

cuttings generated in Cook Inlet would be hauled to shore for disposal onshore, and the other 24 percent would be injected following grinding, into dedicated disposal wells regulated by the Underground Injection Control (UIC) program.

Of the five Cook Inlet operators, two operators generate about 76 percent of the drilling fluids and drill cuttings in Cook Inlet and, have access to a landfill in Alaska. One operator has no future plans to drill. The remaining two operators, who generate about 24 percent of the drilling wastes, would be expected to, for costing purposes, grind and inject to comply with the zero discharge requirement. Out of the five Cook Inlet operators, information obtained by EPA in 1993 indicated that one of them had no plans to drill in the Inlet. Recent (1995) information from an additional Cook Inlet operator relates that this operator also no longer has plans to drill in the Inlet. EPA conservatively estimated that this operator would have drilled six new wells (out of a total of 36 for all of the Cook Inlet operators) in the next seven years. Due to the fact that this is very recent information, the cost and economic analyses presented in this preamble have not deleted these six drillings. Thus, the analysis was performed assuming only one operator, instead of two, operators will not be drilling. However, retaining these six drillings in the analyses will not only provide a conservative estimate of the costs and economic impacts, but may serve to cover future changes in oil and gas activity should decisions be made to resume drilling.

Costs for land disposal include water vessel transportation, storage prior to transport to the disposal facility, truck transportation to the disposal facility, and landfill disposal costs. Costs for grinding and injection include purchase or rental of the grinding, slurring and pumping equipment, and costs to drill dedicated injection wells at the drill site.

To determine the volume of drilling wastes requiring disposal, EPA obtained the projected drilling schedules for the Cook Inlet operators using information from the 1993 Coastal Oil and Gas Questionnaire and contacts with industry. EPA's projections estimate that 36 new wells and 19 recompletions will be drilled in the seven years following scheduled promulgation of this rule. (Recompletions are drilling operations which utilize an existing well but drill to a deeper formation than that which the well was previously producing from). Using information about the volume of drilling fluids and

drill cuttings generated per well, and the projected amount of drilling over the seven years following scheduled promulgation, EPA estimates that the total amount of drilling fluids and cuttings annually discharged from these drilling operations will be approximately 79,000 barrels.

EPA also considered the logistical difficulties of transporting drilling wastes in the Cook Inlet as part of in EPA's costing analysis of the options. To achieve zero discharge, certain platforms would transport drill wastes to the eastern side of Cook Inlet by supply boat during ice conditions, and store the wastes at a transfer station until they could be transported by barge to an existing landfill facility on the west side of the Inlet. During the summer months, transport of wastes would be accomplished by barge directly to the west side.

Costs for the two operators to dispose of their wastes in the Alaskan landfill average \$39/barrel. Costs for the other two operators (one operator has no future plans to drill) to dispose of their wastes by grinding and injection average \$53/bbl. A weighted average for disposal of 76 percent of the drilling wastes by Alaskan landfills and 24 percent by grinding and injection equates to \$42/bbl. On a per well basis, this amounts to approximately \$425,000 and \$600,000 for each recompletion and new well drilled, respectively.

The costs to comply with Option 2 are approximately \$1.4 million annually. Capital expenditures are close to those incurred to meet Option 3 due to the fact that most operators will be required to install the same equipment regardless of the amount of wastes requiring disposal. The economic impact analysis associated with this option would result in a 1.3 percent reduction in the estimated lifetime production for the existing platforms in Cook Inlet as a result of three wells not being drilled. The net present value of this production loss (reduction in producers' net income) is \$263,000 or less than 0.1 percent of baseline net present value. The average well life decreases by 0.2 years as a result of this option.

The results of the economic impact analysis associated with the costs for the zero discharge all option (Option 3) for drilling fluids and cuttings show a 2.7 percent reduction in the estimated lifetime production for the existing platforms in Cook Inlet (an additional 2.6 percent over Option 2). The associated net present value loss of production is approximately \$6.1 million. This is reflective of the estimate that Cook Inlet platforms may close on average, 11 months earlier than their

projected average lifetime of 11 years without this requirement. There are no well or platform shutdowns or barriers to new drilling activities as a result of these costs. However, three new wells would not be drilled. The results of the economic impact analysis are discussed in Section VII of the preamble. For new sources, EPA expects that the costs of complying with NSPS would be equal to or less than those for existing sources.

An analysis of non-water quality environmental impacts for BAT and NSPS was performed. The estimated impacts for the options are discussed in Section VIII of the preamble. The increased energy use and air emissions and availability of land disposal sites and capacity are identified.

#### b. Rationale for Option Selection.

EPA has not selected a preferred option for control of drilling fluids and drill cuttings under BAT and NSPS but, rather is co-proposing all three options. EPA has determined, based on available information, that all three options are technologically and economically achievable and have acceptable non-water quality impacts. However, due to possible operational interferences (for Option 3), the lack of sufficient data to set a toxicity limitation more stringent than 30,000 ppm (SPP) (for Option 2) and the high cost-effectiveness results for both Options 2 and 3, a preferred option has not been selected. EPA solicits comments on the appropriateness of each option.

A large majority of operators are already discharging at levels less toxic than the toxicity limitations of 30,000 ppm (SPP) contained in Option 1. Thus, this is a no cost option incurring no economic or non-water quality environmental impacts.

Option 2 requires zero discharge for all operators except in Cook Inlet where operators would be required to meet the Offshore subcategory limitations in addition to a toxicity limitation of between 100,000 ppm (SPP) and 1,000,000 ppm (SPP). This option would cost \$1.4 million annually and results in less than a 0.1 percent reduction in estimated lifetime production for Cook Inlet platforms which would not significantly reduce the profit potential for these operators. Option 2 would result in the removal of approximately 3.9 million pounds of pollutants being discharged per year (or 1264 pounds in toxic equivalents), assuming a volume of 17 percent of the discharges would not meet a toxicity limit of between 100,000 ppm and one million ppm (SPP) and would therefore be disposed of by grinding and injection or on land. Out of the 3.9 million pounds removed annually less than 0.02