United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 Westgate Center Drive
Hadley, MA 01035-9589

In Reply Refer To:
FWS/Region 5/ES-TE

NOV 30 2011

Memorandum

To: Regional Director, Region 5

From: ACTING Assistant Regional Director, Ecological Services

Subject: Findings and Recommendations Regarding the Incidental Take Permit to Dominion Virginia Power to Allow Incidental Take of the Madison Cave isopod at the Warren County Power Station in Warren County, Virginia

I. Description of Proposal

A. Introduction

The U.S. Fish and Wildlife Service (Service) proposes to issue an incidental take permit (ITP) to Dominion Virginia Power (DVP) to authorize the incidental take of the federally listed threatened Madison Cave isopod (*Antrolana lira*) (MCI) pursuant to section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 *et seq*.). The proposed project involves the construction of a natural gas fired power plant on a 39-acre parcel in Warren County, Virginia. This project will involve installing up to 2,234 micropiles and/or driven H-piles and 13 caissons into the karst geology and the conversion of 6.1 acres of the site from pervious to impervious surface. The subterranean geology below the site is assumed to be occupied by the MCI. Development of this parcel may result in take of the MCI.

As part of its permit application, and as required by section 10(a)(2)(A) of the ESA, DVP has submitted to the Service the "Madison Cave isopod (MCI) Low-Effect Habitat Conservation Plan, Warren County, Virginia," and an Implementing Agreement (IA). The HCP addresses the effects of the proposed development project on the MCI and describes implementation of take avoidance, minimization, and mitigation measures. The permit would allow incidental take of MCI through harm, harassment, injury and direct mortality. Direct mortality or injury of MCI may occur from impingement from falling rocks or the drill head or micropile point during drilling. Indirect impacts, potentially rising to the level of take via harm and harassment, may

occur from the loss and degradation of habitat and disturbance occurring on the site. The permit would be in effect for up to 9 years, until 2020, and addresses impacts from construction activities. Operation of the facility is not expected to result in take of MCI. In addition, DVP is seeking assurances consistent with the U.S. Department of the Interior's "No Surprises" regulations (50 C.F.R. Section 17.22(b)(5) and 17.32(b)(5); 63 Fed. Reg. 8,859).

Documents used in the preparation of these findings and recommendations include: 1) DVP's Low-Effect HCP; 2) the Service's Biological Opinion (BO) under section 7 of the ESA; and, 3) the Service's Low Effect Screening Form/Environmental Action Statement (EAS). These documents are hereby incorporated by reference. In the following sections, the Service presents its analysis and findings justifying permit issuance in accordance with its governing statutory and regulatory criteria, ESA Section 10(a)(2)(B) and 50 C.F.R. Section 17.22(b)(2).

B. Project Description

DVP proposes to construct a combined-cycle power generation facility capable of generating a nominal electrical output of up to 1,500 megawatts. The proposed facility will include the installation of three advanced firing natural gas turbines in combined-cycle mode, each provided with a Heat Recovery Steam Generator and one steam turbine generator. The fuel for the combustion turbines will be natural gas provided to the site by a natural gas supplier. Due to the karst geology and the assumed presence of the MCI in the subterranean phreatic water, DVP proposes to use up to 2,234 micropiles and/or driven H-piles to support heavier or critical structures where susceptibility to sinkholes is not tolerable, and tolerance to total or differential settlement is minimal. Micropiles will be driven through voids in the rock stratum until they reach a minimum depth of 10 feet (ft) within competent rock. Micropiles are installed using a two-step process: 1) a pilot hole less than 2 inches in diameter is drilled to determine the appropriate depth; 2) an air drill enclosed in a steel casing (7 inches in diameter) is drilled to the pre-determined depth. As the drill advances, the casing follows and ensures the drill hole is separated from the surrounding environment. After reaching the pre-determined depth, the drill head is withdrawn, the casing is left in place, an inner steel pipe is inserted through the casing, and the casing is then filled with concrete. H-piles will be driven until first refusal and are typically installed where the bedrock is shallow. They are "H" shaped in cross section and range from 10 to 18 inches square, and the metal ranges from 0.435 to 0.685 inches thick. DVP will also install 13 caissons (which are not expected to penetrate MCI habitat) to support transmission line towers across the site to the point where they connect with an existing transmission line. Their installation will require drilling a pilot hole and inserting a steel casing, which will be filled with concrete. The largest potential diameter is estimated to be 8 ft. To be conservative, DVP is including the caissons in their calculation of potential habitat impacted.

Currently, two stormwater dry detention ponds exist on-site but do not provide adequate treatment for sediment or contaminant removal before water is directed to an off-site sinkhole where it enters into the aquifer. The ponds currently remove only approximately 20 percent of the phosphorus and allow turbid water to enter the aquifer. The proposed plant will incorporate

three stormwater ponds. The existing ponds will be enlarged, retrofitted, and become Ponds #1 and #2. Ponds #1 and #3 are connected in series; Pond #3 will be placed to capture the runoff that has the highest probability of containing hydrocarbons. The third pond, Pond #2, will capture runoff from the remainder of the site. Ponds #1 and #3 are designed to hold and treat a 100-year storm event, and Pond #2 is designed to hold and treat a 10-year storm event with an emergency spillway. Both drain into the county drainage system. Pond #1 is designed to reach 65 percent phosphorus removal and Pond #2 is designed to reach 40 percent phosphorus removal. All of the detention ponds will be lined with impermeable clay liners, will contain a standpipe with a manual shut-off valve that can be closed if necessary, and will be fitted with shut-off valves and hydrocarbon detectors with a detection level of 10 milligrams/liter. Stormwater from the parking areas and containment structures will be routed through oil/water separators prior to discharge into the ponds. Through the IA, DVP also has committed to maintain the stormwater treatment basins for the duration of its Plant's operation, thereby assuring water quality and curtailing the likelihood of take of MCI following construction (IA Sections 8.1 and 15.2).

As a result of construction, approximately 6.1 acres of the site will be converted to impervious surface. At present approximately 0.7 acre of the site are impervious surface. Runoff from these surfaces will be directed to the stormwater ponds.

DVP will mitigate unavoidable impacts by establishing a Deed of Open Space Designation on a nearby 18.41-acre parcel owned by Warren County, Virginia. The mitigation lands will be covered lands within the HCP. The parcel comprises of a 7.67-acre swale that includes Brother Dave's Cave, a known MCI site, and 10.74 acres of forested buffer east of the swale. The mitigation site is in Warren County, approximately 0.2 mile from the project site. DVP is currently working with the County and the Service on terms of the Designation. In addition to the Designation, DVP will fund water quality and MCI population monitoring prior to construction and 8 years of monitoring after construction. Water quality monitoring will measure temperature, turbidity, conductivity, and water levels at Brother Dave's Cave and Power Plant Pit, nearby sites, and a reference site. Population monitoring will entail mark-recapture work to try to assess MCI population trends. DVP will submit annual reports to the Service.

In section II C, below, the Service evaluates whether these measures satisfy the Service's issuance criteria (ESA Section 10(a)(2)(B)(ii) and 50 C.F.R. Section 17.22(b)(2)(i)(B)).

II. Incidental Take Permit Issuance Criteria – Analysis and Findings

A. Permit Issuance Criteria

Sections 10(a)(2) of the ESA specifies the requirements for permit issuance. This provision is broken into two component parts, one directed to DVP and the other to the Service. Section 10(a)(2)(A) sets forth the required components of an application from which the Service can judge whether an applicant's submission is complete. Section 10 (a)(2)(B) provides the criteria

by which the Service must evaluate and approve an application package once it has determined the submission is complete. As described below, the requirements, although necessarily similar, are not identical, and are not interchangeable standards.

Section 10(a)(2)(A) of the ESA specifically mandates that "no permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless DVP submits to the Secretary a conservation plan that specifies: (i) The impact which will likely result from such taking; (ii) what steps DVP will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking DVP considered and the reasons why such alternatives are not being utilized; and (iv) such other measures as the Secretary may require as being necessary or appropriate for the purposes of the plan."

Regarding the requirement set forth in section 10(a)(2)(A)(iii), DVP must consider alternatives to the proposed project, and "give reasons why such alternatives are not being utilized." When DVP appears to have reasonably considered alternatives, and does give "reasons" why the alternatives were not selected, the Service considers the application criterion satisfied.

Section 10(a)(2)(B) of the ESA mandates that the Secretary shall issue a permit if he finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that: (i) The taking will be incidental; (ii) DVP will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) DVP will assure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and he has received such other assurances as he may require that the plan will be implemented" (Emphasis added).

Section 10(a)(2)(B)(ii) requires that the Service find that "DVP will, to the maximum extent practicable, minimize and mitigate the *impacts of such taking*." The only "taking" contemplated is that associated with the proposed projects and HCP. But for this taking, there would be no need for an incidental take permit. Thus, practicability applies only to measures designed to minimize and mitigate the impacts of taking associated with the proposed project.

Upon receipt, the Service evaluated and adjudged DVP's conservation plan (HCP) to be complete and in accordance with ESA Section 10(a)(2)(A) application requirements. The purpose of this findings document, with regard to the project proposed and permit actions, is to explain why permit issuance is warranted and how each of the criteria contained in section 10(a)(2)(B) has been satisfied.

B. Analysis of Effects

The issuance criteria of ESA Section 10(a)(2)(B) focus largely on the take that is anticipated to occur as a result of the proposed project and the obligations of DVP, as the permittee, to reduce or compensate for the taking. But to provide context for that discussion, a brief examination of the anticipated project impacts is necessary.

The direct and indirect impacts from this project to MCI respiration and feeding and to sheltering functions of the habitat are described in section 4.0 of the HCP. These sources of take are also summarized below with the minimization measures proposed by the HCP for each source of take.

1) Mortality or injury during drilling or driving micropiles and caissons: Incidental take of MCI may occur by inadvertently striking MCI during drilling, micropile and caisson installation, or rocks loosening and falling. While the construction techniques for this project are intended to avoid and minimize impacts to MCI, they involve drilling holes and installing micropiles in karst features that may serve as habitat for the species. If MCI do not move away from the site during active construction, we anticipate direct take may result from impingement from the drill head, micropiles, or loose rock. There is no methodology currently available to determine when direct take of MCI has occurred or when take limits have been exceeded. While DVP has developed a surrogate species model to predict the potential impacts of take on the MCI population, the model assumptions and uncertainties reduce its utility for quantifying or measuring take of MCI at the project site. Therefore, the amount of MCI habitat potentially affected by the project will serve as a surrogate for direct and indirect take of MCI. We anticipate and authorize take for 2,897 ft^2 (0.07 acre) of karst features intersected and/or affected by piles and caisson installation. This level of take represents the maximum area where MCI would be exposed to the potential for direct impacts from impingement from falling rocks or contact with the drill bit or pile point and for indirect effects from habitat degradation (as described below) during drilling/driving into the phreatic zone during construction (assumed to disturb an area of 1 ft^2 around piles) and accounts for the loss of subterranean habitat (as described below) due to installation of micropiles and caissons. To offset the effects of incidental take via direct mortality or injury, DVP has developed a habitat protection mitigation measure as described below.

2) Habitat degradation and disturbance: Take of MCI in the form of harm or harassment can occur from the introduction of sediment during drilling or boring into voids connected to the phreatic layer and habitat alteration from the installation of micropiles. Depending on the amount of sediment entering the system, sediment may interfere with MCI respiration and feeding. MCI are expected to move out of the affected areas and return once the water has cleared. Impacts to MCI from increased sedimentation are expected to be temporary and occur only during construction. The HCP has minimized sedimentation effects by upgrading the existing stormwater management system. The system will be converted from a "dry" detention basin system to a "wet" detention basin and will allow the water to enter the system more gradually rather than all at once, which is how the current system is designed. The new system

will be more effective at reducing the nitrates and phosphorous levels of the water entering the karst system. Sedimentation effects are also minimized by DVP's construction technique. Drilling will occur within a steel casing, separating the drilling from the majority of the surrounding environment. The indirect effects of habitat degradation via the potential introduction of sediment into MCI habitat have been explicitly incorporated into the surrogate habitat take assessment (i.e., impacts up to the 2,897 ft^2 (0.07 acre) of karst considered take covered through this permit). The habitat protection mitigation measure described below will serve to offset the effects of incidental take from habitat degradation and disturbance.

3) Habitat loss: Take of MCI in the form of harm can occur from habitat loss. Inserted micropiles may block MCI travel corridors and force them to shift to alternative routes. Habitat will be lost when the micropiles and caissons are installed. Inserted micropiles or caissons can present barriers to dispersal and may isolate populations. However, since the subterranean geology in the area is folded and faulted, we expect there are numerous additional MCI travel corridors. In addition, DVP has minimized potential habitat loss by their choice of construction techniques. Rather than the more traditional approach of filling voids with concrete, DVP plans to use micropiles which will contain the concrete to the space in the casings immediately surrounding the micropile drill holes. By using the micropile technique, DVP is greatly reducing the amount of subterranean habitat impacted. At most, construction of the power plant will impact approximately less than 1 percent of the MCI rangewide habitat. The indirect effects of loss of MCI habitat have been explicitly incorporated into the surrogate habitat take assessment (i.e., impacts up to the 2,897 ft^2 (0.07 acre) of karst considered take covered through this permit). The habitat protection mitigation measure described below will serve to offset the effects of incidental take from habitat loss.

Mitigation: Despite the above mentioned avoidance and minimization measures, the proposed project will result in impacts to up to 2,897 ft^2 (0.07 acre) of karst geology and conversion of up to 6.1 acres from pervious to impervious surface. To address the effects of this take, DVP has protected 7.67 acres of habitat that includes a known MCI site in Warren County in perpetuity. The protected area is located approximately 0.2 mile from the project site. In addition, DVP will protect 10.74 acres of forested buffer adjacent to the mitigation site for a total of 18.41 acres protected.

C. Findings

1. The taking will be incidental.

Any take of the MCI and its habitat in connection with the HCP activities must be incidental to and not the purpose of otherwise lawful activities. These activities include drilling or driving micropiles and caissons and minor alteration of stormwater recharge from the construction of the structures that make-up the power plant. The project also involves the conservation of habitat offsite. These activities are otherwise lawful and will not be conducted for the purpose of

causing harm to MCI; therefore, the Service concludes that the anticipated take associated with the project is incidental.

2. The HCP will, to the maximum extent practicable, minimize and mitigate the impacts of the taking.

This issuance criterion requires the Service to examine and predict the efficacy of DVP's proposed minimization and mitigation measures. It is important to understand that in doing so, the Service is focused solely on measures to be undertaken to reduce the likelihood and extent of the impact of take resulting from the project as proposed, as well as on appropriate compensatory measures. This issuance criteria requires the Service to examine and predict the efficacy of the applicant's proposed minimization and mitigation measures. It is important to understand that in doing so, the Service is focused solely on measures to be undertaken to reduce the likelihood and extent of the impact of take resulting from the project as proposed, as well as appropriate compensatory measures. The Service interprets this section to mean that the impacts of the proposed project including the HCP that weren't eliminated as a result of informal negotiation process, must be minimized to the maximum extent practicable, and then those remaining impacts that can't be further minimized, must be mitigated to the maximum extent practicable. These standards are based in a biological determination of the impacts of the project as proposed, what would further minimize those impacts, and then what would biologically mitigate, or compensate for those remaining impacts.

If, as with DVP, the applicant provides biologically based minimization measures and mitigation measures that are fully commensurate with the level of impacts, no more is required. It is only where certain constraints preclude full minimization or full mitigation that the "practicability" issue needs to be addressed more thoroughly. In those circumstances where the applicant cannot provide measures that are biologically-required to fully compensate, the Service must evaluate issues of feasibility and cost to determine whether the applicant has still minimized and mitigated to the maximum extent practicable.

In this instance, DVP proposes to implement the following measures as part of the HCP to avoid, minimize, and mitigate potential adverse effects of project implementation on the MCI:

<u>Avoidance and Minimization Measures</u>

a) The site has been designed to minimize the amount of impervious surface to maintain aquifer recharge levels (HCP section 5.0).
b) DVP will be improving the stormwater management system which will improve upon current water quality conditions. The new system will reduce the sedimentation and potential organic pollutants such as nitrates and phosphorous (HCP section 2.7, 5.0).
c) DVP has selected a construction design that minimizes the amount of concrete that can enter the subterranean karst system (HCP section 5.0).

Mitigation Measures

A permanent Deed of Open Space Designation will be established on approximately 18.41 acres of MCI habitat in Warren County (See section 5.3 of HCP). The Designation protects the habitat from development and activities that would harm the MCI thereby protecting a known MCI population in perpetuity.

We consider the Designation to be adequate mitigation for habitat loss associated with the proposed project. The criteria needed for off-site mitigation are described below.

The protection of 18.41 acres of habitat is considered to be appropriate compensation for the 6.1 acres of habitat lost at the project site for the following reasons. Habitat is protected at approximately a 3:1 ratio for the habitat degraded (3 acres protected for 1 acre degraded). Compensation ratios do not yet exist for the MCI. To estimate the benefit of conserving Brother Dave's Cave and surrounding forested buffer, DVP developed a model to quantify the change in net primary productivity (NPP) based on the values in Huston and Wolverton (2009). The NPP measures the rate that plants convert carbon dioxide into organic compounds via photosynthesis. The model estimated vegetative cover prior to construction activities and estimated cover after construction and assigned NPP values based on the vegetation cover at the project site. Values used in the model were 779 grams/meter^2/year for mature forest, 393 g/m^2/year for grass and shrub dominated areas, and 586 g/m^2/year for partially forested areas that are a mix of grass and trees. A NPP loss of 13,792 g/m^2/acre/year is projected to occur from the construction of the project and 13,373 g/m^2/acre/year is projected to be preserved through the mitigation site. There is a loss of 419 g/m^2/acre/year NPP; using the lowest model value for surface cover type for grass/disturbed, this represents a difference of slightly more than 1 acre. Modeling NPP estimates mitigative trade-off of the site's functions in terms of plant biomass where as the impact is to the MCI and its habitat, which is not directly related to biomass at a site. The mitigated site is considered a high quality MCI site because of the presence of Brother Dave's Cave, which is one of 16 discrete known locations in which MCI has been recorded. The protection of the cave, swales, and surrounding forested buffer will ensure continued high quality MCI habitat. The project site is located in an industrial park with stormwater management ponds that continue to compromise the quality of the MCI habitat. The difference in habitat quality in terms of the MCI is not captured in the NPP analysis. While there is an imbalance between the project site and the mitigation site in terms of NPP, it is offset by the quality of the mitigation site and the upgraded stormwater management system. Therefore, the 18.41 acres of habitat protection provided is considered to be appropriate and adequate compensation.

Criteria for Mitigation met by this Site

1) **Located within MCI potential habitat**: The mitigation site is located within MCI potential habitat as demarcated in the GIS layer (Orndorff and Hobson 2007).

2) **Habitat must be in the same genetic unit as the project site**: Both the project site and the mitigation site are in the northern genetic unit as identified in Hutchins and Fong (2010).

3) **Protection of a known MCI population**: The Orndorff and Hobson potential habitat model (2007) indicates the mitigation site is MCI potential habitat, and the site contains Brother Dave's Cave, known for repeated MCI observations.

Thus, the many conservation measures used to avoid and minimize take and the preservation of 18.41 acres of habitat off-site fully compensate for the losses that result from this project. Based on the avoidance, minimization, and mitigation measures listed above, we conclude that DVP has minimized and mitigated to the maximum extent practicable.

3. The applicant will ensure adequate funding for the HCP, and procedures to deal with unforeseen circumstances will be provided.

The HCP (Section 6.0) provides adequate assurances from DVP to fully fund its implementation and describes the associated costs. Section 7 of the IA further describes the measures that DVP will take to assure monitoring and mitigation will be implemented.

In a contract with the Virginia Department of Conservation and Recreation (DCR) signed April 15, 2011, DVP committed to provide startup and operational funding to DCR for 1 year of quarterly data collection and population estimates which began in spring 2011. Funding provided to date has included $14,123 for startup and equipment costs and $13,902 for first year monitoring. Before coverage under the ITP becomes effective, DVP will execute the Research Monitoring Contract with DCR described in Section 6.0 to fund 8 years of additional MCI research and water monitoring to end on January 1, 2020. During the additional 8 years of monitoring, invoices submitted by DCR for the previous year's work will be paid in full by DVP. Per the terms of the contract, research and water monitoring will proceed regardless of whether (i) the Project is completed or remains operational or (ii) the ITP is suspended or terminated. DVP is working with Warren County to establish a Deed of Open Space Designation, and the Service has reviewed the language to ensure it is protective of MCI. Coverage under the ITP will not begin until the Deed of Designation is recorded, thereby precluding the need for further funding assurances related to the mitigation property.

As previously mentioned, the HCP incorporates by reference the permit assurances set forth in the HCP Assurances (No Surprises) Rule. Under the No Surprises Rule, if unforeseen circumstances occur, DVP will not be obligated to commit additional land or funds in support of the MCI, provided DVP is properly implementing the HCP. Unforeseen circumstances are changes to existing conditions that are not reasonably anticipated at this time. While the occurrence of unforeseen circumstances may prompt minor changes to the HCP, activities that DVP is required to conduct will be as close as possible to the terms of the original HCP. Addition or modification of activities, outside those described in the HCP, that are due to unforeseen circumstances will be at the discretion of the permittee. The No Surprises Rule does

not limit or constrain the Service or DVP from taking additional actions at its own expense to protect or conserve the MCI.

Therefore, the Service concludes that DVP, through the HCP and IA, has ensured adequate funding for the HCP and provided procedures to deal with unforeseen circumstances.

4. The taking of the MCI will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The ESA's legislative history established the intent of Congress that this issuance criterion be based on a finding, among others, that the proposed action is not likely to jeopardize a listed species pursuant to section 7(a)(2) of the ESA or adversely modify critical habitat. As a result, the Service has reviewed the project pursuant to section 7 of the ESA. In the Service's BO, we concluded that issuance of the proposed ITP is not likely to jeopardize the continued existence of the MCI.

The Service came to this conclusion based upon the following:

1) The project will only impact a small portion of the species range. MCI potential habitat is estimated to occur below 865,028 surface acres in 10 counties. Of this acreage, 223,432 acres are in the northern genetic unit, and the project site is 39 acres. The surface area of the micropiles and caissons (i.e., the level of authorized take) will impact less than 1percent of the overall range of the MCI.

2) The project will improve the water quality currently entering the karst system by improving the stormwater management system. The upgraded system will restore water flow to mimic natural conditions rather than pulses after rain events. System upgrades will also reduce total suspended solids and contaminants entering the system.

Therefore, the Service concludes that the level of authorized take will not significantly affect the local population, will not have a range-wide population effect, and will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

5. Other measures, as required by the Director of the Service, have been met.

The HCP, the minimization and mitigation measures, funding assurances, and all other aspects of the HCP incorporate all elements determined by the Service to be necessary for approval of the HCP and issuance of the permit. The IA includes provisions to ensure that the HCP will be fully implemented. The Service required certain other terms protective of MCI that will survive the termination of the permit or IA (i.e., maintaining the storm water treatment basins during plant operation; providing any outstanding reports; allowing the Service access to covered lands).

III. Public Comments

On August 22, 2011, the Service published a notice of availability of, and solicited comments on, the permit application, including the HCP, and the Service's draft Low Effect Screening Form/Environmental Action Statement (EAS) (73 Fed. Reg. 202). There were no requests for copies of the documents during the review period. The 30-day public comment period closed on September 21, 2011, at which time the Service received one letter of support from DVP. Following final action on the permit application, the Service will publish a notice of permit decision in the Federal Register.

IV. National Environmental Policy Act – Analysis and Findings

The Service has determined, based on the analysis provided in the EAS, that this low effect HCP qualifies for a categorical exclusion under the National Environmental Policy Act (42 U.S.C. Section 4321 *et seq.*). This determination is supported by the following summary conclusions:

- The effects of the ITP on federally listed, proposed, or candidate species and their habitat covered under the HCP are minor or negligible prior to implementation of the mitigation plan.
- The effects of the ITP on other environmental values or resources (e.g., air quality, geology and soils, water quality, socio-economic, cultural resources, recreation, visual resources) are minor or negligible prior to implementation of the mitigation plan.
- The impacts of the ITP, considered together with the impacts of other past, present, and reasonably foreseeable similarly situated projects will not result, over time, in cumulative effects to environmental values or resources that would be considered significant.

Pursuant to the Department of the Interior's National Environmental Policy Act implementing regulations and those of the Council on Environmental Quality, the Service also assessed whether any extraordinary circumstances exist that preclude our use of a categorical exclusion. Our examination revealed that none of the enumerated circumstances exist and that categorical exclusion is appropriate (see EAS).

V. General Criteria and Disqualifying Factors – Analysis and Findings

The Service has no evidence that the permit should be denied on the basis of the criteria and conditions set forth in 50 CFR 13.21 (b through c). Provided that DVP agrees to the terms of the HCP, they will meet the criteria for the issuance of the permit and approval of the agreements, and there are no disqualifying factors that would prevent the permit from being issued under current regulations.

VI. Recommendations on Permit Issuance

Based on our findings with respect to the ITP application, low-effect screening form, and section 7 biological opinion, I have determined that the application meets the issuance criteria found in

section 10(a)(2)(B) of the ESA. Within the spirit and intent of the Council of Environmental Quality's regulations for the implementation of the National Environmental Policy Act of 1969 (as amended) and other statutes, orders, and policies that protect fish and wildlife resources, I have determined ITP application number TE58976A-0, to DVP, is a categorical exclusion as provided by 516 DM2, Appendix 1 and 516 DM 6, Appendix 1.4c(2). Based on the foregoing findings and analysis with respect to the proposed action, I recommend issuance of the section 10(a)(1)(B) incidental take permit number TE58976A-0, to DVP in accordance with the HCP and IA, for the incidental take of the MCI.

Submittal:

ACTING Paul Phifer
R5 Assistant Regional Director, Ecological Services — Date 11/30/11

Concurrence:

Acting Sheryl R. Morgan
Regional Director, Northeast Region — Date 11/30/2011

Literature Cited

Orndorff, W.D., and C.S. Hobson. 2007. Status survey for the Madison Cave isopod (*Antrolana lira*) in Virginia, 2005-2007. Natural Heritage Technical Report 07-11. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, Virginia. 17pp.

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