe how landowners would be adversely affected by an increase in water elevation.

41. Please provide in the FLA a map indicating where the proposed fishing pier and canoe portage route, put-in, take-out, and parking areas, described on page E-70, are located in relation to proposed project facilities, and the river, within a clearly delineated proposed project boundary. Also, please provide in the FLA, an anticipated construction schedule for the proposed recreation sites, in the event a license is issued for the project.

Further, please describe the existing parking areas (i.e., paved, gravel, etc.) and how many vehicles and trailers they can accommodate. Please describe who owns and maintains the parking areas and who would own and maintain each proposed and existing recreation site throughout the term of any license issued for the project. You state that

you propose "to enter into an arrangement with Virginia DGIF and Virginia Marine Resources Commission (Virginia MRC) so that these facilities are managed by the state agencies." However, please note that because there is no guarantee that the state would maintain these sites during the term of any license issued for the project, the licensee would be ultimately responsible for maintaining any project recreation sites and facilities approved for the project.

42. In the FLA, please indicate if you propose to install any directional or informational signage at the existing parking areas and proposed portage and fishing pier, and indicate if there are any existing access paths, or if you propose to install any access paths connecting the parking areas with the proposed recreation sites.

43. On page E-70, you state that you propose to use metal for the take-out and put-in locations; however, this is unclear. In the FLA, please describe how metal would be used at these sites.

Land Use and Aesthetic Resources

44. On page E-71, you categorized the land use surrounding the project as a mixture of riparian, forested, and recreational. The descriptions are vague and do not provide enough detail to identify the land use within the proposed project boundary. Please include in the FLA the types of land use within the project boundary (i.e., industrial, urban, rural, forested, riparian, undeveloped, recreational, residential, etc.); the amount, in acres, for each category; and a map depicting land use categories. Also, please identify the percentage of lands within each category that is applicant-owned and privately owned.

45. On page E-69, you state that there would be a veil of water flowing over the dam 73 percent of the time that would be visible to private boat docks along River Road. However, on page E-70, you state that there would be a "small flow" over the dam 73 percent of the time and on page E-73, you state that there will be flow over the dam 22 percent of the time. In the FLA, please clarify, according to various flow levels, what percentage of the dam would be covered with overflow and how frequently that would occur. You further state that the reduced veil covering the dam 22 percent of the time would be more visually appealing than the veil flow. Please clarify how a limited flow would be preferred by viewers.

46. In the FLA, please elaborate on how you would construct the powerhouse to blend with the surrounding landscape, as stated on page E-73.

47. Construction of project facilities and partial removal of the arch dam have the potential for adverse effects on land use, aesthetic resources, and public safety especially

in developed areas. Specific areas of concern include the effects of construction-related traffic on: (1) road degradation; (2) property damage (i.e., residences located along any access roads); and (3) public safety, including residents and recreationists. So that staff can analyze these potential issues, the FLA should include a description of public road segments that could be affected by construction, including temporary road closures; the expected duration and frequency of such road closures; an assessment of potential construction noise; and any measures you propose to avoid or minimize disruptions to public use or access, particularly during busier public use periods (e.g., informational or warning signs, posted notices, limited hours or days of construction, alternate routes, location of staging areas, etc.). Further, please provide a map showing the location(s) of any temporary or extended road closures, sign locations, alternate routes, or staging areas that may affect public access to cabins or recreation sites near the project.

Cultural Resources

48. On page E-114, the Virginia Department of Historic Resources (Virginia SHPO) concurred with the cultural resources study plan, filed with the revised study plan on February 8, 2018, which identifies a preliminary area of potential effects (APE) for the project. The results of the architectural portion of the cultural resources survey were included in the DLA and indicated that you surveyed only three known historic properties within the proposed APE, rather than surveying for any additional historic properties that could exist within the proposed APE.

Further, the proposed methodology that was/will be implemented to assess presence and eligibility of archaeological resources is vague. For example, the study plan states that you would conduct an archival review and reconnaissance survey, but it is unclear what sources you would reference for the archival review or if the reconnaissance survey would include a field inventory, soil tests, etc. In the FLA, please be specific about the methodology used/to be used to help staff best assess any effects on historic and archaeological resources.

Lastly, in your revised study plan, you indicate that the proposed APE is preliminary and that you would finalize the APE with the Virginia SHPO. Please be sure to also include the Delaware Nation in your consultation for determining the APE and appropriate survey methodology, and provide any documentation of consultation with both parties. Typically, you would ask the Virginia SHPO and Delaware Nation to agree, pursuant to section 106 of the National Historic Preservation Act, with the: (1) proposed project's APE, (2) results of any architectural and archaeological surveys, and (3) any potential effects that may occur to National Register-eligible historic properties. If the Virginia SHPO and Delaware Nation disagree with any of the proposed documents or effects, or if you do not agree with any of the correspondence that you receive, please

explain why in the FLA.

49. On page E-76, you state that you would conduct an archaeological inventory and assessment in late 2017 and early 2018. Please include this report in the FLA to help staff assess any adverse effects of the project on any cultural resources eligible for listing on the National Register. If this information is not available in the FLA, then staff may request that you: (1) identify the project site's APE;[4] (2) after consultation with the Virginia SHPO and Delaware Nation, conduct a Phase I pedestrian field inventory within the APE to locate any historic or archeological resources; (3) assess the National Register-eligibility of historic resources, including the project itself, or archaeological resources within the APE; (4) evaluate the potential effects the project would have on historic properties; (5) assess the condition of the area where any historic and archaeological sites are located for shoreline stability and evidence of erosion; and (6) ask the Virginia SHPO and Delaware Nation for concurrence with the results of the archaeological survey and any potential effects that may occur to any National Register-eligible archaeological resources.

50. The proposed project would include the Water Works Dam and Canal and James River Dam, which are eligible for listing on the National Register. The Water Works Dam and Canal is also a contributing feature of the James River and Kanawha Canal Sites, which was listed on the National Register in 1984. Please provide a copy of the architectural rendering provided in figure A-5 of the DLA to the Virginia SHPO and Delaware Nation for comments. Please include any comments you receive from the Virginia SHPO and Delaware Nation in the FLA and file a copy of the architectural rendering separately with the Secretary of the Commission. Label the first page of the filing "Privileged Information."

Exhibit F – General Design Drawings, Supporting Design Report

51. Section 4.41(g)(1) of the Commission's regulations requires that the drawings of Exhibit F show all major project structures in sufficient detail to provide a full understanding of the project, including: (1) plans (overhead view); (2) elevations (front

[4] The APE should, at a minimum, include the lands enclosed by the proposed project boundary including both in-water and on-shore project lands and facilities, and lands or properties outside the project boundary where project operation or other project-related activities may cause changes in the character or use of historic properties, if any historic properties exist. The APE should be developed after consultation with the Virginia SHPO and Delaware Nation. Once the APE is defined, please request that the Virginia SHPO and Delaware Nation concur with the APE prior to conducting any field surveys within the APE.

view); (3) profiles (side view); and (4) sections. In the FLA, please provide all Exhibit F maps according to section 4.41(g)(1).

52. An applicant must furnish a supporting design report that complies with section 4.41(g)(3) of the Commission's regulations and demonstrates that existing and proposed structures are safe and adequate to fulfill their stated functions. No supporting design report was filed with the DLA. Therefore, please provide the supporting design report in the FLA. Please note that section 4.41(g)(4) of the Commission's regulations requires the applicant to submit two copies of the supporting design report, described in paragraph (g)(3) of section 4.41, at the time preliminary and final design drawings are submitted to the Commission for review. If the report contains preliminary drawings, it must be designated a "Preliminary Supporting Design Report."

Exhibit G – Project Boundary Maps

53. Section 4.61(f) of the Commission's regulations requires, in part, that an application includes an Exhibit G with a map or series of maps that complies with section 4.41(h) that clearly shows the location of the project, relative locations and physical interrelationships of the principal project features, and a proposed project boundary that encloses all project works and features identified in Exhibit A. Pursuant to section 4.41(h)(2) of the Commission's regulations, the map(s) must show a project boundary enclosing all project works and other features described under paragraph (b) of Exhibit A that are to be licensed. In the FLA, please provide maps showing the principal features and project boundary including impoundments, continuous features (e.g., transmission lines, access roads), and non-continuous features (e.g., dams, powerhouses).

54. Section 4.39(a) of the Commission's regulations requires that Exhibit G maps and drawings be stamped by a registered land surveyor. There is no registered land surveyor's stamp on the G-1 map in the DLA. Therefore, all Exhibit G maps and drawings in the FLA must contain a stamp from a registered land surveyor.

55. Section 4.41(h) of the Commission's regulations requires an applicant to provide the project boundary data in a geo-referenced electronic format. Please provide this information in the FLA. In addition, each map and drawing must conform to section 4.39 of the Commission's regulations. Please review section 4.39 and make adjustments as necessary.