STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 8224

APPLICATION OF THE OIL CONSERVATION
COMMISSION UPON ITS OWN MOTION TO
DEFINE THE VERTICAL AND AREAL EXTENT OF
AQUIFERS POTENTIALLY VULNERABLE TO
CONTAMINATION BY THE SURFACE DISPOSAL
OF PRODUCED WATER, McKINLEY, RIO ARRIBA,
SANDOVAL, AND SAN JUAN COUNTIES,
NEW MEXICO.

SUMMARY MEMORANDUM OF OCD STAFF

INTRODUCTION

This case was called by the Commission on its own motion to determine whether fresh water resources in the San Juan Basin of New Mexico are vulnerable to contamination by the surface disposal of produced water from oil and gas operations. If such threats of contamination are found to exist, the Commission has the duty to take action to regulate such disposal.

This hearing process was convened under the mandate contained in the Commission's "Enumeration of Powers" found

at NMSA 70-2-12(15) (1978), which provides that the Commission is authorized to "... direct surface or subsurface disposal of [produced] water in a manner that will afford reasonable protection against contamination of fresh water supplies..." While some of the testimony and other evidence presented at the hearing of this case relates to regulations and standards promulgated pursuant to the Water Quality Act, NMSA 74-6-1 et. seq. (1978), it was emphasized in testimony that in this particular situation the requirements set forth in the regulations of the New Mexico Water Quality Control Commission are referred to only as standards and the hearing was not called pursuant to any authority contained in the Water Quality Act.

It is clear from the evidence introduced at the hearing on this matter that some of the components of produced water are toxic, (Boyer, Tr. 2/20/85, P. 58-60), while others, if introduced into ground water, will result in its degradation. No witness disputed this evidence. Moreover, the introduction of these substances into ground water designated by the State Engineer as "fresh water resources" in quantities that would cause the ground water to exceed water quality standards is strictly prohibited in other situations. Sections 3-101 and 3-103 (A) and (B), Water Quality Control Commission Regulations. So even though this hearing was not called pursuant to the OCC's delegated power to enforce Water Quality Control Regulations, any

contemplated action should be viewed in light of these regulations and the water quality standards contained therein.

The evidence is also clear that much of the produced water that is dumped into unlined pits in Northwest New Mexico necessarily goes directly into the ground. (Boyer, Tr. 2/20/85, P. 69-71, Baca, Tr. 2/20/85, P. 148). And because of the shallow depth to ground water and the alluvial, unconsolidated nature of the soils in the San Juan Basin, most of the water that is absorbed into the ground eventually reaches the ground water.

Given this essentially uncontroverted evidence, the primary question to be addressed by the Commission prior to entering an order in this case concerns the final disposition of organic hydrocarbons and dissolved minerals (TDS) contained in this produced water. Testimony by the opponents of a "no-pit" rule that disposal of produced water onto the ground will have no adverse consequences to ground water is simply not credible. Although several industry witnesses were produced in an attempt to disarm the concern expressed by the Commission in initiating this case, none of them controverted the evidence produced by the Division that produced water contains toxic substances and that such water, if put into unlined pits, enters the ground and mixes with ground water. And in spite of the fact that industry

representatives testified that because of the action of various mechanisms of attenuation, deleterious substances in the produced water do not contaminate ground water supplies, their own studies clearly showed high levels of benzene, a constituent of produced water that does not occur naturally in ground water, contaminating areas under produced water pits (Geoscience Exhibit 3, see especially results of monitoring Tenneco's Eaton A-1E).

Following is a brief synopsis of the relevant evidence. It demonstrates conclusively that the unregulated disposal of produced water should cease.

I. SUBSTANTIAL EVIDENCE WAS PRESENTED REGARDING THE POTENTIAL FOR GROUND WATER CONTAMINATION BY ORGANIC CONTAMINANTS

Modeling using acceptable hydrologic methods has shown the potential for ground water pollution by organic contaminants. In particular, "Random Walk" simulations which include a retardation factor for sorption show levels of benzene exceeding standards at a distance from the source. Standards are exceeded at all discharges of five barrels per day and at most intermediate values of discharge down to one-half barrel per day. Other than dilution, the mechanisms of attenuation (volatilization, sorption, evaporation and biodegradation) have not been shown to be effective at all places under all circumstances. This is especially true for biodegradation which requires the presence of oxygen or long adaptation times to be effective. Therefore, the potential for ground water contamination by volatile organic hydrocarbons cannot be discounted. Given the toxicity of the contaminants and health concerns related thereto, and the concommitant potential for ground water contamination, the Commission should protect ground water by limiting discharges of produced water into unlined pits to no more than one-half barrel per day. Since ancillary pits receive similar fluids, especially in the event of separator malfunction, or where separators are not present, discharges to such pits should also be limited to one-half barrel per day.

II. TESTIMONY IS CLEAR AS TO THE IMPORTANCE OF THE VADOSE ZONE AS AN ATTENUATION MECHANISM

Witnesses for both sides testified as to the importance of the vadose zone in preventing contamination of ground water from organics in the produced water discharge. Mr. Boyer mentioned in his direct testimony that the likelihood of volatilization is greater in the vadose zone than in the ground water (Boyer, Tr. 2/20/85, p. 84).

In their direct testimony, industry representatives also referred frequently to the importance of the vadose zone as a major attenuation mechanism. Dr. Schultz discussed the importance to organic volatilization of partially saturated flow and the air space in the pores. He testified that aromatics are volatilized into the soil gas and transferred to the atmosphere. This is one of the removal mechanisms of attenuation (Schultz, Tr. 4/3/85, p. 152-155). To have soil gas aid in volatilization, unsaturated or partially saturated flow must occur in the vadose zone (Schultz, Tr. 4/3/85, p. 169, 180-182).

Dr. Miller's testimony also emphasized the importance of the vadose zone. The percentage rate of aromatic hydrocarbon degradation in the unsaturated zone is eight times greater than in saturated material (Miller, Tr. 4/22/85, p. 23). Miller felt that there was concern if the pit was in ground water since degradation processes that

occur in the unsaturated zone would not be present to provide adequate safety to ground water quality (Miller, Tr. 4/22/85, p. 68).

Since benzene and toluene are most rapidly degraded under aerobic conditions (Miller, Tr. 4/22/85, p.22) and these conditions are most always prevalent in the vadose zone, this zone must be maintained. Miller also stated that recent studies indicate that toluene and possibly benzene degrade in anaerobic conditions (Miller, Tr. 4/22/85, p. 26). Nevertheless, the OCD staff maintains that aerobic conditions must be maintained to ensure maximum possible benzene mineralization.

The most active zone of degradation is immediately beneath the pit for a depth of about one foot, but that thickness has to be protected from ground water interception of the pit bottom (Miller, Tr. 4/22/85, Tr. p. 69). Under cross-examination, Dr. Miller stressed the importance of preserving the vadose zone between the pit and the water table, and stated that direct introduction of produced water into ground water utilized as drinking water would take away the safety margin and be the worst case (Miller, Tr. 4/22/85, Tr. pp. 94, 104-105).

Since pits are commonly five to eight feet in depth at well sites, depth to ground water would have to be deeper to

provide the necessary vadose zone protection advocated by both OCD and industry witnesses. Seasonal ground water variations due to the rise in river levels, or percolating irrigation waters, can cause ground water levels to move up or down several feet during a year. Frequent large discharges can move unsaturated or partially saturated conditions toward saturation and cause ground water mounding. Therefore, to provide the necessary vadose zone protection, unlined pits in areas where the depth to ground water is less than ten feet should be prohibited. Since pits and trenches dug to bury piping require use of mechanical equipment, the presence of water at depths up to ten feet can be easily ascertained. Therefore this determination will not pose any additional burden on industry.

III. RESULTS OF TDS STUDY

Values of total dissolved solids (TDS) found in produced water in the San Juan Basin are generally less than in Southeast New Mexico. Modeling using the Random Walk program shows that discharges of 10,000 mg/l salts do not significantly increase TDS levels at low discharge volumes (OCD post hearing submittal 5/23/85). Discharge volumes of one-half bbl/day did not cause large increases for any of the simulations using the range of hydraulic conductivities found in alluvium in the area (25-2500 ft/day). Discharges of five barrels per day, however, caused unacceptable increases at all hydraulic conductivity ranges. The increases were judged unacceptable because the discharges would cause the NM WQCC ground water standard of 1000 mg/l TDS to be exceeded when added to existing concentrations in the vulnerable area. Intermediate discharge volumes at 10,000 mg/l TDS may or may not pose a problem depending on the availability of sufficient ground water flow to allow mixing and dilution.

Since the affect on ground water quality cannot be determined with sufficient accuracy without site specific hydrogeological information being available, the Commission should allow a maximum blanket discharge of up to one-half barrel per day to provide necessary ground water protection.

Since TDS is a composite of individual contaminants, some of which can cause health or other problems, limiting TDS discharges should also mitigate most problems caused by individual contaminants (i.e. chloride, sulfate, and others).

IV. THE VALIDITY OF THE HYDROLOGIC INVESTIGATION PERFORMED ON THREE PITS IN THE VULNERABLE AREA IS QUESTIONABLE

In his testimony, Mr. Hicks asserts that his studies of three well sites show that small volume discharges are not a threat to ground water. Even if the drilling and sampling results of the site investigations are assumed correct, these results should not be interpreted as being representative of the entire vulnerable area population of 1300 wells, or of the sample of 300 wells of Amoco and Tenneco. The reason is that these three locations were evaluated and chosen from a list of 21 sites. The 21 sites were chosen separately and apparently prior to the selection of the 50 to 60 wells chosen at random from the Amoco/Tenneco population of 300. Even though some of the 21 sites were also listed in the random selection of 50-60 wells, the selection of the 21 apparently was not random and cannot be considered a representative random sample (Hicks, Tr. 4/22/85, pp. 127, 130).

At the three monitoring sites selected, volumes of water produced were stated by Mr. Hicks as being three and four barrels per day for the Tenneco wells and one-fourth barrel per day for the Amoco well. Official OCD records (Form C-115) show, however, that the Tenneco sites in question <u>never</u> have produced water from any of Dakota, Mesaverde, and Chacra completion intervals. The Amoco well has OCD-reported volumes similar to the one-fourth barrel

per day shown in the report. Therefore, if the volumes of water produced by the Tenneco wells and utilized in the Geoscience study are high and not representative of actual site discharges, this could explain the low values of benzene found in the pits and ground water. If this is the case, the modeling and conclusions presented by Mr. Hicks that wells discharging three to four bbls/day do not represent a hazard to ground water are completely invalid.

Mr. Hicks stated that Pictured Cliffs wells do not have produced water pits or separator pits since no water is produced (Hicks, Tr. 4/22/85, p. 136, and Exhibit 3). Review of OCD records show, however, that such wells represent about one-third of the 45 wells in the vulnerable area with production of five bbls/day or more of produced water. Therefore, they are an important factor contributing to water discharges in the vulnerable areas and cannot be ignored.

OCD SUMMARY

The following conclusions can be drawn from the testimony:

1. Certain aromatic organic contaminants (especially benzene) have high potential to contaminate ground water when discharged even in small volume quantities with produced water. The mechanisms of attenuation, especially biodegradation, cannot be counted on to provide protection at all times and in all locations and situations. Therefore blanket small volume discharges not exceeding one-half barrel per day should not be allowed to unlined produced water and ancillary pits.

2. Both OCD and industry testimony stressed the importance of the vadose zone in attenuation of the organic contaminants. Especially necessary is the presence of air in pore spaces to allow volatilization and biodegradation to occur. To provide the necessary buffer zone, and because pit depths are on the order of five to eight feet, discharges to unlined pits should be prohibited where ground water is at a depth of ten feet or less.

3. From the standpoint of total dissolved solids, discharges of five barrels per day at concentrations of

10,000 mg/l TDS also cause the New Mexico Water Quality standard to be exceeded. Limiting the discharge to unlined pits to one-half barrel per day will provide the necessary TDS protection and mitigate deleterious effects of other contaminants which are TDS components.

4. The study conducted by GeoScience Consultants is inconclusive because the three sites chosen for intensive study cannot be considered representative of vulnerable area conditions, and because of discrepancies in the volumes of water actually discharged at two of the sites.

Since the Oil and Gas Act requires the reasonable protection of fresh water from contamination by such activities, the limits recommended by the Division in its proposed order will provide such protection and are necessary and prudent.

CONCLUSION

The opponents to regulation of produced water disposal have made much of the fact that no water wells have been proven to have been contaminated by produced water. Tenneco, in its Memorandum of Law filed herein even goes so far as to assert that "...we have yet to experience the first confirmed case of contamination of ground water by the use of unlined surface production pits" (at p.24). Clearly, the facts in this case contradict this statement. Tenneco's own witnesses showed concentrations of benzene in ground water underlying surface pits. (Geoscience Exhibit 3). In fact, one of Mr. Hick's own samples exceeded ground water standards for benzene as set by the New Mexico Water Quality Control Commission (Geoscience, Exhibit 3, relating to Tenneco's Eaton A-1E well).

The mandate of the Commission is not to protect only existing water wells. It is to protect all fresh water resources with potential for future use. Other states have not been so reticent or tardy in protecting water resources. Both Oklahoma and Texas have had "no-pit" rules for many years. Yet the opponents of regulation of produced water in New Mexico vow a fight to the finish. Do they really believe that New Mexico regulators are so uninformed and intimidated as to continue to permit such an obviously

outdated practice as totally unregulated surface disposal of produced water? Oklahoma has had a "no-pit" order since 1969. Disposal in unlined pits is allowed only upon a conclusive showing that surface or subsurface water will not be polluted (See Oklahoma regulations attached hereto). Such a burden is almost impossible to meet. Consequently, surface disposal is almost non-existent. Texas has a similar rule. (See Texas Railroad Commission Regulations attached hereto).

The producers make many arguments as to why no rule should be adopted. Tenneco claims that imposition of a "no-pit" rule would entail an unconstitutional taking of private property because in the past it has operated its wells without having to line pits and no regulation to date has referenced the possibility that at some future time pits might be required to be lined. (Tenneco Oil Company's Memorandum of Law and Arguments, p. 18). This argument is patently ridiculous. Simply because an entity has not been required to take preventative measures in the past does not mandate that, given proper notice and due process, it cannot be required to take those measures at a future time. If Tenneco's position were the law, virtually no advance in human health and safety or environmental regulation would be possible because government would be required to absorb the entire cost of such improvements through legal proceedings claiming unconstitutional takings.

The water resources of New Mexico are a scarce and valuable natural resource, much like petroleum. And while the cost of the two is not now comparable, if fresh water resources are not protected for future use, water may eventually come too expensive for many uses.

In New Mexico, approximately 95% of water used for domestic purposes is ground water. This is due primarily to the fact that such little surface water exists in comparison to other areas of the country. Because we are so dependent upon ground water, it is necessary that adequate measures be taken to protect existing supplies. The staff of the OCD believes that its recommendations regarding disposal of produced water are best suited to guarantee protection of these fresh water resources. We have presented a case which demonstrates that produced water, which contains toxic contaminants, is now disposed of in Northwest New Mexico by being dumped into unlined surface pits. Much of this water is absorbed into the ground where it eventually reaches and combines with ground water. In small quantities, this degrades existing fresh water supplies. In larger quantities, it leads to contamination.

The Commission has an obligation to protect fresh water resources. In order to carry out this duty, the Commission must prohibit unregulated disposal of produced water except in quantities of less than one-half barrel. Any other

action would be to ignore the evidence produced at the hearings in this matter, including that of the opponents to regulations.

S/

JEFF TAYLOR
General Counsel
Oil Conservation Division of the
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

MACK WALLACE Chairman
BOBBY TEMPLE Commissioner
JAMES E. (JIM) NUGENT Commissioner

J. M. MORROW P.E.
Director
JERRY W. MALACARA
Director of Underground Injection Control

[illegible] CAPITOL STATION – P. O. DRAWER 12967 AUSTIN, TEXAS 78711

NOTICE OF RULE ADOPTION

The following is a copy of amended Statewide Rule 8 relating to Water Protection (16 TAC §3.8) as amended by the Railroad Commission of Texas on March 5, 1984. These amendments will go into effect on May 1, 1984.

William H. Barnes
Legal Counsel
Underground Injection Control

An Equal Opportunity Employer

§ 3.8. Water Protection.

(a) Definitions. The following words and terms, when used in this section, shall have the following meanings, unless the context clearly indicates otherwise:

(1) Basic sediment pit -- Pit used in conjunction with a tank battery for storage of basic sediment removed from a production vessel or from the bottom of an oil storage tank. Basic sediment pits were formerly referred to as burn pits.

(2) Brine pit -- Pit used for storage of brine which is used to displace hydrocarbons from an underground hydrocarbon storage facility.

(3) Collecting pit -- Pit used for storage of saltwater prior to disposal at a tidal disposal facility, or pit used for storage of saltwater or other oil and gas wastes prior to disposal at a disposal well or fluid injection well. In some cases one pit is both a collecting pit and a skimming pit.

(4) Completion/workover pit -- Pit used for storage or disposal of spent completion fluids, workover fluids, and drilling fluid, silt, debris, water, brine, oil scum, paraffin, or other materials which have been cleaned out of the well bore of a well being completed or worked over.

(5) Drilling fluid disposal pit -- Pit, other than a reserve pit, used for disposal of spent drilling fluid.

(6) Drilling fluid storage pit -- Pit used for storage of drilling fluid which is not currently being used but which will be used in future drilling operations. Drilling fluid storage pits are often centrally located among several leases.

(7) Emergency saltwater storage pit -- Pit used for storage of produced saltwater for limited period of time. Use of the pit is necessitated by a temporary shutdown of a disposal well or fluid injection well and/or

associated equipment, by temporary overflow of saltwater storage tanks on a producing lease, or by a producing well loading up with formation fluids such that the well may die. Emergency saltwater storage pits may sometimes be referred to as emergency pits or blowdown pits.

(8) Flare pit -- Pit which contains a flare and which is used for temporary storage of liquid hydrocarbons which are sent to the flare during equipment malfunction but which are not burned. A flare pit is used in conjunction with a gasoline plant, natural gas processing plant, pressure maintenance or repressurizing plant, tank battery, or a well.

(9) Fresh makeup water pit -- Pit used in conjunction with drilling rig for storage of water used to make up drilling fluid.

(10) Gas plant evaporation/retention pit -- Pit used for storage or disposal of cooling tower blowdown, water condensed from natural gas, and other wastewater generated at gasoline plants, natural gas processing plants, or pressure maintenance or repressurizing plants.

(11) Mud circulation pit -- Pit used in conjunction with drilling rig for storage of drilling fluid currently being used in drilling operations.

(12) Reserve pit -- Pit used in conjunction with drilling rig for collecting spent drilling fluids; cuttings, sands, and silts; and wash water used for cleaning drill pipe and other equipment at the well site. Reserve pits are sometimes referred to as slush pits or mud pits.

(13) Saltwater disposal pit -- Pit used for disposal of produced saltwater.

(14) Skimming pit -- Pit used for skimming oil off saltwater prior to disposal of saltwater at a tidal disposal facility, disposal well, or fluid injection well.

(15) Washout pit -- Pit located at truck yard, tank yard, or disposal facility for storage or disposal of oil and gas waste residue washed out of trucks, mobile tanks, or skid-mounted tanks.

(16) Water condensate pit -- Pit used in conjunction with a gas pipeline drip or gas compressor station for storage or disposal of fresh water condensed from natural gas.

(17) Generator -- Person who generates oil and gas wastes.

(18) Carrier -- Person who transports oil and gas wastes generated by a generator. A carrier of another person's oil and gas wastes may be a generator of his own oil and gas wastes.

(19) Receiver -- Person who stores, handles, treats, reclaims, or disposes of oil and gas wastes generated by a generator. A receiver of another person's oil and gas wastes may be a generator of his own oil and gas wastes.

(20) Director -- Director of the Oil and Gas Division or his staff delegate designated in writing by the Director of the Oil and Gas Division or the commission.

(21) Person -- Natural person, corporation, organization, government or governmental subdivision or agency, business trust, estate, trust, partnership, association, or any other legal entity.

(22) Affected person -- Person who, as a result of the activity sought to be permitted, has suffered or may suffer actual injury or economic damage other than as a member of the general public.

(23) To dewater -- To remove the free water.

(24) To dispose -- To engage in any act of disposal subject to regulation by the commission including, but not limited to, conducting, draining, discharging, emitting, throwing, releasing, depositing, burying, landfarming, or allowing to seep, or to cause or allow any such act of disposal.

(25) Landfarming -- A waste management practice in which oil and gas wastes are mixed with or applied to the land surface in such a manner that the waste will not migrate off the landfarmed area.

(26) Oil and gas wastes -- Materials to be disposed of or reclaimed which have been generated in connection with activities associated with the exploration, development, and production of oil or gas or geothermal resources, or activities associated with underground storage of hydrocarbons. The term oil and gas wastes includes, but is not limited to, saltwater, other mineralized water, sludge, spent drilling fluids, cuttings, waste oil, spent completion fluids, and other liquid, semi-liquid, or solid waste material.

(27) Oil field fluids -- Fluids to be used or reused in connection with activities associated with the exploration, development, and production of oil or gas or geothermal resources, or activities associated with underground storage of hydrocarbons. The term oil field fluids includes, but is not limited to, drilling fluids, completion fluids, surfactants, and chemicals used to detoxify oil and gas wastes.

(28) Pollution of surface or subsurface water -- The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface or subsurface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(29) Surface or subsurface water -- Groundwater, percolating or otherwise, suitable for domestic or livestock use, irrigation of crops, or industrial use, and lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water,

natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

(b) No pollution. No person conducting activities subject to regulation by the commission may cause or allow pollution of surface or subsurface water in the state.

(c) Exploratory wells. Any oil, gas, or geothermal resource well or well drilled for exploratory purposes shall be governed by the provisions of statewide or field rules which are applicable and pertain to the drilling, safety, casing, production, abandoning, and plugging of wells.

(d) Pollution control.

(1) Prohibited disposal methods. Except for those disposal methods authorized for certain wastes by paragraph (3) of this subsection or subsection (e) of this section, or disposal methods permitted pursuant to § 3.9 of this title (relating to Disposal Wells) or § 3.46 of this title (relating to Fluid Injection into Productive Reservoirs) (Rules 9 or 46), no person may dispose of any oil and gas wastes by any method without obtaining a permit to dispose of such wastes. The disposal methods prohibited by this paragraph include, but are not limited to, the unpermitted discharge of oil field brines, geothermal resource waters, other mineralized waters, or drilling fluids into any watercourse or drainageway, including any drainage ditch, dry creek, flowing creek, river, or any other body of surface water.

(2) Prohibited pits. No person may maintain or use any pit for storage of oil or oil products. Except as authorized by paragraph (4) of this subsection, no person may maintain or use any pit for storage of oil field fluids, or for storage or disposal of oil and gas wastes, without obtaining a

permit to maintain or use the pit. A person is not required to have a permit to use a pit if a receiver has such a permit, if the person complies with the terms of such permit while using the pit, and if the person has permission of the receiver to use the pit. The pits required by this paragraph to be permitted include, but are not limited to, the following types of pits: saltwater disposal pits; emergency saltwater storage pits; collecting pits; skimming pits; brine pits; drilling fluid storage pits (other than mud circulation pits); drilling fluid disposal pits (other than reserve pits or slush pits); washout pits; and gas plant evaporation/retention pits. If, after the effective date of this subsection, a person maintains or uses a pit for storage of oil field fluids, or for storage or disposal of oil and gas wastes, and the use or maintenance of the pit is neither authorized by paragraph (4) or (7)(C) of this subsection nor permitted, then the person maintaining or using the pit shall backfill and compact the pit in the time and manner required by the director. Prior to backfilling the pit, the person maintaining or using the pit shall, in a permitted manner or in a manner authorized by paragraph (3) of this subsection, dispose of all oil and gas wastes which are in the pit.

(3) Authorized disposal methods.

(A) Fresh water condensate. A person may, without a permit, dispose of fresh water which has been condensed from natural gas and collected at gas pipeline drips or gas compressor stations, provided the disposal is by a method other than disposal into surface water of the state.

(B) Inert wastes. A person may, without a permit, dispose of inert and essentially insoluble oil and gas wastes including, but not limited to, concrete, glass, wood, and wire, provided the disposal is by a method other than disposal into surface water of the state.

(C) Low chloride drilling fluid. A person may, without a permit, dispose of the following oil and gas wastes by landfarming, provided the wastes are disposed of on the same lease where they are generated, and provided the person has the written permission of the surface owner of the tract where landfarming will occur: water base drilling fluids with a chloride concentration of 3,000 milligrams per liter (mg/l) or less; drill cuttings, sands, and silts obtained while using water base drilling fluids with a chloride concentration of 3,000 milligrams per liter (mg/l) or less; and wash water used for cleaning drill pipe and other equipment at the well site.

(D) Other drilling fluid. A person may, without a permit, dispose of the following oil and gas wastes by burial, provided the wastes are disposed of at the same well site where they are generated: water base drilling fluids which had a chloride concentration in excess of 3,000 milligrams per liter (mg/l) but which have been dewatered; drill cuttings, sands, and silts obtained while using oil base drilling fluids or water base drilling fluids with a chloride concentration in excess of 3,000 milligrams per liter (mg/l); and those drilling fluids and wastes allowed to be landfarmed without a permit.

(E) Completion/workover pit wastes. A person may, without a permit, dispose of the following oil and gas wastes by burial in a completion/workover pit, provided the wastes have been dewatered, and provided the wastes are disposed of at the same well site where they are generated: spent completion fluids, workover fluids, and the materials cleaned out of the well bore of a well being completed or worked over.

(F) Effect on backfilling. A person's choice to dispose of a waste by methods authorized by this paragraph shall not extend the time allowed for backfilling any reserve pit, mud circulation pit, or completion/workover pit whose use or maintenance is authorized by paragraph (4) of this subsection.

(4) Authorized pits. A person may, without a permit, maintain or use reserve pits, mud circulation pits, completion/workover pits, basic sediment pits, flare pits, fresh makeup water pits, and water condensate pits on the following conditions:

(A) Reserve pits and mud circulation pits. A person shall not deposit or cause to be deposited into a reserve pit or mud circulation pit any oil field fluids or oil and gas wastes other than the following:

(i) drilling fluids, whether fresh water base, saltwater base, or oil base;

(ii) drill cuttings, sands, and silts separated from the circulating drilling fluids;

(iii) wash water used for cleaning drill pipe and other equipment at the well site;

(iv) drill stem test fluids; and

(v) blowout preventer test fluids.

(B) Completion/workover pits. A person shall not deposit or cause to be deposited into a completion/workover pit any oil field fluids or oil and gas wastes other than spent completion fluids, workover fluids, and the materials cleaned out of the well bore of a well being completed or worked over.

(C) Basic sediment pits. A person shall not deposit or cause to be deposited into a basic sediment pit any oil field fluids or oil and gas wastes other than basic sediment removed from a production vessel or from the bottom of an oil storage tank. Although a person may store basic sediment in a basic sediment pit, a person may not deposit oil or free saltwater in the pit. The total capacity of a basic sediment pit shall not exceed 50 barrels. The area covered by a basic sediment pit shall not exceed 250 square feet.

(D) Flare pits. A person shall not deposit or cause to be deposited into a flare pit any oil field fluids or oil and gas wastes other than the hydrocarbons designed to go to the flare during upset conditions at the well, tank battery, or gas plant where the pit is located. A person shall not store liquid hydrocarbons in a flare pit for more than 48 hours at a time.

(E) Fresh makeup water pits. A person shall not deposit or cause to be deposited into a fresh makeup water pit any oil field fluids or oil and gas wastes.

(F) Water condensate pits. A person shall not deposit or cause to be deposited into a water condensate pit any oil field fluids or oil and gas wastes other than fresh water condensed from natural gas and collected at gas pipeline drips or gas compressor stations.

(G) Backfill requirements.

(i) A person who maintains or uses a reserve pit, mud circulation pit, fresh makeup water pit, completion/workover pit, basic sediment pit, flare pit, or water condensate pit shall dewater, backfill, and compact the pit according to the following schedule:

(I) Reserve pits and mud circulation pits which contain fluids with a chloride concentration of 6,100 milligrams per liter (mg/l) or less and fresh makeup water pits shall be dewatered, backfilled, and compacted within one year of cessation of drilling operations.

(II) Reserve pits and mud circulation pits which contain fluids with a chloride concentration in excess of 6,100 milligrams per liter (mg/l) shall be dewatered within 30 days and backfilled and compacted within one year of cessation of drilling operations.

(III) All completion/workover pits used when completing a well shall be dewatered within 30 days and backfilled and compacted with 120 days of

well completion. All completion/workover pits used when working over a well shall be dewatered within 30 days and backfilled and compacted within 120 days of completion of workover operations.

(IV) Basic sediment pits, flare pits, and water condensate pits shall be dewatered, backfilled, and compacted within 120 days of final cessation of use of the pits.

(V) If a person constructs a sectioned reserve pit, each section of the pit shall be considered a separate pit for determining when a particular section should be dewatered.

(ii) A person who maintains or uses a reserve pit, mud circulation pit, fresh makeup water pit, or completion/workover pit shall remain responsible for dewatering, backfilling, and compacting the pit within the time prescribed by clause (i) of this subparagraph (G), even if the time allowed for backfilling the pit extends beyond the expiration date or transfer date of the lease covering the land where the pit is located.

(iii) The director may require that a person who uses or maintains a reserve pit, mud circulation pit, fresh makeup water pit, completion/workover pit, basic sediment pit, flare pit, or water condensate pit backfill the pit sooner than the time prescribed by clause (i) of this subparagraph (G) if the director determines that oil and gas wastes are likely to escape from the pit or that the pit is being used for improper disposal of oil and gas wastes.

(iv) Prior to backfilling any reserve pit, mud circulation pit, completion/workover pit, basic sediment pit, flare pit, or water condensate pit whose use or maintenance is authorized by this paragraph (4), the person maintaining or using the pit shall, in a permitted manner or in a manner

authorized by paragraph (3) of this subsection, dispose of all oil and gas wastes which are in the pit.

(5) Responsibility for disposal.

(A) Permit required. No generator or receiver may knowingly utilize the services of a carrier to transport oil and gas wastes if the carrier is required by this rule to have a permit to transport such wastes but does not have such a permit. No carrier may knowingly utilize the services of a second carrier to transport oil and gas wastes if the second carrier is required by this rule to have a permit to transport such wastes but does not have such a permit. No generator or carrier may knowingly utilize the services of a receiver to store, handle, treat, reclaim, or dispose of oil and gas wastes if the receiver is required by statute or commission rule to have a permit to store, handle, treat, reclaim, or dispose of such wastes but does not have such a permit. No receiver may knowingly utilize the services of a second receiver to store, handle, treat, reclaim, or dispose of oil and gas wastes if the second receiver is required by statute or commission rule to have a permit to store, handle, treat, reclaim, or dispose of such wastes but does not have such a permit. Any person who plans to utilize the services of a carrier or receiver is under a duty to determine that the carrier or receiver has all permits required by the Oil and Gas Division to transport, store, handle, treat, reclaim, or dispose of oil and gas wastes.

(B) Improper disposal prohibited. No generator, carrier, receiver, or any other person may improperly dispose of oil and gas wastes or cause or allow the improper disposal of oil and gas wastes. A generator causes or allows the improper disposal of oil and gas wastes if:

(i) the generator utilizes the services of a carrier or receiver who improperly disposes of the wastes, and

(11) the generator knew or reasonably should have known that the carrier or receiver was likely to improperly dispose of the wastes and failed to take reasonable steps to prevent the improper disposal.

(6) Permits.

(A) Standards for permit issuance. A permit to maintain or use a pit for storage of oil field fluids or oil and gas wastes may only be issued if the commission determines that the maintenance or use of such pit will not result in the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface waters. A permit to dispose of oil and gas wastes by any method, including disposal into a pit, may only be issued if the commission determines that the disposal will not result in the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface water. A permit to maintain or use any unlined pit, other than an emergency saltwater storage pit, for storage or disposal of oil field brines, geothermal resource waters, or other mineralized waters may only be issued if the commission determines that the applicant has conclusively shown that use of the pit cannot cause pollution of surrounding productive agricultural land nor pollution of surface or subsurface water, either because there is no surface or subsurface water in the area of the pit, or because the surface or subsurface water in the area of the pit would be physically isolated by naturally occurring impervious barriers from any oil and gas wastes which might escape or migrate from the pit. Permits issued pursuant to this paragraph will contain conditions reasonably necessary to prevent the waste of oil, gas, or geothermal resources and the pollution of surface and subsurface waters. A permit to maintain or use a pit will state the conditions under which the pit may be operated, including the conditions under which the permittee shall be required to dewater, backfill, and compact the pit. Any permits issued pursuant to this paragraph may contain requirements

concerning the design and construction of pits and disposal facilities, including requirements relating to pit construction materials, dike design, liner material, liner thickness, procedures for installing liners, schedules for inspecting and/or replacing liners, overflow warning devices, leak detection devices, and fences. However, a permit to maintain or use any lined pit for storage or disposal of oil field brines, geothermal resource waters, or other mineralized waters will contain requirements relating to liner material, liner thickness, procedures for installing liners, and schedules for inspecting and/or replacing liners.

(B) Application. An application for a permit to maintain or use a pit or to dispose of oil and gas wastes shall be filed with the commission in Austin. The applicant shall mail or deliver a copy of the application to the appropriate district office on the same day the original application is mailed or delivered to the commission in Austin. A permit application shall be considered filed with the commission on the date it is received by the commission in Austin. When a commission-prescribed application form exists, an applicant shall make application on the prescribed form according to the instructions on such form. The director may require the applicant to provide the commission with engineering, geological, or other information which the director deems necessary to show that issuance of the permit will not result in the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface water.

(C) Notice. The applicant shall give notice of the permit application to the surface owner of the tract upon which the pit will be located or upon which the disposal will take place. When the tract upon which the pit will be located or upon which the disposal will take place lies within the corporate limits of an incorporated city, town, or village, the applicant shall

also give notice to the city clerk or other appropriate official. Where disposal is to be by discharge into a watercourse other than the Gulf of Mexico or a bay, the applicant shall also give notice to the surface owner of each waterfront tract between the discharge point and 1/2 mile downstream of the discharge point except for those waterfront tracts within the corporate limits of an incorporated city, town, or village. When one or more waterfront tracts within 1/2 mile of the discharge point lie within the corporate limits of an incorporated city, town, or village, the applicant shall give notice to the city clerk or other appropriate official. Notice of the permit application shall consist of a copy of the application together with a statement that any protest to the application should be filed with the commission within 15 days of the date the application is filed with the commission. The applicant shall mail or deliver the required notice to the surface owners and the city clerk or other appropriate official on or before the date the application is mailed or delivered to the commission in Austin. If in connection with a particular application the director determines that another class of persons, such as offset operators, adjacent surface owners, or an appropriate river authority, should receive notice of the application, the director may require the applicant to mail or deliver notice to members of that class. If the director determines that, after diligent efforts, the applicant has been unable to ascertain the name and address of one or more persons required by this subparagraph (C) to be notified, then the director may authorize the applicant to notify such persons by publishing notice of the application. The director shall determine the form of the notice to be published. The notice shall be published once each week for two consecutive weeks by the applicant in a newspaper of general circulation in the county where the pit will be located or the disposal will take place. The applicant shall file proof of publication with the commission in Austin.

(D) Protests and hearings. If a protest from an affected person is made to the commission within 15 days of the date the application is filed, then a hearing shall be held on the application after the applicant requests a hearing. If the director has reason to believe that a person entitled to notice of an application has not received such notice within 15 days of the date an application is filed with the commission, then the director shall not take action on the application until reasonable efforts have been made to give such person notice of the application and an opportunity to file a protest to the application. If the director determines that a hearing is in the public interest, a hearing shall be held. A hearing on an application shall be held after the commission provides notice of hearing to all affected persons, or other persons or governmental entities, who express an interest in the application in writing. If no protest from an affected person is received by the commission, the director may administratively approve the application. If the director denies administrative approval, the applicant shall have a right to a hearing upon request. After hearing, the hearings examiner shall recommend a final action by the commission.

(E) Modification, suspension, and termination. A permit granted pursuant to this paragraph (6), or a renewal permit granted pursuant to paragraph (7) of this subsection, or a permit which has been issued by the commission prior to the effective date of this subsection but which does not expire pursuant to paragraph (7) of this subsection, may be modified, suspended, or terminated by the commission for good cause after notice and opportunity for hearing. A finding of any of the following facts shall constitute good cause:

(i) pollution of surface or subsurface water is occurring or is likely to occur as a result of the permitted operations;

(ii) waste of oil, gas, or geothermal resources is occurring or is likely to occur as a result of the permitted operations;

(iii) the permittee has violated the terms and conditions of the permit or commission rules;

(iv) the permittee misrepresented any material fact during the permit issuance process;

(v) the permittee failed to give the notice required by the commission during the permit issuance process;

(vi) a material change of conditions has occurred in the permitted operations, or the information provided in the application has changed materially.

(F) Emergency permits. If the director determines that expeditious issuance of the permit will prevent or is likely to prevent the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface water, the director may issue an emergency permit. An application for an emergency permit to use or maintain a pit or to dispose of oil and gas wastes shall be filed with the commission in the appropriate district office. Notice of the application is not required. If warranted by the nature of the emergency, the director may issue an emergency permit based upon a verbal application, or the director may verbally authorize an activity before issuing a written permit authorizing that activity. An emergency permit is valid for up to 30 days, but may be modified, suspended, or terminated by the director at any time for good cause without notice and opportunity for hearing. Except when the provisions of this subparagraph (F) are to the contrary, the issuance, denial, modification, suspension, or termination of an emergency permit shall be governed by the provisions of subparagraphs (A) - (E) of this paragraph.

(G) Minor permits. If the director determines that an application is for a permit to store only a minor amount of oil field fluids or to store or dispose of only a minor amount of oil and gas waste, the director may issue a minor permit provided the permit does not authorize an activity which results in waste of oil, gas, or geothermal resources or pollution of surface or subsurface water. An application for a minor permit shall be filed with the commission in the appropriate district office. Notice of the application shall be given as required by the director. The director may determine that notice of the application is not required. A minor permit is valid for 30 days, but a minor permit which is issued without notice of the application may be modified, suspended, or terminated by the director at any time for good cause without notice and opportunity for hearing. Except when the provisions of this subparagraph (G) are to the contrary, the issuance, denial, modification, suspension, or termination of a minor permit shall be governed by the provisions of subparagraphs (A) - (E) of this paragraph.

(7) Existing permits and pits.

(A) Existing permits. Each permit to maintain or use a lined or unlined pit for storage or disposal of oil field brines, geothermal resource waters, or other mineralized waters, which has been issued by the commission prior to the effective date of this subsection (d), shall expire 180 days after the effective date of this subsection. Every other permit to store oil field fluids or oil and gas wastes or to dispose of oil and gas wastes, which permit has been issued by the commission prior to the effective date of this subsection (d), shall remain in effect until modified, suspended, or terminated by the commission pursuant to paragraph (6)(E) of this subsection. The permits which will expire pursuant to this paragraph (7) include, but are not limited to,

permits for the following types of pits: saltwater disposal pits, emergency saltwater storage pits, skimming pits, and brine pits.

(6) Renewal permits. Any person holding a permit scheduled to expire pursuant to subparagraph (A) of this paragraph may apply to the commission for renewal of the permit. If a person makes timely and sufficient application for renewal of a permit, then, notwithstanding the provisions of subparagraph (A) of this paragraph, the permit shall not expire until final commission action renewing or denying renewal of the permit. An application for renewal of a permit shall be filed with the commission in Austin within 180 days of the effective date of this subsection. No notice of the application is required. The director may administratively approve an application for renewal of a permit. No hearing shall be held on an application for renewal of a permit unless the applicant requests a hearing or the director determines that a hearing is necessary. No renewal permit will be issued unless the stanoards for permit issuance stated in paragraph (6)(A) of this subsection have been met.

(C) Operating existing unpermitted pits. If, as of the effective date of this subsection, a person is maintaining or using a pit, which is required by this subsection to be permitted but which was not required to be permitted prior to the effective date of this subsection, then the person maintaining or using the pit may continue to maintain or use the pit for 180 days after the effective date of this subsection. If a person makes timely and sufficient application for a permit to maintain or use such an existing but unpermitted pit, then the person may continue to use the pit until final commission action denying the permit. An application for a permit shall be considered timely if it is filed with the commission within 180 days of the effective date of this subsection. The issuance or denial of the permit shall be governed by the provisions of paragraph (6) of this subsection. The

unpermitted pits, whose use or maintenance is authorized by this subparagraph (C), include, but are not limited to, the following types of pits: drilling fluid storage pits, gas plant evaporation/retention pits, and washout pits.

(D) Backfilling existing pits. If, as of the effective date of this subsection, a person is maintaining or using a basic sediment pit which does not meet the 50 barrel size limitation of paragraph (4)(C) of this subsection, then that person shall dewater, backfill, and compact the pit or rebuild the pit to comply with the 50 barrel size limitation within 180 days of the effective date of this subsection. Any person who, as of the effective date of this subsection, is maintaining or using a lined or unlined pit for storage or disposal of oil field brines, geothermal resource waters, or other mineralized waters, which pit was permitted prior to the effective date of this subsection, shall dewater, backfill, and compact the pit within 270 days of the effective date of this subsection unless the person applies for a renewal permit pursuant to subparagraph (B) of this paragraph. If a person applies for a renewal of a permit to maintain or use a lined or unlined pit for storage or disposal of oil field brines, geothermal resource waters, or other mineralized waters, the director may extend the time for dewatering, backfilling, and compacting the pit to up to 90 days after final commission action denying renewal of the permit. If, as of the effective date of this subsection, a person is maintaining or using a pit, which is required by this subsection to be permitted but which was not required to be permitted prior to the effective date of this subsection, then the person maintaining or using the pit shall dewater, backfill, and compact the pit within 270 days of the effective date of this subsection unless the person applies for a permit to maintain or use the pit within the 180-day period allowed by subparagraph (C) of this paragraph. If a person applies for such a permit to maintain or use a previously unpermitted pit, the director may

extend the time for dewatering, backfilling, and compacting the pit to up to 90 days after final commission action denying issuance of the permit. The director may require that pits required to be backfilled by this subparagraph be dewatered, backfilled, and compacted sooner than the time prescribed by this subparagraph if the director determines that oil and gas wastes are likely to escape from the pit or that the pit is being used for improper disposal of oil and gas wastes.

(e) Pollution prevention (reference Order Number 20-59,200, effective May 1, 1969).

(1)-(4) (No change.)

(f) Saltwater haulers.

(1)-(2) (No change.)

(g) Record keeping.

(1) Produced water. When produced water is hauled by truck from the lease where it is produced to an off-lease disposal facility, the person producing the water shall keep, for a period of two years from the date of water production, the following records:

(A) identity of the property from which the produced water is hauled;

(B) identity of the commission-approved disposal facility to which the produced water is delivered;

(C) name, address, and permit number (WHP No.) of saltwater hauler transporting the water from producing lease to disposal facility; and

(D) volume of produced water transported each day from producing lease to disposal facility by saltwater hauler.

(2) Retention of run tickets. A person may comply with the requirements of paragraph (1) of this subsection by retaining run tickets or

other billing information created by the saltwater hauler, provided the run tickets or other billing information contain all the information required by paragraph (1).

(3) Examination and reporting. The person keeping any records required by this subsection (g) shall make the records available for examination and copying by members and employees of the commission during reasonable working hours. Upon request of the commission, the person keeping the records shall file such records with the commission.

(h) Penalties. Violations of this section may subject a person to penalties and remedies specified in Title 3 of the Texas Natural Resources Code and any other statutes administered by the commission. The certificate of compliance for any oil, gas, or geothermal resource well may be revoked in the manner provided in § 3.68 of this title (relating to Pipeline Connection and Severance) (Rule 73) for violation of this section.

☐ New Application
☐ Application for Renewal

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division
Application for Permit to Maintain and Use a Pit

Form H-11
May 1984
Comply with Instructions on Reverse Side

1. Operator's Name (As shown on Form P-5, Organization Report)	2. RRC Operator No.	3. RRC Dist. No.	4. County of pit site

5. Operator's Address (Street, City, State and Zip Code)

6. Name of Lease, Project or Facility of Pit Location	7. RRC Oil Lease No. or	8. RRC Gas ID No.

9. Pit Location

- Section _____ Block _____ Survey _____ Abstract No. A- _____
- Location is _____ miles _____ (direction) from _____ (nearest town)

10. a. Is pit bottom below ground level?
☐ Yes ☐ No

b. Artificial liner?
☐ Yes ☐ No

Lined, equipped with a leak detection system?
☐ Yes ☐ No

11. Name and Address of Surface Owner

12. Are wastes or fluids from operations other than your own?
☐ Yes ☐ No

13. Type of pit (refer to item F of instructions)

14 a. Describe land use surrounding pit location:

b. Is land surrounding pit location productive agricultural land?
☐ Yes ☐ No

15. a. Briefly explain the need for this pit:

15. b. Type of waste or fluid:

15. c. Chloride concentration: _____ mg/l

16. Pit is
☐ Proposed ☐ Existing
existing, date constructed _____

17. Dikes
a. Height above ground level _____ feet Width at base _____ feet
b. Are dikes designed to keep wastes or fluids in the pit? ☐ Yes ☐ No
c. Are dikes designed to keep stormwater runoff out of the pit? ☐ Yes ☐ No
d. Source of Dike Material: ☐ Excavated from pit ☐ Adjacent borrow pit
☐ Off-site excavation (describe material):

18. Pit capacity (barrels)
_____

19. Inside dimensions two feet below top of dike
Length _____ feet Width _____ feet
Depth:
from ground level to deepest point _____ feet

20. Wastes or fluids are transported to pit by (check all that apply):
☐ Contract Hauler ☐ Applicant's truck ☐ Pipe ☐ Other: _____

21. a. Distance to nearest water well within one-mile of pit
_____ feet

21. b. Depth of this water well
_____ feet

22. Depth to shallowest fresh water _____ feet
Source of information:
☐ measured/observed ☐ well owner ☐ electric log ☐ TDWR

23. Have you included all attachments required by the Instructions on the reverse side of this form?

CERTIFICATE

I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.

_____
Signature

_____
Name of Person (type or print) Title

Telephone _____ Date _____
Area Code Number

• RRC DISTRICT USE ONLY •

Application Information Review

Date received _____
Date inspected _____
Inspector _____

☐ Location ☐ Liner ☐ Agricultural Land ☐ Dimensions
☐ Grade Construction ☐ Type Pit ☐ Capacity ☐ Dikes ☐ Waste Transport

Comments:

• RRC AUSTIN USE ONLY •

Date received _____ Pit code _____ Pit type _____ Permit no. _____ Permit date _____

Instructions to Pit Application

Authority: Statewide Rule 8, Water Protection

A. File the application, including all attachments, with the Railroad Commission, Oil and Gas Division, P.O. Drawer 12967, Capitol Station, Austin, Texas 78711. On the same day file one copy of the application and its attachments with the appropriate District Office. This form is not required for a minor permit.

B. Notify the surface owner of the land where the pit will be located by mailing or delivering a copy of the application form, both front and back, but excluding the attachments. If the land where the pit is proposed is within corporate limits, also notify the city clerk or other appropriate city official. If application is for renewal of an existing permit, notice is not required.

C. Attach a plat showing the size of the lease or tract and the location of the pit within the lease or tract. Give approximate perpendicular distance to nearest intersecting lease/unit lines and section/survey lines.To avoid confusion, distinguish between the two sets of lines. Indicate scale on this plat.

D. Attach a county highway map (scale: 1"= 4 miles) showing the location of the pit. County highway maps are available from the Texas Department of Highways and Public Transportation, P. O. Box 5051, Attn: Map Distribution File D-10, Austin, TX 78763.

E. If application is for renewal of a permit for an existing pit, attach a copy of your current authority to use the pit.

F. Identify the type of pit in item 13 using one of the following as defined in Statewide Rule 8(a): Emergency Saltwater Storage Pit, Collecting Pit, Gas Plant Evaporation/Retention Pit, Brine Pit (located at underground hydrocarbon storage facilities only), Saltwater Disposal Pit, Skimming Pit, Washout Pit, Drilling Fluid Disposal Pit, Drilling Fluid Storage Pit, or other (specify in item 13 and explain in item 15a).

G. Attach a drawing of two perpendicular, sectional views of the pit showing the pit bottom, sides, dikes and the natural grade. For an existing pit, dimensions below fluid level may be approximated.If the pit length and width are irregular, include a top view to show pit dimensions and dike widths. Indicate scale on all views.

H. **If pit is lined,** attach data on liner material, thickness, and installation procedures.

I. Attach an identification and description of the soil or subsoil that will make up the pit bottom and sides. The information shall describe the soil by typical name, appropriate proportion of grain sizes, texture, consistency, moisture condition, and other pertinent characteristics. (Example: clayey silt, slightly plastic, small percentage of fine sand, firm and dry in place.) Identify the source of soil information. Information on how to classify soils is available from the District Office or Austin Office upon request. If application is for renewal of a permit for an existing emergency saltwater storage pit or a lined pit with a leak detection system, this attachment is not required.

J. **If pit is equipped with a leak detection system,** attach engineering design drawing of the pit and leak detection system.

K. **If lined pit is not equipped with a leak detection system,** describe procedures for periodic maintenance and determining liner integrity, including any special monitoring.

L. **If pit is an emergency salt water storage pit,** attach justification for pit size based on water production, lease water storage capacity, and anticipated well or equipment shut-down time.

Note: The Director of the Oil and Gas Division may require the applicant to provide the Commission with any additional engineering, geological, or other information which the Director deems necessary to show that issuance of the permit will not result in the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface water.

Protests and hearings.

An affected person may file a protest to the application and request a hearing. Any protest to the application should be filed with the Commission in Austin within fifteen days of the date the application is filed with the Commission. Any such protest shall be made in writing and shall include (1) the name, mailing address, and phone number of the person making the protest; and (2) a brief description of how the protestant would be adversely affected by the granting of the permit. If the Commission determines that a valid protest has been received, or that a hearing would be in the public interest, a hearing will be held after the issuance of proper and timely notice of the hearing by the Commission. If no protest is received within fifteen (15) days of receipt of the application in Austin, the application may be processed administratively.

CHAPTER III FIELD OPERATIONS

RULE 3-100 POLLUTION ABATEMENT

RULE 3-101 PROHIBITION OF POLLUTION

(a) All operators, contractors, drillers, service companies, pipepulling and salvaging contractors, or other persons shall at all times conduct their operations and drill, equip, operate, produce, plug and abandon all wells drilled for oil or gas, service wells or exploratory wells (including seismic, core and stratigraphic holes) in a manner that will prevent pollution and the migration of oil, gas, salt water or other substance from one stratum into another, including any fresh water bearing formation. Pollution of surface or subsurface fresh water by deleterious substances used in connection with the exploration, drilling, producing, refining, transporting or processing of oil or gas is hereby prohibited.

(b) Sections 305, 306, 307 and 308 of Title 52, Oklahoma Statutes Annotated, governing the drilling, operation and plugging of oil and gas wells in workable coal beds are hereby adopted as rules of the Commission as fully as if set out verbatim herein.

RULE 3-102 ADMINISTRATION AND ENFORCEMENT OF RULES

The Manager of Pollution Abatement shall supervise and coordinate the administration and enforcement of these rules under the direction of the Director of Conservation and the Commission.

RULE 3-103 COOPERATION WITH OTHER AGENCIES

(a) These rules shall not be construed as modifying the rights, obligations or duties of any person under any law of this State, or under any order, rule or regulation of the Oklahoma Water Resources Board, State Department of Health, Oklahoma Wildlife Conservation Commission, State Board of Agriculture, Department of Pollution Control, or any other agency of this State with respect to the pollution of fresh water.

(b) Whenever a written complaint against any person is filed with the Commission, alleging pollution as prohibited by Rule 3-101, the Manager of Pollution Abatement shall immediately initiate such action as may be necessary or appropriate to abate the pollution.

RULE 3-104 PITS AND TANKS

(a) Pits and tanks for drilling mud or deleterious substances used in the drilling, completion and recompletion of wells shall be constructed and maintained so as to prevent pollution of surface and subsurface fresh water.

(b) Deleterious fluids other than fresh water drilling fluids that were used in drilling or workover operations, which are displaced or produced in well completion or stimulation procedures such as from

ILLEGIBLE

fracturing, acidizing. swabbing, drill stem tests, and any other well stimulation process, shall be collected into a plastic lined pit of at least 30 mil, or metal tank and maintained separate from above-mentioned drilling fluids to allow for separate and legal disposal. (3-30-82)

RULE 3-105 SURFACE AND PRODUCTION CASING

(a) Owners, operators and drilling contractors shall comply with Rule 3-206, "Drilling and Casing Procedures" and Rule 3-301, "Approval of Enhanced Recovery Injection Wells or Disposal Wells". (3-16-81)

(b) In the event a rupture, break or opening occurs in the surface or production casing, the owner, operator or drilling contractor shall take immediate action to repair it, and shall report the occurence to the appropriate District Office or the Manager of Pollution Abatement.

RULE 3-106 FRACTURE AND ACIDIZING

In the completion of an oil, gas, injection, disposal or service well, where acidizing or fracture processes are used, no oil, gas or deleterious substances shall be permitted to pollute any surface and subsurface fresh water.

RULE 3-107 SWABBING AND BAILING

In swabbing, bailing or purging a well, all deleterious substances removed from the bore hole shall be placed in adequate pits or tanks, and no such substances shall be permitted to pollute any surface and subsurface fresh water.

RULE 3-108 PRODUCING OIL AND GAS WELLS

All wellhead connections, surface equipment and tank batteries shall be maintained at all times so as to prevent leakage of oil, gas, salt water or other deleterious substances.

RULE 3-109 OIL STORAGE

Oil storage tanks shall be constructed so as to prevent leakage; and dikes or walls, where necessary, shall be constructed so as to prevent oil or deleterious substances from polluting surface and sub-surface water.

RULE 3-110 USE OF EARTHEN PITS

RULE 3-110.1 USE OF ON-SITE EARTHEN PITS

(a) An earthen pit serving only the lease or unit on which it is located is defined as an on-site pit. An on-site earthen pit used for the handling, storage or disposal of any deleterious substance produced, obtained, or used in connection with the drilling or

ILLEGIBLE

operation of wells, shall be constructed of, or sealed with, an impervious material, and shall be used and operated at all times so as to prevent any escape of any deleterious substance. (4-2-81)

(b) No on-site earthen pit shall be constructed, enlarged, reconstructed, or used until the District Office has issued a written permit for its use and assigned a permit number. The operator shall file Form 1014, in triplicate, with the appropriate District Office. When approved, one copy will be returned to the operator as a permit which shall bear the permit number assigned. The operator shall post a waterproof sign bearing the name of the operator and the permit number within twenty-five (25) feet of the pit. (4-2-81)

(c) Every on-site earthen pit not having a permit and permit number shall be emptied and leveled. (4-2-81)

(d) Paragraph (b) and (c) above, shall not apply to:

(1) An emergency pit constructed solely to prevent escape of substances. Provided, an emergency pit shall not be constructed in pervious soil unless lined, and shall never be used for the storage of any substance. (4-2-81)

(2) A circulating, frac or reserve mud pit used in drilling, deepening, testing, reworking or plugging a well while such operations are in progress. Each reserve pit shall be leveled within twelve (12) months after drilling operations cease. One six-month extension may be granted by the District Manager for reasonable cause. Each circulating pit shall be emptied and leveled within sixty (60) days after the drilling operations cease. Each fracture pit shall be emptied and leveled within sixty (60) days after completion of fracture operations. Provided, however, upon application, notice and hearing, and not less than ten (10) days notice by restricted mail to the occupying owner or tenant of the land upon which the pit is located, and for good cause shown, reasonable extensions of the times set out above may be granted. (4-2-81)

(3) A burn pit used solely to burn waste oil or other flammable material. Provided, a burn pit shall never be used for storage of any substance. (4-2-81)

(e) Notice of construction of an on-site emergency pit or burn pit shall be filed, in triplicate, with the appropriate District Office on Form 1014. The appropriate District Office shall be notified in writing of each use of an emergency pit. (4-2-81)

(f) No on-site earthen pit shall be constructed or maintained so as to receive outside runoff water and the fluid level of each earthen pit shall be maintained at all times at least eighteen (18) vertical inches below the lowest point of the embankment. (3-30-82)

ILLEGIBLE

(g) The appropriate District Office shall be notified in writing whenever an on-site earthen pit is abandoned. (4-2-81)

RULE 3-110.2 USE OF OFF-SITE EARTHEN PITS

(a) Any earthen pit not defined in Rule 3-110.1 is defined as an off-site earthen pit. An off-site earthen pit used for the handling, storage or disposal of any deleterious substance produced, obtained, or used in connection with the drilling or operation of wells, shall be constructed of, or sealed with, an impervious material, and shall be used and operated at all times so as to prevent any escape of any deleterious substance. (3-30-82)

(b) No off-site earthen pit shall be constructed, enlarged, reconstructed, or used until the District Office has issued a written permit for its use and assigned a permit number. The operator shall file Form 1014, in triplicate, with the appropriate District Office. When approved, one copy will be returned to the operator as a permit which shall bear the permit number assigned. The operator shall post a waterproof sign bearing the name of the operator and the permit number within twenty-five (25) feet of the pit. If Form 1014 is not approved by the appropriate District Office, or if a protest is received at the district level, the operator may file an application for hearing with the Commission, which shall be set for hearing. (4-2-81)

(c) Notice that an application has been filed with the Commission shall be published by the applicant in a newspaper of general circulation and published in the county in which the pit is located and not less than ten (10) days notice by restricted mail to the occupying owner or tenant of the land upon which the pit is located. The applicant shall file proof of publication prior to the hearing. (4-2-81)

(d) Every off-site earthen pit not having a permit and permit number shall be emptied and leveled. (4-2-81)

(e) Every off-site earthen pit shall be completely enclosed by a permanent woven wire fence of at least four (4) feet in height. (4-2-81)

(f) No off-site earthen pit shall be constructed or maintained so as to receive outside runoff water and the fluid level of each earthen pit shall be maintained at all times at least eighteen (18) vertical inches below the lowest point of the embankment. (3-30-82)

(g) The appropriate District Office shall be notified in writing whenever an off-site earthen pit is abandoned. (4-2-81)

(h) The provisions of Rule 3-110.2 shall not apply to an off-site reserve pit used for primary drilling operations. (4-2-81)

(i) Use of off-site earthen pits designed specifically for disposal of deleterious substances from more than one well site shall meet the additional following requirements: (3-30-82)

ILLEGIBLE

(1) No off-site earthen pit shall be constructed or maintained so as to receive outside runoff water and the fluid level in the off-site earthen pit shall be maintained at all times at least twenty-four (24) vertical inches below the lowest point of the embankment. (3-30-82)

(2) No off-site earthen pit shall be constructed in the 100 year flood plain of any drainage basin. (3-30-82)

(3) No off-site earthen pit shall contain fluids with a chloride content greater than 3500 MG/L. (3-30-82)

(4) No off-site earthen pit shall contain a soil seal less than 12 inches thick with the co-efficient of permeability no greater than 10^{-7} cm/sec. If a Bentonite seal is to be used, the Bentonite shall be mixed to form the previously mentioned permeability requirement into the soil to a uniform depth of at least 6 inches. (3-30-82)

(5) Two test borings shall be drilled to a minimum depth of 25' below the bottom of the earthen pit, and to be located outside of and near the low elevation side of the pit. The borings shall be submitted with the application to demonstrate the subsurface profile of the proposed pit. (3-30-82)

(6) Any earthen pit that contains deleterious substances shall be lined so as to prevent contamination of the fresh water. The type of liner proposed shall be approved by the Commission's District Manager and Manager of Pollution Abatement. (3-30-82)

(7) Written certification that the seal was provided and constructed in accordance with Commission-approved specifications shall be furnished by the supplier, project engineer, or independent soils laboratory. (3-30-82)

(8) All off-site earthen pits shall be filled and leveled within one (1) year after abandonment. (3-30-82)

(9) No abandoned mines or strip pits shall be used for disposal of oilfield waste unless the geology and hydrology demonstrate that such disposal will not contaminate the fresh water of the state. (3-30-82)

(10) No off-site earthen pit shall contain deleterious substances unless the geology and hydrology demonstrate that such disposal will not contaminate the fresh water of the state. (3-30-82)

RULE 3-110.3 AGRICULTURAL USE OF OIL FIELD WASTE PROHIBITED

Any spreading and/or soil farming of oil field drilling waste shall be prohibited.

ILLEGIBLE

RULE 3-111 REFINING AND PROCESSING OF OIL AND GAS

(a) All deleterious substances obtained or used in the processing and refining of oil and gas shall be disposed of in a manner that will prevent the pollution of fresh water.

(b) Chemicals, gasolines, oils and other deleterious substances shall be stored, where necessary, in tanks or containers of a material and of a construction and in a manner that will prevent the escaping, seepage, or draining of such liquids into any fresh water.

RULE 3-114 PROTECTION OF MUNICIPAL WATER SUPPLIES

The Commission, upon application of any municipality or other governmental subdivision, may enter an order establishing special field rules within a defined area to protect and preserve fresh water and fresh water supplies.

RULE 3-120 INSPECTION AND ENFORCEMENT

RULE 3-121 INFORMAL COMPLAINTS

If, upon information or inspection, it is found that an operator, processor, refiner, or transporter of oil or gas is violating any rule or order of the Commission or causing damage or pollution to any oil or gas formation, surface or underground fresh water, the Conservation Division shall cause an investigation to be made and shall file a written administrative complaint, in duplicate, on Form 1036, and one copy of Form 1036 shall be delivered or mailed to the operator. If, upon subsequent inspection it is determined that the operator has taken the corrective actions specified the complaint shall be dismissed; otherwise, formal application will be made to the Commission for an order shutting down the lease or well, and for any other appropriate remedy; pending the outcome of the final determination of the Commission on the formal application, any District Manager shall, after an on-site inspection, have the authority to shut down those operations where conditions appear obvious that surface or underground pollution is occurring. (4-2-81)

RULE 3-200 DRILLING AND DEVELOPMENT

RULE 3-201.1 OPERATORS AGREEMENT, FINANCIAL STATEMENT, ETC.

(a) Each person who drills or operates any well within the State of Oklahoma for the exploration, development or production of oil or gas, or as an injection or disposal well, shall furnish his agreement in writing to plug the well at the time and in the manner prescribed by the Rules and Regulations of the Commission and the laws of the State of Oklahoma. The agreement shall provide that if the Commission determines that he has neglected, failed or refused to plug any well in compliance with the Commission's Rules and Regulations, he will forfeit or pay to the State, through the

ILLEGIBLE

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION ON ITS OWN MOTION TO DEFINE THE VERTICAL AND AREAL EXTENT OF AQUIFERS POTENTIALLY VULNERABLE TO CONTAMINATION BY THE SURFACE DISPOSITION OF WATER PRODUCED IN CONJUNCTION WITH THE PRODUCTION OF OIL AND GAS IN McKINLEY COUNTY, RIO ARRIBA, SANDOVAL AND SAN JUAN COUNTIES, NEW MEXICO.

CASE NO. 8224

Order No. R-

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing on June 7, 1984, and February 22, April 3, 22, and 23, 1985, at Santa Fe, New Mexico before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this _____ day of June, 1985, the Commission, a quorum being present, and having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) In the process of producing oil or gas, or both, in San Juan, McKinley, Rio Arriba and Sandoval Counties, New Mexico, various amounts of water is also produced, which is permitted to be disposed of on the surface of the ground or into unlined disposal pits.

(3) This produced water often contains high concentrations of chlorides and other minerals as well as organic hydrocarbons such as benzene and toluene.

(4) Unregulated disposal of produced water containing organic hydrocarbons or high levels of dissolved minerals onto the surface of the ground or into unlined pits may endanger fresh water supplies in the vicinity of such disposal.

(5) Section 70-2-12B(15) NMSA (1978) of the Oil and Gas Act mandates the Oil Conservation Commission "to regulate the disposition of water produced or used in connection with the drilling for or producing of oil or gas, or both, and to direct surface or subsequent disposal of such water in a manner that will afford reasonable protection against contamination of

fresh water supplies..." The Director of the Oil Conservation Division, after the initial hearing in this case, appointed a Committee to evaluate the impact of oil and gas operations on the ground and surface waters in San Juan, Sandoval, McKinley, and Rio Arriba Counties, New Mexico. The Committee was comprised of representatives from the oil and gas industry, the Oil Conservation Division, the Environmental Improvement Division, the League of Women Voters, environmental organizations, and

(6) The Committee was assigned the following tasks:

A. Determine what constitutes a vulnerable aquifer;

B. Map the vulnerable aquifer;

C. Attempt to determine the probability unlined pits may have in contaminating the vulnerable aquifers; and

D. Prepare a recommendation to the OCD for an order which will address the problems identified by the committees.

(7) The Committee made its report at the hearing held on February 22, 1985. Among the Committees findings and recommendations were the following:

A. There are areas in San Juan, Rio Arriba, McKinley, and Sandoval Counties, New Mexico, where ground or surface water may be vulnerable to contamination by oil and gas production operations.

B. The vulnerable areas include these areas where the depth to ground water is less than fifty (50) feet, the aquifer containing the ground water consists of unconsolidated alluvial fill, and the water is presently used for or is of such quality that it could reasonably be used for municipal domestic, industrial, agricultural or stock watering purposes.

C. The vulnerable area is geographically defined as those portions of the San Juan, Animas, and La Plata River Valleys that are bounded by a topographic line on either side of the river, which lines are 100 vertical feet above the river channel measured perpendicularly to the river channel.

D. Vulnerable areas lying outside this described area are referred to as special areas and consist of the following described parcels, all

of which have water production from less than 50 feet in depth:

T28N-R 8W, Sec. 17	T30N-R12W, Sec. 13
T28N-R11W, Sec. 18	T30N-R12W, Sec. 15
T28N-R15W, Sec. 26	T30N-R12W, Sec. 27
T29N-R10W, Sec. 16	T30N-R12W, Sec. 33
T29N-R12W, Sec. 24	T30N-R13W, Sec. 1
T29N-R18W, Sec. 17	T30N-R15W, Sec. 6
T29N-R19W, Sec. 23	T30N-R15W, Sec. 16
T29N-R19W, Sec. 30	T30N-R15W, Sec. 21
T30N-R10W, Sec. 5	T30N-R16W, Sec. 29
T30N-R11W, Sec. 3	T30N-R19W, Sec. 34
T30N-R11W, Sec. 7	T31N-R10W, Sec. 13
T30N-R11W, Sec. 8	T31N-R11W, Sec. 35
T30N-R11W, Sec. 10	T32N-R10W, Sec. 10
T30N-R11W, Sec. 19	T32N-R11W, Sec. 23
	T32N-R12W, Sec. 25

E. Those areas that lie between the aforementioned rivers and irrigation ditches are also classified as Special Areas. These are defined more specifically as follows.

F. Disposal of produced water or fluids produced

in connection with the production of oil and natural gas, or both, into unlined pits is prohibited, except for the following:

1. Pits lying outside vulnerable or special areas are exempt from this order.

2. Any pits, ponds, lagoons, or impoundments resulting from activities regulated by a discharge plan approved and permit issued by NMOCD or NMEID under Water Quality Control Commission Regulations authorized under the New Mexico Water Quality Act.

3. Any pits, ponds, lagoons or impoundments resulting from activities regulated by a RCRA or NPDES permit issued by NMEID or EPA under RCRA or NPDES regulations authorized under the Resource Conservation and Recovery Act, New Mexico Hazardous Waste Act, Clean Water Act or Safe Drinking Water Act.

4. Any pits, ponds, lagoons or impoundments resulting from activities regulated by a mining plan approved and permit issued by the New Mexico Coal Surface Mining

Commission under the authority of the Surface Mined Lands Reclamation Act.

(8) The Committee, although agreeing that an order regulating the use of produced water and ancillary pits in San Juan, Rio Arriba, McKinley, and Sandoval Counties was needed, was unable to agree on whether such an order should have exemptions based on a well- by-well analysis, or a "blanket" exclusion of wells producing small quantities of water. The Committee was also unable to agree on a minimum depth to ground water for continued use of unlined pits.

(9) Expert testimony by Division staff and others indicates that because of the high soil permeabilities and shallow ground water in the vulnerable area, unregulated disposal of produced water onto the surface of the ground or into unlined pits can reasonably be expected to lead to contamination of fresh water resources.

(10) Although various mechanisms of attenuation, such as evaporation, volatilization, sorption, dissolution, and biodegradation can be expected to degrade some of the organic hydrocarbons contained in produced water, these mechanisms cannot be reasonably relied on in all situations and in all areas to protect fresh water resources from contamination in the vulnerable area.

(11) Expert testimony by Division staff and others indicates that discharge of not more than one-half barrel per day of produced water and other fluids will provide reasonable protection of fresh water provided that depth to ground water is at least ten feet.

IT IS THEREFORE ORDERED THAT:

(1) Disposal of produced water in San Juan, Rio Arriba, McKinley, and Sandoval Counties, New Mexico, should henceforth be regulated in such a manner as to afford reasonable protection to fresh water resources.

(2) The areas where fresh water is most vulnerable to contamination from unregulated disposal of produced water in the aforementioned counties are those areas where the depth to ground water is less than fifty (50) feet, the aquifer containing the ground water consists of unconsolidated alluvial fill, and the water is presently used for or is of such quality that it could reasonably be used for municipal, domestic, industrial, agricultural, or stock watering purposes.

(3) This area of vulnerable ground water ("vulnerable area") is geographically defined as follows:

a. The area within the river valleys of the

San Juan, Animas, and La Plata Rivers which is bounded by the topographic line on either side of the river that is one hundred vertical feet above the river channel measured perpendicularly to the river channel.

b. Parcels outside the above-described area in which ground water is found to be within fifty feet of the ground surface and which also contain oil or gas wells. These areas, referred to as "special areas," are listed below:

T28N-R 8W, Sec. 17	T30N-R12W, Sec. 13
T28N-R11W, Sec. 18	T30N-R12W, Sec. 15
T28N-R15W, Sec. 26	T30N-R12W, Sec. 27
T29N-R10W, Sec. 16	T30N-R12W, Sec. 33
T29N-R12W, Sec. 24	T30N-R13W, Sec. 1
T29N-R18W, Sec. 17	T30N-R15W, Sec. 6
T29N-R19W, Sec. 23	T30N-R15W, Sec. 16
T29N-R19W, Sec. 30	T30N-R15W, Sec. 21
T30N-R10W, Sec. 5	T30N-R16W, Sec. 29
T30N-R11W, Sec. 3	T30N-R19W, Sec. 34
T30N-R11W, Sec. 7	T31N-R10W, Sec. 13
T30N-R11W, Sec. 8	T31N-R11W, Sec. 35
T30N-R11W, Sec. 10	T32N-R10W, Sec. 10
T30N-R11W, Sec. 19	T32N-R11W, Sec. 23
	T32N-R12W, Sec. 25

C. Areas that lie between the San Juan, Animas or La Plata Rivers and the ditches mentioned below are also special areas:

Highland Park Ditch
Hillside Thomas Ditch
Cunningham Ditch
Farmers Ditch
Halford Independent Ditch
Citizens Ditch
Hammond Ditch

(4) Disposal of water or other fluids produced in connection with the production of oil or gas, or both, onto the surface of the ground or into any pit, pond, lake, depression, draw, streambed, arroyo, or into any watercourse, or into any other place or in any manner as to constitute a hazard to any fresh water supply is hereby prohibited in the vulnerable area as defined in Paragraph (3) above, except as described herein.

a. Those wells whose produced water or ancillary pit receives no more than one-half barrel of water in any twenty-four hour period are exempt from this order unless depth to ground water is less than ten feet.

b. Any pits, ponds, lagoons, or impoundments

resulting from activities regulated by a discharge plan approved and permit issued by NMOCD or NMEID under Water Quality Control Commission Regulations authorized under the New Mexico Water Quality Act.

c. Any pits, ponds, lagoons or impoundments resulting from activities regulated by a RCRA or NPDES permit issued by NMEID or EPA under RCRA or NPDES regulations authorized under the Resource Conservation and Recovery Act, New Mexico Hazardous Waste Act, Clean Water Act or Safe Drinking Water Act.

d. Any pits, ponds, lagoons or impoundments resulting from activities regulated by a mining plan approved and permit issued by the New Mexico Coal Surface Mining Commission under the authority of the Surface Mined Lands Reclamation Act.

(5) Transportation and disposal of produced water from a point within the vulnerable area to a point outside the vulnerable area shall be made only after approval by the Division.

(6) The provisions of this order shall be effective twelve months from the date hereinabove set forth.

(7) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION