220 are small crude or condensate oil spills ranging from >1 bbl up to 50 bbl which could occur during the 44-year crude or condensate oil-production period, which is an average of about 5 spills per year. In addition to the 220 small crude or condensate spills just discussed, an estimated two small crude or condensate oil spills ≥500 bbl and <1,000 bbl could occur during the 44-year oil-production period. Of those two small crude oil spills ≥500 bbl and <1,000 bbl, one is assumed to occur offshore (from platforms or pipeline), and one is assumed to occur onshore (from the 300 mi onshore pipeline).

An estimated 260 refined-oil spills >1 bbl could occur during the 44-year oil-production period for Alternatives I, III, and IV, an average of about 6 spills per year. Likewise, BOEM estimates 260 refined spills could occur over the 44-year gas-sales production period.

Overall, estimates of crude, condensate and refined oil spills >1 and <1,000 bbl assumed to occur during each year of Development and Production are 11 for Years 10-30, 17 for Years 31-53 and 6 for Years 54 to 77.

Large Oil Spills: ≥1,000 bbl

Large spills, although accidental, are estimated to occur from Development and Production activities and therefore are reasonably foreseeable. Two large spills of crude, condensate, or refined oil are assumed to occur during the Development and Production phases. This assumption is based on considerable historical data that indicates large OCS spills ≥1,000 bbl may occur during this phase (Anderson, Mayes, and Labelle, 2012). This assumption is also based on statistical estimates of the mean number of large spills from platforms, wells, and pipelines, the number and size of large spills on the OCS, and project-specific information in the Scenario. The mean number of large spills is calculated by multiplying the spill rate from the Fault Tree model by the estimated resources produced (4.3 Bbbl). By adding the mean number of large spills from platforms and wells (0.5) and from pipelines (0.9), a mean total of 1.4 large spills was calculated for the Scenario. Based on the mean spill number, a Poisson distribution indicates there is a 75% chance of one or more large spills occurring over the 77 years of the Scenario, and a 25% chance of no spills occurring.

Table 4-3. Large Spill Assumptions.

Variable	Assumption for Purposes of Analysis
Number	2 large spills occurring during the 64 years of oil and gas development and production
Percent chance of one or more occurring	75% Chance of One or More Large Spills Occurring
Activities	Large spills occur during development or production. No large spill occurs during geological and geophysical activities or exploration and delineation drilling activities.
Timing	Large spills occur any time of the year Large spills do not occur in the same time and space; but at punctuated intervals throughout 64 years. Large crude, condensate, or diesel spills could occur during the 44 years of crude oil or natural gas liquid condensate production. Large diesel spills could occur during sales gas production.
Size and Oil Type	Pipeline 1,700 bbl crude or condensate oil Platform 5,100 bbl crude, diesel or condensate oil
Medium Affected	• production facility and then open water or ice • open water • broken ice • on top of or under solid ice • shoreline • tundra or snow
Weathering After 30 days	Condensate and diesel oil will evaporate and disperse much more rapidly than crude oil, generally within 1-13 days. After 30 days in open water or broken ice, BOEM assumes the following weathering for crude oil: • 28-40% evaporates, • 3-16% disperses, and • 44-62% remains.