

emissions associated with the regulatory options considered. These non-water quality environmental impacts are presented in Table 11.

TABLE 11.—NON-WATER QUALITY ENVIRONMENTAL IMPACTS FOR PRODUCED WATER

Option	Fuel requirements (BOE/yr)		Total emissions (tons/yr)	
	BAT	NSPS <sup>1</sup>	BAT	NSPS <sup>1</sup>
1. BPT All .....	0	0	0	0
2. Oil and Grease .....	28,595	1,712	258	17
3. Zero Discharge; Cook Inlet BPT 48/72 .....	258,946	5,948	2,799	64
4. Zero Discharge; Cook Inlet Oil and Grease .....	260,376	5,948	2,801	64
5. Zero Discharge All .....	343,759	5,948	2,899	64

<sup>1</sup> Impacts are associated only with new sources in the Gulf of Mexico. No new sources are expected in other coastal areas.

For small volume production facilities in the Gulf, produced water would be transported to commercial facilities for injection to comply with the options based on either gas flotation or injection because it is less expensive for smaller flows than installing injection or gas flotation equipment on-site. Produced water transportation (via barge or truck), and vacuum pumps to unload produced water at the commercial facilities are sources included in fuel use and air emissions calculations. For medium to large volume facilities in the Gulf and in Cook Inlet, either gas flotation or injection would be the technology bases to comply with the options. EPA determined the fuel requirements and air emissions for these technologies by evaluating:

- Power requirements to operate feed pumps and gas flotation devices
- Injection pumps and feed pumps for injection and pretreatment technology

Energy consumption for the different options was determined based on the produced water flowrates and the associated power requirements for operating treatment and injection systems.

EPA calculated the air emissions for each discharging facility by taking the product of specific emission factors, the usage in hours (that is, hours per year), and the horsepower requirements. EPA calculated total emissions for zero discharge based on the use of reciprocating natural gas fired engines as the power source for the injection pumps. According to industry, these engines are commonly used in coastal production facilities. Air emissions increases calculated for the produced water options include nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and hydrocarbons. See the Coastal Technical Development Document for more detail on the estimated compliance costs and EPA's calculation of pollutant removals

and non-water quality environmental impacts.

The only increase in vessel waterway traffic due to these options would be for the small facilities that would be required to barge their produced waters to a commercial facility. This amounts to approximately 50 facilities out of a total of 216. Because vessels generally service several facilities on any given trip, EPA expects this increase to be small enough that it will be absorbed into current vessel operations.

Additionally, use of the coastal waterways by the oil and gas industry accounts for less than 10 percent of all commercial traffic according to data from the Minerals Management Service. A slight increase in vessel traffic due to this rule would have negligible effect on the water traffic overall.

*C. Treatment, Workover and Completion Fluids*

The non-water quality environmental impacts associated with disposal of treatment, workover and completion fluids are the fuel requirements and air emissions resulting from transportation to commercial disposal where operators choose this method to comply with the rule. No incremental energy requirements and air emissions have been estimated for existing facilities that treat and discharge or inject treatment, workover and completion fluids onsite. This is because the control options for the facilities that treat and inject onsite are based on commingling treatment, workover and completion fluids with the produced water and, therefore, non-water quality environmental impacts associated with this activity have already been taken into account in assessing the impacts of control options for produced water.

Option 1, requiring BPT limits and zero discharge to freshwaters in Louisiana, would not cause additional non-water quality impacts because it

reflects current practice (zero discharge of these fluids is a requirement in the Region VI general drilling permit).

Option 2, requiring limitations equal to those for produced water, would result in the consumption of approximately 1000 and 300 additional BOE per year, for BAT and NSPS respectively, and the generation of 12 and 3 tons of additional emissions per year for BAT and NSPS respectively.

**IX. Executive Order 12866**

Under Executive Order 12866, (58 FR 51735; October 4, 1993) the EPA must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- (1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;
- (2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- (3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- (4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant" regulatory action. As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendation will be documented in the public record for this rulemaking.