

STATE OF ALASKA

SARAH PALIN, GOVERNOR

ALASKA OIL AND GAS CONSERVATION COMMISSION

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ADMINISTRATIVE APPROVAL AIO 33.001 ADMINISTRATIVE APPROVAL AIO 34.001

Mr. Dale Hoffman
Pioneer Natural Resources Alaska
700 G Street, Suite 600
Anchorage, AK 99501

RE: Application to Amend Rule 3 of Area Injection Orders Nos. 33 & 34, Oooguruk-Kuparuk and Oooguruk-Nuiqsut Oil Pools, Oooguruk Unit

Dear Mr. Hoffman:

In accordance with Rule 10 of Area Injection Order (AIO) 33, Oooguruk-Kuparuk Oil Pool, and AIO 34, Oooguruk-Nuiqsut Oil Pool, the Alaska Oil and Gas Conservation Commission (Commission) grants a portion of the request of Pioneer Natural Resources Alaska (Pioneer) for administrative approval to use additional fluids for enhanced recovery.

By application, dated March 11, 2009, Pioneer requests that the Commission approve the use of three additional sources of water for enhanced recovery injection purposes at the Oooguruk Unit. Due to circumstances beyond Pioneer's control, the sources of water authorized for enhanced recovery injection under Rule 3 of AIOs 33 and 34 will not be available for at least several additional weeks. Simulation results indicate that delaying water injection will adversely impact reservoir pressure and producing gas-oil-ratio and thus could reduce the near- and long-term recovery of hydrocarbons from the two pools. Accordingly, Pioneer has identified three possible additional water sources. The first source is Harrison Bay sea water, which is used to mix drilling mud for Oooguruk drilling operations. The second is the shallow source water wells which are used to feed the reverse osmosis (RO) unit that produces potable water for the Oooguruk camp. These two sources would be treated with biocide and oxygen scavenged prior to injection. The third potential source is effluent from the RO unit.

The first source is essentially the same as the water that would come from the Kuparuk sea water treatment plant, which is an approved source under Rule 3 of AIOs 33 and 34, but is collected from a different location. The second source, the shallow source water wells, is also expected to be very similar to the water from the Kuparuk sea water treatment plant because they are very shallow wells, less than 100 feet measured depth,

and are believed to be charged from the Beaufort Sea. Laboratory analyses indicate that these sources are very similar to the already approved fluid. Because these two proposed sources are so similar to an already approved fluid, the water from these sources will very likely be compatible with the formation and reservoir fluids and will provide enhanced recovery benefits. The third proposed source, the effluent from the RO unit, has significantly more total dissolved solids than any of the fluids currently approved for enhanced recovery injection purposes, and therefore additional review is needed to determine whether this source is compatible with the formation and reservoir fluids and whether using it will provide an enhanced recovery benefit to the Oooguruk-Kuparuk and Oooguruk-Nuiqsut Oil Pools.

The Commission has determined that the proposed action does not require notice and public hearing, will not promote waste or jeopardize correlative rights, is based on sound engineering and geoscience principles, and will not result in an increased risk of fluid movement into freshwater. Therefore, in accordance with Rule 10 of AIOs 33 and 34, the Commission administratively amends the AIOs; to allow (as soon as possible) commencement of enhanced recovery injection operations, the Commission approves the injection of fluids from the first two sources. The Commission is not now making a decision on the RO effluent. Rule 3 of AIO 33 is amended to read as follows:

Rule 3 Authorized Fluids for Enhanced Recovery

Fluids authorized for injection are:

- a. source water from the Kuparuk sea water treatment plant;
- b. injection water provided by the Kuparuk Field;
- c. produced water from the Oooguruk-Kuparuk and Oooguruk-Nuiqsut Oil Pools;
- d. tracer survey liquid to monitor reservoir performance;
- e. biocide-treated and oxygen-scavenged sea water extracted from Harrison Bay, adjacent to the Oooguruk Drill Site (ODS); and
- f. biocide-treated and oxygen-scavenged the ODS shallow water source wells.

The injection of any other fluids, or mixtures of the above fluids, shall be approved by separate administrative action.

Rule 3 of AIO 34 is amended to read as follows:

Rule 3 Authorized Fluids for Enhanced Recovery

Fluids authorized for injection are:

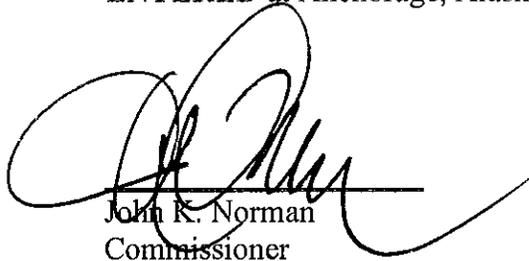
- a. source water from the Kuparuk sea water treatment plant;

- b. injection water provided by the Kuparuk Field;
- c. produced water from the Ooguruk-Kuparuk and Ooguruk-Nuiqsut Oil Pools;
- d. tracer survey liquid to monitor reservoir performance;
- e. biocide-treated and oxygen-scavenged sea water extracted from Harrison Bay, adjacent to the Ooguruk Drill Site (ODS);
- f. biocide-treated and oxygen-scavenged the ODS shallow water source wells; and
- g. natural gas provided by the KRU CPF-3.

The injection of any other fluids, or mixtures of the above fluids, shall be approved by separate administrative action.

This administrative approval does not exempt you from obtaining additional permits or approvals required by law from other governmental agencies.

ENTERED at Anchorage, Alaska, and dated March 13, 2009.


John R. Norman
Commissioner


Cathy P. Foerster
Commissioner



RECONSIDERATION AND APPEAL NOTICE

As provided in AS 31.05.080(a), within 20 days after written notice of the entry of this order or decision, or such further time as the Commission grants for good cause shown, a person affected by it may file with the Commission an application for reconsideration of the matter determined by it. If the notice was mailed, then the period of time shall be 23 days. An application for reconsideration must set out the respect in which the order or decision is believed to be erroneous.

The Commission shall grant or refuse the application for reconsideration in whole or in part within 10 days after it is filed. Failure to act on it within 10-days is a denial of reconsideration. If the Commission denies reconsideration, upon denial, this order or decision and the denial of reconsideration are **FINAL** and may be appealed to superior court. The appeal **MUST** be filed within 33 days after the date on which the Commission mails, **OR 30** days if the Commission otherwise distributes, the order or decision denying reconsideration, **UNLESS** the denial is by inaction, in which case the appeal **MUST** be filed within 40 days after the date on which the application for reconsideration was filed.

If the Commission grants an application for reconsideration, this order or decision does not become final. Rather, the order or decision on reconsideration will be the **FINAL** order or decision of the Commission, and it may be appealed to superior court. That appeal **MUST** be filed within 33 days after the date on which the Commission mails, **OR 30** days if the Commission otherwise distributes, the order or decision on reconsideration. As provided in AS 31.05.080(b), "[t]he questions reviewed on appeal are limited to the questions presented to the Commission by the application for reconsideration."

In computing a period of time above, the date of the event or default after which the designated period begins to run is not included in the period; the last day of the period is included, unless it falls on a weekend or state holiday, in which event the period runs until 5:00 p.m. on the next day that does not fall on a weekend or state holiday.