



**FINDING OF NO SIGNIFICANT IMPACT**  
**For the**  
**ROCKY MOUNTAIN OILFIELD TESTING CENTER/  
NAVAL PETROLEUM RESERVE NO. 3**  
**SITEWIDE ENVIRONMENTAL ASSESSMENT**

**AGENCY:** Department of Energy, Naval Petroleum Reserve No. 3/Rocky Mountain Oil Field Testing Center

**ACTION:** Finding of No Significant Impact

**SUMMARY:** The Secretary of the U.S. Department of Energy (DOE) has determined that continued operation of Naval Petroleum Reserve No. 3 (NPR-3) by DOE is no longer in the national interest. Therefore, DOE is proposing to discontinue government operations at the Rocky Mountain Oilfield Testing Center (RMOTC) and sell NPR-3 to a private entity or entities via competitive bid for continued petroleum and natural gas production. For the most part this Proposed Action represents a return to those actions previously addressed in the 1998 *Site-wide Environmental Assessment for Preparation for Transfer of Ownership of Naval Petroleum Reserve No. 3 (NPR-3)* (DOE 1998). However, the current Proposed Action also includes the conveyance of a 520-acre conservation easement would protect areas of Tribal concern and Historic Properties on the property.

DOE is required to evaluate the Proposed Action to sell NPR-3 to determine whether or not it is in compliance with the NEPA (42 U.S.C. 4321) and the DOE's NEPA implementing regulations (10 CFR section 1021.330) and procedures. In the Site-Wide Environmental Assessment (SWEA), DOE evaluated four alternative operating futures for NPR-3 and RMOTC:

- Sale of NPR-3 to a private entity or entities for continued petroleum and gas production, including the conveyance of a conservation easement to protect areas of Tribal interest and historic properties (Proposed Action).
- Transferring the property to another federal agency that would then lease the property to private entities for continued production.
- Sale of NPR-3 for utility scale renewable energy development, including the conveyance of a conservation easement to protect areas of Tribal interest and historic properties.
- No Action (DOE would retain ownership of NPR-3, continue to produce petroleum using current techniques, and continue to provide a field testing platform for private enterprise).

Under the Proposed Action DOE anticipates that the new owner(s) would continue to use conventional oil exploration and production methods similar to those DOE has employed at the site since 1976, as well as implementing Enhanced Oil Recovery (EOR) techniques such as carbon dioxide (CO<sub>2</sub>) flooding because such activities could enhance the economic value of the oilfield. DOE believes that these EOR techniques could be implemented at NPR-3 because they are similar to EOR methods DOE has tested on-site in the past and some of these methods are currently being implemented by private industry in the adjacent Salt Creek oilfield.

Under the Lease Alternative, DOE would shut down operations, remediate environmental liabilities, and transfer NPR-3 to the DOI to be managed by BLM. Cleanup efforts would include remediating petroleum-contaminated soil, removing structures, plugging/abandonment of all wells, removing tanks, closing and abandoning pipelines, and re-grading and seeding roads (DOE 2007). The permitted inactive solid industrial waste landfill would be closed per WYDEQ requirements and post-closure monitoring responsibilities would be negotiated between BLM and DOE before the property transfer. This option would maintain federal ownership of the cultural and historic sites associated with NPR-3. However, DOE would not meet its mandate to maximize revenue for the field. Under the Renewable Energy Development Alternative, DOE would sell and transfer NPR-3 to a private entity for utility-scale renewable energy development. The sale and transfer would include the conveyance of a conservation easement encompassing approximately 520 acres of land at NPR-3. The conservation easement would prohibit development, subdivision, and a host of other measures to preserve the conservation area. The conservation easement would be routinely monitored by a qualified non-profit trust entity to ensure that the private entity is adhering to the terms of the conservation easement and to document the condition of the conservation area.

On the basis of the information and analyses presented in the final SWEA, DOE has determined that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, as defined by NEPA. Therefore, preparation of an environmental impact statement is not required and DOE is issuing this Finding of No Significant Impact (FONSI). Based on this determination DOE will implement the Proposed Action.

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

DOE has operated the Teapot Dome Oil Field, also known as NPR-3, since 1976. It is the only producing oil field in the continental United States owned by the U.S. Government. NPR-3 is located in Natrona County, Wyoming, approximately 35 miles north of the City of Casper, and covers an area of 9,481 acres. Production at NPR-3 peaked in 1981; since then, production has declined. Currently NPR-3 is a mature stripper field with an average well yield of less than two barrels per day.

Production facilities include pumping units, treaters, and tanks for storing petroleum and produced water; a gas plant which includes gas compressors and driers in operation on the main line (two sets in parallel for safety purposes) which produce sufficient gas to operate some of the field machinery and heat the buildings); water and gas injection facilities; a wastewater treatment facility and disposal

system; and flow lines. In addition there are numerous support facilities, including: electrical power distribution systems; cathodic protection systems; potable water and sewer systems; road; bridges and fences; and buildings for maintenance, production support, administration, safety, security, and environmental purposes.

From 1977 through 2010 an average of 100 to 200 contractor and DOE personnel were employed at NPR-3. Over the same time-frame, approximately 40 personnel were employed in DOE's Casper office. Since 2010, employment has dropped to approximately 40 personnel at NPR-3 and 8 at the Casper office.

RMOTC was established in 1993 as an endeavor to utilize NPR-3 resources and facilities to help strengthen the domestic energy industry by providing a test bed for new petroleum and environmental technologies in an operating oil field. Commercial field testing at RMOTC began in 1995 and continued until 2014. The majority of the technologies and processes field tested at RMOTC have included drilling, oil production, enhanced recovery, alternative/renewable energy, and production cost reduction.

### **Purpose and Need**

DOE has made the determination that the public interest is best served by selling NPR-3 to a private operator for continued production, potentially including EOR activities. This represents a reversal of the previous Congressional mandate for DOE to produce oil and gas from NPR-3 as assessed in the 2008 *Rocky Mountain Oilfield Testing Center/Naval Petroleum Reserve No. 3 Site-wide Environmental Assessment and Finding of No Significant Impact*. Consequently, new NEPA documentation was required.

### **Proposed Action**

Under the Proposed Action, the infrastructure and facilities at NPR-3 would remain in place and the transfer of the land to a private entity would include the conveyance of a conservation easement encompassing approximately 520 acres of land at NPR-3. The conservation easement would prohibit development, subdivision, and a host of other measures to preserve the conservation area. The conservation easement would be routinely monitored by a qualified non-profit trust entity to ensure that the private entity is adhering to the terms of the conservation easement and to document the condition of the conservation area. Development outside of the easement would be at the discretion of the new owner(s).

### **Environmental Impacts of the Proposed Action**

#### Land Resources

The Proposed Action would transfer ownership of NPR-3 to a private entity or entities. Oil and gas production would continue and would not present a conflict with adjacent landowners. Currently no recreational facilities are present at NPR-3 and no recreational activities (such as hunting) are permitted; DOE expects that these standard industry practices will be maintained under new ownership.

With respect to land use, the Proposed Action is a continuation of current land use (oil and gas production). Therefore, no new impacts are expected. If the new owner prohibits grazing it could affect the current grazing lease holder, but it would not impact regional grazing operations.

NPR-3 is located in an area which is rated as having a low level of visual sensitivity due to prior modifications of the natural setting in the area. The Proposed Action consists of a continuation of historic activities and related operations, so it will not change the visual sensitivity rating.

#### Air Quality

NPR-3 does not currently have any permitted air emissions sources and a continuation of existing operations under the Proposed Action will not cause any National Ambient Air Quality Standards to be exceeded. The construction of EOR systems may cause a temporary increase in dust and emissions from heavy equipment, but these would be transitory. If production increases such that throughput at existing facilities exceeds the limits shown in their respective WYDEQ Air Quality permit waivers, the new owner would be required to submit new documentation to WYDEQ for evaluation to determine if a Title V Air Quality permit is required. The Proposed Action is expected to increase emissions of NO<sub>x</sub>, CO, H<sub>2</sub>S, VOCs, and HAPs, but not to the extent that NAAQS would be exceeded. Overall, the air quality impacts are similar to impacts observed during peak oil production and are not significant.

#### Noise

The Proposed Action may increase noise levels temporarily as EOR systems are constructed, primarily as a result of heavy equipment use and increased vehicular traffic. Because there are no noise sensitive areas within or around NPR-3, the temporary noise increase is not a significant adverse impact.

#### Water Resources

Current operations at NPR-3 generate approximately 957,000 gallons of produced water per day, more than 99 percent of which comes from 5 Tensleep wells. This water is treated by oil-water separators and temperature reduction ponds before being discharged to a WYPDES-permitted outfall. If average water production is maintained in the future, each new Tensleep well would increase water production by approximately 180,000 gallons per day. Up to nine new wells could be drilled into the Tensleep formation before water discharges would exceed those proposed in the 2008 SWEA and deemed at the time to be insignificant.

Incremental increases in produced water volume from routine operations and down-hole stimulation are expected to be less than five percent of existing water production and are therefore deemed insignificant. The geology at NPR-3 is not suitable for long-reach horizontal drilling and water impacts are not expected from this technique.

All groundwater at NPR-3 is non-potable due to naturally occurring TDS, salinity, and (where present) contact with hydrocarbons. However, groundwater is being impacted by benzene from an inactive industrial waste landfill (IND-2). The nature and extent of this impact has not been determined and will be addressed with WYDEQ through the closure process for that landfill. DOE will remain financially

responsible for determining the nature and extent of this contamination until after the new owner(s) demonstrate financial assurance and WYDEQ transfers the final closure permit to the new owner(s). Because the benzene is coming from an inactive landfill currently undergoing closure, the Proposed Action will not significantly alter groundwater quality.

With respect to potable water, there are no potable water aquifers in the vicinity of NPR-3 and the Proposed Action will therefore not affect this resource. The anticipated increase in employment at the field will not significantly impact potable water usage in the area.

#### Geology, Soils and Prime and Unique Farmlands

The Proposed Action will not have any impact to the geology on the site, or to Prime or Unique Farmlands.

The Proposed Action may increase the potential for erosion temporarily as EOR systems are constructed, primarily as a result of heavy equipment use, excavation, and land disturbance. This will be mitigated with standard erosion controls and re-vegetation efforts required by Storm Water Pollution Prevention Plan requirements.

#### Wetlands and Floodplains

Wetlands on-site are predominantly supported by process water discharges. The Proposed Action will not significantly impact wetlands because maintaining the discharges would preserve current conditions and eliminating the discharges would return these areas to their natural conditions.

Floodplain maps do not exist for NPR-3 because there are no large population centers in the vicinity. Flood-prone areas are generally low-lying areas adjacent to wetlands and drainages, but are limited to lands within the embankments of the draws. The Proposed Action will not significantly impact floodplains because anticipated future activities on the site are not expected to permanently or substantially eliminate vegetation or increase runoff volume.

#### Biological Resources

The Proposed Action will have minimal impact on biological resources. Temporary impacts are expected for terrestrial vegetation during EOR construction and routine operations. These will only impact a small percentage of the total NPR-3 area and are considered insignificant. Aquatic vegetation on NPR-3 is the result of human activity (predominantly discharge of produced water from the Tensleep formation). In the unlikely event that the new owner shuts down the Tensleep wells, the riparian vegetation would return to a natural condition, which is not considered a significant impact.

Impacts of the Proposed Action to raptors, waterfowl, other avian species and big-game species are expected to be insignificant. Raptor habitat at NPR-3 is predominantly included in the Conservation Easement. There are no expected impacts of the Proposed Action on threatened, endangered, and rare species.

## Cultural Resources

There are 18 properties at NPR-3 that are eligible for listing or are listed on the NRHP. As part of its Section 106 process and its consultations with the Consulting Parties, DOE has modified the Proposed Action to include a conservation easement as part of the sale and transfer of NPR-3 to a private entity. The conservation easement will provide adequate and legally enforceable restrictions or conditions to ensure the long-term preservation of areas of Tribal interest, as well as the historic significance for 16 historic properties; therefore, the proposed action would have no adverse effect on the historic properties and areas of Tribal interest. Also, the Proposed Action would have no adverse effect on the Bozeman Trail (48NA3024) because no intact segments of the trail are located within NPR-3.

Site 48NA831, the Historic Teapot Dome Oilfield property and its associated contributing components, would be adversely affected by the Proposed Action because the land will no longer be managed or controlled by the Federal government. The Proposed Action would alter, directly or indirectly, the characteristics of the historic property that qualify it for inclusion in the NRHP, because NPR-3 would no longer be managed by the Federal government and afforded the associated Federal stewardship under the NHPA. Through the Section 106 process, DOE has consulted with the Consulting Parties and has developed and executed a Programmatic Agreement (PA) to avoid, minimize, or mitigate the adverse effects of the Proposed Action on site 48NA831. A summary of the stipulations contained in the PA include:

- DOE will update and amend the existing Teapot Rock site (48NA213) NRHP listing with additional documentation about site 48NA831, the Historic Teapot Dome Oilfield property
- DOE will prepare Historic American Engineering Record (HAER) documentation for Tank Ring #5 which is associated with the Teapot Dome Oilfield site 48NA831 for submittal to the NPS.
- DOE will prepare HAER documentation for the Mammoth Camp Sewer Facility (48NA831\_13), a contributing component of the historic Teapot Dome Oilfield site (48NA831) for submittal to the NPS.
- DOE will develop, produce and disseminate an interpretative brochure, audio file, web site, and smart phone application describing the history of the Teapot Dome Oilfield.
- DOE will donate selected NPR-3 historic artifacts and other modern effects to local museums and repositories.
- DOE will prepare NPR-3 prehistoric artifacts for permanent curation at the Archaeological Repository of the University of Wyoming in Laramie.

The execution of the PA and future implementation of the stipulations demonstrate DOE's compliance with Section 106.

## Socioeconomics

DOE anticipates that the Proposed Action along with full EOR implementation will likely result in an increase of as many as 100 additional employees at NPR-3. However, given the large pool of oilfield

workers due to the adjacent, larger Salt Creek field, the increased employment will not significantly impact the overall employment, population, housing, community services, or traffic in the area.

#### Waste Management

Currently, all wastes generated by on-site activities are properly characterized, containerized, and transported off-site for appropriate disposal (with the exception of petroleum contaminated soils, which are treated in four on-site composting facilities that comply with Wyoming Oil and Gas Conservation Commission requirements). The Proposed Action may increase the quantities of some of these categories, but will not change their appropriate handling and disposal.

DOE has applied for a Closure Permit for its existing, inactive landfill (IND-2) and the final permit is pending. The existing cover on IND-2 meets WYDEQ regulatory requirements and will have to be maintained in perpetuity. Deed notices for IND-2 and two other pre-regulatory landfills (IND-1A and IND-1B) informing the new owner(s) of the landfill locations and prohibiting disturbance of those areas will be included in the sale documentation. Additional regulatory actions may be required at IND-2 as the permit process continues.

#### Accidents and Intentional Destructive Acts

By the nature of their products and operations, oilfields have the potential for various types of accidents. The Proposed Action would not change this at NPR-3, nor would the Proposed Action make NPR-3 a more attractive target for terrorism or other intentionally destructive act than it is currently.

#### Cumulative Effects

The Proposed Action may result in approximately 630,612 metric tons of additional carbon dioxide emissions per year, not accounting for any carbon dioxide that may end up sequestered due to implementing carbon dioxide flooding. While the release of anthropogenic greenhouse gases and their potential contribution to global climate change are inherently cumulative phenomena, this amount of increased emissions is approximately 1/1000<sup>th</sup> of the total U.S. greenhouse gas emissions in 2012 (6,526 million metric tons).

#### **COPIES OF THE FINAL EA ARE AVAILABLE FROM:**

**Until September 30, 2015:**

DOE NEPA Compliance Officer

DOE RMOTC/NPR-3

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**Starting October 1, 2015:**  
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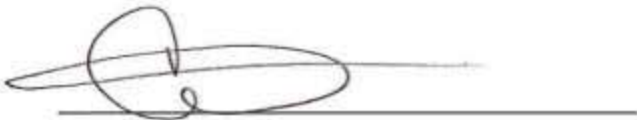
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**DETERMINATION:**

Based on the information presented in the Final SWEA (DOE/EA 1956), DOE determines that the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, within the meaning of the National Environmental Policy Act. Therefore, the preparation of an Environmental Impact Statement is not required, and DOE is issuing this Finding of No Significant Impact. Based on this determination DOE will sell NPR-3 to the highest bidder.

Issued in Casper, Wyoming this 29 day of January, 2015.



CLARKE D. TURNER

Director, NPR-3/RMOTC