shortened economic lifetimes. A total of 111 Gulf wells (2.4 percent of all current coastal Gulf wells) and no Cook Inlet platforms are considered likely to shut in as a result of this rule. These shut-in wells tend to be relatively low-producing and marginal wells.

At most, 12 firms owning and/or operating Gulf Coastal wells (2.8 percent of the estimated 435 Gulf Coastal region operators) might potentially fail as a result of the selected BAT option (i.e., data are not available to rule out this possibility, although the actual number could be as small as none). No firm failures are predicted for operators in Cook Inlet. The ''average'' Gulf Coastal firm does not discharge produced water (there are a total of 435 firms and more than 50 percent—actually 72 percent—will not be discharging in coastal areas by 1996). Thus, Gulf Coastal firms are potentially expected to face average (median) declines in equity or working capital of 0 percent since the majority of Gulf firms do not discharge and thus will not incur compliance costs. Of the 122 discharging firms, average (median) declines in equity or working capital of 0.37 percent or 2.63 percent are expected to occur, respectively.

The selected option potentially could result in a $84.9 million loss in federal tax revenues over an average of 10 years, or $12.6 million, on average, annually. This loss is only 10 percent of income taxes collected from discharging wells and platforms alone. Losses to state revenues due to a potential loss of severance taxes total $10.7 million or $1.6 million, on average, annually. This loss is only 3.8 percent of severance taxes from dischargers alone. State royalties lost total $34.3 million, or $5.1 million, on average, annually. This loss is only 5.1 percent of royalties from dischargers alone. These effects are negligible compared to federal and state revenues and royalties collected.

The selected option is not expected to affect energy prices, international trade, or inflation, and will have a minimal impact on national-level employment. Primary employment losses are expected to be 181 FTEs. Primary and secondary losses are expected to total 518 FTEs. Net employment losses (including secondary effects and employment gains) are expected to be 128 FTEs. Table 8 summarizes the impacts from the proposed produced water option.

Based on the minimal impacts predicted, EPA finds that the proposed BAT option for produced water is economically achievable for the Coastal Oil and Gas Industry.

2. NSPS

This section discusses the barrier-to-entry analysis for all regions but Cook Inlet first, then NSPS relative to Cook Inlet is discussed separately. Total annual costs associated with NSPS requirements for produced water in the Gulf of Mexico (the only region where NSPS projects are of concern) are $4.5 million per year. The selected NSPS requirement is equivalent to BAT requirements in this region. Because NSPS is equivalent to BAT outside of Cook Inlet region, and BAT has been found to be economically achievable, NSPS requirements for all but Cook Inlet (which will be discussed separately below) would not pose a barrier to entry and are considered economically achievable.

TABLE 8.—SUMMARY OF ECONOMIC IMPACTS TO GULF OF MEXICO AND COOK INLET REGIONS FROM PRODUCED WATER BAT OPTION NO. 4

[Zero discharge except Cook Inlet]

Impact	Option No. 4 produced water
Number of wells or platforms shut in.	111 wells.
	0 platforms.
Present value of production loss (million BOE).	15.2.
Total production lost (million BOE).	32.4.
Net present value of producer income lost ($000).	$153,209.
Present value of federal taxes lost ($000).	$84,903.
Present value of lost severance taxes.	$10,676.
Present value of lost royalties to states.	$34,255.
Total present value losses ($000).	$283,043.
Employment effects	128 FTEs lost.

Two NSPS economic models were run for Cook Inlet in the EIA for the Offshore Effluent Guidelines (EPA, 1993, Table 7–19; Table 7–21).[6] These models include a 24-slot gas/oil platform and a 12-slot gas platform. The gas/oil platform was estimated to incur incremental compliance costs for produced water disposal under a zero discharge requirement of $1.8 million annually (inflated to 1992 dollars). The key impacts affecting whether a new project would be undertaken (which would lead to conclusions about barriers to entry) include impacts on net present value (NPV) and impacts on the internal rate of return (IRR). The gas/oil 24 is projected to face declines in NPV of 2.9 percent from baseline under a zero discharge requirement for produced water. IRR drops 5.1 percent, however, this drop is estimated to be from 39 percent in the baseline to 37 percent in the zero-discharge scenario. These impacts are not likely to affect the decision to undertake a project in Cook Inlet (given production levels similar to existing Cook Inlet platforms). Additionally, the impact on NPV from the zero-discharge requirement is not substantially different from the impacts on NPV from the proposed BAT option under the Coastal Guidelines at existing Cook Inlet platforms. The decline in NPV projected for the Coastal rule BAT option is 2.4 percent. Thus, existing platforms and new platforms will face similar impacts on NPV even though the NSPS requirement is more environmentally stringent than the BAT requirement.

Costs and impacts associated with the Cook Inlet 12-slot platform are much less than those associated with the 24-slot platform or with existing platforms under the proposed BAT option for produced water under the Coastal Guidelines (see EPA, 1993, Table 7–21 and Section D.1 of this preamble).

Based on the analyses performed for the Offshore Guidelines (which continue to be relevant analyses for the Coastal Guidelines), EPA concludes that impacts on new sources in Cook Inlet are minimal and that NSPS requirements should pose no significant barriers to entry for two reasons: (1) declines in returns (measured as NPV and IRR) most likely would not affect the decision to undertake a new project since operations would still be quite profitable and (2) the level of impacts on new sources from NSPS requirements are not substantially greater than those on existing sources from BAT requirements.

E. Drilling Fluids and Drill Cuttings

1. BAT

As noted above, current practice in the Gulf of Mexico region is zero discharge of drilling fluids and drill cuttings; and therefore, this proposed rule would result in no additional costs to Gulf operators. The three options being co-proposed affect Cook Inlet operations. Option 1 would result in no economic impacts. Option 2 would cause a total 3.6 million BOE loss in production over 15 years. This represents a 1.2 percent reduction in the estimated lifetime production for the

[6] NSPS models were run for Cook Inlet in the Offshore EIA because EPA considered including Cook Inlet in the offshore subcategory, but finally included the operations in the Coastal subcategory. The NSPS models constructed for the Offshore EIA were used as the basis for modeling the existing Cook Inlet platforms in the Coastal Guidelines EIA, thus comparisons between NSPS platforms and BAT platforms can be made.