United States Department of the Interior

NATIONAL PARK SERVICE
Padre Island National Seashore
P. O. Box 181300
Corpus Christi, Texas 78480-1300

IN REPLY REFER TO:
L3025 (PAIS)

January 18, 2007

Mr. Spike Schamber
Boss Operating Company, LLC
300 East Sonterra Blvd., Suite 1200
San Antonio, Texas 78258

Dear Mr. Schamber:

On October 30, 2007, Padre Island National Seashore received one copy of a Plan of Operations from Boss Operating Company, LLC for the Dunn McCampbell 16-1, 16-2, and 16-3 wells proposed at the park. On October 31, 2007, the park requested 4 additional copies of the draft Plan of Operations to facilitate the review process. On November 13, 2007 the park received four additional copies of the draft Plan of Operations. The plan has been reviewed by the NPS and the following comments need to be incorporated into your plan, so that we can formally accept it and begin the environmental compliance and planning phase.

General Comments
Overall, Boss has developed an environmentally sound drilling and production program that uses much the same approach as recently approved well drilling projects in the park and that meets most of the relevant informational requirements of the 36 CFR Part 9B regulations. A topic of concern was the conclusion that the 5.4-acres of proposed disturbance would affect only 0.2 acres of wetland. The NPS Water Resources Division is following up with the consultant and park staff to verify wetlands data and provide further direction if warranted.

To cut down on the use of paper, copying, and time, we recommend that Boss ask their consultants to cross-reference the materials listed below in their plans, and not submit them with the plan. In addition, a plan does not need to include copies of NPS documents and can reference materials previously submitted in substantially the same form as in a previously approved plan (36 CFR §9.36(b)).

- Exhibit C – The NPS's *Guideline for the Detection and Quantification of Contamination at Oil and Gas Operations, revised October 2006.*
- Exhibit G – Texas Air Control Board Standard Exemption List, Revised June 18, 1992. Reference a plan where this has been previously submitted until such time as the document is revised.
- Appendix C – PINS Plan of Operations Guideline. Note that this is not the current guidance for plan of operations preparation. The outline for a plan of

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operations for drilling and production operations, dated 5/30/01, has been superseded by the Operator's Handbook dated October 2006.

- Appendix C – The general mitigation measures table. The plan should infuse the appropriate measures into the plan and tailor them to the site specific issues.

Finally, use of double-sided printing would reduce the remaining bulk by essentially 50%. By following these suggestions, the current plan could be reduced from a 3-inch binder to a 2-inch binder.

Specific Comments

Section I – Lease and Ownership Information

There are several missing signature pages on leases in Appendix A that Boss needs to provide to meet the ownership documentation requirement of 36 CFR §9.36(a)(2).

Four leases, each dated March 13, 2006, have missing signature pages as described below:

- Thurmond to Cinco Lease missing signature page 438;
- Hotitik to Cinco Lease missing signature page 441;
- Jolly to Cinco Lease missing signature page 444; and,
- Fern to Cinco Lease missing signature page 447.

Bottomhole locations for wells #16-2 and #16-3 are not yet identified and are contingent on results of the #16-1 well. The plan includes drilling details for #16-1 only. The variations in directional plans and bottomhole locations among these wells should not affect impact analysis. We recommend that all three wells be fully evaluated at this time in the accompanying environmental assessment. Boss would need to provide specific drilling programs for #16-2 and #16-3 for NPS verification that proposed operations are within the scope of its approved plan, including ownership documentation prior to drilling those wells.

Section II – Maps and Plats

Section II(A)(2). Bottom of page 3 and top of page 4. Both surface and bottomhole locations for the 16-1 well have been provided, but at this time only the surface locations for the 16-2 and 16-3 wells have been provided. This section should include text to clarify that once the 16-1 well is drilled and bottomhole targets confirmed for the 16-2 and 16-3 wells, Boss will submit to the park, in writing, a supplement to the plan of operations providing bottomhole locations for these two wells for NPS review and approval before proceeding to drill these two wells. The bottomhole targets must be located within the lease boundaries specified in the documentation of property right interests included in the plan. In reviewing the supplement, the NPS will determine whether the anticipated impacts of drilling/producing and ultimately plugging the 16-2 and 16-3 wells and reclamation were adequately disclosed in the environmental analysis to be prepared for this plan.

Section II(A)(2). Provide a description outlining routine monitoring and inspections that Boss will perform for the proposed operations, and include the inspection form to be used. Absent an inspection form, Boss should include in the plan the park's inspection form. Boss shall conduct inspections weekly, and shall submit the signed inspection form to the park within 3 days of completing the inspection.

Please include text in this section to clarify that Boss will provide electronic daily drilling logs to the NPS for same-time monitoring during drilling and workovers. Also include a statement that

Boss will submit revised drilling procedures for the 16-1 well to the NPS should the bottomhole target be changed from that proposed in the plan of operations.

Section II(B)(3). Any use of a helicopter for any purpose shall be coordinated with NPS staff to ensure proper policies and laws are followed and any necessary temporary closures that may impact visitors are kept to a minimum.

Section II(C)(1). A two-lane access road that includes a 60-foot wide turnout at its intersection with Park Road 22 has been proposed. Recently approved and conducted operations in the park demonstrate that a 20 foot wide, one-lane road constructed with a 40-foot right-of-way with appropriate traffic control is feasible and less damaging to park resources. Also, the proposed turnout is sized as a staging area and is not in the best location. The park suggests an alternate 20-foot wide pullout that is 80-feet long on the north side of the access road where it intersects Park Road 22 which would help keep trucks from stopping on Park Road 22 and still allow for stationary trucks to be moved away from Park Road 22. Staging (i.e., temporary storage of equipment/materials for eventual transport to location) will not be permitted within the park and must be conducted outside the park. Once the pad site is constructed, trucks can utilize that area for short-term parking. Vehicle ingress or egress along the 20-foot wide, single lane access road can then be controlled by an on-site manager.

Section II(C)(2). The diagram associated with this section (Figure 6) depicts a 20-mil liner under the pad site itself but not over the berm. The berm is also required to be lined with 20-mil liner material that is tied into the pad liner to create a continuous, impermeable layer.

Section II(C)(3). Pipeline. This section describes a pipeline trench excavation to be 24" wide and 46" deep. Please include a description of the specific type of equipment proposed to be used to excavate and fill the trench. Include the overall 40' width of the construction corridor. Also include the potential for Horizontal Directional Drilling (HDD) for all or a portion of this pipeline to decrease impacts to wetlands. The description of wetlands acreage that could be impacted from pipeline construction is inconsistent throughout the plan of operations and needs to be standardized.

Section II(C)(4). The plan provides information on the Nabors Rig #685 or #456, which are diesel-electric rigs rated to 15,000 feet, as an example of the type and class of rig that would be used. So long as the same class of diesel-electric rig is used, the specific equipment lists and layout details for each rig are not material to the impact analysis or monitoring/compliance, particularly when the drilling pad, including the berm, is fully lined. Boss will be required to provide additional information, accompanied by further NPS review and approval, if there is a change in the rig type or class. It should be clarified that anticipated impacts of drilling the two wells may require additional analysis if the EA covering this plan does not adequately describe environmental conditions and potential effects. Boss will need to provide this information to the park for review and approval in writing before drilling of the 16-2 and 16-3 wells may proceed. Any supplementation to the approved plan that describes different environmental conditions or results in impacts different from those described in the EA would warrant additional analysis and public involvement.

Section III – Description of Geology

The TCEQ Form-0051 in Appendix C (TCEQ LETTER ON DEPTH TO PROTECT USEABLE GROUNDWATER) gives 400 feet as the depth to which usable quality water must be protected. For other wells drilled at Padre Island, the state typically requires protection of the Goliad Aquifer, which occurs in the area from about 1,400 to 1,700 feet. We note that the State of

Texas is consistent in specifying a 400-foot water protection depth for the nearby Kindee and Ensearch wells. Boss' proposed surface casing program and plugging program account for isolation and protection of the Goliad Aquifer if it is present here, so there are no issues so long as work progresses as planned. We will follow-up with the state to verify the status of the Goliad Aquifer in this area of the park. The correct information becomes important if well drilling/plugging does not go according to plan.

Section V – Description of Operations

Section V(A) – Road Construction. Per the above discussion on road dimensions, this discussion needs to be made consistent with revised plats and diagrams. Also it is again stated that the pad area will be lined with a 20-mil plastic liner but not the berm. The berm around the perimeter of the pad site is also required to be lined with 20-mil plastic that is tied in to the pad liner creating an impermeable layer. The vegetation to be mowed shall be from the access road right-of-way as well as the pad site area. Previous operations have only baled the pad site area which has not provided adequate vegetation for reclamation activities and/or the bales have disappeared from the site. All baled vegetation is required to be kept on site and utilized solely for revegetation of the disturbed area.

Section V(B) – Methods and Equipment Used During Drilling/Completion. Like the previous discussion on drilling rig details, it would be more useful for the plan to include an example diagram and equipment inventory of a completion rig at this time so we do not have to make assumptions during impact analysis. Then so long as the rigs used are the same type and class, there is no need for second, third, and fourth rounds of information submissions, reviews, and approvals.

Section V(E) – Water Requirements. Boss states a number of alternatives for obtaining water at the drill site, but never clearly states its proposal. We recommend that the "alternatives" discussion be moved to Section X. F., and this section plainly state that water will be obtained from a fire hydrant north of the park and transported to location by laying temporary polypipe from the source alongside Park Road 22 and the well's access road.

Section V(G) – Well Flow Testing Program. Given the site's proximity to visitor use areas, Boss will be required to provide the Superintendent, or representative, with 24-hour advance notice of flaring and then again 1 hour in advance. This will allow the park to observe the testing and inform employees and visitors of the operation and be better able to answer their questions and address their concerns.

Section V(J), Completions, Stimulations, Workovers. The discussion in this section is limited to the initial well completion activities only. Workovers are a reasonable expectation at some point over the life of a producing well and the impacts (e.g., traffic, noise, sights, emissions, etc) of a workover are comparable to the proposed completion activities. Therefore, if Boss envisions the need for workovers, then it need only state that it proposes to conduct workovers as defined in the NPS's Operator's Handbook for Non-Federal Oil and Gas Development in Units of the National Park Service as necessary.

As a function of monitoring and compliance, Boss will be required to submit specific procedures and any associated permits for NPS review and verification for compliance with its plan of operations. Boss will be required to notify the Superintendent at least 5 working days prior to beginning work to assure that all necessary permits, plans, and NEPA and other environmental compliance has been addressed.

Section V(K) – Pipeline Construction. It has been proposed to construct a 1,950-foot gathering line from the well site to a tie-in point on the Houston Pipeline using a trench and burial method. Recently, another operator in the park demonstrated that it is feasible to install a 2,000-foot section of gathering line using horizontal directional drilling (HDD) under the same conditions expected at Boss' site. One alternative route described in the plan includes a 1,100-foot HDD section in combination with a 1,100-foot section of trenched line. The NPS suggests that Boss evaluate an alternative to use HDD from the well site to a point near the alternative tie-in point shown in the plan. This would be a distance of approximately 1,900 feet, and would minimize surface disturbance associated with pipeline construction and operation.

Section V(K) - Sales Meter Location. The plan is inconsistent in describing the location of the pipeline company's sales meter. A sales meter location at the well site is preferable to a sales meter located at the tie-in point on the Houston Pipeline based on the environmental benefits of avoiding an additional long-term access road and operations site. It is the opinion of the NPS that proper installation, testing, and maintenance of a new gathering line can mitigate a pipeline operator's concern to a point where reduction in resource impacts is the determining factor in locating the meter.

Section V(K) - Well Cellars. The plan does not address how well cellars would be maintained during the production phase and the park has identified resource concerns with open cellars. The park has documented bird mortalities at sites and the open cellars often become unwanted waste receptacles. The park will require operators to fill the cellars as part of the procedures for making wells ready for production.

It is important from an operational integrity standpoint to be able to monitor the production casing - surface casing annulus for pressure buildup. In most cases, filling in the cellar will cover surface casing valves. The State of Texas Statewide Rule 17 infers that operators need to monitor pressures between casing strings. Therefore, before filling in the cellar, piping will need to be installed from the surface casing valve(s) to above grade (leaving surface casing valve open or providing a means for operating it) so that pressure can be checked periodically. Should the operator need access to below-grade valves and piping, sand could easily be washed/vacuumed out of the cellar and replaced when work is complete.

Section V(L) - Well plugging procedures. The final plugging procedure for each well will be submitted to the Superintendent, Padre Island National Seashore, for review and approval in writing prior to Boss starting plugging operations. As a function of monitoring and compliance, Boss will be required to submit specific procedures and wellbore diagrams at the time of plugging for NPS review and verification for compliance with its plan of operations.

Section V(N) – Actions to Ensure Compliance with Operating Standards. As stated in *Section II(A)(2)*, Boss needs to describe routine monitoring and inspections it will perform for the proposed operations, and include the inspection form it will use. Absent an inspection form, Boss should include in the plan the park's inspection form as a minimum reporting requirement. Boss shall conduct inspections weekly, and shall submit the signed inspection form to the park within 3 days of completing the inspection.

Section VI – Contaminating or Toxic Substance Spill Control Plan

While the proposed plan of operations contains all the necessary components that make up a strong spill control plan, we suggest that operators developing plans of operations follow the guidance in Chapter 11 of the Operator's Handbook for developing spill control plans. This

way, the spill control plan contained within a plan of operations can be a standalone document facilitating field implementation.

Section VII – Reclamation Plan
Item I – Itemized Cost Estimate and Recommended Performance Bond Amount. The performance bond will be set at $200,000 - the maximum allowed under 36 CFR §9.48(d)(3).

Section VIII – Affidavits and Statements
The regulatory compliance affidavit needs to be signed by an officer of Boss with the authority to legally bind the company. The document also should be notarized. The review copy of the affidavit is unsigned. Prior to officially accepting the plan of operations, Boss will be required to provide one to the park.

Section X - Background Environmental Information
On page 31, under Baseline Soil Chemical Analysis, it is stated that: Soils will be collected and tested according to the sampling protocol described in Exhibit D. Exhibit D is the list of Federally listed species. The correct statement should be that it is found under Exhibit C.

Mitigation measure #32 on page 40 states "Boss will have in place a Hurricane Evacuation Plan to minimize effects of flooding." Boss should include text that it will adhere to the park's Hurricane Preparedness Plan so that closure and evacuation procedures can be carried out simultaneously with little or no confusion. A copy of the park's Hurricane Preparedness Plan is enclosed.

Item E, on page 42, 44, and 48, under Land Features, Vegetation, and Pipeline, descriptions of the amount of unavoidable impacts to non-tidal wetlands varies from 1,295 sq ft to 1,316 sq ft to 7,520 sq ft. Please address the acreage of wetlands impacted so that values are consistent throughout the plan.

Exhibit D includes the FWS list of federally-listed species. This exhibit should also include state-listed species. Include the results of the survey, and when and by whom it was performed.

Exhibit F
This section depicts the proposed project area on a NWI map. The legend on this map shows that the entire pad, all of the pipeline route, and most of the access road route would be located in wetlands. Was the legend reversed?

Appendix C
In the materials provided to the COE in Appendix C, the overview map shows the jurisdictional area within pipeline corridor to be approximately 8,804.7 sq ft or 0.202 acres. Later in Appendix C is a second letter from BEI to COE dated April 25, 2007, Exhibit A, of a map denoting approximately 185 total linear feet (1,295 sq ft) of impacts to jurisdictional wetlands. Include the letter from COE responding to BEI's April 25, 2007, letter requesting verification of wetland determination and delineation.

Appendix C, Operating Rules. The first operating rule should state that Boss and its contractors and subcontractors will conduct operations as specified in the approved plan of operations.

The table of Mitigation Measures at the end of Appendix C should list all the park mitigation measures, with references to the section and page number in the plan of operations where each

measure is presented and/or referenced. If an existing mitigation measure is not relevant to the proposed operation, simply place N/A in the box.

Appendix H
Appendix H includes a figure titled "Alternatives Overview," that again uses the NWI map as a base in which the legend appears to be reversed.

Other Comments
The following additional comments are suggestions for improving the plan.

1. Preface, page i. The 2nd paragraph should be deleted. The 2nd sentence incorrectly states that the NPS will circulate the plan of operations for review by COE, FWS, TPWD, TRC and TCEQ. The park will make public a notice of availability of the plan of operations, in addition to the EA and draft wetlands and floodplains statements of findings; and will provide a copy to a requestor via the notice of availability published in the Federal Register.

2. Section X(E), Noise. Suggest the last sentence "Detectable increases in noise levels should be increased in the range of 10-20% over current ambient levels" be deleted as it is not supported. There will need to be analysis of the distance that noise from the proposed operations could extend and determine whether additional mitigation measures are needed.

3. Section XI(A), last sentence in the 2nd paragraph stating that the NPS issues special use permits to parties proposing to develop minerals within the park should be deleted. This is not the case.

Five hardcopies and a digital copy of the corrected Plan will be needed after these changes have been made. If we can be of any further assistance, please contact Mark Biel, of my staff, at (361) 949-8173, extension 234.

Sincerely,

Joe Escoto
Superintendent

Enclosure (PAIS Hurricane Preparedness Plan)

cc: Linda Dansby, NPS, IMSF-MOG
Carol McCoy, NPS, WASO-NRPC-GRD
Kevin Noon, NPS-WRD
Charlie Belaire, Belaire Environmental