STATE OF COLORADO

Ebert - DNR, Jared <jared.ebert@state.co.us>

Knox Pit in LaPorte: Larimer County Planning: 17-ZONE2113, DRMS M2017-036

Stephanie Fancher-English <stephanieh@lrmconcrete.com> Thu, Sep 20, 2018 at 5:03 PM
To: Jayme8704@gmail.com, rhelmick@larimer.org, "Ebert - DNR, Jared" <jared.ebert@state.co.us>
Cc: rhelmick@larimer.org, "Ebert - DNR, Jared" <jared.ebert@state.co.us>, Brad Fancher <bradf@lrmconcrete.com>

Jayme,

Please see attached response to your letter dated August 13, 2018.

We look forward to setting up a time to sit down and review this information with you.

Thank you,

Stephanie Fancher-English

Loveland Ready-Mix Concrete, Inc.

Office: 970.667.2680

Cell: 970.663.9162

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PO BOX 299
LOVELAND, CO 80539

OFFICE 970.667.2680
FAX 970.667.0092

September 20, 2018

Via Electronic Mail

Jayme Patrick Tilley
PO Box 657
LaPorte, Colorado 80535
Jayme8704@gmail.com

Subject: **Loveland Ready-Mix Concrete, Knox Pit**
Reply to Letter Dated August 13, 2018

Dear Ms. Patrick:

This letter is in response to your August 13, 2018 letter. We have heard and understand your apprehension and sincerely hope to alleviate those concerns. We would be pleased to meet with you directly to discuss specific questions and to determine where we can find common ground. Below is a summary of the technical studies and reports prepared to address the issues you listed.

Overnight noise

> *Overnight noise will also include CNG compressors, generators, etc. We already have a berm which does little to muffle occasional noise from the east.*

The CNG compressors have a predicted sound level at your property line much lower than the allowable minimum nighttime level of 50 dBA. Our consultant, Telesto Solutions, has estimated that approximately 25 dBA will be generated from the CNG compressors at your property line. This level is achieved without additional berming and buffering from stockpiles and equipment in the plant area. Generators will not be present in the project area.

Allowable noise levels

> *But my family will be exposed to up to 50-80 decibels for 12 hours per day and up to six days a week, and potentially periods of 24/ 7 exposure, all within just a few feet of our property line without the benefit of protective equipment.*

All sound is predicted to be below allowable levels. Construction activities will be short in duration and limited to day time hours. The predicted sound levels will be no different than what would be experience for any construction activity that would take place for building roads, houses, or commercial buildings. Telesto's noise study predicts sound levels at your property line to vary from 53 dBA during mining

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activities to 58 dBA during overburden removal to 61 dBA during the short-term site construction activities. These predicted sound levels do not include the reduction in sound from mitigation that will be provided by the perimeter berms.

Dust mitigation

> *Your project predicts dust pollution, and a fugitive dust control plan was required to address this pollutant, one which is known to cause a number of lung conditions. Dust generation by the pit operation, by rock crushing, by trucks driving on your roads, and by wind erosion will create a major source of large and small particle pollution within 50 feet of our property. We are concerned that the standards set in your control plan are to protect citizens from pollution sources over the general area, but that the proposed control measures may not adequately protect us because of the level of exposure we face.*

We anticipate limited activity inside the 100-foot setback from your property solely to relocate West Fort Collins Water District's water main, install the perimeter drain, and place the berm. After the perimeter berm is built, there will be no activity with 100 feet of your property. Wet mining activity, overburden removal, pit lining, and reclamation activity will be similar to that experienced for any construction activity that would take place for building roads, houses, or commercial buildings. APENs and modeling show that LRM dust generation will be well within allowable limits. Telesto's air quality study, using a conservative screening-level model, predicts the following maximum air quality impacts.

		NAAQS	CAAQS	Existing Background Concentration	Maximum Predicted Controlled Concentration	Cumulative Controlled Concentrati
PM_{10}	24 Hr Conc ($\mu g/m^3$)	150	150	48	22	70
	Annual Conc ($\mu g/m^3$)	NA	NA	NA[5]	3.66	NA[5]
$PM_{2.5}$	24 Hr Conc ($\mu g/m^3$)	35	35	22	5	27
	Annual Conc ($\mu g/m^3$)	(12/15)	15	7	1.0	8

We are confident from our experience at our other operations in Johnstown, Boulder and Loveland, and from the modeling results, that we will not exceed allowable standards for the air quality of our neighbors.

Weed control

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> *Herbicides will be used, according to your reclamation plan. Spot spraying of noxious weeds will occur through the reclamation process which could last for years. Currently, noxious weed control is not required on the property, and weeds are naturally controlled by grazing and haying. Our young children would be exposed to herbicide blow-over and contamination on our property from this pollution source. Additionally, we may be exposed to detrimental levels of selenium from water-spray dust suppression on the road along our fence line.*

LRM is currently using herbicides to treat leafy spurge, thistle, and knapweed on the adjacent property, using a licensed contractor for all applications. While there is a history of weed problems on this property our current tenant has worked hard to eliminate noxious weeds through mowing and diligent pasture management. If you don't want herbicides used next to your property, please let us know and we will work with you to post "no herbicides" signage at your property line.

Selenium

There has been no sound engineering presented that supports the assertion that selenium will be present. This was confirmed at the MLRB hearing. All the appropriately applied engineering confirms through sampling of the shale taken from the project site and from water quality testing that selenium will not be present.

Regarding long-term nuisance and degradation

> *We invested in our property as a long term investment, and we continually work to improve it so we can raise our kids and build returns on our own timeline. We did our research too. Gravel mining is not an allowed use in Open Zoning and in the LaPorte Area Plan. We have the right to peaceful enjoyment of our property. The pollutants, noise, nuisance, traffic, damage and sheer existence of your industrial mine so close to us detracts from the use, value, and enjoyment of our property, and it reduces the income potential that the property's resources offer. And this is not a short-term problem; this will endure for many years and will exceed our timeline to raise our kids and for our investment to pay off.*

Gravel mining is an approved use by Special Review in Open Zoning and in the LaPorte Area Plan. We believe that the 100-foot setback and berming provide buffering above and beyond what is needed to protect your property. As stated above, air quality and noise studies show that dust and sound generated from our operations are within allowable limits.

Dewatering

> *Evidence was presented at the MLRB hearing that your project will substantially lower water levels in my monitoring wells indicative of damaging groundwater loss. Dewatering was predicted as a certainty to happen during initial construction dewatering, and*

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> *continuing through the mining phases. Maximum dewatering rates are predicted at the beginning of Phase 1, starting adjacent to our property, so we will experience drastic dewatering as soon as the project starts.*
>
> *Dewatering on our property will persist though Phases 2 and 3 which would last several years. We have 50+ large healthy trees on our property which shade and cool our house and reduce our lawn watering needs. As Dr. Calvin Miller, P.E. testified during the MLRB hearing, "I saw that she has large cottonwood trees, and I have personally seen dewatering from gravel mines kill cottonwood trees. It's not just an aesthetics issue, it would be a very large expense to remove dead trees." The threat of trees falling on our residences is also a serious safety issue. Further, Dr. Miller testified that "there is a high risk of strong changes on her property" lasting years. In one scenario in the groundwater study, possible drawdown would be 13 feet when the normal groundwater level is 4 feet below the surface. This would most certainly damage the natural landscape for the long term and degrade my property's potential. Understanding that I don't have a "water right" to the groundwater under my property, it is clear that your water consumption will cause irreversible damage to my property. The testimony you provided to the MLRB that you would run water, create a hydrodam, and therefore recharge my wells, is vague. There is no plan or mechanism in place to protect us from your dewatering.*

The Division of Reclamation, Mining, and Safety (DRMS) performed a detailed review of the groundwater study, asking for clarification and additional information in their adequacy review comments prior to their recommendation to approve the 112C mining permit application. We believe that the testimony provided by State of Colorado expert staff confirm the appropriateness and reliability of mitigation measures to be implemented. Below are a few of those statements:

> *The Division would like to point out there are very similar sites to this. This activity is not really something novel or new. There are similar mining activities like this along the Front Range, specifically for 49 active permits in Larimer, Weld, Adams, Morgan, and Logan counties with the post-mining land use of developed water resource, and there has been 37 "terminated" sites, sites that were permitted and subsequently released within these counties. (Jared Ebert)*

Calvin Miller did identify the concern that the cottonwood trees could be affected by draw down during dewatering. LRM now has over a year's worth of data from the monitoring well adjacent to the Tilley property. The data show that with current changes in groundwater elevations, irrigation of the trees is required to keep them alive. This was confirmed at the DRMS hearing:

> *I have read several studies where it has shown that cottonwood and riparian species that are absolutely relying on the groundwater table to be impacted by dewatering. The—from what I have seen*

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> *from experience, I haven't seen that occur too often. And, like, especially in these areas where it's primarily ornamental vegetation kind of surrounding the area, those vegetation, it's primarily reliant on surface water, I would say, and less on groundwater. They will be relying on both to some extent. But I believe Loveland Ready Mix's plan on allowing people to continue to use their wells and – their monitoring and mitigation wells for their irrigation should protect the trees that they have on their property. (Jared Ebert)*

It was established at the MLRB hearing that the monitoring plan LRM has in place, the 5-foot drawdown trigger along with the proposed mitigation measures, will prevent any damage from lowered groundwater to your property. At the MLRB hearing, LRM committed to installing a "reverse French drain" along the edge of the Tilley property that will prevent any significant drawdown. This is documented in the MLRB Findings of Fact:

> 24. Applicant presented testimony regarding mitigation efforts should groundwater levels drop by 5 feet or more. The Applicant's mitigation plan includes provisions for reintroducing pumped groundwater through a leach field or injection well back into the aquifer near the affected well.
>
> 25. Applicant also presented testimony specifically addressing the potential drawdown adversely affecting Objector Tilley's wells, stating that they would run water into the ground on the side of Tilley's property to act as a hydrodam, which would cause groundwater to back up and recharge Objector Tilley's wells.

Mounding concerns

> *(Continuing from your letter): During reclamation after the pit is lined, groundwater mounding is predicted by your modeling as a possibility on my property, with a two foot rise being a value of significance and action. The water is 40 inches (3.3 feet) below the surface during irrigation season. Dr. Miller testified that "It's clear that a two foot rise would not be acceptable on her property. It would saturate the soils." The foundations of my buildings would be flooded by a 2 foot rise, and the sewer line could be disturbed. Flooding rises quickly, and major damage would occur before anything could be done. Dr. Miller testified that a proposed solution of using valves and pumps and perimeter drains, even if they work initially, would require long-term monitoring and perpetual maintenance to prevent mounding at our property. Said by Mr. Machado in the hearing, "They've proposed some engineering fixes but we don't know if they are going to work. The solutions they've proposed are not meeting the standard. They are a workaround. This thing needs to work in perpetuity."*

This issue was also addressed thoroughly at the MLRB hearing. According to Mr. Ebert "what they (LRM) are proposing is not uncommon, and their mitigation

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measures are very common – commonly used throughout the Front Range in gravel pits. So we've seen perimeter drains be installed and be very effective. We've seen water monitoring plans that have been in place to monitor trigger levels, and those have been effective as well."

Calvin Miller recommended that your wells, "given the high risk of strong changes in her property, (be) monitored monthly for at least the first three phases (of mining), possibly longer." He recommended "monitoring monthly for three years and the reassess to decide if we could drop back to quarterly." Mr. Miller stated "a 1-foot rise could start causing a problem for part of her property. So I would recommend tighter triggers for – at least for her property." He testified that groundwater would be expected to rise in the summer "usually from the irrigation ditches or just people irrigating in the area" and that there are two irrigation ditches near the Tilley property.

LRM will monitor 14 wells on its property and remains committed to monitoring groundwater in your wells, with your permission.

With the proposed perimeter drain to be placed, no mounding is predicted to occur on your property. The groundwater modeling was used to (1) predict where mounding may occur and (2) provide information needed to design the perimeter drain. The monitoring wells will be used to monitor the drain's ability to function and operating properly. This design and monitoring plan was thoroughly vetted and approved by DRMs at the MLRB hearing.

Jared Ebert commented that "this is a rigorous monitoring plan. There are a lot of other sites out there that do the exact same thing very close to wells and houses and structures, and these are the typical monitoring and mitigation measures that the Division has approved in the past." Jeff Fugate, Office of the Attorney General, stated for DRMS, "and the idea or the theory behind the monitoring plan is to monitor to avoid the impact, and if the monitoring wells indicate there is going to impact, that's when mitigation measures are triggered and set in place…the purpose of this plan is to avoid impacts, to avoid, you know, causing impacts to off-site property. The plan is set up and the Division believes it adequately addresses those events."

As documented by Tony Waldron, DRMS, "the idea of a model was to predict what would happen if you have – if you put a dam in there. And the mitigation – they realized that there would be mounding, and so the mitigation was to install that drain. So that's – that's really what's going to happen. There won't be mounding if that drain functions properly, but there's also monitoring to back that up, and there are also mitigation measures to address it in the event that it does begin to mound."

At the conclusion of the hearing, Jeff Fugate, DRMS also testified

> *this permit in particular is – it does go above and beyond with respect to the monitoring regime for a construction pit. Fourteen monitoring wells, four or five of which are devoted to water quality alone, the requirement of baseline groundwater site*

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> *characterization is unique. As Jared testified... 'this was the most – one of the most rigorous plans he's ever reviewed, and that covers his work in hard rock, coal, and construction pits.'*
>
> *The Division believes that this plan as submitted and as changed and altered over the course of four adequacy letters over a five-month period, it satisfies the acts and rules.*

Mr. Miller recommended that the perimeter drains, "these drains need some sort of entity – there needs to be some sort of entity responsible for the drains for the long-term." Condition of Approval number 34, SR 17-zone 2113, contains language that provides for long-term responsibility of the drains. "A drainage agreement for the maintenance of the retention ponds post-reclamation will need to be submitted. The agreement will need to include maintenance responsibilities of the perimeter drain if it were to fail in the future."

Impact to Structures

> *Your studies predict that structural damage WILL occur to my buildings and structures within 200 feet of your property...Mr. Matt Machado said so well in the MLRB hearing, "We have all these unknowns right now. There's just not enough assurance and I think the potential for injury to Ms. Tilley's property is high."*

Mr. Machado's statements are speculative. He submitted no evidence that showed the monitoring plan and the drain would not work as designed. Our geotechnical stability analysis was conducted with conservative inputs to soil properties and setbacks. The report concluded the opposite of what you assert above: "*the embankment stability analyses indicate that all permanent structures identified within this report will have a factor of safety of at least 1.7 against a destabilizing slope failure caused by highwall construction, both during mining operations as well as after closure when reclamation activities are complete.*"

As mentioned above we are confident from existing experience and rigorous analysis for this site in our ability to operate without significant harm to you or your property, and we would be pleased to meet with you directly along with Brad Fancher, Walt Niccoli or Kent Bruxvoort from Telesto to discuss specific questions and to determine where we can find common ground.

Sincerely,

Stephanie Fancher-English
Loveland Ready-Mix Concrete, Inc.

cc: Jared Ebert – DRMS: M2017-036
Rob Helmick – Larimer County Planning: 17-ZONE2113