

STATE OF ALASKA
ALASKA OIL AND GAS CONSERVATION COMMISSION
3001 Porcupine Drive
Anchorage, Alaska 99501-3192

Re: THE REQUEST OF UNION OIL) Area Injection Order No. 12
COMPANY OF CALIFORNIA for)
an Area Injection Order) Southern Portion of
for the portion of the) Trading Bay Field
Trading Bay Field developed)
by the Monopod Platform)

November 20, 1986

IT APPEARING THAT:

1. Union Oil Company of California (Union) requested the Alaska Oil and Gas Conservation Commission to issue an Area Injection Order permitting the underground injection of fluids within a portion of the Trading Bay Field for purposes of enhanced hydrocarbon recovery.
2. Notice was published in the Anchorage Daily News on September 12, 1986 of an opportunity for a public hearing on October 13, 1986.
3. Neither a protest nor a request for a public hearing was timely filed. Accordingly the Commission will, in its discretion, issue an order without a public hearing.

FINDINGS:

1. An order permitting the underground injection of fluids on an area basis, rather than for each injection well individually, provides for efficiencies in the administration and surveillance of underground fluid injection operations. 20 AAC 25.460 provides the Commission with the authority to issue an order governing underground injection operations on an area basis.
2. The portion of the Trading Bay Field developed by Union's Monopod platform constitutes a compact "project area" which can readily be described by governmental subdivisions. Union is the sole operator of this Project Area.

3. The Project Area encompasses approximately the Southern half (1/2) of the Trading Bay Field, Middle Kenai and Hemlock Oil Pools. The Project Area includes all existing injection wells and injection well sites planned for enhanced recovery of oil from the Middle Kenai and Hemlock Oil Pools in this portion of the field.
4. The portion of aquifers beneath Cook Inlet described by a 1/4 mile area beyond and lying directly below the Trading Bay Field are exempted for Class II injection activities by 40 CFR 147.102(b)(2)(D) and 20 AAC 25.440(c).
5. Less stringent requirements for well construction, operation, monitoring, and reporting of injection operations may be more appropriate than would be required when injection occurs into, through or above portions of aquifers not exempted.
6. The vertical limits of injection strata and confining formations may be defined in the Union Oil Company of California Trading Bay State well No. A-17.
7. The strata into which fluids are to be injected will accept fluids at injection pressures which are less than the fracture pressure of the injection strata and their confining formations.
8. Statewide regulations and conservation orders govern field operations except as modified by this order.
9. To ensure that fluids injected are confined to injection strata, the mechanical integrity of injection wells should be demonstrated periodically and monitored routinely for disclosure of possible abnormalities in operating conditions.
10. Injection wells existing on the date of this order were constructed and completed in accordance with regulations which conform to the requirements of 20 AAC 25.412.

NOW, THEREFORE, IT IS ORDERED THAT the rules hereinafter set forth govern Class II underground injection operations in the following described area referred to in this order as the affected area:

SEWARD MERIDIAN

T9N	R13W	Section 3: All.
		Section 4: All.
		Section 5: E $\frac{1}{2}$.
		Section 8: NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$.
		Section 9: N $\frac{1}{2}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$.
		Section 10: N $\frac{1}{2}$, N $\frac{1}{2}$ SE $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$.
T10N	R13W	Section 33: S $\frac{1}{2}$ SE $\frac{1}{4}$.

Rule 1 Authorized Injection Strata for Enhanced Recovery

Within the affected area, non-hazardous fluids may be injected for purposes of pressure maintenance and enhanced oil recovery into strata defined as those strata which correlate with the strata found in the Union Oil Company of California Trading Bay State well A-17 between the measured depths of 3220 feet and 8270 feet for the Trading Bay Middle Kenai "B", "C", "D", "E" and Hemlock Oil Pools.

Rule 2 Fluid Injection Wells

The underground injection of fluids must be: 1) through a new well that has been permitted for drilling as a service well for injection in conformance with 20 AAC 25.005; 2) through an existing well that has been approved for conversion to a service well for injection in conformance with 20 AAC 25.280; or 3) through a well that existed as a service well for injection purposes on the date of this order.

Rule 3 Monitoring the Tubing/Casing Annulus Pressures

The tubing/casing annulus pressure of each injection well must be checked weekly to ensure there is no leakage and that it does not exceed a pressure that will subject the casing to a hoop stress greater than 70% of the casing's minimum yield strength.

Rule 4 Reporting the Tubing/Casing Annulus Pressure Variations

Tubing/casing annulus pressure variations between consecutive observations need not be reported to the Commission.

Rule 5 Demonstration of Tubing/Casing Annulus Mechanical Integrity

A schedule must be developed and coordinated with the Commission which ensures that the tubing/casing annulus for each injection well is pressure tested prior to initiating injection and at least once every four years thereafter. A test surface pressure of 1500 psi, or, assuming a 0.465 psi/ft geo-pressure gradient, a surface pressure that imposes a differential pressure gradient across the casing of 0.25 psi/ft at the vertical depth of the packer, whichever is greater; but not to exceed a hoop stress greater than 70% of the casing's minimum yield strength, must be held for 30 minutes with no more than a 10 percent decline. The Commission must be notified at least 24 hours in advance to enable a representative to witness pressure tests.

Rule 6 Well Integrity Failure

Whenever operating pressure observations or pressure tests indicate pressure communication or leakage of any casing, tubing or packer, the operator must notify the Commission on the first working day following the observation, obtain Commission approval of a plan for corrective action, and when an USDW is not endangered, obtain Commission approval to continue injection.

Rule 7 Plugging and Abandonment of Fluid Injection Wells

An injection well located within the affected area must not be plugged or abandoned unless approved by the Commission in accordance with 20 AAC 25.105.

Rule 8 Administrative Relief

Upon request, the Commission may administratively amend any rule stated above as long as the operator demonstrates to the Commission's satisfaction that sound engineering practices are maintained and the amendment will not result in an increased risk of fluid movement into an underground source of drinking water.

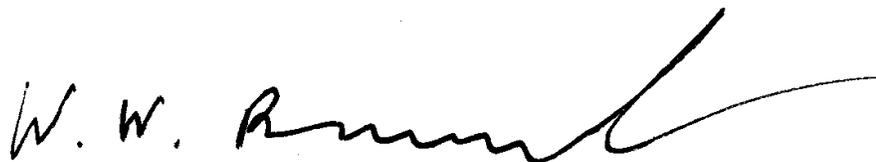
DONE at Anchorage, Alaska and dated November 20, 1986.



C. V. Chatterton, Chairman
Alaska Oil & Gas Conservation Commission



Lonnie C. Smith, Commissioner
Alaska Oil & Gas Conservation Commission



W. W. Barnwell, Commissioner
Alaska Oil & Gas Conservation Commission