UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
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August 20, 2012

Niki Nicholas
Superintendent
Big South Fork National River and Recreation Area
4564 Leatherwood Road
Oneida, Tennessee 37841

RE: Big South Fork National River and Recreation Area Obed Wild and Scenic River Non-Federal Oil and Gas Management Plan, Implementation, KY and TN CEQ Number: 20120234

Dear Ms. Nicholas:

Pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the subject Big South Fork National River and Recreation Area Obed Wild and Scenic River Non-Federal Oil and Gas Management Plan, Implementation, KY and TN. The National Park Service (NPS) is the lead federal agency for the proposed action.

Big South Fork National River and Recreation Area (NRRA) encompasses approximately 125,000 acres on the Cumberland Plateau in Tennessee and Kentucky, approximately 70 highway miles northwest of Knoxville, Tennessee. The Obed Wild and Scenic River (WSR) encompasses approximately 5,056 acres in Morgan and Cumberland Counties in Tennessee on the Cumberland Plateau, approximately 20 to 30 miles south and west of the Big South Fork NRRA.

The enabling legislation for the Big South Fork NRRA prohibits oil and gas extraction and development within the park's designated gorge area, but allows for development in the adjacent areas outside the gorge. Currently, there are more than 300 oil and gas wells within the Big South Fork NRRA, although no new wells have been drilled in the Big South Fork NRRA since about 1990. Active oil and gas production at Big South Fork NRRA occurs primarily in the south end of the unit, on both deferred properties (fee simple private property within the legislative boundary), as well as on property owned by the United States government. Wells with an "inactive" status are candidates to become either actively producing wells or plugged and abandoned wells. Within the Obed WSR, oil and gas exploration is limited, by deed restrictions, to directional drilling from outside the boundary. However, there are seven oil and gas wells in Obed WSR, including two plugged and abandoned wells. The plugged and abandoned wells may be in need of additional surface reclamation, and three of the five other wells may have leases that have expired, and would thus be required to be plugged and abandoned under state regulations. All of the operations inside the park unit are subject to existing rights.

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At this time, while the NPS has comprehensive regulations governing nonfederal oil and gas development in national parks. The NPS does not have a comprehensive plan guiding oil and gas activities within the parks and limited ability to proactively communicate and enforce applicable regulations. Operators may be uncertain of the requirements and areas of the park having special resource values are not clearly identified to operators or the public. Existing and future oil and gas operations in the parks have the potential to impact resources and values. Because of the proximity of the two units, and their similar attributes and issues relating to oil and gas operations (such as similar geography and other natural resource conditions), the NPS decided to develop a draft Oil and Gas Management Plan / Environmental Impact Statement (Plan/EIS) for both units together to aid in the effective regulation and management of non-federal oil and gas operations.

The purpose of the Plan/EIS for Big South Fork NRRA and Obed WSR is to analyze alternative approaches, clearly define a strategy, and provide guidance to ensure that activities undertaken by owners and operators of private oil and gas rights, as well as activities undertaken by the NPS, are conducted in a manner that protects the resources, visitor use and experience, and human health and safety in the park units. This plan/EIS presents and analyzes the potential impacts of three alternatives: current management (the no action alternative) and two action alternatives for managing non-federal oil and gas in these units. Upon conclusion of the plan/EIS and decision-making process, one of the alternatives will become the Non-Federal Oil and Gas Management Plan for the units and guide future actions for a period of 15 to 20 years.

As noted, there are over 300 private oil and gas operations within Big South Fork NRRA and Obed WSR. Many of the past and existing oil and gas operations in these NPS units are adversely impacting resources and values, human health and safety, and visitor use and experience; most are not in compliance with federal and state regulations, most notably, the NPS 36 Code of Federal Regulations (CFR), Part 9 Subpart B. In addition, future oil and gas operations have the potential to damage park resources and values. The Plan/EIS is needed to provide an efficient and effective strategy for park managers to ensure the units are protected for the enjoyment of future generations. There is also a need for park-specific guidance for the planning efforts of oil and gas owners and operators.

This is a programmatic management plan that establishes a general framework for managing oil and gas operations. By itself, it does not authorize any on-the-ground activities, but it does recognize existing operations. The reasonably foreseeable development scenario identified up to 25 wells that would be drilled in Big South Fork NRRA and Obed WSR in the next 15-20 years, and up to 125 wells that could be amended or serviced to restore or improve production. The NPS will authorize specific projects by reviewing and approving operator-submitted plans of operations or special use permit applications. Before doing so, the NPS will conduct further analysis in accordance with the National Environmental Policy Act of 1969 (NEPA), the National Historic Preservation Act of 1966, the Endangered Species Act of 1973, and other applicable federal laws.

PLAN ALTERNATIVES

Forecast of Oil and Gas Activities

The NPS developed a forecast of oil and gas activities that includes a reasonably foreseeable development (RFD) scenario for new development to project future oil and gas development in the parks and an estimate of future well plugging. The purpose of the forecast is to provide a reasonable basis for analyzing the potential and cumulative effects of oil and gas related operations in the parks among the alternatives presented in this EIS. For Big South Fork NRRA, the forecast of oil and gas is primarily for plugging of existing wells, as opposed to new drilling and production.

For the RFD scenario, the U.S. Geological Survey (USGS) and the NPS worked together to estimate the remaining hydrocarbon resources in the parks and to develop a projection of the type and level of activities that could occur to develop these resources. The RFD drilling scenario presented in this plan is based on the collaborative work of the USGS and the NPS. Seismic and other proprietary data available only to oil and gas companies was not used in the preparation of the RFD scenario. It is possible that the well spacing may be different than is projected in the RFD scenario, the drilling success rate may deviate from the NPS projection, and it may take fewer or more wells to develop the oil and gas resources underlying the parks. Any of these factors could result in a different development scenario than is presented by the NPS in this plan/EIS.

When the NPS acquired lands for Big South Fork NRRA, it inherited a legacy of inactive non-federal oil and gas wells, many without responsible parties. The 2001 well inventory (TDEC 2001) identified 59 inactive wells at Big South Fork NRRA that were considered candidates for plugging, of which over half had no responsible parties. Of these, 54 wells have been or will be plugged within the next few years mainly using funding received through the American Recovery and Reinvestment Act and NPS funding administered through a cooperative agreement with Tennessee Department of Environment and Conservation. However, the NPS and operators are to identify additional inactive wells as plugging candidates in the future, and the forecast of oil and gas activity for this plan estimates that about 50 additional wells will need to be plugged over the life of this plan.

SUMMARY

The forecast of oil and gas activities for Big South Fork NRRA includes:

- Plugging of up to 50 wells (these are in addition to those that have recently been or are currently being plugged under American Recovery and Reinvestment Act of 2009 (ARRA) and NPS funding administered through the Tennessee Department of Environment and Conservation (TDEC), and surface reclamation of associated pads and access roads. However, if during the course of operations under this plan, additional wells were to be identified, they would also be incorporated into the scope of this plan.
- Workover or well servicing of up to 125 wells to restore or improve production. Very little, if any, geophysical (e.g., seismic) exploration.
- Drilling of between 0 and 20 new wells to produce both resources existing within discovered fields and undiscovered resources estimated to occur beneath nonfederal oil and gas estate acreage in the park.
- No federal surface disturbance associated with gas storage projects.

The forecast of oil and gas activities for Obed WSR includes:

- Plugging of up to 5 wells and surface reclamation of associated pads and access roads.
- Workover or well servicing of 2 wells to restore or improve production.
- Drilling of between 0 and 5 directional wells from surface locations outside the park to bottomhole locations inside or through the park to produce the volume of undiscovered resources estimated to occur beneath the park.

Important aspects of the forecast for both Big South Fork NRRA and Obed WSR are:

- Activities associated with existing operations are not expected to involve any new surface disturbance;
- Disturbance from new wells is expected to be offset by reclamation of existing wellpads and roads by at least a 2:1 ratio and perhaps by as much as a 10:1 ratio; and,
- The overall footprint of oil and gas activities and all the associated impacts is expected to be on a decreasing trend over the planning period.

SUMMARY OF PLAN ALTERNATIVES

Three alternatives are presented. These alternatives were developed to meet the stated objectives of this draft plan/EIS to a large degree and provide a reasonable range of options to manage exploration, drilling, production and transportation of nonfederal oil and gas within the parks. The alternatives are described below.

ALTERNATIVE A: NO ACTION

Alternative A—No Action is required by the NEPA as the baseline. No action is the continued management of oil and gas operations in the parks following the current management plan. The NPS would continue to work cooperatively with the state on regulations or enforcement, but would be somewhat limited in its ability to conduct inspections and monitoring of all operations on a regular basis and would defer to the state to notify operators about compliance issues. Compliance for plans of operations related to management of current operations and for new drilling and/or exploration would be conducted on a case-by-case basis in both park units with currently available staff and funding sources. Restrictions and protected areas identified in the current legal and policy requirements (CLPRs) for each park unit (including the NPS 9B regulations) would be applied to new operations. Plugging and reclamation activities would be guided by the 9B or state regulations, as appropriate, and compliance for these operations would be conducted on a case-by-case basis in both park units.

ALTERNATIVE B: COMPREHENSIVE IMPLEMENTATION OF 9B REGULATIONS AND A NEW MANAGEMENT FRAMEWORK FOR PLUGGING AND RECLAMATION

Under alternative B, the NPS would proactively pursue enforcement of the 9B regulations and plans of operations and provide clear communication with the public and operators about CLPRs, including the 9B regulations. For current operations, the NPS would continue to work

cooperatively with the state on regulations or enforcement, but would conduct increased inspections and monitoring and identify sites that are found to be impacting, or threatening to impact, park resources beyond the operations area to bring these into compliance. New operations would be reviewed and permitted in accordance with the restrictions and protected areas described in the CLPRs, similar to alternative A. The park would use the oil and gas management planning process to proactively share information with the public about regulatory requirements, to seek out operators to ensure information is communicated clearly and effectively, and to focus staff resources on the implementation and compliance with the regulatory framework. Alternative B also includes a new management framework for efficiently completing compliance processes necessary for plugging and reclamation of wells, which would provide a method for evaluating the environmental compliance needs for future site-specific projects. Priority sites for plugging and reclamation would be identified using criteria developed for this plan/EIS.

ALTERNATIVE C: COMPREHENSIVE IMPLEMENTATION OF 9B REGULATIONS, NEW MANAGEMENT FRAMEWORK FOR PLUGGING AND RECLAMATION, AND ESTABLISHMENT OF SPECIAL MANAGEMENT AREAS

Alternative C would implement the same type of more proactive management described in alternative B, including additional inspections and monitoring of current operations to bring them into compliance, as well as the permitting of new operations. However, under alternative C, "Special Management Areas" or SMAs have been designated to identify and protect those areas where park resources and values are particularly susceptible to adverse impacts from oil and gas development. Specific protections afforded by these SMAs are presented in Table 2; and these operating stipulations would be applied in the designated SMAs to protect the resources and values of the park units unless other mitigation measures were specifically authorized in an approved plan of operations. Similar to alternative B, the park would use the oil and gas management planning process to proactively share information with the public about regulatory requirements, to seek out operators to ensure information is communicated clearly and effectively, and to focus staff resources on the implementation and compliance with the regulatory framework. Alternative C also includes the new management framework for plugging and reclamation of wells as described under alternative B; and the designated SMAs would be considered in setting priorities for plugging and reclamation.

EPA COMMENTS and RECOMMENDATIONS

EPA appreciates the effort and planning put into this Plan EIS. We would like to provide general comments for the plan and specific comments on three areas mentioned in the Plan: Alternative C and the drilling of new wells.

General Comments

Any Management Plan adopted by the NPS must comply with the Clean Water Act. Also we appreciate the management objectives include a provision for protection of species of management concern. Both state and federally protected species must be given consideration in the planning and implementation processes. The Big South Fork and Obed Rivers are part of the

Cumberland River Watershed known globally for having the highest number of fish and mussel species at risk than any freshwater region of the United States.

Alternative C The NPS Preferred Alternative

During internal and public scoping and subsequent analyses, the interdisciplinary planning team identified certain resources and values that are particularly susceptible to adverse impacts from oil and gas operations or are essential to maintain the ecological integrity of Big South Fork NRRA and Obed WSR. In some SMAs, oil and gas operations may be permitted with specific operating stipulations to protect park resources and values. In other areas, new operations would not be permitted to use or occupy the land surface, referred to as the "No Surface Use" stipulation, unless other mitigation that would protect the resources and values of the SMA is included in an approved plan of operations. There may be surface use allowed if mitigations are approved in a plan of operations. However, while an approved plan of operations could relax SMA restrictions, it would not supersede applicable statutes such as gorge restrictions and deed restrictions. In some cases where the No Surface Use requirement would apply, there are distance setbacks from the boundary of the SMA. For example, No Surface Use with a 500- to 1,500-foot setback in the visitor use/administrative areas means that surface uses associated with non-federal oil and gas operations would not be permitted within 500 to 1,500 feet of the perimeter of the designated SMA. These setbacks are variable, and are dependent upon the mitigation measures employed to protect resources, values, and human health and safety. Other mitigation measures that could be employed include installation of 10-foot sound walls for compressor sites during production, sound muffling and redirecting of unwanted sounds away from visitor use areas, regular maintenance to eliminate squeaks, and incorporation of newer, quieter pumpjacks that run on electricity. In addition, timing stipulations would be applied to minimize impacts during wet periods and high visitor use/visitation periods (generally April through October) in certain SMAs. Operations may be conducted when the timing stipulations are not in effect, unless an operator can demonstrate a compelling reason why it must conduct their activities when they are in effect.

Any modification of any SMA operating stipulation may be considered by the NPS if site-specific information (such as engineering, geological, biological, or other studies) warrant the change, or if an operator can demonstrate that their proposed operation would meet the goals of protecting resources and values in the SMA. SMAs would apply to all new operations unless an operator demonstrates this would entirely prevent reasonable access to a mineral estate. The NPS would require an operator to provide information to support such a conclusion, and would evaluate the application of the SMAs relative to the proposed operation on a case-by-case basis.

EPA concurs with the selection of Alternative C, the NPS Preferred Alternative, and is in favor of the tiered approach of Special Management Areas (SMA) to identify and protect those areas where park resources and values are particularly susceptible to adverse impacts from oil and gas development.

EPA recommends maximum flexibility of the SMAs to best incorporate evolving science and best management practices regarding oil and gas exploration.

Natural gas plays a key role in our nation's clean energy future. The U.S. has vast reserves of natural gas that are commercially viable as a result of advances in horizontal drilling and hydraulic fracturing technologies enabling greater access to gas in shale formations. Responsible development of America's shale gas resources offers important economic, energy security, and environmental benefits.

EPA is working with states and other key stakeholders to help ensure that natural gas extraction does not come at the expense of public health and the environment. The Agency's focus and obligations under the law are to provide oversight, guidance and, where appropriate, rulemaking that achieve the best possible protections for the air, water and land where Americans live, work and play.

Drilling of New Wells

EPA recommends the NPS considers and addresses the following issues related to the drilling of new wells in the management plan as well as implementing regulations.

Cumulative impacts need to be analyzed in terms of the specific resource, ecosystem, ground and surface water and the human community being affected.

Hydraulic fracturing which include but are not limited to the following: Water Acquisition, Chemical Mixing, Well Injection, Flowback and Produced Water, and Wastewater Treatment and Waste Disposal.

Reclamation – Including but not limited to impacts on surface and groundwater and loss of habitat.

We have concerns that the proposed action identifies the potential for impacts to the environment that should be further avoided/minimized. The Agency is investing in improving our scientific understanding of hydraulic fracturing, providing regulatory clarity with respect to existing laws, and using existing authorities where appropriate to enhance health and environmental safeguards. Within the federal government, EPA has played a lead role in conducting stakeholder outreach to individual citizens, communities, tribes, state and federal partners, industry, trade associations and environmental organizations that have a strong interest in the Agency's work and policies related to hydraulic fracturing and shale gas extraction. EPA is committed to full transparency and providing opportunities for stakeholder input on all agency actions.

Therefore, we encourage the NPS to contact us, regarding updates on the latest technologies and regulatory clarity with respect to existing laws developed for oil and gas extraction.

Based on the FEIS, Alternative C, with consideration of additional Best Practices, would appear to be the best approach.

We appreciate the opportunity to review the proposed action. Please provide a copy of the ROD and contact Ken Clark at (404) 562-8282 if you have any questions or want to discuss our comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management