***************** * KEY ISSUES: CONFISCATION **Correlative Rights, Economic** Well, Fair Share, Secondary Recovery * * FINAL ORDER: R37 EXCEPTION DENIED ********************* **RULE 37 CASE NO. 0216112 PROPOSAL FOR DECISION** DISTRICT 8A APPLICATION OF TEXLAND-RECTOR & SCHUMACHER, FOR AN EXCEPTION TO STATEWIDE RULE 37 TO DRILL ITS WELL NO. 2, E. COOK ESTATE LEASE, STOCKYARD (CLEARFORK, UPPER) FIELD, GAINES COUNTY, TEXAS. **APPEARANCES: REPRESENTING: APPLICANT** -Carroll Martin, Attorney Texland-Rector & Schumacher R.E. Hilty, Consulting Geologist Jim Wilkes, Senior V.P. Texland Petroleum, Inc. **PROTESTANT -**Primero Operating, Inc. David Gross, Attorney Phelps White, President F. Andrew Grooms, Vice-President Dale E. Miller, Consulting Eng.

PROCEDURAL HISTORY

Application Filed:	May 7, 1997
Notice of Hearing:	June 20, 1997
Hearing Held:	July 25, 1997
Transcript Received:	August 1, 1997
PFD Circulated	August 22, 1997
Heard by:	Colin K. Lineberry,

Hearings Examiner Donna K. Chandler, P.E. Technical Examiner

STATEMENT OF THE CASE

Texland-Rector & Schumacher ("Texland-Rector" or "applicant") seeks an exception to Statewide Rule 37 to drill its proposed Well No. 2 on the E. Cook Estate Lease for the Stockyard (Clearfork, Upper) Field. The application is protested by Primero Operating Inc. ("Primero" or "protestant"), the operator that developed the field and operates the lease immediately north of applicant's lease. The Stockyard (Clearfork, Upper) Field is an oil field governed by statewide rules mandating spacing of 467 feet from lease lines and 1200 feet between wells, with 40 acre density.

There are regular locations available on the E. Cook Estate Lease but the applied-for location is irregular as to both between-well spacing and the northern lease line. The proposed location is only 933 feet from Texland-Rector's existing Well No. 1 which currently produces from the Stockyard (Clearfork, Upper) Field. In addition, the proposed location is only 330 feet south of the lease line that abuts Primero's lease. Accordingly, an exception to Statewide Rule 37 is necessary to authorize drilling at the proposed location. The E. Cook Estate Lease contains 320 contiguous acres and the proposed well would only be the second well on the lease producing from the Stockyard (Clearfork, Upper) Field so no exception to Statewide Rule 38 is necessary.

Applicant Texland-Rector and Primero each presented expert testimony in support of their respective positions and cross-examined the other party's witnesses.

HISTORY OF THE FIELD

Protestant Primero, which originally operated both its current acreage and applicant's E. Cook Estate Lease, discovered and developed the Stockyard (Clearfork, Upper) Field. The Stockyard (Clearfork, Upper) Field is a solution drive reservoir without significant structural features. Primero drilled the discovery well in the field in mid-1991 and completed nine additional wells over the next two and one-half years. All of Primero's wells are at regular locations. In 1992, Primero drilled well No. C-2 on the E. Cook Estate Lease ("Cook Lease") and produced a cumulative total of 3000 barrels of oil from the well. In 1994, Primero began a pressure maintenance water injection program. As part of that program, Primero converted the C-2 to a water supply well¹ and converted five of the ten producing wells on its lease to water injection. Primero instituted the injection program relatively early in the life of the field², before the reservoir reached bubble point, so it could maintain reservoir pressure and maximize ultimate recovery. After Primero's lease on the E. Cook Estate lapsed, Texland-Rector took over the lease and drilled its well No. 1 in late 1996.

¹ The well was plugged back and supplies water from a higher horizon than the productive Stockyard (Clearfork, Upper) Field at issue in this proceeding.

² All of the wells that Primero converted from production to injection were still producing in commercial quantities at the time of conversion. In fact, well No. 6 was still producing at a rate of 100 barrels of oil per day at the time it was converted.

TEXLAND-RECTOR'S EVIDENCE AND POSITION

Applicant Texland-Rector operates approximately 25 water flood projects in West Texas and 900 wells, of which 90-95% are in water flood projects. The majority of its remaining wells are located adjacent to water flood projects. Texland-Rector currently has one well adjacent to the lease water flood operated by Primero and has no plans to conduct its own injection program. Texland-Rector based its direct case on the assertion that the Stockyard (Clearfork, Upper) Field diminishes in quality to the south and that Texland-Rector needs the proposed more northerly exception location to have a "commercial" well. Texland-Rector's expert witness, R.E. Hilty, also stated that the proposed location was necessary to prevent drainage but did not explain this contention or present any evidence supporting it.

Hilty sponsored isopach maps of "average porosity-thickness" and current oil production rate for a portion of the subject field around the proposed location indicating that, for the small portion of the field mapped, calculated average porosity thickness and current production tend to decrease to the south. Hilty also introduced an isopach map denominated as a map of "Peak Primary Production" assigning production rates of 15 to 260 barrels of oil per day to wells in the field and indicating that the rates mapped tended to decrease to the south (as well as in all other directions as well locations move away from the "heart" of the field). On cross-examination, Hilty acknowledged that both the proposed location and a regular location fall between the 50 BOPD and 100 BOPD contour lines on his map.

Hilty estimated that the proposed location would initially produce 50 barrels per day and that a location a regular distance from lease lines would produce 40 barrels per day. Based on these initial production rates and decline rates of 57% for the first nine months and 14% thereafter, Hilty further estimated that a well at the proposed location would recover 115,000 barrels while a lease-line regular well would recover only 81,000 barrels. Based on his calculations of time to pay out and rate of return (19% vs. 8.9%), Hilty opined that a well at the proposed location would be economic while a lease-line regular well would not.

Texland-Rector did not present any evidence concerning original or current recoverable reserves as part of its direct case. On cross-examination, however, Hilty stated that Texland-Rector had calculated original oil in place under the Cook Lease as 4,000,000 barrels of oil. Hilty stated that Texland-Rector had not quantified current oil in place under the lease. As part of its rebuttal case, Texland Petroleum's vice-president Jim Wilkes testified that Texland-Rector's isopach map of net pay for the Stockyard (Clearfork, Upper) Field under the Cook Lease was prepared based on logs of the four wells nearest the proposed location and the use of "φ-h" (porosity x height) calculations for those wells. Wilkes acknowledged that he had the data available to do the same calculations for the other wells in the Stockyard (Clearfork, Upper) Field and to map the entire field but that he did not do so. He further acknowledged that doing the additional calculations and mapping would have been "better" and provided more control. Wilkes opined, however, that the mapping was accurate based on the four wells

³ Texland-Rector subsequently acknowledged that the rate for at least one well was a peak rate during secondary recovery, and so was not peak primary production but "actually just peak rate, period." Later, when it was established that the numbers were not necessarily absolute peak production, Texland-Rector again amended its description of the points mapped to "kind of an average top point."

he did use as control and that additional control wouldn't change the "depiction very much at all."

Based on planimetering of his isopach map, Wilkes estimated original oil in place under the Cook Lease as 4,000,000 barrels. In Texland-Rector's rebuttal case Wilkes sponsored an estimate of 390,000 barrels in primary recoverable reserves under the Cook Lease based on an estimated 10% primary recovery factor and deduction of 10,000 barrels in cumulative lease production through June 30, 1997. Wilkes used the same method and an estimated secondary recovery factor of an additional 10% to derive an estimate of 400,000 barrels in secondary reserves for the Cook Lease. Wilkes confirmed that Texland-Rector had not done any reserves or economic calculations for a regular location. Wilkes also indicated that while he believed there had been some drainage of the Cook Lease, the drainage had not been quantified by Texland-Rector.

Hilty testified that the C-2 well had produced about 3000 barrels of oil prior to conversion to a water supply well and that Texland-Rector's existing No. 1 well had cumulative production through March 31, 1997 of 4000 barrels for a cumulative lease total of 7000 barrels. On cross examination, Hilty acknowledged that Texland-Rector had production data through June 1997 indicating that producing Well No. 1 had produced an additional 5000 barrels through June 30, 1997 so that cumulative lease production was 12,000 barrels of oil. Subsequently, Texland-Rector's other expert witness, Jim Wilkes, indicated a range was possible but that he estimated that Texland-Rector's existing Well No. 1 will recover approximately 150,000 barrels of oil.

PROTESTANT PRIMERO'S EVIDENCE AND POSITION

Protestant Primero presented a net pay isopach map of the entire Stockyard (Clearfork, Upper) Field having a porosity greater than or equal to 12.5%. Primero used the 12.5 % cut off because it had concluded, due to a strong correlation between porosity in excess of 12% and high permeability, that the portions of the reservoir with porosity above 12.5% are the effective pay zones. Reservoir rock with porosities of less than 12% has permeabilities of 1 millidarcy or less while rock with a porosity of more than 12% has permeabilities of 9 to 50 millidarcies. Primero found, based on a planimetering of its net pay isopach map that the Stockyard (Clearfork, Upper) Field contains 38,595.2 acre-feet of effective pay, of which 84% is under Primero's lease and 3%, or 1170.6 acre-feet, is under Texland-Rector's Cook Lease (the remaining 13% of the reservoir is under adjacent tracts to the west, north and east of Primero's lease). Based on calculated pore volume of 650.9 stock tank barrels per acre-foot, and estimated recovery factors of 10% for primary reserves and 20% (cumulative) for secondary reserves, Primero calculated original recoverable reservoir-wide primary reserves of 2,512,000 barrels and reservoir-wide secondary reserves of an additional 2,512,000 barrels. By similar calculation, Primero concluded that the recoverable reserves under Texland-Rector's lease consisted of 76,195 barrels of "primary" oil and a like amount of secondary oil.

Primero presented undisputed evidence that a total of 1,161,509 barrels of oil have been recovered from the Stockyard (Clearfork, Upper) Field as of July 1, 1997. By comparing this recovered volume to the original recoverable primary reserves (1,161,509/2,512,000), Primero concluded that 46% of primary reserves have been recovered and 54% remain. Applying this ratio to the Cook Lease recoverable reserves, Primero concludes that 41,145 barrels of primary recoverable reserves (54% of 76,195 barrels) remain under the lease and constitute Texland-Rector's fair share of the Stockyard (Clearfork, Upper) Field.

Primero's mapping shows the proposed location to have 32 feet of effective pay while a regular location would have 28 feet of effective pay. Primero's expert opined that either location would give Texland-Rector a commercial well. By comparison, Texland-Rector's existing Well No. 1, which Primero maps with only 14 feet of effective pay is currently producing 60-70 barrels of oil per day.

Primero disputes Texland-Rector's estimated decline rates (57% for nine months and then 14%) and the resulting calculations of ultimate recovery for its existing Well No. 1 and for the proposed well. Primero presented evidence that since its water flood began to take effect in January 1995, only one well had been added to the field yet field-wide production has increased from 12,419 barrels of oil in January 1995 to 20,533 barrels of oil in June of 1997. Primero's expert noted that production is increasing rather than declining and that the steep decline rates used by Texland-Rector are inappropriate for this field. Primero estimates that after its water flood reaches maximum effectiveness and a decline does begin, the decline rate will be 10%. Primero used this rate to calculate an ultimate recovery of approximately 220,000 barrels for Texland-Rector's existing well and to predict a cumulative recovery of 230,000 barrels for a regularly located well on the Cook Lease.

Although it presented evidence regarding the "secondary" reserves under the Cook Lease, Primero argued strenuously that applicant Texland-Rector's fair share was properly measured by current recoverable primary reserves only.

EXAMINERS' OPINION

Protection of Correlative Rights

Exceptions to Statewide Rule 37 may be granted to prevent waste or to protect correlative rights/prevent confiscation. Texland-Rector did not present any evidence of waste and sought an exception in this case based on correlative rights. To obtain an exception to Statewide Rule 37 to protect correlative rights, the applicant must show that: 1) It is not possible to recover its fair share of minerals under its tract from regular locations; and, 2) that the proposed irregular location is reasonable.⁴ A mineral interest owner's fair share is measured by the currently recoverable reserves under its property.

No Right to a "Commercial Well"

⁴ An exception based on correlative rights may also be granted based on proof of uncompensated drainage, i.e. a showing that the applicant's lease is being drained by offset (usually irregularly located) wells and that wells on applicant's acreage in the field are not "compensating" for that drainage by drawing reserves from other tracts. This is merely an alternate method of showing that an applicant is not recovering his fair share. Although applicant's witnesses stated that they were being drained, no evidence supporting this bald assertion was offered and Mr. Wilkes acknowledged that Texland-Rector had not quantified any drainage. In fact the evidence indicates that no drainage is occurring. All of Primero's offset wells are a regular distance from lease lines and are therefore presumed not to be draining adjacent tracts. Further, Primero's ongoing water flood, although characterized as pressure maintenance, renders it highly likely that Primero is pushing oil onto applicant's lease rather than draining oil from applicant.

Applicant Texland-Rector's witnesses indicated that they believed that they needed the applied-for irregular location to allow them to have a commercial well. However, neither Texland-Rector nor any other operator is guaranteed a well that meets its self-imposed criteria for economic viability - each mineral interest owner is entitled to a fair and equal **opportunity** to recover its fair share of the hydrocarbons under its tract. Rule 37 is equally applicable to all operators. While the non-discriminatory application of Commission spacing rules may result in some economic loss by an operator, this loss does not amount to legal confiscation. **See** *Railroad Commission v. Manziel*, 361 S.W.2d 560, 565 (Tex. 1962); *Railroad Commission v. Fain*, 161 S.W.2d 498, 500 (Tex. Civ. App. --Austin 1942, writ dism'd w.o.m.). The determination of what is a fair opportunity must be based on the relationship between potential drillsite locations and the currently recoverable reserves under a tract, not on economic viability guidelines that each operator selects for itself-particularly where commercial viability will be obtained by draining oil from an adjoining tract.

Calculation of Reserves

The most important element of any correlative rights-based exception is a quantification of the applicant's fair share. Applicant's fair share is compared to the estimated recovery of a regularly located well to determine whether an exception well is necessary for an applicant to recover the reserves under his lease.⁵ Applicant Texland-Rector did not present any evidence of currently recoverable reserves under its lease as part of its direct case and the estimate which it eventually sponsored in its rebuttal case is grossly overstated.

Texland-Rector's estimated currently recoverable reserves by applying a 10% recovery factor to its estimate of original oil in place and then subtracting production to date. Although this basic concept is sound, there are significant problems with the application of that concept, and the supporting evidence, in this case. Although Texland-Rector claims to be suffering drainage, it did not reduce its estimate of currently recoverable reserves to account for alleged past drainage. In fact, Texland-Rector did not even quantify the amount of drainage. When there has been drainage, that amount must be quantified and deducted from original recoverable reserves to determine current recoverable reserves.

By far the biggest problem with Texland-Rector's calculation is the base number for original oil in place which is substantially inflated. The problems with Texland-Rector's estimate of original oil in place originate with the isopach map of net pay on which its volumetric calculations are based. Because Texland-Rector only used four control points and mapped a small portion of the reservoir, its contour lines are inaccurate and assign more original oil to the Cook Lease than is warranted. In addition, in the volumetric calculation, Texland-Rector further inflated oil in place by using an unreasonably low water saturation of 29.6%. While this is a valid average number for the Stockyard (Clearfork, Upper) Field as whole, Texland-Rector's lease, located in the poorer quality southern fringe

⁵ If an applicant successfully refutes the possibility of recovering its fair share from a regular well, the volume of currently recoverable reserves under applicant's tract remains crucial to the issue of the reasonableness of the proposed location. A proposed location that will allow an applicant to recover its approximate fair share is less harmful to offset operators, and therefore more reasonable, than a proposed location that will allow applicant to recover, necessarily from adjacent property, many times its fair share.

of the reservoir, actually has a water saturation of 36-37%, as established by Texland-Rector's calculated water saturation for its own well on the Cook Lease.

Most importantly, applicant has vastly overstated the recoverable reserves by including reserves that are not, even in applicant's view, reasonably recoverable. Applicant Texland-Rector included in its isopach map all oil on its lease down to a theoretical 0 line and assumed that 10% of this was recoverable (20% for primary and secondary). As a result, applicant counts the majority of its lease in determining recoverable oil, even though it claims that it can only drill a "commercial" well⁶ in a tiny sliver area along the northern border of the lease. In fact, by Texland-Rector's mapping, 87% of the original oil on the lease, or roughly 3.5 million of the 4 million barrels estimated by Texland-Rector, occur in the area in which Texland-Rector claims it could not drill a commercial well. By including all of these 3.5 million barrels, Texland-Rector has greatly overstated the volume of recoverable oil under its lease (or shown that a regular well would by "commercial" by its criteria). Texland-Rector did not present credible evidence of the volume of recoverable reserves under its Cook Lease.

Primero's estimate of 152,000 barrels (76,000 barrels characterized as primary and 76,000 characterized as secondary) in "gross" recoverable reserves underlying the Cook Lease, although possibly slightly pessimistic, is a reasonable estimate of Texland-Rector's fair share. Primero, the operator of ten wells in the field (5 injectors and 5 producers), accurately isopached the entire field honoring all control points and more accurately mapping the effective pay under the Cook Lease. Further, its mapping was limited to truly recoverable reserves or, as it characterized its map, the "effective pay." Although portions of the formation that do not meet Primero's criteria for effective pay will undoubtedly contribute some production, the total contribution will not be great and Primero's estimate of "gross" recoverable reserves is far more accurate than the inflated number sponsored by Texland-Rector.

"Secondary" Oil as Part of Fair Share

Texland-Rector took the position that its fair share included, and that it was therefore entitled to an exception permit to recover, both primary and secondary reserves. Primero argues that fair share encompasses only primary reserves and that Texland-Rector, which does not have any injection wells on its lease, has no plans to initiate secondary recovery operations, and did not pay any part of the cost of Primero's secondary recovery operations or incur any of the risk (e.g. in terms of converting producing wells to injectors), should not be able to count "secondary" reserves as part of its fair share.

⁶ Based on its economic exhibits, it appears that Texland-Rector defines an economic well as one that will produce at least 100,000 barrels.

⁷ The examiners do not, however, agree with Primero's "net" estimate of primary recoverable reserves of 41,145 barrels. This was derived by reducing the "gross" primary reserves on the E. Cook Estate Lease by 46% - the ratio of field-wide production to field-wide recoverable reserves. This methodology is erroneous. First, applying a field-wide average to the E. Cook Estate Lease is inappropriate because, for reasons stated above, it is likely that any drainage of the E. Cook Estate Lease by offset wells has been negligible and there has only been roughly 12,000 barrels of production by wells on the lease. Second, this methodology effectively characterizes all production as "primary" when, in fact, Primero's water flood has been affecting the field for over two years.

However inequitable it may seem, Texland-Rector has every right to enjoy the collateral benefits of Primero's secondary recovery operation without compensating Primero - including increased production because of higher reservoir pressures, longer field life, and the recovery of additional oil that Primero's water flood pushes onto the Cook Lease. A mineral interest owner's fair share is measured by the currently recoverable reserves under his property. It is the volume of recoverable reserves currently under a tract that controls fair share and not the source of those reserves or the characterization of the reserves as primary, secondary, or tertiary. The fact that half of the currently recoverable reserves under Texland-Rector's lease are characterized as "secondary" and would not be currently recoverable but for Primero's operations is irrelevant. The reserves are under Texland-Rector's lease and are currently recoverable and therefore are part of Texland Rector's fair share. If this were not the case, oil swept onto Texland-Rector's lease and existing oil on the lease recoverable only because of Primero's operations (but not recoverable by any Primero wells) would not be recovered by any well, resulting in waste.

Texland-Rector's fair share of Stockyard (Clearfork, Upper) Field reserves consists of the currently recoverable reserves underlying the Cook Lease. Based on the evidence presented, Texland-Rector's fair share is approximately 140,000 barrels (152,000 barrels in "gross" recoverable reserves less the 12,000 barrels produced by wells on the lease through June 30, 1997).

Recovery by Existing Texland-Rector Well

Texland-Rector's best estimate was that its existing well on the Cook Lease will recover an additional 140,000 barrels of oil and Primero estimated that the well will recover an additional 200,000 barrels of oil. The examiners believe Primero's estimate to be more accurate. Under either party's estimate, however, the existing well will recover Texland-Rector's fair share of reserves. Accordingly, an exception is not necessary for Texland-Rector to recover its fair share of reserves. The proposed location is also unreasonable. None of the offset Primero wells are irregularly located and the exception would only allow Texland-Rector to create a pressure sink and drain oil from Primero's lease.

Right to Regular Well

⁸ Conversely, as noted above, if recoverable reserves that were once under Texland-Rector's lease have been drained away by an adjacent tract, those reserves would no longer be currently recoverable by Texland-Rector and would not be part of its fair share.

⁹ The estimates differ primarily because of the use of different decline rates. Primero used a 10% decline rate which it asserted was appropriate for secondary recovery and, in fact, is conservative given that production from wells in the field is still increasing rather than declining due to the ongoing secondary recovery project. Texland-Rector used an initial decline rate of 57% followed by a 14% decline rate which is consistent with primary decline rates in the field. This use of a primary decline rate does not appear warranted given the established secondary recovery program and Texland-Rector's own assertion that it is entitled to secondary reserves (and therefore, implicitly, that its production is being boosted by the secondary recovery operations).

Although Texland-Rector is not entitled to an exception to Rule 37, it is undisputed that regular locations exist on the Cook Lease and Texland-Rector has a right to a regular permit for an additional regularly located well on the lease. This is true even though the evidence in this case indicates that Texland-Rector's existing well will recover more than its fair share and that the additional well will simply allow even greater recovery in excess of its fair share. As noted above, this is one of the benefits Texland-Rector can enjoy, "free of charge," as a result of its location adjacent to Primero's highly successful water flood project.

The examiners recommend adoption of the following proposed findings of fact and conclusions of law:

FINDINGS OF FACT

- 1. Notice of the hearing was given at least 10 days prior to the hearing to all designated operators, lessees of record for tracts that have no designated operator, and owners of record of unleased mineral interests for each adjacent tract and each tract nearer to the well than the prescribed minimum lease-line spacing distance.
- 2. Notice of the hearing was published in the *Seminole Sentinel*, a newspaper of general circulation in Gaines County, for four consecutive weeks beginning on June 22, 1997, a date at least 28 days prior to the hearing date.
- 3. Texland-Rector & Schumacher ("applicant") has applied on Form W-1 for a permit to drill Well No. 2 on the E. Cook Estate Lease. Applicant proposes to drill its well at a location 330 feet from the north line and 2228 feet from the east line of the lease, and 330 feet from the north line and 2228 feet from the east line of the PSL/J. Chesher Survey (A-376), Gaines County, Texas. Applicant has applied to drill its proposed well for the Stockyard (Clearfork, Upper) Field.
- 4. The Stockyard (Clearfork, Upper) Field is governed by statewide rules requiring spacing of 467 feet from lease lines and 1200 feet between wells. The field rules further specify a density pattern of 40 acres per well.
- 5. Applicant's E. Cook Estate Lease is a tract containing 320 acres.
- 6. There are locations available on the E. Cook Estate Lease that comply with the applicable spacing and density rules for the Stockyard (Clearfork, Upper) Field.
- 7. The currently recoverable reserves under applicant's E. Cook Estate Lease in the Stockyard (Clearfork, Upper) Field can be recovered by regularly located wells on the lease.
 - a. There are 140,000 barrels of currently recoverable Stockyard (Clearfork, Upper) Field oil underlying the lease.

- b. Applicant's existing, regularly located well on the lease will recover an additional 140,000 200,000 barrels of oil from the Stockyard (Clearfork, Upper) Field.
- 8. The applied-for location is not necessary to allow applicant to recover the currently recoverable reserves under its E. Cook Estate Lease.

CONCLUSIONS OF LAW

- 1. Proper notice of hearing was timely given to all persons legally entitled to notice.
- 2. All things have occurred or have been done that are necessary to give the Commission jurisdiction to decide this matter.
- 3. An exception pursuant to Statewide Rule 37 to the Stockyard (Clearfork, Upper) Field rules regarding well spacing is necessary to permit drilling the applied-for well.
- 4. Approval of the requested permit to drill a well at the proposed location is not necessary to give the owners of the E. Cook Estate Lease a reasonable opportunity to recover their fair share of hydrocarbons underlying the E. Cook Estate Lease from the Stockyard (Clearfork, Upper) Field.
- 5. Approval of the requested permit to drill a well at the proposed location is not necessary to prevent the waste of hydrocarbons in the Stockyard (Clearfork, Upper) Field.
- 6. The applied-for location is not reasonable.

RECOMMENDATION

The examiners recommend that the subject application be denied in accordance with the attached final order.

Respectfully submitted

	Respectfully Submitted,	
Colin K. Lineberry	Donna K. Chandler, P.E.	
Hearings Examiner	Technical Examiner	