



Suite 1100, Eagle Gate Plaza & Office Tower  
60 East South Temple, Salt Lake City, UT 84111-1019  
P.O. Box 11808, Salt Lake City, UT 84147-0808

Tel (801) 532-1900 • Fax (801) 532-1913

nielsen.senior@ns-law.com  
www.ns-law.com

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DIVISION OF  
OIL, GAS AND MINING

September 28, 2001

Lowell Braxton, Director  
Division of Oil, Gas, and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

**Re: Skyline Mine CHIA & PHC**

Dear Mr. Braxton:

First, thanks to both you and the Division for your professionalism and cooperation in our mutual settlement of the various issues connected with the coal-mining water-replacement rules. We realize that public policy, as enunciated by the Division's rules and actions is still being formulated in this area. We are confident that the issues we find ourselves forced to raise today will be handled with similar courtesy and professional skill.

Nielsen & Senior, as you know, represents the Huntington-Cleveland Irrigation Company ("Huntington-Cleveland") of Emery County, on whose behalf we have prepared this letter.

We are all aware that on August 16, 2001, miners in the Skyline Mine owned and operated by Arch Coal, Inc. bored into a sandstone aquifer which immediately began inundating the mine at approximately 4,700 gpm. The newspaper report of the incident, published two weeks later, notes that the Mine has spent some \$6.6 million on pumps and pipes to drain the water into Eccle's Creek and, more appropriately, into Electric Lake. (John Serfustini, *Ancient Water: Coal miners Strike it Wet in Scofield*, The Salt Lake Tribune, 8/31/01 p. A1.)

Careful perusal of the newspaper article, however, raises several disturbing questions to which, in our review of hydrological information on file at the Division, we have so far been unable to find satisfactory answers. We therefore submit the following issues to you and the Division for analysis and response:

First, we remain very much concerned, as you will recall, with current mine dewatering practices, which allow mine operators who encounter water in their diggings essentially to interrupt and divert it without State Engineer authorization, to say nothing of State Engineer investigation or oversight. It is longstanding, well-settled Utah law that subterranean waters are publicly owned and subject to appropriation law, and that the State Engineer's authority extends to water within an

aquifer as much as to a surface flow. Utah Code Annotated §§ 73-1-1 & 73-2-1(3)(b)(iii)(A); see also *Salt Lake City v. Silver Fork Pipeline Corp.*, 2000 UT 3, ¶31, 5 P.3d 1206.<sup>1</sup>

What is perhaps not so clear is whether (and if so, what regulations apply to) pumping water encountered in a mine out of the mine and into the proper drainage is an appropriation and/or diversion of such water. If so, then the State Engineer's office must be involved at the outset. Even if such pumping is neither appropriation or diversion, the State Engineer's office must still be involved as soon as the water flows into (or at the latest out from) the mine, where it becomes appropriable. And if the water encountered in a mine is tributary to surface flows, the question becomes even more complex. The gravity of this issue, its numerous ramifications, and the likely increase in its being raised, plainly call for swift resolution of the question, especially since no extant regulations address the matter at all.

Since it is well-settled law that "a right to water includes an interest in the source(s) of those waters," *Silver Fork Pipeline Corp.*, 2000 UT 3 at ¶22, the rights of water users in the Huntington Creek drainage, including Huntington-Cleveland, naturally bestow upon them an interest in the sources of the water therein. It follows that, if the waters in the Skyline aquifer are tributary to the waters of the Huntington Creek drainage—feeding the seeps and springs whence such waters flow—that water, of necessity, would be subject to the senior appropriations of the water users in and downstream from the Huntington Creek drainage. Skyline Mine's dewatering, diversion, and redirection of these sources (especially into a different drainage) would constitute illegal interference with the property rights of downstream water users, most notably Huntington-Cleveland.

Unfortunately, there remains a question, given the entire lack of available data, as to whether or not the waters in the aquifer encountered by the Skyline Mine are tributary to the seeps and springs which feed the Huntington Creek drainage. And this lack of awareness on the part of the operators of the Skyline Mine deprives them of any protection which may attach to their emergency dewatering operations. In *N.M. Long & Co. v. Cannon Papanikolas Const. Co.*, 343 P.2d 1100 (Utah 1959), Long & Co. brought suit against Cannon, claiming that Cannon's draining of its property had drained off water from Long's adjoining land. The Court, in addressing the issues before it, "consider[ed] the . . . fundamental question as to [Cannon's] right to use their property even though it may have an adverse effect upon the water table in the lands of [Long]." 343 P.2d at 1101-02. The Court noted that while "[i]t is generally considered . . . axiomatic that the right to own property includes the right to make reasonable and ordinary uses thereof even though it may incidentally cause damage or unavoidable loss to another," *id.* at 1102, nevertheless, liability would still attach if Cannon (or indeed anyone subject to the "well-established principles of law relating

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<sup>1</sup> We have been verbally informed on several occasions that some believe that different rules apply to mine dewatering than apply generally to surface flows and wells. We have never, however, been given any basis or reference for such a belief.

to interference with underground waters," *id.*) had been "negligent or reckless with respect [to interference with Long's water] in installation of their drains," *id.* In the present case, the "inadvertent" tapping of the lake-sized aquifer adjoining the Skyline Mine, and the emergency draining which followed thereupon might, under certain circumstances, qualify as necessary actions for the maintenance of the mine. However, the hydrology characterization requirements found in R645-301-700 generally, and specifically existing hydrologic resources (R645-301-711.100), and potential impacts on hydrologic balance (R645-301-711.200), and ground water information (R645-301-724.100), to name a few, and the fact that so much water went entirely uncharacterized in the PHC and CHIA until it actually began filling up the mine, establishes a standard of care that is clearly not being met.

The importance of this determination increases manifold in light of the fact that the Skyline Mine operators have unilaterally extended dewatering practices well beyond their settled limits. The operators of the Skyline Mine are dewatering an aquifer adjacent to the mine by means of wells drilled *outside* of the mine. This is the very first time in our experience that mine dewatering has extended beyond the mine itself. In our capacity as representatives of a major water rights holder in the Huntington Creek drainage, we must ask the breadths and limits of this policy. Is it the Division's view that *all* water which may enter a mine is subject to withdrawal and redirection? If not, what are the limits to this new policy?

Third, we note that the Serfustini article describes the water pouring into the mine as "ancient" and "prehistoric," and quotes Doug Johnson (identified as the "manager of technical support" for the Skyline Mine), who characterizes the water as "old and cold." No data are given in support of these assertions of the water's antiquity: merely a generic statement that "[t]ests of samples of the water . . . indicate it was trapped in the stone at least 10,000 years ago." We have, thus far, been unable to locate any test data in the Division files. Did the apparent age of the water play any role in the approval of the wells to dewater the aquifer? If so, how was this date determined? What tests were performed? Who ran the tests?

In any event, Huntington-Cleveland would like very much to examine both the data supporting the 10,000-year conclusion as well as the testing methodology. After all, certain tests, such as carbon dating, may become unreliable in the carbon-laced environment of a coal mine. At the very least, the Division's own hydrologists ought to be involved in the testing of the Skyline water, if they are not already.

Accordingly, we are deeply concerned about the effect the draining of this "ancient" aquifer will have on the seeps and springs flowing from it or from aquifers lying above it. If in fact the water in the Skyline Mine is as "prehistoric" as it is claimed to be, then perhaps we need not worry that there may be seeps and springs flowing from it which will dry up as a result of the drainage of the aquifer. Might not the removal of this same "ancient" water, however, cause water higher up to flow downward to take its place? This would result in the discontinuance of seeps and springs rather higher than the discharging aquifer, which could be disastrous to points therebelow in the drainage.

There is, as you are probably aware, a rather unsettling contradiction between the Division's perception of such issues and that of the State Engineer's office. The Division, for the most part, presumes that aquifers in separate strata may indeed be isolated from each other, and mining into one particular saturated formation does not necessarily affect water above it or below. The State Engineer's office, however, has adopted what State Engineer Robert Morgan refers to as the "bottom of the tub" analogy: in essence (in a highly oversimplified example), when water is removed from the bottom of a tub full of water, the water above it will obviously move downward to fill the void. (It should be noted that these two contradictory positions—held by two different divisions within the same department—make it difficult to act upon the drainage of water from mine to surface.)

Of course, Huntington-Cleveland's interest is on water sources, and it subscribes to the view of the State Engineer in this matter, since human tinkering with aquifers can wreck havoc upon even the most well-established spring. In addition, the CHIA for the Skyline Mine, in the present case, notes that, although "[d]raining of . . . perched systems may cause individual springs or seeps to disappear . . . . Flows in the mines that persist for more than 30 days should be considered as possibly intercepting surface water through a natural or subsidence induced fracture system." (Skyline CHIA at 36.)

With these potential issues in mind, are measurements being taken from streams and rivers in the area? What about flows from seeps and springs above and near the Mine? Has any analysis or investigation been undertaken on the saturation of higher aquifers? If any of this information indicates a decreased flow or amount, what will be done to reestablish the lost water and to avert future loss?

Next, and perhaps most disturbing, Skyline's tapping into the saturated sandstone appears to have come as a complete surprise, despite the well-established regulatory requirements in R645-301-700 designed to accurately predict the hydrologic consequences of mining. The newspaper account calls the miners' exposure of the aquifer "inadvertent," and notes that the miners were "cutting tunnels into a coal seam in preparation for installation of a larger piece of mining equipment" when they chanced—entirely unexpectedly—upon a sandstone formation containing enough water to gush out nearly 28 acre-feet a day! So entirely unforeseen was this deluge that, according to the Tribune, the miners were put to work seven days a week while "their bosses scour[ed] the West for more pumps and plastic pipe to siphon off [the] flood." In two weeks, the Mine spent over \$6.5 million for tens of thousands of feet of 12-inch pipe and dozens of pumps to handle the sudden, abrupt submergence of the Mine under millions of gallons of water.

Obviously, the probable hydrologic consequences of mining were not accurately predicted in the PHC, nor was the cumulative hydrologic impact analysis accurate.

Both the PHC and the CHIA for the Skyline Mine discuss the various sandstone formations through which the mine has been bored: Analysis of the Castlegate, Blackhawk, and Star Point

sandstone formations forms a significant part of both documents. Neither, however, says anything at all about what amounts to a veritable subterranean lake residing—allegedly for millennia—in the pores of these very same sandstone formations. Ironically, the authors of the Skyline PHC blithely maintained in 1992 that

long-term discharge of groundwater from the mines will average approximately 550 gpm . . . .

. . . [T]his is the maximum possible increase in average mine discharge. As mining of multiple seams progresses below Mine No. 1 (the mine highest in elevation), less groundwater will be intercepted since overlying areas will have been previously dewatered. As a result, the rate of mine-water discharge should decrease.

(Skyline PHC at 2-12.) Such complete ignorance of the actual hydrology might perhaps be wryly humorous were it not for the astounding negligence it betokens. This is, after all, no easily overlooked little pocket of water: it is millions of gallons spread throughout the sandstone formations into which the Skyline Mine is carved. This raises an obvious question: Are the rules themselves or their application and enforcement inadequate? Such events require a careful review of the regulatory program, and we submit that such a review is not only warranted but compelled to prevent repeat occurrences. For example, questions which need to be answered include the type, quality, and amount of hydrologic data gathered: Were sufficient boreholes drilled? Were sufficient testing and modelling conducted? and so forth.

The PHC and the CHIA appear to indicate that the only testing done was a review of flow data from seeps, springs, and earlier drilled wells. Evidently, no one so much as bothered to investigate whether there was any buildup of water in or around the Mine's target formations, to say nothing of testing or checking for it.

Huntington-Cleveland requests that the PHC and the CHIA for the Skyline Mine be immediately revised and updated to take into account and to explore the source and destination of the vast flow of water pouring into and out from the Skyline Mine, prior to continued mining. In addition, it would, we believe, be wise to examine the regulations governing coal exploration, and to take such steps as the Division may deem necessary to avert such unfortunate "inadvertencies" in the future.

Finally, the Huntington-Cleveland Irrigation Company, as you know, is pleased that the operators of the Skyline Mine realize that much (if not most) of the water filling the Mine derives from aquifers within Emery County. Huntington-Cleveland is therefore gratified that this displaced water is to be pumped to Electric Lake and so to the appropriate drainage. Huntington-Cleveland is mindful of the economic consequences of mine closures on the area, but points out that water is, as has been recognized by both the courts and the legislature numerous times, a priceless and irreplaceable resource which Utah's residents will still depend upon decades (even centuries) after mining has entirely ceased in the Skyline Mine.

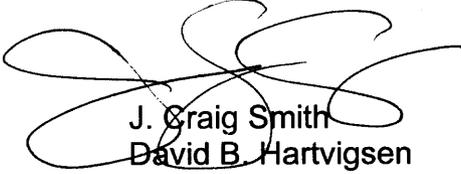
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Thank you for your time and attention. Should you have any questions, please feel free to contact us. We would welcome the opportunity, should you deem it necessary and appropriate, to discuss these critical matters at length with you at your convenience.

Sincerely,



J. Craig Smith  
David B. Hartvigsen  
Scott M. Ellsworth

cc: Robert L. Morgan, P.E.  
Kathleen Clark  
Michael Quealy, Esq.  
Norman Johnson, Esq.  
Thomas Mitchell, Esq.  
Kurt Seel, Esq.  
Eugene Johansen  
Nick Sampinos, Esq.  
Val Payne  
Blaine M. Gordon, Asst. General Counsel, Arch Coal  
Board of Directors, Huntington-Cleveland  
Kay Jensen, President  
Dennis Ward, Vice President