

Text Message • SMS  
Jan 27, 2023 at 4:17 PM

Hi Chad, Brett here (neighbor on Kalispell Street. The noise profile is pretty strong right now.

we've noticed it most nights this week. it's been pretty consistent.

Is it the ~500hz sound or the hissing?

the hissing and the low ~250hz are consistent. the ~500hz has been intermittent and mostly not present

500hz is audible now. comes and goes

512Hz very clearly audible now

Do you have an idea of about how long it lasts for? I have someone checking it out now.

This really helps so I appreciate the info!

i think it's all the time.

just depends on the wind if we hear it at the house or not

wind is out of the south at 5mph right now which seems ideal for the sound to carry

Got it. That helps too

thanks!

one more signature, the 512 Hz tone fades in and out at about 145 beats per minute. pulsing. maybe some kind or harmonic with an enclosure?

Jan 27, 2023 at 5:57 PM

That's quite a ripple. Our team has some things they are going to zero in on. Thank you. I'll check in with you next week. If anything changes, new sounds or

are going to zero in on. Thank you. I'll check in with you next week. If anything changes, new sounds or something let me know

Sounds good. Thanks to you and your team for working on this. Much appreciated. Will do. Have a great weekend.

Feb 9, 2023 at 9:00 AM

Ok I have an update. We are going to make a change to our nitrogen plant in the next 2 weeks. We believe this will quiet it down quite a bit. We are also going to be planting trees along our berm to grow into a sound barrier. I know that is a long term solution but everything helps.

I'll let you know when the plant modification is done and we'll monitor afterwards.

Feb 9, 2023 at 1:31 PM

Thanks Chad for the update that sounds great. Do you think the nitrogen plant is involved with all of the sounds we've ID'd or just the hissing?

Feb 9, 2023 at 3:20 PM

I'm hoping both. It is the only distinguishable sound we can detect.

Mar 2, 2023 at 9:54 AM

Good morning. The 512Hz sound has been pretty loud Tuesday night. and last night through to this morning.

i'm guessing due to cold temps and south wind

Mar 3, 2023 at 7:55 AM

Good morning. I wasn't able to meet with the facilities person in status of the work they have been doing. I should be able to connect with him today.

Mar 23, 2023 at 10:15 AM

Good Morning Chad. We've got a really solid noise

Good Morning Chad. We've got a really solid noise signature today. Probably due to wind from the south at 16 mph.

Mar 23, 2023 at 11:46 AM

Possibly. We are still working on the plant but I think the big noise improvements are done at this point. We still plan to do the additional trees but that'll be long term. I'll have facilities look into a sound wall where we generate nitrogen.

It does seem to be really tied to wind carrying sound though huh.

For today how long would you say?

I think it is just where we make nitrogen but if there are truck offloads happening we need to take different steps they only make elevated noise at the end of the offload for a few min.

Today I first noticed it around 9am. I think that was when the wind picked up this morning. It's been continuous since then. I don't think trees will reduce the impact if the source of the sound is up high like a roof top air handler. There are lots of trees between us and the facility. I think it's going over/through them.

But yes it seems very much a wind direction issue.

All of the sounds we're hearing from the facility seem to be continuously generated.

It's possible at some point I'd love to pinpoint the source of the noise because it might not be what we think it is

The only way I can think to do that is, on a day when we can hear the sound clearly, to turn off a suspected source and see if the sound stops or not.

if the sound continues then we know that wasn't the source. and can turn it back on right away

source. and can turn it back on right away

but i imagine some of the suspected sources are things that •need• to run all the time

Mar 23, 2023 at 3:50 PM

They do. air systems and the nitrogen plant are in part to support safety requirements. Shutting them down is a major thing.

Do you work typical business hours? Maybe we can meet to review together with our facilities manager.

Typical hours yes but I work from home and my schedule is very flexible.

I'd be glad to meet.

Ok. I'll see what works best on our end

Apr 12, 2023 at 9:06 AM

Hi Chad, We heard a new sound last night, a low frequency rumble. We first noticed it around 8pm. I took a midnight drive to locate it, and it's coming from Lam. Any equipment changes in the past few days that might explain it?

Nothing that I'm aware of. Was it more than a few minutes. I need to set up our meeting. I'll confirm time this week.

Thanks. For sure it was continuous from at 11:20pm till 12:30am when I fell asleep. We heard it earlier, just not sure if it was continuous then.

Apr 12, 2023 at 10:55 AM

Are you available at 1pm on monday?

at 1:10

Apr 12, 2023 at 2:34 PM

Ok. Let's plan to meet here at our lab for then. I'll

Ok. Let's plan to meet here at our lobby then. I'll confirm the time with our facilities manager.

Apr 12, 2023 at 4:03 PM

Sounds good. Thanks.

Apr 18, 2023 at 9:05 AM

Hi Chad, Thanks for meeting with my yesterday. I'm glad to get a better sense of what is going on. I was wrong about the beat frequency of the 512 Hz tone. I measured it last night, it's not 5 beats a second, but more like 1.95 Hz or 117 beats per minute.

Here's a tone I generated online that's pretty close to what we hear.



Generated.m4a

Audio Recording · 51 KB



Not Delivered

Oh shoot. The audio file didn't go through. I'll upload it to the web and send you the URL

No worries. It will be interesting to hear what you hear at your house

turns out the audio file is really small, so i just attached it to an email.

Ok

Apr 26, 2023 at 3:02 PM

Hi Brett, we were able to idle our nitrogen plant today for a few days to do some work. Let me know if you hear the same sound. I'll let you know when it comes back on.

oh super. will do. thanks!

Apr 27, 2023 at 7:39 AM

Well that was a shorter time frame than I had expected.  
It is back up and running now.

ok. was it up and running last night?

Yes it was back up around 10pm. I originally thought it would be offline for a few days.

that's consistent with what i heard. the wind was from the north yesterday eve so it was quiet at our house. i went out just after 10pm to drive downwind and take a listen. heard the same sounds as typical, but the scrubber fans were slightly higher freq than normally are.

thanka for letting me know about the idle

May 4, 2023 at 9:21 AM

Good Morning. We've had our windows open the past few days and have noticed a clean 520Hz tone with a beat frequency around once every two seconds. One time it was so loud my wife asked "Is that an alarm?"

Ok. I don't know of anything unusual over the past few days but I'll check.

Thanks. I'm guessing it's the scrubber fans running slightly faster than they have in the past?

May 14, 2023 at 11:19 PM

Hi Chad, Sorry to bug you at night. There is a new loud constant tone. About 350Hz. Sounds like by the nitrogen plant. Just started a few minutes ago

Loudest thing we've ever heard from Lam.

I think it stopped

May 15, 2023 at 5:45 AM

May 15, 2023 at 5:45 AM

I woke up at 5:30 to a different but similar noise 343Hz confirmed just now it's coming from the nitrogen plant area.

Interesting. I'll check what was going on last night.

Thanks

May 16, 2023 at 10:02 AM

We are putting in some noise mitigation next week. We'll see what it does. But I think every improvement helps.

That sounds great. Thank you!

Curious was there something different going on Sunday night, or was it just a bad night for sound?

May 18, 2023 at 6:35 AM

Good Morning. There's a super clear 522 Hz tone with a slow, irregular beat this morning. South wind 4mph. I think it woke me up. Windows are open. Surprised how loud it is in warm weather too. Sounds a bit like an alarm clock. Probably is the scrubber fans.

I'm going to head over through the neighborhood and see what I hear. Thanks for the heads up.

Thanks to you too!

interestingly it's easier to hear inside than outside. maybe because less background noise inside? for some reason the tone is less audible inside now than it was earlier.

I'm going to datalog the fans and N2 plant again now that we are through a bunch of work on the N2 system. I hear it. But I think given the intensity, it may still be the N2. When I get close to the scrubber fans then back out to the property line I can't hear them with my ears. Or maybe the N2 system is just drowning it out. I can

Or maybe the N2 system is just drowning it out. I can hear that anywhere on the north side.

Oh interesting. Thanks!

it's audible in my back yard intermittently. both the N2 sounds and the other tone

Jun 8, 2023 at 8:26 PM

We've got an audible 510 Hz tone with a beat in our backyard right now. Comes and goes. Plus some N2 sounds. The 510 tone was pretty loud last night and this morning.

Jun 8, 2023 at 9:34 PM

Ok I was going to check with you yesterday  
Our newest N2 compressor has been down for a while.  
It just came back up yesterday.

We have new trees in around it. I'm looking at other effective sound dampening methods.

Interesting. Thanks.

Jun 23, 2023 at 10:00 AM

We have a clear 517Hz tone today with a beat. Audible upstairs, downstairs, and in the back yard.

Sep 11, 2023 at 8:30 AM

Hi Chad, as the weather cools down, the 520Hz tone with a beat is becoming louder again. We realized what it reminds us of: a digital beeping alarm clock. Not the kind of thing you want to hear at night when you are trying to go to sleep.

No it's not. I know it's not a fast solution but we are looking implementing more sound prevention to reduce as much sound from being heard off site as possible. We will improve this.

Sep 11, 2023 at 4:04 PM



Sep 11, 2023 at 4:04 PM

Thanks for your understanding and for your efforts towards improvements.

Dec 4, 2023 at 9:35 AM

Hi Chad, I hope you are well. We had a loud weekend here. Friday night especially so, wind was from the south over 10mph, so that doesn't help. There is a new primary frequency at 175Hz and a harmonic at 354Hz. The 175Hz seems louder than anything we've heard previously. I compared to the sounds onsite Sunday morning and they matched. Have there been any changes that could explain this?

Dec 4, 2023 at 11:47 AM

Hi Brett, I'm not aware of any changes but will investigate. We are still planning improved sound reduction. Did you notice where it was strongest.

off the NE corner of building D

kinda lined up with that alley between buildings E and D

That is odd. We've modified our system a few months ago to minimize how much we run chillers. That should result in reduced noise, not more. How did the nitrogen gas plant sound?

Oh interesting. The 175Hz sound has been pretty constant since Friday, but not sure how much of that is due to a steady wind pattern. The nitrogen gas plant sounds like white noise when onsite, which is good, and I don't think it carries too far. I wasn't listening for it across the street tho, cuz it's not what we're hearing at our house. I'll give it a listen from our neighborhood entry next time I'm out.

Jan 19, 2024 at 1:49 PM

Hi Chad, The neighbors who live near Grimm's Fuel Compost are trying to get the word out about a Metro license renewal and a public comments period that is

license renewal and a public comments period that is open. Wondering if it would be possible for us to put up some yard signs on Lam property on 124th between Tualatin Road and Highway 99 until the end of the month?

Jan 19, 2024 at 3:54 PM

Hi Brett. That isn't our property it is owned by another company. We just lease a few floors.

Ok, Good to know! Thanks.

Mar 4, 2024 at 9:03 AM

Hi Chad, The sound has been loud the past few days. This weekend was probably the worst so far. Could hear it throughout our house. The pulsing 350Hz tone woke me up both mornings. It was going day and night. Kept me awake last night. Wind was steady out of the south the whole time I think.

Hi Brett. It is amazing what wind does for sound. Aside from the trees planted, we are pulling sound protection into our construction designs. It is in progress but moves slowly.

Apr 25, 2024 at 5:04 PM

Hi Chad, Just a heads up that the 520 Hz tone is loud enough that I'm hearing it in my garage. Ground level, no windows.

Is it still happening or was it for a set period of time?

It was audible for most of the afternoon. I've got some water running right now so can't tell if it's still going or not.

It's still going now.

the sound that is.

Ok I'm investigating

Chad: interesting

Thanks.

Apr 30, 2024 at 9:48 AM

It's been loud over the weekend plus yesterday and today. Probably because the wind is steady from the south at 10+ mph and chilly?

Yeah the wind definitely affects it. I haven't found anything different. I will be happy when we get new sound screens up

Up

Tue, Dec 3 at 9:32 AM

Hi Chad, We were hearing some new harmonics last night, including a really low frequency around 47Hz. I think it's the first time we've heard that low frequency. Wondering if anything has changed onsite that might explain this? There were four harmonics. Each was about one octave lower than the next. 347/170/84/47Hz

Tue, Dec 3 at 11:59 AM

That's interesting. How long did the low frequencies last for? No changes that would do that. I don't think we have anything big enough to push that low a frequency that far.

Not sure how long it lasted. We noticed it around 10:30pm until falling asleep around 11:15pm.

Any recent changes that could account for the other, higher, harmonic frequencies?

Tue, Dec 3 at 2:00 PM

I am checking to see if anything has happened that I'm not aware of. But nothing obvious or significant.

Ok. Thanks!

Thu Jan 30 at 8:38 AM

Thu, Jan 30 at 8:38 AM

Hi Chad. We've noticed a major decrease in sound the past couple weeks but it's back last night and today. any changes onsite that could explain it, or just the weather?

Hi Brett. I've been traveling all week but am checking with the team on site.

Thu, Jan 30 at 11:55 AM

I think it might have been a wind shift. Wind has been N and NW recently (including last night) but today it's from the South. I wonder if the local actual wind last night was different than what the weather app said. Any clues from on site?

No, we haven't had any change in operations.

Ok thanks.

Fri, Jan 31 at 9:54 AM

Just an update. Today the wind is South 180° at 8 mph gusting to 26. The fan noise is so loud I can hear it in my garage with the doors closed.

Fri, Jan 31 at 3:37 PM

That's unusual. I'll ask facilities to see if something is changing. We have every parameter monitored so of something was off we would know right away.

Tue, Feb 4 at 8:52 AM

The low frequency 88Hz was back last night along with its 344Hz harmonic, both of which we have heard together before.

Tue, Feb 4 at 11:56 AM

Hmm. I did double check with facilities. They confirmed no changes and everything is running normally.