

IN THE OFFICE OF THE STATE ENGINEER
OF THE STATE OF NEVADA

IN THE MATTER OF APPLICATION 63775)
FILED TO CHANGE THE POINT OF)
DIVERSION, PLACE AND MANNER OF USE)
OF WATER PREVIOUSLY APPROPRIATED)
FROM THE TRUCKEE MEADOWS)
HYDROGRAPHIC BASIN (087), WASHOE)
COUNTY, NEVADA.)

RULING

4855

GENERAL

I.

Application 63775 was filed on January 16, 1998, by Dayton J. McDonald and Suzanne McDonald to change the point of diversion, manner and place of use of 0.33 cubic feet per second (cfs), not to exceed 238.85 acre-feet annually, of water previously appropriated under Permit 13205, Certificate 3903. The proposed manner of use is for quasi-municipal and domestic purposes within portions of the South Truckee Meadows General Improvement District, Washoe County, Nevada. The proposed point of diversion is described as a drilled and cased well located within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 23, T.18N., R.19E., M.D.B.&M. and owned by Washoe County Utility Division.¹

II.

Application 13205 was filed on December 22, 1949, by Roland J. Giroux for the appropriation of 0.75 cfs of underground water for the propagation of fish.² The place of use was described as being within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 36, T.19N., R.19E., M.D.B.&M. The point of diversion was described as being located within the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 36, T.19N., R.19E., M.D.B.&M.

Under the terms of Permit 13205, the permittee Mr. Giroux was required to file his proof of completion of works of diversion on

¹ File No. 63775, official records in the office of the State Engineer. See also, Exhibit No. 14, public administrative hearing before the State Engineer, February 9, 1999 (hereinafter "Exhibit").

² File No. 13205, official records in the office of the State Engineer. Exhibit Nos. 2 and 3.

or before September 13, 1951, and his proof of beneficial use of the waters on or before September 13, 1952. The Proof of Completion of Work filed by the original permittee Mr. Giroux described the works of diversion under Permit 13205. That document indicated that the improvements made to collect the water consisted of an 8-inch concrete open joint pipeline laid in a 30-inch trenchline approximately 2,110 feet long with the water then flowing into an 8-inch closed pipeline approximately 460 feet long, then flowing into a 6-inch pipeline to the place of use being three fish ponds approximately 30 feet in diameter and 11 feet deep. When the original permittee filed his Proof of Application of Water to Beneficial Use he described the source of supply of the water as an underground drainline which ran along side an irrigation line.

On November 10, 1952, Certificate 3903, was issued under Permit 13205 for 0.33 cfs of water. No acre-foot total duty is identified in the certificate, rather only a diversion rate, and no water right was issued for irrigation purposes as none was applied for under the application. The certificate indicates that the water is developed by means of an 8-inch concrete open joint drainline laid in a 30-inch trench line approximately 2,110 feet long with the water then flowing into an 8-inch steel pipeline approximately 460 feet long with another 900 feet of 6-inch pipeline flowing into three fish ponds each 30 feet in diameter and 11 feet deep.

III.

By letter dated November 14, 1997, counsel for the McDonalds indicated that the McDonalds were interested in conveying all the water set forth under Permit 13205, Certificate 3903, to a well in the same fashion as other groundwater rights have been transferred in the Truckee Meadows.³ The McDonalds are requesting to transfer

³ File No. 13205, official records in the office of the State Engineer.

what is known as the diversion rate expanded, which is the rate at which water flows every moment of every day, i.e., 0.33 cubic feet per second times a conversion factor of 1.983 to obtain acre-feet per day times 365 days per year for a total of 238.85 acre-feet per year ($0.33 \times 1.983 \times 365 = 238.85$). The letter indicated that the McDonalds had met with the State Engineer and the State Engineer had expressed that he did not feel the water right set forth in Permit 13205 was a consumptive use of water, and therefore, could not be treated in the same fashion as other consumptive groundwater rights in the Truckee Meadows. Pursuant to the November 14, 1997, letter, said counsel requested that the State Engineer confirm in writing that he does not consider the water right under Permit 13205 to be a consumptive groundwater right, but some other category.

By letter dated December 8, 1997,⁴ the State Engineer responded to counsel's request and indicated that the water right under Permit 13205 was not developed by means of a developed drilled and case well, but rather the drainline structure was capturing near-surface water in a pasture down gradient from the Lake Ditch and parallel to Evans Creek. The State Engineer's letter describes how the same person who filed the original application under Permit 13205 described the source of water as subsurface drainage through an open joint drainline trench.

The State Engineer's letter further indicates that around the same time that Roland Giroux filed Application 13205 to develop the drain he also filed Application 12807 to drill a deep well.⁵ The State Engineer's letter indicates that at least three sources of water exist for irrigation purposes on lands located within a

⁴ File No. 13205, official records in the office of the State Engineer.

⁵ File No. 12807, official records in the office of the State Engineer. Application 12807 was filed 10 months prior to the filing of Application 13205.

portion of the E $\frac{1}{2}$ SE $\frac{1}{4}$ of Section 36, T.19N., R.19E., M.D.B.&M., and a portion of the W $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 31, T.19N., R.20E., M.D.B.&M., and one of those sources was the same source of water that was being used for the fish ponds under Permit 13205. However, the source of water found under Permit 13205 was in reality near-surface water appropriated through works of diversion that were drains which collected that water in a sub-surface manner.

IV.

Based on the State Engineer's letter of December 8, 1997, the McDonalds filed a Petition for Judicial Review with the Second Judicial District Court. By Stipulation and Order, the parties agreed to stay the action in the Second Judicial District Court pending the State Engineer's action on Application 63775. During the State Engineer's consideration of Application 63775, a field investigation of the site was conducted on July 21, 1998, by the office of the State Engineer. By Notice dated December 31, 1998, the State Engineer notified all parties of interest by certified mail of an administrative hearing to be held in Carson City, Nevada, before the State Engineer on February 9, 1999, as to Application 63775.⁶

FINDINGS OF FACT

I.

In their Prehearing Statement,⁷ the applicants take the position that the waters appropriated under Permit 13205 are ground water and not surface water. The files and records of the office of the State Engineer are maintained in two categories: ground water and surface water. The file cover to Permit 13205 indicates the applicant was applying to use ground water, and at the administrative hearing the State Engineer stipulated that the

⁶ Exhibit No. 1.

⁷ Exhibit No. 18.

records of the Division of Water Resources had "characterized" the source as ground water⁸. However, the State Engineer does not agree that the water appropriated under Permit 13205 is ground water in the true sense of the word, but rather is water which was collected through a system of drainline pipes laid under the surface of the ground, which at the time the permit was granted collected mainly surface water runoff from waters of the Truckee River applied to the surrounding lands for irrigation purposes. The map filed along with Application 13205 indicates the drainline pipes in the collection system capture water in between approximately 3 to 8 feet below the surface of the ground.⁹

The State Engineer finds that while the file cover and records of the office of the State Engineer from the 1950's indicated the water appropriated under Permit 13205 was ground water, as opposed to surface water, the final determination as to the type of water at issue here should be judged by the reality of the facts found before him.

II.

Nevada Revised Statute § 533.345(1) provides that an application can be filed to change the place of diversion, manner or place of use of water already appropriated. Nevada Revised Statute § 533.035 provides that beneficial use is the basis, the measure and the limit of the right to the use of water. Nevada Revised Statute § 533.370(3) provides that the State Engineer shall approve an application to change the point of diversion, place and manner of use of water already appropriated if that change does not conflict with existing rights or threaten to prove detrimental to the public interest. Just because a person holds a water right in a particular groundwater basin does not mean that person can automatically have the water right changed to another

⁸ Transcript, p. 32, public administrative hearing before the State Engineer, February 9, 1999 (hereinafter "Transcript").

⁹ Exhibit No. 3; See also, Transcript, pp. 106, 123.

use or point of diversion, particularly if there are indications the water would be appropriated from a totally different source. The applicants argue that the only question before the State Engineer is whether the water requested for change is ground water or not, but the State Engineer does not agree with this simplistic analysis. There are more questions to be asked and answered before a change application is granted.

In reviewing a change application, the State Engineer must first closely review the original appropriation for its beneficial use, and that analysis must include a determination of the amount of water actually beneficially used under that original appropriation. The State Engineer then must look at the proposed use under the change application and make a determination that the water right is not being expanded or changed to the detriment of other water users in the area. The State Engineer finds that a non-consumptive or essentially non-consumptive water right cannot be allowed to be changed into a consumptive water right since such an action would constitute a new appropriation of water rather than being a change of a previously existing water right carrying with it the original priority date.

III.

In the State Engineer's review of the use of water under Permit 13205, it can be seen that the water right was only issued for a diversion rate, there is no total duty of water used, and the use of water was for the propagation of fish. The water flowed through the fish ponds, and thereby was essentially a non-consumptive use of water, with the only consumptive use of water being evaporation off the ponds. There was no water use authorized for irrigation or any other consumptive use purposes under Permit 13205. The Proof of Beneficial Use filed under Permit 13205 describes 3 ponds 30 feet in diameter yielding a surface water area of 2,120.58 square feet or 0.05 of an acre. The evaporation rate for water in the Truckee Meadows is 4.0 acre-

feet per acre annually.¹⁰ The State Engineer finds that the consumptive use under Permit 13205 is 0.2 acre-feet annually, and the water right that forms the basis for the subject change application was an essentially non-consumptive water right. The water that flowed off the fish ponds apparently drained through lands which were irrigated by Truckee River water supplemented by water from other sources.¹¹ However, Permit 13205 did not authorize the use of any water for irrigation purposes and even if Permit 13205 had been authorized for irrigation purposes that use would have been supplemental to Truckee River water rights and could not be segregated from the primary water right irrigating those lands. The State Engineer finds that Application 63775 requests the use of 238.85 acre-feet annually from a deep groundwater source for quasi-municipal and domestic purposes with a resulting much higher consumptive use of water than that found under Permit 13205.

IV.

Application 63775 indicates that by reason of a catastrophic flood in January 1997 the applicants could no longer raise fish as was previously done under Permit 13205.¹² The State Engineer finds that the actual physical conditions, which existed at the time Permit 13205 was issued no longer exist at the existing place of use under that permit.

¹⁰ Van Denburgh, A.S., Lamke, R.D., and Hughes, J.L., A Brief Water-Appraisal of The Truckee River Basin, Western Nevada, Water Resources - Reconnaissance Series Report 57, Nevada Dept. of Conservation and Natural Resources, Division of Water Resources and United State Geological Survey, 1973, 53.

¹¹ Claim No. 208½ and Permit 12807.

¹² File No. 63775, official records in the office of the State Engineer; Transcript, p. 12.

V.

Claim No. 208½ under the Orr Ditch Decree¹³ describes part of its decreed place of use as encompassing the lands described as the E½ SE¼ of Section 36, T.19N., R.19E., M.D.B.&M. and a portion of the W½ SW¼ of Section 31, T.19N., R.20E., M.D.B.&M. Under this claim, the waters of the Truckee River are conveyed via the Lake Ditch to the place of use.¹⁴ Exhibit Nos. 12 and 13 from the public administrative hearing show that at the time Permit 13205 was granted nearly all the lands surrounding the place of use and works of diversion under Permit 13205 were irrigated with waters of the Truckee River conveyed through systems of ditches to the places of use and there was much seepage in the area.¹⁵

The State Engineer finds that the main source of water to irrigate the lands encompassed in the place of use described under Truckee River Claim No. 208½ is water from the Truckee River conveyed through the Lake Ditch. The State Engineer finds the records of the office of the State Engineer filed by the original permittee indicate that under Permit 13205 water was appropriated from a sub-surface drainage source which collected water that drained off property mainly irrigated by water from the Truckee River under Claim No. 208½.

VI.

Certificate 3699 was issued under Permit 12807 on September 24, 1951, for 0.25 cfs for the irrigation of 18.362 acres of land described as being located within the E½ SE¼ of Section 36, T.19N., R.19E., M.D.B.&M. and the W½ SW¼ of Section 31, T.19N., R.20E., M.D.B.&M.¹⁶ The water was developed by means of a 530

¹³ Final Decree, U.S. v. Orr Water Ditch Co., In Equity A-3 (D.Nev. 1944) ("Orr Ditch Decree").

¹⁴ Orr Ditch Decree and Exhibit No. 12.

¹⁵ Transcript, pp. 114-119.

¹⁶ File No. 12807, official records in the office of the State Engineer.

feet deep well and was used as a supplemental supply of water to augment the Truckee River water that was delivered via the Lake Ditch under Claim No. 208½.¹⁷ The State Engineer finds that water from the deeper artesian aquifer described below has been applied as irrigation water to the lands surrounding the places where water samples were taken for geochemical analysis thereby possibly skewing those analyses to indicate deep artesian aquifer water as flowing upward and mixing with the near-surface aquifer described below.

VII.

The crux of the applicants' argument in this matter is that since the water was collected under the ground it should then be classified as ground water and subject to change to a deep well located in another place within the hydrographic basin. The applicants argue that the collection system should not be considered a drainline collection system, but should now be considered 50 years after the fact as a horizontal well. The applicants appear to be attempting to make an argument that is not based on common sense in this situation. The area was originally surrounded by a great deal of land irrigated with water from the Truckee River.¹⁸ Exhibit No. 13, which is a 1913 plane table survey map, shows that in Section 36, T.19N., R.19E., M.D.B.&M. there was "much seepage" found in the NE¼. There is only pasture in the area at issue here, which is a crop that can tolerate having its "feet" in water, and there is a "drain" in the area where the works of diversion under Permit 13205 is located, and flowing off that area the water is identified as "waste". However, even in light of this historic evidence, as seen from the evidence described below, the applicants attempt to argue that the water requested for change under Application 63775 is ground water

¹⁷ Exhibit No. 5.

¹⁸ Exhibit Nos. 12 and 13.

and that they should be allowed to appropriate from the deep aquifer and at a full consumptive use duty of the diversion rate expanded.

Attached to the applicants' Prehearing Statement is a report prepared by the applicants' witness who appeared at the administrative hearing to provide testimony as to the source of the water collected in the collection system. In the report, the witness indicates that the first primary source of ground water and mountain runoff in the Truckee Meadows, including the project area, is from precipitation mostly in the form of snow on the Carson Range west of the project area and to a lesser extent the slopes of alluvial fans to the west and within the project area. He indicates that the groundwater recharge that takes place at high altitude in the Carson Range is the main source of water found in the deeper artesian groundwater system.¹⁹ The source of recharge for what he describes as the near-surface aquifer system in the Truckee Meadows, including the project area, and the east flowing streams, including Evans Creek, is the eastern slope of the Carson Range.

The witness identifies the second primary process for groundwater recharge as being from mountain runoff, or streamflow that exits the Carson Range. The source for this water being precipitation that is not evapotranspired from the east side of the mountain block, which infiltrates into unconsolidated sediments and moves downward along the soil-bedrock interface to discharge into Evans Creek. He indicates his belief that Evans Creek most likely loses flow into underlying sediments.

The witness identifies the third and fourth processes for groundwater recharge in the area, which he identifies as secondary recharge, as being from surface-water diversions such as the Lake and Last Chance Ditches that divert irrigation water from the Truckee River, and recharge from applied irrigation water in

¹⁹ Exhibit No. 18, second page 3.

excess of the plant's needs that infiltrates into the groundwater system. The witness notes that the project area is in an area of the valley which has soils that are considered hard pan (high clay content) that inhibit the downward movement of ground water so that in his belief perhaps the actual contribution of secondary recharge to the "horizontal groundwater collection pipeline" (what the original permittee under Permit 13205 identified as a drainline) is minimal. The witness believes the principal source of the water collected in the drainline system (what in testimony he calls a horizontal well)²⁰ is probably the shallow groundwater system within the eastern slope of the Carson Range with perhaps there being secondary recharge during the irrigation season or upward leakage from a deeper artesian system.²¹ The State Engineer notes this testimony appears to be a little contradictory to that just provided by the same witness that perhaps secondary recharge is minimal. The witness indicates that a constant source of water is suggested because Mr. McDonald told him that flow out of the drainline collection system into the first of five connected fish rearing ponds was approximately 200 gallons per minute and continued during the winter when irrigation water was not being applied, and the irrigation ditches were dry and Evans Creek was at a very low flow. However, he also notes that superimposed on the deeper artesian aquifer is a shallow or near-surface groundwater system which gives rise to Evans Creek and all other creeks on the eastern slope and that the waters in that near-surface shallow groundwater system have a different geochemistry than the deeper system.²²

Most of the water appropriated for quasi-municipal and municipal use in the Truckee Meadows is from the deep artesian

²⁰ Transcript, pp. 49-51.

²¹ Exhibit No. 18, second pages 3-5.

²² Transcript, p. 56.

aquifer and is not from the sources, which supply the multiple near-surface water sources, which form shallow aquifers on the alluvial fan areas coming off the Sierra Nevada Mountains. The State Engineer finds from the testimony of the applicants' own witness that the water found in the area of the drainline collection system is very unique to the project area and is a source influenced by localized irrigation ditches, surface streams and the near-surface shallow aquifer. The State Engineer finds that the applicants' evidence ignores the historical information that the area was somewhat water logged, that a drain system was used to move waste water off the property, that it had to be somewhat water logged for a drain collection system to work, and that clay lenses and artesian pressure rising upward inhibited the downward percolation of any applied surface water for irrigation which would have stayed above the hardpan in the subterranean zone.

VIII.

The applicants had geochemical analysis performed by sampling sources of water in the vicinity of the source for Permit 13205 which indicated that three possible sources of water could contribute to the water collected in the drainline system found under Permit 13205.²³ These samples were taken of the shallow or near-surface aquifer from a monitoring well, two domestic wells, an artesian well, Evans Creek, and the Last Chance Ditch. The applicants' report indicates that the geochemical analysis confirmed that the waters under Permit 13205 are not solely from upward leakage or secondary recharge from surface water, but rather indicates that three possible sources of water account for the shallow groundwater system in the project area. The first being a combination of groundwater recharge from the east slope of the Carson Range combined with mountain front runoff from Evans Creek; the second being a mixture of deep artesian system water

²³ Exhibit No. 18, second page 4.

and secondary recharge; and the third being a mixture of Truckee River water carried through the Last Chance Ditch with Evans Creek water. The State Engineer notes that water from the deep artesian aquifer was used in the area as a supplemental water source for lands irrigated under Claim 208½. From the geochemical analysis, the applicants' witness testified that the artesian water is isotopically different from the water from the monitoring well drilled near the collection system, and drew the conclusion that the source of water in the collection pipeline is most likely from the shallow aquifer system.²⁴

The State Engineer finds that the applicants' own witness indicated that the source of the water found in the deep artesian aquifer system is not the same source of water which recharges the near-surface aquifer system, and the source of water found in the collection system is a truly different source of water than found in the deep artesian aquifer. The State Engineer finds the applicants did not prove sufficiently to his satisfaction that any of the water appropriated under Permit 13205 is solely derived from the same source of water which they request to appropriate from a very deep well several miles to the south under Application 63775. The State Engineer finds by his examination of the evidence that the original appropriation under Permit 13205 collected mostly drainwater runoff from Truckee River waters applied to irrigation in the surrounding area. If any water is allowed to be appropriated from the deep artesian aquifer system under change Application 63775 it should only be that amount of deep water the applicants can prove contributed to the water collected in the drainline collection system.

IX.

The applicants are attempting to convince the State Engineer that the works of diversion are not as described under the original appropriation as a drainline collection system, but

²⁴ Transcript, pp. 81-87; Exhibit 18, second page 5.

rather are from what is known as a horizontal well. The State Engineer finds that under Permit 13205 the water was appropriated by collecting water in a drainline and that the original permittee never described the works of diversion as a well.

X.

Application 63775 requests to change the point of diversion from a near-surface collection system to a well drilled to a depth of approximately 1,100 feet.²⁵ The existing collection system is similar to a covered collection box used to capture surface waters of a spring or seep. The proposed point of diversion is located nearly four miles south of the existing collection system. The well log filed for the well constructed under Permit 12807, which is in the vicinity of the drainline, indicates that there are clay lenses throughout the entire depth of the well.²⁶ The presence of these clay lenses tend to act as semi-impermeable barriers and occur at various depths indicating that the contribution from percolation of applied surface waters to the deeper aquifer would be minimal at this location. The applicants' witness also noted there is hardpan in the area of the project which inhibits the downward movement of ground water, so logically, it also inhibits the upward leakage of the deep artesian aquifer into what he describes as the near-surface shallow aquifer. A witness for the applicants' also noted that there seemed to be three distinct groundwater systems in the area and they are not hydrologically connected and they have different sources of water.²⁷

The water requested for appropriation under Application 63775 would be pumped from the deep artesian aquifer that the State

²⁵ Exhibit No. 16. The State Engineer notes at the time of the public administrative hearing it appears the well to be used had not been drilled, therefore, the well log for a nearby monitor well was introduced as Exhibit No. 16. Transcript, p. 122.

²⁶ Exhibit No. 8.

²⁷ Transcript, pp. 84-85.

Engineer does not consider to be the same source of water that was appropriated under Permit 13205. While both the State Engineer's witness and a witness for the applicant noted that the State Engineer has managed the near-surface water system and deeper artesian system as one groundwater basin, the State Engineer finds in this instance there are circumstances that require a more thorough analysis of the situation. The State Engineer finds that Application 63775 represents an appropriation from a source of water that is independent and separate from the source from which Permit 13205 appropriated water.

XI.

The applicants provided testimony that the water temperature of surface sources in the area is 85 to 87 degrees and that the temperature of water needed for rearing trout must be between 48 and 56 degrees.²⁸ They assert this as part of their proof that the water collected in the drainline must have been ground water. As previously noted, the map filed along with Application 13205 indicates the drainline pipes in the collection system capture water in between approximately 3 to 8 feet below the surface of the ground.²⁹ The State Engineer finds that the water found 3 to 8 feet under the surface of the ground would be nearly equal to the temperature of the surrounding ground and the water temperatures provided do not sufficiently convince him as to the source of water filling the collection line.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.³⁰

²⁸ Transcript pp. 11, 50.

²⁹ Exhibit No. 3; See also, Transcript, pp. 106, 123.

³⁰ NRS Chapters 533 and 534.

II.

The State Engineer is prohibited by law from granting a permit under an application to change water already appropriated from the public waters of Nevada where:³¹

- A. the proposed use conflicts with existing rights,
or
- B. the proposed use threatens to prove
detrimental to the public interest.

III.

By State Engineer's Order No. 708, the State Engineer designated and described the Truckee Meadows Groundwater Basin as a basin in need of additional administration.³² For over 20 years, the State Engineer has been concerned about additional appropriations of water from the Truckee Meadows Groundwater Basin. The State Engineer concludes that to allow the essentially non-consumptive use of 0.2 acre-feet per year of near-surface water collected in a drainline system to be converted to a quasi-municipal right using 238.85 acre-feet annually would conflict with the many existing water rights in the area and would threaten to prove detrimental to the public interest.

IV.

The applicants presented testimony and evidence that described water in the groundwater basin as being in a near-surface shallow aquifer system and a separate deep artesian aquifer system and that there is little mixing between the two systems. The applicants' water quality analysis was based on what is found in the area at the present time which is significantly different than the mostly agriculture pursuits in the area at the time Permit 13205 was granted. The applicants' evidence did not prove that the water collected in the drainline system found under

³¹ NRS § 533.370.

³² State Engineer's Order No. 708, dated March 1, 1978, official records in the office of the State Engineer.

Permit 13205 is the same source of water sought to be appropriated under Application 63775. The State Engineer concludes the evidence did not sufficiently convince him that the source of water sought to be appropriated under Application 63775 is derived from the same source of water appropriated under Permit 13205.

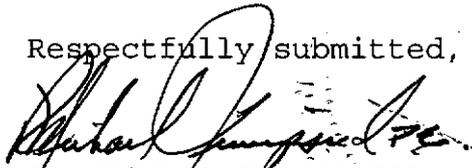
V.

The State Engineer concludes that the water collected in the open jointed pipe under Permit 13205 is a mixture of Truckee River water conveyed via the Lake Ditch, Evans Creek water, water from the near-surface shallow aquifer and only to a limited extent, if any, upward leakage from the deep aquifer.

RULING

Application 63775 is hereby denied on the grounds that the evidence did not sufficiently convince the State Engineer that the proposed source of water is the same as collected in the existing drainline collection system, and that a change from an essentially non-consumptive use to a consumptive use of water would in effect be a new appropriation of water, conflict with existing rights, and threaten to prove detrimental to the public interest.

Respectfully submitted,



R. MICHAEL TURNIPSEED, P.E.
State Engineer

RMT/SJT/cl

Dated this 18th day of
February, 2000.