

Addendum

May 1, 2023 Planning Commission Agenda Packet

This addendum to the May 1, 2023 Planning Commission agenda packet contains written public comments received before 3:00pm on April 28, 2023 that did not get included in the agenda packet published on April 28, 2023.

The agenda packet posted on April 28, 2023 is available for review on the Town's website at <https://www.wellingtoncolorado.gov/Archive.aspx?AMID=56>.

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Planning Commission May 1, 2023 Public Comment - Submission #3042

Date Submitted: 4/26/2023

First and Last Name*

Alyssa McGarvey

Email Address*

lissy.mcgarvey@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3948 Eucalyptus Street

Public Comment for the Planning Commission May 1, 2023 Meeting

I am opposed to the proposed asphalt plant in Wellington. The chemical and noise from the plant are enough for me to not want it here.

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Planning Commission May 1, 2023 Public Comment - Submission #3043

Date Submitted: 4/26/2023

First and Last Name*

Erin

Email Address*

erin5mcguirk@outlook.com

Are you a Town of Wellington Resident? *

☒

Yes

☐

No

Address

6992 Grassy Range Dr. Wellington, CO 80549

Public Comment for the Planning Commission May 1, 2023 Meeting

We do not want the Asphalt Plant here in Wellington so close to where my son attends school. We do not want to be exposed to such harsh chemicals. Air quality is already an issue.

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Planning Commission May 1, 2023 Public Comment - Submission #3044

Date Submitted: 4/26/2023

First and Last Name*

paul d Wakefield

Email Address*

pdwfield@yahoo.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

8912 Smoke Signal Way

Public Comment for the Planning Commission May 1, 2023 Meeting

This is in regards to the Asphalt plant meeting on may 1st. I have uploaded copies of three recent Asphalt plant accidents. Please review them for consideration to oppose the approval of the asphalt plant north of Buffalo Creek subdivision. 1. The Superior, Wi accident affected thirty six residents and eleven employees. People were evacuated up to 10 miles away. 2. The Ardmore asphalt explosion left one employee dead where they store a lot of volatile chemicals. 3. Tank explodes at asphalt plant in ADAMS COUNTY as a result of an electrical fire. Lastly, my other concern is: How is the Wellington fire department, the town of Wellington and Larimer county prepared to respond to such accidents?

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Ardmore asphalt plant.docx

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Tank explodes at asphalt plant
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United Asphalts plant in
Commerce.docx

Tank explodes at asphalt plant

ADAMS COUNTY – Southwest Adams County Fire and Rescue says an asphalt tank at Lafarge exploded Monday morning.

No one was hurt and the damage was minimal. A wooden deck on top of the tank and the motor was damaged.

Fire Chief George Ditolla says the cause of the explosion is still under investigation although it appears to be electrical in nature.

Author: ColleenLocke Published: 8/6/2007 1:38:59 PM Retrieved April 26, 2023 from <https://www.9news.com/article/news/local/tank-explodes-at-asphalt-plant/73-343730236>

Author: ColleenLocke
Published: 8/6/2007 1:38:59 PM
Updated: 1:38 PM MDT August 6, 2007

No one was hurt and the damage was minimal. A wooden deck on top of the tank and the motor was damaged.

Fire Chief George Ditolla says the cause of the explosion is still under investigation although it appears to be electrical in nature.

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 **NEXT UP IN 5**
Property values jump 35% to 45% in 9 counties across Denver metro area

•

 **Yosemite closing for several days due to flooding**

IN OTHER NEWS

Extended headlines and weather for Wednesday evening

COMMERCE CITY, Colo. -- Fire officials say an asphalt tank caught fire at the United Asphalts plant in Commerce City this morning.

A witness told Denver7 there was an explosion.

Gregg Vest, was working security detail at a nearby business when he heard a loud boom, ran outside and saw smoke coming from one of the tanks at the asphalt plant at 4306 E. 60th Avenue.

"I called 911," he said.

Vest, snapped several photos of the black smoke emanating from the plant site.

Vest said he saw a crew member on a fork lift trying to control the blaze with a fire extinguisher.

An Adams County Fire Department spokesperson said the fire broke out around 11:25 a.m. as the crew tried to heat the tank "to get the right consistency."

There were no injuries.

Denver 7 news 2023 Scripps Media, Inc. Retrieved April 26, 2023 from <https://www.denver7.com/news/local-news/asphalt-tank-catches-fire-explodes-in-commerce-city>

One dead after explosion at Ardmore asphalt plant

Friday, July 16th 2021, 10:50 AM CDT

Updated:

Friday, July 16th 2021, 6:38 PM CDT

By **Lexy French**

ARDMORE, Okla. (KTEN) -- One person was killed after an explosion and fire at an Ardmore asphalt plant on Friday morning.

Ardmore police Chief Kevin Norris said they began receiving calls around 10 a.m. concerning the blast at Asphalt Express Enterprises at 415 North Plainview Road on the city's west side, not far from the Michelin tire plant.

"Firefighters arrived on the scene and found heavy flames and smoke coming from the back of the compound ... where they stored a lot of their volatile chemicals," said Ardmore Fire Department spokesperson Jason Woydziak.

Thick black smoke rose from the scene and could be seen for miles around.

Norris confirmed that one person died in the blast; no identity was released. The chief said no one else was injured.

"We don't know what the cause of the fire is," Chief Norris said. "Right now that is under investigation, and then OSHA will come in and do an investigation."

He said it may be several months before the origin of the blast can be identified.

Concerned family members of employees were asked to meet officers stationed nearby at the car wash at Broadway and Plainview Road for help in contacting loved ones.

The fire was reported under control as of 12:45 p.m.

Phone calls to the company by the AP rang unanswered on Friday and neither the fire department nor emergency services immediately replied to messages seeking comment.

According to its website, Asphalt Express provides transportation, storage and sales of bulk liquids such as asphalt and various types of oil at the Ardmore plant.

Retrieved April 26, 2023, from 10 news Okla. By Lexy French

<https://www.kten.com/story/44324469/fire-breaks-out-at-ardmore-asphalt-facility>

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Planning Commission May 1, 2023 Public Comment - Submission #3045

Date Submitted: 4/26/2023

First and Last Name*

Joe Hayes

Email Address*

diverhayes@yahoo.com

Are you a Town of Wellington Resident? *

☒

Yes

☐

No

Address

3328 Wild West lane wellington 80549

Public Comment for the Planning Commission May 1, 2023 Meeting

We are trying to work together as a city to fight hidden things, power and greed. We feel that the city employees are trying to sneak something into the town without letting us know about it. Luckily one of our neighbors found out about it, and notified us. We encourage more people to get involved and are asking that the truth be known that they are Toxic chemicals coming from the asphalt plant. This is not what the Connell companies representative presented to us and tried to say “only steam comes out no chemicals, no more than a gas station”. There is Also evidence that Connell has been out of compliance in the past & was fined \$7k via a Settlement Agreement with the CDC. We didn’t move here to be pushed out by greedy people who want to sell their families land that used to be a farm for millions of dollars to be an asphalt plant instead and right next to where our children go to play.

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Planning Commission May 1, 2023 Public Comment - Submission #3046

Date Submitted: 4/26/2023

First and Last Name*

Larry M. Rice

Email Address*

larryriceoc1@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

9073 Flaming Arrow Avenue

Public Comment for the Planning Commission May 1, 2023 Meeting

Dear Mr. Bird, Simply and to the point, I am a Wellington resident who resides and owns a home in Buffalo Creek subdivision, located to the west of the proposed Hot Asphalt Plant that is being considered for construction behind Wellington Community Park. I want to express in the strongest means possible that I oppose any such development in our community! Why? In plain terms that anyone can understand: IT STINKS! The smell, full of toxic gases and emissions. The eyesore (really, does anyone want to look out and see this ugly construction site?). The increase in heavy truck traffic within our town (as if we need any MORE traffic). The reduction in property values (who would like to have their home situated downwind of the asphalt fumes?). Noise pollution (yes, there are residents of Wellington who appreciate its small-town tranquility). And why is this hot asphalt plan even being considered to be located in Wellington? Hmmmâ€¦.letâ€™s think about that for a second. Money? Greed? Short-sighted, ill-informed thinking? All of the above? I think â€œall of the above.â€ I implore you, Mr. Bird, and the rest of the town trustees, including the mayor, to stop this ill-conceived idea from going any further. Do NOT allow this asphalt plan to be situated anywhere within Wellington. Not only for us current residents, but for those who might want to call Wellington their home in the future. Itâ€™s just a plain bad idea that should have never have been considered in the first place. Itâ€™s time to stop it now. Wellington does not need it. We do not need it! Thanks you for your time and consideration. Please do the right thing. Sincerely, Larry Rice Buffalo Creek Estates Sent from my iPhone

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Planning Commission May 1, 2023 Public Comment - Submission #3047

Date Submitted: 4/26/2023

First and Last Name*

Robby Oxford

Email Address*

jessicaoxford10@yahoo.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

6902 Grassy Range Dr.

Public Comment for the Planning Commission May 1, 2023 Meeting

To whom it may concern, We are all about growth and prosperity for our town, however allowing a large, toxic, company such as an asphalt plant to move in brings a lot of negative effects to our community. Some of these negatives include unwanted traffic, as well as all the health risks that it would bring, including breathing in toxic chemicals and potential water contamination in already questionable water, etc... The smell is just another negative aspect to add to this list of reasons why a plant does not belong here. I don't usually speak up, but this is a concern in which myself and many others do not agree with. We should not be allowing this to happen to our town. Thank you for your time and consideration of our opinion.

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Planning Commission May 1, 2023 Public Comment - Submission #3048

Date Submitted: 4/26/2023

First and Last Name*

Lorene Simpson

Email Address*

Lrsimpson25@gmail

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

6915 Grassy Range Dr

Public Comment for the Planning Commission May 1, 2023 Meeting

As a new homeowner in the state of Colorado and Wellington, I would like to express my concern over the Cornell asphalt plan and its toxic chemicals. It cannot be located at the proposed location due to the set back requirements of 2640 feet from any residential district, school, medical facility or religious area. DO NOT APPROVE THIS PLAN as the plant produces and curates toxic chemicals. Thank you for taking the property owners concern. Lorene Simpson

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Planning Commission May 1, 2023 Public Comment - Submission #3049

Date Submitted: 4/26/2023

First and Last Name*

Nathan Schmidt

Email Address*

nds.schmidt@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3233 Grizzly Way Wellington Co

Public Comment for the Planning Commission May 1, 2023 Meeting

I have lived in Wellington for six years, and we are wanting to start a family soon, putting an asphalt plant near our neighborhood (Buffalo Creek) would cause health issues for us, as well as drastically lower the value of our house. If we want this city to continue to grow, we cannot put a toxic and loud commercial enterprise so close to our neighborhoods, schools, and playgrounds. Please use some common sense and do not allow the asphalt plant to be built in such close proximity to the city. Think 10-20 years from now and what would be in the best interest of the city and for the people that call this place home.

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Planning Commission May 1, 2023 Public Comment - Submission #3050

Date Submitted: 4/26/2023

First and Last Name*

Jennieann West

Email Address*

jennieann9378@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3294 Wild West Ln. Wellington, CO

Public Comment for the Planning Commission May 1, 2023 Meeting

OPPOSED to proposed asphalt plant. Please do not ruin our beautiful community of Buffalo Creek and the community park with a plant this close to our houses and playground for our children.

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Planning Commission May 1, 2023 Public Comment - Submission #3051

Date Submitted: 4/26/2023

First and Last Name*

Chad Mickschl

Email Address*

chad.guides@gmail.com

Are you a Town of Wellington Resident? *



Yes



No

Address

6915 Grassy Range Dr

Public Comment for the Planning Commission May 1, 2023 Meeting

I am against the decision to approve the Asphalt Plant from being built at the current location within Wellington town limits. 1. The town of Wellington was re-zoned in 2022 with the land that Connell Resources wants to develop zoned as Heavy Industrial. As Wellington was re-zoned, Heavy Industrial land came with setback requirements of 1000ft linear and 45ft height restrictions. The claim by Connell Resources that the land is not suitable for Heavy Industrial use with current setbacks should have led town planners to decide that this property should be re-zoned to Light Industrial to limit the setback needs. The need for a greater setback of 2640ft is actually more appropriate given the language in the Land Use Code Section 4.03.21 B curating toxic chemicals. Especially since it is adjacent to a residential neighborhood, a park and school. Additionally, the asphalt plant will not only impact the nearby neighborhoods, but our entire small town as the air quality will be impacted. 2. I have issues with the lack of informed decision making to grant the setback variance as well. It does not appear the town of Wellington has done any environmental (air quality, water quality and quantity, soil erosion), traffic impact, view shed impacts, noise, environmental justice for underserved communities, or economic impacts analyses that this will have on the health and safety of Wellington residents and wildlife such as migrating birds. The town must clearly understand and communicate to the public, the risks and/or benefits associated with the Asphalt Plant. This has yet to have been completed. Based on other locations where Asphalt Plants are located near neighborhoods, property values decreased 56% according to Blue Ridge Environmental Defense League (BREDL). BREDL also found that 45% of residents living within a half mile of a new asphalt plant reported a deterioration of their health, which began after the plant opened. Known toxins also come with an Asphalt Plant such as odor, formaldehyde, hexane, phenol, polycyclic organic matter, and toluene. The CDC's National Institute for Occupational Safety & Health states, "Known carcinogens have been found in asphalt fumes generated at work sites." Exposure to these air toxins may cause cancer, central nervous system problems, liver damage, respiratory problems, and skin irritation (EPA Asphalt Plant Emission Assessment Report 2000). The town of Wellington has a number of human health and safety issues to deal with currently, they do not need to add another issue. The responsibility of the Town of Wellington and its elected representatives is the health, safety, and well being of its residents. If this asphalt plant is approved, the town is falling far short of this responsibility. 3. The economic impact on the residents and the town will be noticeable. Residents will lose property value and will likely look to move out of town. With issues Wellington is already trying to deal with (train crossings, water quality, water price, concentrated feed lots, close proximity to the highway), this will likely be the final thing to tilt residents to leave. Businesses will also likely leave and close as their consumers will leave town. 4. There are certainly better locations for the Asphalt Plant to be located. Connell Resources likes to mention that homes have been built in Fort Collins next to their plants, however that is a homeowners decision. With this approval, homeowners were not able to make a decision to live next to an Asphalt Plant, the town of Wellington is poorly making that decision for them. As elected officials, you must stand up for your constituents. There are large swaths of county land in Larimer and Weld where this could be located away from residential areas. Connell Resources claims that the counties don't want the Asphalt Plants, but there is a process to get those approved there. There are also areas within Weld County where these plants are welcomed. Connell Resources also claimed that they could open in Carr (where they get their aggregate) but its too cold and windy for transporting? There are common mitigations such as lining and insulating trucks for transport. Asphalt plants exist in far colder places than the Front Range of Colorado. It's time for the town of Wellington to STOP being Fort Collins' dumping ground. Thank you for taking comments and I trust the right decision will be made regarding the health, safety, and viability of residents and the town of Wellington. Chad Mickschl

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Planning Commission May 1, 2023 Public Comment - Submission #3054

Date Submitted: 4/27/2023

First and Last Name*

Jessica R Howe

Email Address*

colacinoj@yahoo.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

8802 Raging Bull Lane

Public Comment for the Planning Commission May 1, 2023 Meeting

I have COPD and a history of breast cancer. Having an asphalt company in town will exacerbate by COPD and I won't be able to live here. I cannot afford to move. We are highly against this plant being built here due to health concerns. Thank you

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Planning Commission May 1, 2023 Public Comment - Submission #3055

Date Submitted: 4/27/2023

First and Last Name*

Aaron Hackett

Email Address*

aaron.e.hackett@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3337 Grizzly Way

Public Comment for the Planning Commission May 1, 2023 Meeting

Town of Wellington Planning Commission, I am extremely opposed to the proposed Asphalt Plant. I have a home that would be very close to this plant and I am very worried about chemical exposure, associated health impacts, noise pollution, and loss of property value. My wife is pregnant and as a parent-to-be I am appalled at the idea of raising my child near such a toxic industrial facility. The idea of putting an asphalt plant right in the center of a residential area when there are literally thousands of open acres near enough to be of no economic detriment is quite frankly one of the most ludicrous proposals I have ever heard. There is absolutely no reason to expose large numbers of children, mothers, and elderly individuals to the toxic fumes an asphalt plant would produce. The town, county, and state recently spent an extremely large sum of money building a new school that would be in the near vicinity to this proposed plant and therefore expose all the students, staff, and parents to these fumes. A simple solution to my and other's concerns would be to relocate the proposed plant to a significantly less populated area north or east of town. Aaron Hackett

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Planning Commission May 1, 2023 Public Comment - Submission #3056

Date Submitted: 4/27/2023

First and Last Name*

Trevor Vilkaitis

Email Address*

tvilkaitis@hotmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3282 Grizzly Way

Public Comment for the Planning Commission May 1, 2023 Meeting

To whom it may concern, In regards to the proposed asphalt plant, I strongly oppose the decision to allow the plant to be near Wellington. As a resident and homeowner in the Buffalo creek subdivision this will directly effect me and my family. Not only will my home value be compromised, but the pollution and health effects on me, my children and my animals is unacceptable. Also, Wellington is already on an infrastructure system that has been spread thin for years. For years now we have been on water restrictions, constant power outages and the traffic at peak times such as school start and finish times is already an issue. This area is not capable of supporting what is already here plus any industrial plant of any kind. Please take these concerns into consideration when discussing this asphalt plant near Wellington. Thank you.

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Planning Commission May 1, 2023 Public Comment - Submission #3057

Date Submitted: 4/27/2023

First and Last Name*

Ben Leistikow

Email Address*

ben.leistikow@me.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

8605 Citation Ct, Wellington

Public Comment for the Planning Commission May 1, 2023 Meeting

Dear Planning Board, The intent of this letter is that the Connell site plan doesnâ€™t meet the stringent requirements that apply to toxic chemicals and so cannot be located at the proposed location nor does a continuance for air modeling help with this. Land use code 4.03.21,B, regarding the production and curating of toxic chemicals requires these sites to be located at least 2,640 feet from any residential district, religious land use, medical care facility, or school. Batch asphalt plants produce toxic chemicals in the forms of HAPs and PAHs. Colorado Department of Public Health & Environment refer to these chemicals as toxic in their documentation. Additionally Lea Schneider from Larimer County Department of Public Health & Environment was quoted in the Coloradoan and at the previous meeting referring to these chemicals as toxic. John Warren also referenced these chemicals as toxic at major source levels. The code does not care about levels it only refers to if there are toxic chemicals. This batch asphalt plant produces and curates toxic chemicals. The planning board should not approve this plan due to the producing and curating setback of 2,640 feet. There is no variance for this setback. Thanks for your consideration, Ben Leistikow

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Proposed Wellington asphalt plant approval delayed.pdf

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This fact sheet answers.pdf

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PAH FAQ.pdf

Polycyclic Aromatic Hydrocarbons (PAHs) - ToxFAQs™

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pöl'i-sī'klīk ār'ō-māt'īk hī'drō-kar'bānz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.

- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.
- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

Polycyclic Aromatic Hydrocarbons

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaqs/index.asp>.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Coloradoan.

BUSINESS

Approval of asphalt plant in Wellington put on hold for more air quality data



Pat Ferrier

Fort Collins Coloradoan

Published 11:03 a.m. MT March 7, 2023 | Updated 12:33 p.m. MT March 7, 2023

Wellington's planning commission delayed a decision about a new asphalt plant in north Wellington to get more information on what level of toxins, if any, are dispersed into the air.

During a four-hour hearing, residents living near the proposed Connell asphalt plant at 3548 E. County Road 66 voiced concerns about air pollution, noise and truck traffic the plant may generate. The plant would mix asphalt for use in roads and highways.

The site is in an industrial zone on a lot south of County Road 66 between North County Road 7 and North County Road 9, adjacent to Buffalo Creek subdivision and the undeveloped Sundance subdivision.

Connell Resources' current plant, which is nearing the end of its lifespan, is just south of the Harmony Road and Interstate 25 intersection in Timnath. Connell plans to close the plant and redevelop it as a commercial and residential project, including a potential Topgolf entertainment center.

The planning commission is the last approval Connell needs before it can apply for a building permit. The Wellington Board of Adjustments approved two variances for the plant in October, including allowing a 70-foot silo and an 800-foot buffer from residential areas.

Wellington's land use code limits heights in the industrial zone to 45 feet and requires a 1,000-foot buffer from neighborhoods.

Flooded with last-minute emails and in-person comments from neighbors questioning the levels of benzene, formaldehyde and other toxins that could be emitted from the plant, commissioners stepped on the brakes, asking town planners to find additional resources and data to help them sort through conflicting information.

"Are there going to be toxic chemicals emitted at this plant?" Commissioner Lowrey Moyer asked. "Is the 800-foot buffer enough? Are our kids going to be OK? As a resident with four kids, I want to know."

Lea Schneider, an environmental health planner with Larimer County, said the plant does produce air toxics — pollutants that are known or suspected to cause cancer or other serious health effects — but the concentrations depend on production levels and equipment.

An analysis of potential air toxics at a larger asphalt plant near the Poudre Trail in Fort Collins had emissions that were within acceptable levels even for the closest neighbor and at the trailhead, she said. "But each asphalt plant is individual. Air dispersion modeling will be a huge asset to evaluate what needs to be done to protect the community if this is approved."

Wellington's land use code and the state require the plant to be tested regularly for air pollutants.

John Warren, president of Connell Resources, said that in 2002 the Environmental Protection Agency removed asphalt plants from its list of major sources of hazardous air pollution under the Clean Air Act and concluded asphalt plants do not have the potential to emit hazardous air pollution approaching major source levels.

Connell will comply with all emission regulations, but emissions coming from the plant are similar to emissions from everyday sources, he said. "It's a misnomer that's what coming out of the stack is asphalt fumes," he said. "It's steam coming off the natural gas used to

heat aggregates. We use a lot of natural gas, but (the emissions) are no different from what's coming off the furnace at your house."

A report from Sanborn, Head & Associates of Denver reported in an emissions comparison report that the benzene emissions from the combustion of fuel are equivalent to a single gas station or single fast-food restaurant in a year. In a letter sent to commissioners, resident Katie Meyer urged the board to require a 2,640-foot setback, which the Wellington land use code recommends for heavy industrial and manufacturing uses.

"The town has due diligence to find the correct unbiased research and data to make sure the land use code is properly followed," she wrote.

Jason Waldo, whose family has owned the property next door for 45 years, said Connell has addressed his family's concerns. "As a family, we feel this is a good opportunity to have a quality ... company as neighbors."

The property has been zoned industrial for years, and given that the asphalt plant will operate seasonally, from about April to November, Waldo said his family supports the project.

About the proposed Connell Resources asphalt plant in Wellington

Acres: 35

Estimated number of truck trips during production season: 50 to 60 per day

Operating hours/months: 7 a.m. to 5 or 6 p.m., April through November

Employees: 35

Polycyclic Aromatic Hydrocarbons (PAHs) - ToxFAQs™

This fact sheet answers the most frequently asked health questions (FAQs) about polycyclic aromatic hydrocarbons (PAHs). For more information, call the CDC Information Center at 1-800-232-4636. This fact sheet is one in a series of summaries about hazardous substances and their health effects. This information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present.

HIGHLIGHTS: Exposure to polycyclic aromatic hydrocarbons usually occurs by breathing air contaminated by wild fires or coal tar, or by eating foods that have been grilled. PAHs have been found in at least 600 of the 1,430 National Priorities List (NPL) sites identified by the Environmental Protection Agency (EPA).

What are polycyclic aromatic hydrocarbons?

(Pronounced pöl'i-sī'klīk ār'ō-māt'īk hī'drō-kar'bānz)

Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot.

Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides.

What happens to PAHs when they enter the environment?

- PAHs enter the air mostly as releases from volcanoes, forest fires, burning coal, and automobile exhaust.
- PAHs can occur in air attached to dust particles.
- Some PAH particles can readily evaporate into the air from soil or surface waters.
- PAHs can break down by reacting with sunlight and other chemicals in the air, over a period of days to weeks.
- PAHs enter water through discharges from industrial and wastewater treatment plants.

- Most PAHs do not dissolve easily in water. They stick to solid particles and settle to the bottoms of lakes or rivers.
- Microorganisms can break down PAHs in soil or water after a period of weeks to months.
- In soils, PAHs are most likely to stick tightly to particles; certain PAHs move through soil to contaminate underground water.
- PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live.

How might I be exposed to PAHs?

- Breathing air containing PAHs in the workplace of coking, coal-tar, and asphalt production plants; smokehouses; and municipal trash incineration facilities.
- Breathing air containing PAHs from cigarette smoke, wood smoke, vehicle exhausts, asphalt roads, or agricultural burn smoke.
- Coming in contact with air, water, or soil near hazardous waste sites.
- Eating grilled or charred meats; contaminated cereals, flour, bread, vegetables, fruits, meats; and processed or pickled foods.
- Drinking contaminated water or cow's milk.
- Nursing infants of mothers living near hazardous waste sites may be exposed to PAHs through their mother's milk.

Polycyclic Aromatic Hydrocarbons

How can PAHs affect my health?

Mice that were fed high levels of one PAH during pregnancy had difficulty reproducing and so did their offspring. These offspring also had higher rates of birth defects and lower body weights. It is not known whether these effects occur in people.

Animal studies have also shown that PAHs can cause harmful effects on the skin, body fluids, and ability to fight disease after both short- and long-term exposure. But these effects have not been seen in people.

How likely are PAHs to cause cancer?

The Department of Health and Human Services (DHHS) has determined that some PAHs may reasonably be expected to be carcinogens.

Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer. Some PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer), or had them applied to their skin (skin cancer).

Is there a medical test to show whether I've been exposed to PAHs?

In the body, PAHs are changed into chemicals that can attach to substances within the body. There are special tests that can detect PAHs attached to these substances in body tissues or blood. However, these tests cannot tell whether any health effects will occur or find out the extent or source of your exposure to the PAHs. The tests aren't usually available in your doctor's office because special equipment is needed to conduct them.

Has the federal government made recommendations to protect human health?

The Occupational Safety and Health Administration (OSHA) has set a limit of 0.2 milligrams of PAHs per cubic meter of air (0.2 mg/m^3). The OSHA Permissible Exposure Limit (PEL) for mineral oil mist that contains PAHs is 5 mg/m^3 averaged over an 8-hour exposure period.

The National Institute for Occupational Safety and Health (NIOSH) recommends that the average workplace air levels for coal tar products not exceed 0.1 mg/m^3 for a 10-hour workday, within a 40-hour workweek. There are other limits for workplace exposure for things that contain PAHs, such as coal, coal tar, and mineral oil.

Glossary

Carcinogen: A substance that can cause cancer.

Ingest: Take food or drink into your body.

References

Agency for Toxic Substances and Disease Registry (ATSDR). 1995. Toxicological profile for polycyclic aromatic hydrocarbons. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service.

Where can I get more information?

For more information, contact the Agency for Toxic Substances and Disease Registry, Division of Toxicology and Human Health Sciences, 1600 Clifton Road NE, Mailstop F-57, Atlanta, GA 30329-4027.

Phone: 1-800-232-4636.

ToxFAQs™ Internet address via WWW is <http://www.atsdr.cdc.gov/toxfaqs/index.asp>.

ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Print

Planning Commission May 1, 2023 Public Comment - Submission #3058

Date Submitted: 4/27/2023

First and Last Name*

Ayla Leistikow

Email Address*

Ayla.leistikow@gmail.com

Are you a Town of Wellington Resident? *



Yes



No

Address

8605 Citation Ct

Public Comment for the Planning Commission May 1, 2023 Meeting

Dear Planning Board, The intent of this letter is to bring attention to our 2,640' setback for producing and curating toxic chemicals. It's frustrating to hear the EPA say they don't have the resources or money to deal with toxic chemicals coming from asphalt plant emissions, so they leave it up to each state. Colorado has been severely neglecting families by not putting money into research for this industry. In the documents I've submitted, you can see North Carolina is very upfront about these toxic chemicals. New Jersey has information that poisonous gases are produced in a fire, containers may explode. A quick google search shows asphalt plant explosions happen more often than they should. Asking for a continuance for the air dispersion study is useless. The air dispersion study is finding thresholds for these toxic chemicals, Connell wouldn't be able to do the study without producing toxic chemicals. The land use code does not reference thresholds in the setback, the plant has to simply produce toxic chemicals. I am asking the board to deny the continuance and apply the 2,640ft setback for producing and curating toxic chemicals. I have also included emails from the Weld County planner, and Larimer County planner stating Connell's options for finding a safer location away from families. Thanks, Ayla Leistikow

Optional File Attachment

County planners.pdf

Optional File Attachment

Poisonous gases.pdf

Optional File Attachment

Environmental Quality.pdf

EMERGENCY INFORMATION

Common Name: **ASPHALT**
DOT Number: **NA 1999 (Asphalt)**
UN 1999 (Tars, Liquid)
DOT Hazard Class: **3 (Flammable)**
NAERG Code: **130**
CAS Number: **8052-42-4**

Hazard rating	NJDHSS	NFPA
FLAMMABILITY	-	1, 2 or 3
REACTIVITY	-	0
FLAMMABLE OR COMBUSTIBLE DEPENDING ON FORMULATION POISONOUS GASES ARE PRODUCED IN FIRE CONTAINERS MAY EXPLODE IN FIRE		

Hazard Rating Key: 0=minimal; 1=slight; 2=moderate; 3=serious; 4=severe

FIRE HAZARDS

- * Cutback and Rapid Curing Asphalt are FLAMMABLE.
- * Typical or Medium to Slow Curing Asphalt is COMBUSTIBLE.
- * Use dry chemical, CO₂, water spray, or a foaming agent.
- * Water may cause frothing so do not apply solid streams of water directly on Asphalt.
- * POISONOUS GASES ARE PRODUCED IN FIRE including Sulfur Oxides and Hydrogen Sulfide.
- * CONTAINERS MAY EXPLODE IN FIRE.
- * Use water spray to keep fire-exposed containers cool.
- * Vapors may travel to a source of ignition and flash back.
- * Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source.
- * If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA Fire Brigades Standard (29 CFR 1910.156).

SPILLS AND EMERGENCIES

If Asphalt is spilled or leaked, take the following steps:

- * Evacuate personnel and secure and control entrance to the area.
- * Eliminate all ignition sources.
- * Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.
- * Ventilate and wash area after clean-up is complete.
- * Keep Asphalt out of a confined space, such as a sewer, because of the possibility of an explosion.
- * It may be necessary to contain and dispose of Asphalt as a HAZARDOUS WASTE. Contact your state Department of Environmental Protection (DEP) or your regional office of the federal Environmental Protection Agency (EPA) for specific recommendations.
- * If employees are required to clean-up spills, they must be properly trained and equipped. The OSHA Hazardous

Waste Operations and Emergency Response Standard (29 CFR 1910.120) may apply.

FOR LARGE SPILLS AND FIRES immediately call your fire department. You can request emergency information from the following:

CHEMTREC: (800) 424-9300
NJDEP HOTLINE: 1-877-WARN-DEP

HANDLING AND STORAGE (See page 3)

FIRST AID

For POISON INFORMATION call 1-800-222-1222

Eye Contact

- * Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting upper and lower lids.

Skin Contact

- * Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.

Breathing

- * Remove the person from exposure.
- * Begin rescue breathing (using universal precautions) if breathing has stopped and CPR if heart action has stopped.
- * Transfer promptly to a medical facility.

PHYSICAL DATA

Flash Point:

Cutback Asphalt: less than 50°F (10°C)
Slow to Rapid Curing Asphalt: 80°F (27°C) to 225°F (107°C)
Typical Asphalt: greater than 400°F (204°C)

Water Solubility: Insoluble

OTHER COMMONLY USED NAMES

This Fact Sheet can also be used for:

Asphalt (Cutback) RTK # 3172

Chemical Name:

Asphalt

Other Names:

Road Tar, Mineral Pitch; Petroleum Pitch; Bitumen

Not intended to be copied and sold for commercial purposes.

NEW JERSEY DEPARTMENT OF HEALTH AND
SENIOR SERVICES

Right to Know Program

PO Box 368, Trenton, NJ 08625-0368
(609) 984-2202



NORTH CAROLINA *Environmental Quality*



Asphalt Plants

Hot mix asphalt is a proportioned mixture of dried aggregate and liquid asphaltic concrete cement used as roadway paving material. Aggregate is a graded mixture of crushed stone, sand and recycled asphalt paving. Liquid asphaltic concrete cement is a mixture of hundreds of organic compounds that remain after crude oil refining. There more than 150 asphalt plants in North Carolina with DAQ Air Quality Permits.

How does an asphalt plant work?

There are two types of asphalt plants, batch mix and [drum mix \(/air-quality/drum-mix/download?attachment\)](/air-quality/drum-mix/download?attachment). In a drum mix facility, undried aggregate and heated asphalt are placed directly into the rotary drum dryer, where they are mixed. The asphalt produced can be stored on site in heated storage silos or loaded directly into trucks and transported off-site. In a [batch mix \(/air-quality/batch-mix/download?attachment\)](/air-quality/batch-mix/download?attachment) facility, the aggregate is dried separately in a rotary drum dryer and stored in heated bins. Heated aggregate measured per batch in a weigh box and a proportional amount of heated asphalt are mixed in a pugmill and either stored on-

site in heated storage silos or loaded directly into trucks for transport off-site.

How are asphalt plants regulated by DAQ?

- All asphalt plants must obtain an air quality permit.
- Asphalt plants are subject to state regulations for criteria pollutant emissions of particulate matter, carbon monoxide, sulfur dioxide, nitrogen dioxide and volatile organic compounds. Most asphalt plant air quality permits include production limits to avoid applicability of Prevention of Significant Deterioration (PSD) rules ([/air-quality/d0530/download?attachment](#)).
- A DAQ currently active asphalt plant permit reflects what specific equipment can be operated at a specific location. As asphalt plants consist of portable equipment modules, an asphalt plant may be moved and operated at numerous permitted locations depending on paving contracts.
- In November 1999 DAQ issued an asphalt plant permitting policy ([/water-quality/chemistry-lab/certification/memos/991118/download](#)), which requires new and modified asphalt plant applications to quantify all 97 Toxic Air Pollutants (TAPs) emitted to determine the need for air toxics permit limits using EPA AP-42 emissions.
 - If the emissions of a specific TAP are below their regulatory threshold in NC Regulation 15A NCAC 2Q.0711 ([/air-quality/q0711/download?attachment](#)), an air quality permit is not required.
 - If the TAP emissions exceed its threshold, a dispersion modeling demonstration must be performed. The results of this model must show that the emissions are below the acceptable ambient level (AAL) listed in NC Regulation 15A NCAC 2D.1104 ([/air-quality/d1104/download?attachment](#)), and air quality permit emission limit, for the respective TAP not to exceed the AAL, is required.
- Air pollutant emissions from asphalt plants can be calculated using the DAQ

[Asphalt Plant Spreadsheet \(.xls\) \(/documents/files/hma/download\).](#)

- In August 13, 2013 DAQ issued the [Emission Testing Frequency Policy \(/air-quality/hot-mix-asphalt-plant-performance-testing/download?attachment\)](#), which establishes the baseline testing frequency of 120 months, unless other factors require more frequent testing schedule.

Why are there are so many asphalt plants?

North Carolina has the second largest state-maintained highway system in the United States. The state has about 80,000¹ miles of roads, with more under construction every year. In addition, roads generally need resurfacing every 12 to 15 years, so about 4,400 miles of roads are repaved each year. Paving is difficult at lower temperatures, and highway contractors must reject asphalt that is not hot enough (at least 250oF). That means asphalt plants must be located fairly close to road construction sites.

What TAPs do asphalt plants emit?

Toxic air pollutants compounds emitted from asphalt plants include polycyclic aromatic compounds, volatile organic compounds, metals and hydrogen sulfide.

Toxic air pollutants (TAPs) emitted from asphalt plant ²		
Toxic Air Pollutant	Emitted from drum dryer and hot oil heater	Emitted from material handling and storage
Acetaldehyde	yes	no
Acrolein	yes	no

Formaldehyde	yes	yes
Phenol	no	yes
Styrene	no	yes
Trichlorofluoromethane (CFC 111)	no	yes
Methyl chloroform	yes	yes
Methyl ethyl ketone	yes	yes
Toluene	yes	yes
Xylene	yes	yes
Methylene chloride	no	yes
Soluble Chromate Compounds, as Chromium (VI)	yes	no
n-Hexane	yes	yes
Manganese & compounds	yes	no
Mercury	yes	no

Nickel & Compounds	yes	no
Carbon disulfide	no	yes
Tetrachlorodibenzo-p-dioxin, 2,3,7,8-	yes	no
Arsenic & Compounds	yes	no
Benzene	yes	yes
Benzo(a)pyrene	yes	yes
Hydrogen Sulfide	yes	yes
Beryllium	yes	no
Cadmium	yes	no
Hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8	yes	no
Hydrogen Chloride (hydrochloric acid)	yes	no
Perchloroethylene (tetrachloroethylene)	no	yes
Trichloroethylene	no	yes

From: Tom Parko Jr. tparko@weldgov.com
Subject: RE: Zoning county land
Date: Jan 26, 2023 at 8:55:27 AM
To: Ayla Leistikow ayla.leistikow@gmail.com

Good morning, Ayla.

Yes, the County's I-3 industrial zone district can accommodate asphalt and concrete batch plants with a Site Plan Review (SPR). Please see attached. See Section 23-3-330.C.4.

Sincerely,
Tom Parko
Director, Dept. of Planning Services
Weld County

-----Original Message-----

From: Ayla Leistikow <ayla.leistikow@gmail.com>
Sent: Wednesday, January 25, 2023 3:39 PM
To: Tom Parko Jr. <tparko@weldgov.com>
Subject: Zoning county land

Caution: This email originated from outside of Weld County Government. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello,

I have a question regarding zoning. Can an asphalt company buy county land and get it rezoned to heavy industrial for a batch asphalt plant?

Thanks,
Ayla

From: Lea Schneider schneils@co.larimer.co.us
Subject: Re: Wellington asphalt plant
Date: Jan 11, 2023 at 9:34:04 AM
To: Ayla Leistikow ayla.leistikow@gmail.com

Good morning Ayla!

I did not see the connell made it to planning commission on Mon...is that true?

1. Connell could purchase land in unincorporated Larimer County and apply to rezone the land. This would require the company to submit a sketch plan application with Larimer County, hold a public meeting, then apply for a public hearing rezoning application. They would also have to complete a Special Review process either combined or separate applications. This process could take over a year or more.

2. If the company is not able to find a location for the Connell asphalt plant...

Print

Planning Commission May 1, 2023 Public Comment - Submission #3059

Date Submitted: 4/27/2023

First and Last Name*

Randi Vilkaitis

Email Address*

Randinicole502@hotmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3282 grizzly way

Public Comment for the Planning Commission May 1, 2023 Meeting

To whom it may concern, In regards to the proposed asphalt plant, I strongly oppose the decision to allow the plant to be near Wellington. As a resident and homeowner in the Buffalo creek subdivision this will directly effect me and my family. Not only will my home value be compromised, but the pollution and health effects on me, my children and my animals is unacceptable. Also, Wellington is already on an infrastructure system that has been spread thin for years. For years now we have been on water restrictions, constant power outages and the traffic at peak times such as school start and finish times is already an issue. This area is not capable of supporting what is already here plus any industrial plant of any kind. Please take these concerns into consideration when discussing this asphalt plant near Wellington. Thank you.

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Planning Commission May 1, 2023 Public Comment - Submission #3061

Date Submitted: 4/28/2023

First and Last Name*

David Goodness

Email Address*

dgoodness@comcast.net

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

7090 Grassy Range Dr

Public Comment for the Planning Commission May 1, 2023 Meeting

To Whom it May Concern: I recently learned of the proposed development of an asphalt plant near the Wellington Community Park. I am very disappointed that this is being considered. Not only do I live in Wellington, but I take my granddaughter to the Community Park to enjoy the playgrounds and water park. There are no benefits to this plan as everyone knows an asphalt plant is a heavy industry that produces toxic chemicals, which will affect the health of people and the environment. There must be a safe distance between this project and citizens of Wellington. I hope I can be assured that the leaders of this community have the health and safety interests of its citizens in mind. Thank you

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Planning Commission May 1, 2023 Public Comment - Submission #3062

Date Submitted: 4/28/2023

First and Last Name*

Dr. Fred Condos

Email Address*

fjc448@gmail ,com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

8994 Raging Bull Lane

Public Comment for the Planning Commission May 1, 2023 Meeting

My name is Dr. Fred Condos. I am retired and reside at the above stated address in the Buffalo Creek neighborhood. Our home is almost 3/4 of a mile from the proposed Connell Resources Hot Batch Asphalt Plant. I oppose the approval of Connell's application! The Town has not provided sufficient indications to the citizens of Wellington that answer the following: How will the construction of an Asphalt Plant within the city limits of Wellington benefit its' residents? Will it benefit us to be exposed to known health hazards from the proposed Asphalt Plant emissions particularly Nitrogen Oxides? See attachment from the U.S. Center for Disease Control Medical Management Guidelines for Nitrogen Oxides describing the health hazards posed even by the acceptable emission levels of Nitrogen Oxides. On June 20, 2021, The Colorado Department of Health & Environment issued an Out of Compliance status for excessive Carbon Monoxide and Nitrogen Oxides emission rates from the asphalt baghouse to the Connell Asphalt Plant in Fort Collins. The Stack Test and attending documents can be obtained from the Colorado Department of Health \$ Environment. The Commission likely already has that information. Will it happen here too? How would that benefit us? Will it benefit us to be exposed to the excessive noise associated the process from trucks, loading and unloading aggregate materials, as well as truck trave to and from plant? Will it benefit us to have the park, people's back yards, schools the Community Park and neighborhoods barren of people on hot days and nights from the smell and particulates emitting from the plant stack? . Are the road conditions adequate to support the excessive truck loads a day. Who is responsible to improve and maintain the road improvements? Will these needs be a benefit to us? Will it benefit us when our property values drop because of an asphalt plant in our city limits? Most of us worked hard and planned carefully to make a happy, secure, quiet and safe home and environment to live, raise our children and spend our retirement years absent a preposterous and intrusive thing like an asphalt plant as a neighbor, Please answer us about how we benefit with an asphalt plant in our backyards? I am not convinced! Will our quality of life, our peace and happiness be improved and benefit us if the plant is built.

Optional File Attachment

Nitrogen Oxides _ Medical
Management Guidelines _ Toxic
Substance Portal .pdf

Optional File Attachment

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Toxic Substances Portal

Medical Management Guidelines for Nitrogen Oxides

(NO, NO₂, and others)

CAS# 10102-43-9, 10102-44-0

UN# 1660 (NO), 1067 (NO₂), 1975 (Mixture)

[PDF Version](#)  [295 KB]

Synonyms for nitric oxide (NO) include mononitrogen monoxide and nitrogen monoxide. Synonyms for nitrogen dioxide (NO₂) include dinitrogen tetroxide, nitrogen peroxide, nitrogen tetroxide, and NTO. Synonyms for mixtures of nitrogen oxides include nitrogen fumes and nitrous fumes.

- Persons exposed only to nitrogen oxide gases do not pose substantial secondary contamination risks. Persons whose clothing is contaminated with liquid nitrogen oxides can secondarily contaminate others by direct contact or through off-gassing vapors.
- Nitric oxide and nitrogen dioxide are nonflammable liquids or gases; however, they will accelerate the burning of combustible materials. Odor generally provides an adequate warning of acute exposure providing the higher oxides (NO₂, N₂O₄ and N₂O₅) are present. Nitric oxide (NO) is odorless and nitrous oxide (N₂O) has only a very faint odor.
- The primary route of exposure to nitrogen oxides is by inhalation, but exposure by any route can cause systemic effects. Nitrogen oxides are irritating to the eyes, skin, mucous membranes, and respiratory tract. On contact with moisture, nitrogen dioxide forms a mixture of nitric and nitrous acids.

General Information

Description

Nitrogen oxides represent a mixture of gases designated by the formula NO_x. The mixture includes nitric oxide (NO), nitrogen dioxide (NO₂), nitrogen trioxide (N₂O₃), nitrogen tetroxide (N₂O₄), and nitrogen pentoxide (N₂O₅). The toxicity of nitrous oxide (N₂O) or laughing gas, which is used as an anesthetic, is different from that of the other nitrogen oxides and is not discussed in this protocol.

The most hazardous of the nitrogen oxides are nitric oxide and nitrogen dioxide; the latter exists in equilibrium with its dimer, nitrogen tetroxide. Nitric oxide is a colorless gas at room temperature, very sparingly soluble in water. Nitrogen dioxide is a colorless to brown liquid at room temperature and a reddish-brown gas above 70°F poorly soluble in water. Nitric oxide is rapidly oxidized in air at high concentrations to form nitrogen dioxide.

Routes of Exposure

Inhalation

Nitrogen oxides (NO₂, N₂O₄, N₂O₃ and N₂O₅) are irritating to the upper respiratory tract and lungs even at low concentrations. Only one or two breaths of a very high concentration can cause severe toxicity. Odor is generally an adequate warning property for acute exposures. Nitrogen dioxide is heavier than air, such that exposure in poorly ventilated, enclosed, or low-lying areas can result in asphyxiation.

Children exposed to the same levels of nitrogen oxides as adults may receive larger doses because they have greater lung surface area:body weight ratios and increased minute volumes:weight ratios. In addition, they may be exposed to higher levels of nitrogen dioxide than adults in the same location because of their short stature and the higher levels of nitrogen

dioxide found nearer to the ground.

Skin/Eye Contact

Exposure to relatively high air concentrations can produce eye irritation and inflammation.

Children are more vulnerable to toxicants affecting the skin because of their relatively larger surface area:body weight ratio.

Ingestion

Both nitrogen dioxide and nitric oxide are gases at room temperature. However, nitrogen dioxide exists as a liquid below 21°C and, if ingested, will cause gastrointestinal irritation or burns.

Sources/Uses

Nitrogen oxides form naturally during the oxidation of nitrogen-containing compounds such as coal, diesel fuel, and silage. Nitrogen oxides are also formed during arc welding, electroplating, engraving, dynamite blasting, as components of rocket fuel, and nitration reactions such as in the production of nitro-explosives, including gun-cotton, dynamite and TNT. They are produced commercially, usually as the first step in the production of nitric acid, either by the direct oxidation of atmospheric nitrogen in the electric arc (Birkeland-Eyder Process) or by the catalytic oxidation of anhydrous ammonia (Oswald Process). Trace metal impurities most likely cause nitrogen oxides to form in nitric acid and its solutions. Nitrogen oxides are intermediates in the production of lacquers, dyes, and other chemicals and are important components of photo-oxidant smog.

Standards and Guidelines

Nitric Oxide: OSHA PEL (permissible exposure limit) = 25 ppm (averaged over an 8-hour workshift)

NIOSH IDLH (immediately dangerous to life or health) = 100 ppm

Nitrogen Dioxide: OSHA PEL (permissible exposure limit) = 5 ppm (Ceiling)

NIOSH IDLH (immediately dangerous to life or health) = 20 ppm

Nitrogen Dioxide AIHA ERPG-2 (maximum airborne concentration below which it is believed that nearly all persons could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action) = 15 ppm

Physical Properties

Nitric Oxide

Description: Colorless gas Yellow-brown liquid or red-brown gas

Warning properties: Non-irritating, odorless and colorless gas; no adequate 1-5 ppm; warning for acute exposure unless accompanied by NO₂ or another higher oxide as is usual.

Molecular weight: 30.0 daltons

Boiling point (760 mm Hg): -241°F (-152°C)

Freezing point: -263°F (-164°C)

Vapor pressure: >760 mm Hg at 68°F (20°C)

Gas density: 1.0 (air = 1)

Water solubility: Water soluble

Flammability: Not flammable, but will accelerate burning of combustible materials

Nitrogen Dioxide

Description: Yellow-brown liquid or red-brown gas

Warning properties: Irritating, sharp odor at adequate warning for acute exposure; inadequate warning for chronic exposure.

Molecular weight: 46.0 daltons

Boiling point (760 mm Hg): 70°F (21°C)

Freezing point: 12°F (-11°C)

Vapor pressure: 720 mm Hg at 68°F (20°C)

Gas density: 1.5 (air = 1)

Water solubility: Highly soluble, but reacts with water to form a mixture of nitric and nitrous acids.

Flammability: Not flammable, but will accelerate burning of combustible materials

Incompatibilities

Nitrogen dioxide and nitric acid react with combustible materials, chlorinated hydrocarbons, carbon disulfide, and ammonia. May react violently with cyclohexane, fluorine, formaldehyde and alcohol, nitrobenzene, petroleum, and toluene.

Health Effects

- Most of the higher oxides of nitrogen are eye, skin, and respiratory tract irritants. Nitrogen dioxide is a corrosive substance that forms nitric and nitrous acids upon contact with water; it is more acutely toxic than nitric oxide, except at lethal concentrations when nitric oxide may kill more rapidly. Nitric oxide is a potent and rapid inducer of methemoglobinemia.
- Exposure to nitrogen oxides may result in changes of the pulmonary system including pulmonary edema, pneumonitis, bronchitis, bronchiolitis, emphysema, and possibly methemoglobinemia. Cough, hyperpnea, and dyspnea may be seen after some delay.
- Damage to, and subsequent scarring of, the bronchioles may result in a life-threatening episode several weeks following exposure involving cough, rapid, shallow breathing, rapid heartbeat, and inadequate oxygenation of the tissues.
- Populations that may be particularly sensitive to nitrogen oxides include asthmatics and those with chronic obstructive pulmonary disease or heart disease.

Acute Exposure

Nitrogen dioxide is thought to damage lungs in three ways: (1) it is converted to nitric and nitrous acids in the distal airways, which directly damages certain structural and functional lung cells; (2) it initiates free radical generation, which results in protein oxidation, lipid peroxidation, and cell membrane damage; and (3) it reduces resistance to infection by altering macrophage and immune function. There may be an immediate response to exposure to nitrogen oxide vapors that may include coughing, fatigue, nausea, choking, headache, abdominal pain, and difficulty breathing. A symptom-free period of 3 to 30 hours may then be followed by the onset of pulmonary edema with anxiety, mental confusion, lethargy, and loss of consciousness. If survived, this episode may be followed by bronchiolitis obliterans (fibrous obstruction of the bronchioles) several weeks later. Any of these phases can be fatal.

Children do not always respond to chemicals in the same way that adults do. Different protocols for managing their care may be needed.

Respiratory

The higher nitrogen oxides are respiratory irritants. The primary site of toxicity is the lower respiratory tract. Low concentrations initially may cause mild shortness of breath and cough; then, after a period of hours to days, victims may suffer bronchospasm and pulmonary edema. Inhalation of very high concentrations can rapidly cause burns, spasms, swelling of tissues in the throat, upper airway obstruction, and death.

Exposure to certain chemicals can lead to Reactive Airway Dysfunction Syndrome (RADS), a chemically- or irritant-induced type of asthma.

Children may be more vulnerable to corrosive agents than adults because of the relatively smaller diameter of their airways. Children also may be more vulnerable because of relatively increased minute ventilation per kg and failure to evacuate an area promptly when exposed.

Cardiovascular

Absorption of nitrogen oxides can lead to a weak rapid pulse, dilated heart, chest congestion, and circulatory collapse.

Hematologic

High-dose exposure may convert Fe^{+2} in hemoglobin to Fe^{+3} , by virtue of the presence of nitric oxide (NO), causing methemoglobinemia and impaired oxygen transport.

Dermal

Higher nitrogen oxides are skin irritants and corrosives. Skin moisture in contact with liquid nitrogen dioxide or high concentrations of its vapor can result in nitric acid formation, which may lead to second- and third-degree skin burns. Nitric acid may also cause yellowing of the skin and erosion of dental enamel.

Because of their relatively larger surface area:body weight ratio, children are more vulnerable to toxicants affecting the skin.

Ocular

Liquid nitrogen oxides cause severe eye burns after brief contact. High concentrations of the gas cause irritation and, after prolonged exposure, may cause clouding of the eye surface and blindness.

Potential Sequelae

Obstruction of the bronchioles may develop days to weeks after severe exposure. Patients suffer malaise, weakness, fever, chills, progressive shortness of breath, cough, hemorrhage of the lungs or bronchioles, blue or purple coloring of the skin, and respiratory failure. This condition may be confused with the adult respiratory distress syndrome secondary to infectious diseases such as miliary tuberculosis.

Victims of inhalation exposure may suffer reactive airways dysfunction syndrome (RADS) after a single acute, high-dose exposure.

Chronic Exposure

Chronic exposure to nitrogen oxides is associated with increased risk of respiratory infections in children. Permanent restrictive and obstructive lung disease from bronchiolar damage may occur.

Carcinogenicity

Nitrogen oxides have not been classified for carcinogenic effects.

Reproductive and Developmental Effects

Nitric oxide and nitrogen dioxide are not included in *Reproductive and Developmental Toxicants*, a 1991 report published by the U.S. General Accounting Office (GAO) that lists 30 chemicals of concern because of widely acknowledged reproductive and developmental consequences. Methemoglobin inducers are considered harmful to the fetus and nitrogen dioxide has been shown to be fetotoxic in rats and has affected behavior and growth statistics in newborn mice. Nitrogen dioxide also causes DNA damage, mutations, sister chromatid exchanges, and other DNA aberrations.

Special consideration regarding the exposure of pregnant women may be warranted, since nitrogen oxides have been shown to be mutagenic and clastogenic, and fetotoxic in rats; thus, medical counseling is recommended for the acutely exposed pregnant woman.

Prehospital Management

- Victims exposed only to nitrogen oxide gases do not pose risks of secondary contamination to rescuers. Victims whose clothing or skin is contaminated with liquid nitrogen oxides or nitric acid can secondarily contaminate response personnel by direct contact or through off-gassing vapors.
- Most of the higher nitrogen oxides are eye, skin, and respiratory tract irritants. Initial respiratory symptoms after exposure to nitrogen oxides may be mild, but progressive inflammation of the lungs may develop several hours to days after exposure. Noncardiogenic pulmonary edema may develop even if initial pulmonary signs were minimal. Exposures may result in methemoglobinemia, depending upon the presence of nitric oxide (NO) in the gas mixture.
- There is no antidote for nitrogen oxides. Primary treatment consists of respiratory and cardiovascular support. Methylene blue may be necessary to treat methemoglobinemia.

Hot Zone

Rescuers should be trained and appropriately attired before entering the Hot Zone. If the proper equipment is not available, or if rescuers have not been trained in its use, assistance should be obtained from a local or regional HAZMAT team or other properly equipped response organization.

Rescuer Protection

Nitrogen oxides are severe respiratory tract irritants.

Respiratory Protection: Positive-pressure, self-contained breathing apparatus (SCBA) is recommended in response situations that involve exposure to potentially unsafe levels of nitrogen oxides.

Skin Protection: Chemical-protective clothing is recommended when repeated or prolonged contact with liquids of nitrogen oxides or with high concentrations of nitrogen oxide vapors is anticipated because skin irritation or burns may occur.

ABC Reminders

Quickly access for a patent airway, ensure adequate respiration and pulse. If trauma is suspected, maintain cervical immobilization manually and apply a cervical collar and a backboard when feasible.

Victim Removal

If victims can walk, lead them out of the Hot Zone to the Decontamination Zone. Victims who are unable to walk may be removed on backboards or gurneys; if these are not available, carefully carry or drag victims to safety.

Consider appropriate management of chemically contaminated children, such as measures to reduce separation anxiety if a child is separated from a parent or other adult.

Decontamination Zone

Victims exposed only to nitrogen oxide gases may appear to have no skin or eye irritation. However, they should still be decontaminated as described below as irritation may not become evident until washing commences.

Rescuer Protection

If exposure levels are determined to be safe, decontamination may be conducted by personnel wearing a lower level of protection than that worn in the Hot Zone (described above).

ABC Reminders

Quickly access for a patent airway, ensure adequate respiration and pulse. Stabilize the cervical spine with a collar and a backboard if trauma is suspected. Administer supplemental oxygen as required. Assist ventilation with a bag-valve-mask device if necessary.

Basic Decontamination

Victims who are able may assist with their own decontamination. Remove and double-bag contaminated clothing and personal belongings.

Flush exposed skin and hair with water for 20 minutes. Use caution to avoid hypothermia when decontaminating children or the elderly. Use blankets or warmers when appropriate.

Immediately begin irrigation of exposed or irritated eyes with plain water or saline and continue for at least 20 minutes. Remove contact lenses if easily removable without additional trauma. Continue eye irrigation during other basic care and transport.

If the victim has ingested a solution of nitrogen oxides or nitric acid, **do not induce emesis**. Do not administer activated charcoal. Victims who are conscious and able to swallow should be given 4 to 8 ounces of water or milk.

Consider appropriate management of chemically contaminated children at the exposure site. Also, provide reassurance to the child during decontamination, especially if separation from a parent occurs. If possible, seek assistance from a child separation expert.

Transfer to Support Zone

As soon as decontamination is complete, move the victim to the Support Zone.

Support Zone

Be certain that victims have been decontaminated properly (see *Decontamination Zone* above). Victims who have undergone decontamination pose no serious risks of secondary contamination to rescuers. In such cases, Support Zone personnel require no specialized protective gear.

ABC Reminders

Quickly access for a patent airway. If trauma is suspected, maintain cervical immobilization manually and apply a cervical collar and a backboard when feasible. Ensure adequate respiration and pulse. Administer supplemental oxygen as required and establish intravenous access if necessary. Place on a cardiac monitor.

Additional Decontamination

Continue irrigating exposed skin and eyes, as appropriate.

If the patient has ingested a solution of nitrogen oxides or nitric acid, **do not induce emesis**. Do not administer activated charcoal. Patients who are able to swallow should be given 4 to 8 ounces of water or milk, if not provided previously.

Advanced Treatment

In cases of respiratory compromise secure airway and respiration via endotracheal intubation. If not possible, perform cricothyroidotomy if equipped and trained to do so.

Treat patients who have bronchospasm with aerosolized bronchodilators. The use of bronchial sensitizing agents in situations of multiple chemical exposures may pose additional risks. Consider the health of the myocardium before choosing which type of bronchodilator should be administered. Cardiac sensitizing agents may be appropriate; however, the use of cardiac sensitizing agents after exposure to certain chemicals may pose enhanced risk of cardiac arrhythmias (especially in the elderly).

Consider racemic epinephrine aerosol for children who develop stridor. Dose 0.25-0.75 mL of 2.25% racemic epinephrine solution in 2.5 cc water, repeat every 20 minutes as needed, cautioning for myocardial variability.

Patients who are comatose, hypotensive, or are having seizures or cardiac arrhythmias should be treated according to advanced life support (ALS) protocols.

If evidence of shock or hypotension is observed begin fluid administration. For adults, bolus 1,000 mL/hour intravenous saline or lactated Ringer's solution if blood pressure is under 80 mm Hg; if systolic pressure is over 90 mm Hg, an infusion rate of 150 to 200 mL/hour is sufficient. For children with compromised perfusion administer a 20 mL/kg bolus of normal saline over 10 to 20 minutes, then infuse at 2 to 3 mL/kg/hour.

Transport to Medical Facility

Only decontaminated patients or patients not requiring decontamination should be transported to a medical facility. "Body bags" are not recommended.

Report to the base station and the receiving medical facility the condition of the patient, treatment given, and estimated time of arrival at the medical facility.

If a solution of nitrogen oxides, which means in effect a mixture of nitric (HNO₃) and nitrous (HNO₂) acids, has been ingested, prepare the ambulance in case the victim vomits toxic material. Have ready several towels and open plastic bags to quickly clean up and isolate vomitus.

Multi-Casualty Triage

Consult with the base station physician or regional poison control center for advice regarding triage of multiple victims. Because delayed respiratory compromise may occur even with minimal initial symptoms, all patients who have histories or evidence of exposure should be transported to a medical facility for evaluation. Because of the danger of acute, though delayed, onset of severe, life-threatening pulmonary edema from 3 to 30 hours after what may appear to have been quite a trivial exposure it is important that exposed subjects be maintained under medical surveillance for the first 48 hours post-exposure. If such are allowed to return home and acute pulmonary edema develops in a home environment during sleep it may not be possible to get the patient to resuscitative medical treatment in time. Others may be discharged at the scene after their names, addresses, and telephone numbers are recorded. Those discharged should be advised to seek medical care promptly if symptoms develop (see *Patient Information Sheet* below).

Emergency Department Management

- Patients exposed only to nitrogen oxide gases do not pose risks of secondary contamination to rescuers. Patients whose clothing or skin is contaminated with liquid nitrogen oxides or nitric acid can secondarily contaminate response personnel by direct contact or through off-gassing vapors.
- Most of the higher nitrogen oxides are eye, skin, and respiratory tract irritants. Initial respiratory symptoms after exposure to nitrogen oxides may be mild, but progressive inflammation of the lungs may develop several hours to days after exposure. Noncardiogenic pulmonary edema may develop even if initial pulmonary signs were minimal. Exposures may result in methemoglobinemia, depending upon the presence of nitric oxide (NO) in the gas mixture.
- There is no antidote for nitrogen oxides. Treatment consists of respiratory and cardiovascular support. Methylene blue may be necessary to treat methemoglobinemia.

Decontamination Area

Previously decontaminated patients may be transferred immediately to the Critical Care Area. Others require decontamination as described below.

Be aware that use of protective equipment by the provider may cause fear in children, resulting in decreased compliance with further management efforts.

Because of their relatively larger surface area:body weight ratio, children are more vulnerable to toxicants absorbed affecting the skin. Also, emergency room personnel should examine children's mouths because of the frequency of hand-to-mouth activity among children.

ABC Reminders

Evaluate and support airway, breathing, and circulation. Administer supplemental oxygen as required. Children may be more vulnerable to corrosive agents than adults because of the relatively smaller diameter of their airways. In cases of respiratory compromise secure airway and respiration via endotracheal intubation. If not possible, surgically create an airway.

Treat patients who have bronchospasm with aerosolized bronchodilators. The use of bronchial sensitizing agents in situations of multiple chemical exposures may pose additional risks. Consider the health of the myocardium before choosing which type of bronchodilator should be administered. Cardiac sensitizing agents may be appropriate; however, the use of cardiac sensitizing agents after exposure to certain chemicals may pose enhanced risk of cardiac arrhythmias (especially in the elderly).

Consider racemic epinephrine aerosol for children who develop stridor. Dose 0.25-0.75 mL of 2.25% racemic epinephrine solution in 2.5 cc water, repeat every 20 minutes as needed, cautioning for myocardial variability.

Patients who are comatose, hypotensive, or have seizures or ventricular arrhythmias should be treated in the conventional manner.

Basic Decontamination

Patients who are able may assist with their own decontamination. If the patient's clothing is wet with nitrogen oxides or nitric acid, remove and double-bag the contaminated clothing and all personal belongings.

Flush exposed skin and hair with water for 20 minutes (preferably under a shower). Use caution to avoid hypothermia when decontaminating children or the elderly. Use blankets or warmers when appropriate.

Begin irrigation of exposed eyes **immediately** and continue for at least 20 minutes. Remove contact lenses if easily removable without additional trauma to the eye. Continue irrigation while transporting the patient to the Critical Care Area.

If the patient has ingested a solution of nitrogen oxides or nitric acid, **do not induce emesis**. Do not administer activated charcoal. Activated charcoal is unlikely to be of benefit and may obscure endoscopic findings if GI tract irritation or burns are present. Patients who are conscious and able to swallow should be given 4 to 8 ounces of water or milk if not provided earlier.

Critical Care Area

Be certain that appropriate decontamination has been carried out (see *Decontamination Area* above).

ABC Reminders

Evaluate and support airway, breathing, and circulation as in *ABC Reminders* above. Administer supplemental oxygen as required. Children may be more vulnerable to corrosive agents than adults because of the relatively smaller diameter of their airways. Establish intravenous access in seriously symptomatic patients. Continuously monitor cardiac rhythm.

Patients who are comatose, hypotensive, or have seizures or ventricular arrhythmias should be treated in the conventional manner.

Inhalation Exposure

Administer supplemental oxygen by mask to patients who have respiratory symptoms. Treat patients who have bronchospasm with aerosolized bronchodilators. The use of bronchial sensitizing agents in situations of multiple chemical exposures may pose additional risks. Consider the health of the myocardium before choosing which type of bronchodilator should be administered. Cardiac sensitizing agents may be appropriate; however, the use of cardiac sensitizing agents after exposure to certain chemicals may pose enhanced risk of cardiac arrhythmias (especially in the elderly). Some clinicians recommend high doses of corticosteroids for seriously symptomatic patients, especially with severe bronchospasm; in patients with acute respiratory failure without bronchospasm, the value of steroids is unproven.

Consider racemic epinephrine aerosol for children who develop stridor. Dose 0.25-0.75 mL of 2.25% racemic epinephrine solution in 2.5 cc water, repeat every 20 minutes as needed, cautioning for myocardial variability.

Skin Exposure

If the skin was in contact with liquid nitrogen oxides or their solutions, chemical burns may occur; treat as thermal burns.

Because of their relatively larger surface area:body weight ratio, children are more vulnerable to toxicants affecting the skin.

Eye Exposure

Continue irrigation for at least 20 minutes. If liquid nitrogen oxides or nitric acid has been splashed in the eyes, irrigate until the pH of the conjunctival fluid has returned to normal. Test visual acuity. Examine the eyes for corneal damage and treat appropriately. Immediately consult an ophthalmologist for patients who have severe corneal injuries.

Ingestion Exposure

If the patient has ingested a solution of nitrogen oxides or nitric acid, **do not induce emesis**. Do not administer activated charcoal. Patients who are conscious and able to swallow should be given 4 to 8 ounces of water or milk if not provided earlier.

Consider endoscopy to evaluate the extent of gastrointestinal tract injury. Extreme throat swelling may require endotracheal intubation or cricothyroidotomy. Gastric lavage is useful in certain circumstances to remove caustic material and prepare for endoscopic examination. Consider gastric lavage with a small nasogastric tube if: (1) a large dose has been ingested; (2) the patient's condition is evaluated within 30 minutes; (3) the patient has oral lesions or persistent esophageal discomfort; and (4) the lavage can be administered within 1 hour of ingestion. Care must be taken when placing the gastric tube because blind gastric tube placement may further injure the chemically damaged esophagus or stomach.

Because children do not ingest large amounts of corrosive materials, and because of the risk of perforation from NG intubation, lavage is discouraged in children unless intubation is performed under endoscopic guidance.

Toxic vomitus or gastric washings should be isolated, e.g., by attaching the lavage tube to isolated wall suction or another closed container.

Antidotes and Other Treatments

There are no antidotes for nitrogen oxide poisoning. Methylene blue (tetramethylthionine chloride) should be considered for patients who have signs and symptoms of hypoxia (other than cyanosis) or for patients who have methemoglobin levels >30%. Cyanosis alone does not require treatment. Methylene blue may not be effective in patients who have G6PD deficiency and may cause hemolysis.

The standard dose of methylene blue is 1 to 2 mg/kg body weight (0.1 to 0.2 mL/kg of a 1% solution) intravenously over 5 to 10 minutes, repeated in 1 hour if needed. The total initial dose should not exceed 7 mg/kg. (Doses greater than 15 mg/kg may cause hemolysis.) Clinical response to methylene blue treatment is usually observed within 30 to 60 minutes. Side effects include nausea, vomiting, abdominal and chest pain, dizziness, diaphoresis, and dysuria.

Consider exchange transfusion in severely poisoned patients who are deteriorating clinically in spite of methylene blue treatment. Intravenous ascorbic acid administered to severely poisoned patients has not proved to be effective.

Administration of steroids is thought by some physicians to reduce the likelihood of the development of bronchiolitis obliterans by reducing inflammation and therefore lung damage. Steroids should be started soon after exposure and continued for 8 weeks, then tapered gradually. The data on steroid use to prevent late sequelae (bronchiolitis obliterans) is anecdotal and somewhat controversial.

Laboratory Tests

The diagnosis of acute nitrogen oxide toxicity is primarily based on respiratory symptoms and establishing a history of exposure to nitrogen oxides. Routine laboratory studies for all exposed patients include CBC, glucose, and electrolyte determinations. Additional studies for patients exposed to nitrous oxides include determination of methemoglobin levels. The condition of victims who have respiratory complaints should be evaluated with pulse oximetry (or ABG measurements), chest radiography, spirometry, and peak flow measurements. Pulse oximetry is not reliable if methemoglobin is present.

NO and NO₂ are metabolized to nitrite (NO₂.) and nitrate (NO₃.) and are excreted in the urine. The levels of these urinary metabolites are not medically useful but may be helpful in documenting exposure.

Disposition and Follow-up

Consider hospitalizing patients who have histories of significant inhalation exposure and are symptomatic.

Delayed Effects

Symptomatic patients should be observed in a controlled setting for 48 hours for delayed noncardiogenic pulmonary edema. All patients determined to have been exposed to nitrogen oxides should be advised that life-threatening symptoms may develop as late as several weeks after the exposure.

Patient Release

Patients who have been observed for several hours after minimal exposure and remain asymptomatic may be treated as outpatients. They should be advised to seek medical care promptly if symptoms develop (see *Nitrogen Oxides-Patient Information Sheet*). A patient whose symptoms resolve within 24 to 36 hours may be released with a follow-up appointment to assess pulmonary status.

Follow-up

Obtain the name of the patient's primary care physician so that the hospital can send a copy of the ED visit to the patient's doctor.

Close outpatient follow-up should be continued in patients who experienced significant respiratory compromise because these patients are at high risk of developing bronchiolitis obliterans within several weeks.

Patients who have corneal injuries should be reexamined within 24 hours.

Reporting

If a work-related incident has occurred, you may be legally required to file a report; contact your state or local health department.

Other persons may still be at risk in the setting where this incident occurred. If the incident occurred in the workplace, discussing it with company personnel may prevent future incidents. If a public health risk exists, notify your state or local health department or other responsible public agency. When appropriate, inform patients that they may request an evaluation of their workplace from OSHA or NIOSH. See Appendices III and IV for a list of agencies that may be of assistance.

Patient Information Sheet

This handout provides information and follow-up instructions for persons who have been exposed to nitrogen oxides.

[Print this handout only.](#)  [44.1 KB]

What are nitrogen oxides?

Nitrogen oxides are a mixture of gases that each contain nitrogen and oxygen. Nitrogen oxides are formed naturally when fossil fuels (e.g., coal, oil, gas, kerosene) are burned and when silage containing nitrate fertilizer ferments in storage silos. They are also formed during electric arc welding, electroplating, and engraving. They are part of airborne smog and are partly indirectly responsible for the burning eyes, nose, and throat caused by air pollution, through formation of the intensely irritating compound peroxyacetylnitrate, PAN.

What immediate health effects can be caused by exposure to nitrogen oxides?

Breathing low levels of nitrogen oxides may cause brief, nonspecific symptoms such as cough, shortness of breath, tiredness, and nausea. However, even if removed from exposure, a person who has breathed nitrogen oxides can develop more serious lung injury over the next 1 to 2 days. Exposure to massive concentrations can cause sudden death due to lung injury and suffocation or choking. Generally, the more serious the exposure, the more severe the symptoms.

Can nitrogen oxides poisoning be treated?

There is no antidote for nitrogen oxide poisoning. Treatment for exposure usually involves giving the patient oxygen and medications to make breathing easier.

Are any future health effects likely to occur?

A single small exposure from which a person recovers quickly may not cause delayed or long-term effects. After a serious exposure or repeated exposures, a patient may develop asthma or other lung conditions.

What tests can be done if a person has been exposed to nitrogen oxides?

Specific tests for the presence of nitrogen oxides in blood or urine generally are not useful to the doctor. If a severe exposure has occurred, blood and urine analyses and other tests may show whether damage has been done to the lungs, heart, and brain. Testing is not needed in every case.

Where can more information about nitrogen oxides be found?

More information about nitrogen oxides can be obtained from your regional poison control center; your state, county, or local health department; the Agency for Toxic Substances and Disease Registry (ATSDR); your doctor; or a clinic in your area that specializes in occupational and environmental health. If the exposure happened at work, you may wish to discuss it with your employer, the Occupational Safety and Health Administration (OSHA), or the National Institute for Occupational Safety and Health (NIOSH). Ask the person who gave you this form for help in locating these telephone numbers.

Follow-up Instructions

Keep this page and take it with you to your next appointment. Follow *only* the instructions checked below.

[Print instructions only.](#)  [44.1 KB]

☐ Call your doctor or the Emergency Department if you develop any unusual signs or symptoms within the next 24 hours, especially:

☐ Call your doctor or the Emergency Department if you develop any unusual signs or symptoms within the next 24 hours, especially:

- coughing or wheezing
- difficulty breathing, shortness of breath, or chest pain
- weakness, fatigue, or flu-like symptoms
- increased redness or pain or a pus-like discharge in the area of a skin burn

☐ No follow-up appointment is necessary unless you develop any of the symptoms listed above.

☐ Call for an appointment with Dr.____ in the practice of _____.

When you call for your appointment, please say that you were treated in the Emergency Department at _____ Hospital by _____ and were advised to be seen again in ____ days.

☐ Return to the Emergency Department/Clinic on ____ (date) at ____ AM/PM for a follow-up examination.

☐ Do not perform vigorous physical activities for 1 to 2 days.

☐ You may resume everyday activities including driving and operating machinery.

☐ Do not return to work for ____ days.

☐ You may return to work on a limited basis. See instructions below.

☐ Avoid exposure to cigarette smoke for 72 hours; smoke may worsen the condition of your lungs.

☐ Avoid drinking alcoholic beverages for at least 24 hours; alcohol may worsen injury to your stomach or have other effects.

☐ Avoid taking the following medications: _____

[] You may continue taking the following medication(s) that your doctor(s) prescribed for you: _____

[] Other instructions: _____

- Provide the Emergency Department with the name and the number of your primary care physician so that the ED can send him or her a record of your emergency department visit.
- You or your physician can get more information on the chemical by contacting: _____ or _____, or by checking out the following Internet Web sites: _____;_____.

Signature of patient _____ Date _____

Signature of physician _____ Date _____

Where can I get more information?

If you have questions or concerns, please contact your community or state health or environmental quality department or:

For more information, contact:

Agency for Toxic Substances and Disease Registry
Division of Toxicology and Human Health Sciences
4770 Buford Highway
Chamblee, GA 30341-3717
Phone: 1-800-CDC-INFO 888-232-6348 (TTY)
Email: [Contact CDC-INFO](#)

ATSDR can also tell you the location of occupational and environmental health clinics. These clinics specialize in recognizing, evaluating, and treating illnesses resulting from exposure to hazardous substances.

Page last reviewed: October 21, 2014

Print

Planning Commission May 1, 2023 Public Comment - Submission #3064

Date Submitted: 4/28/2023

First and Last Name*

Sue Burke

Email Address*

sue2nd9827@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

8714 Crossfire Drive

Public Comment for the Planning Commission May 1, 2023 Meeting

I am writing in opposition to approval for the asphalt plant planned for Wellington. From my research, I have learned that overall Connell Resources is a reputable company. This is not about Connell's reputation. No company is perfect, and no human beings are perfect. If the asphalt plant is approved, there WILL be increased traffic noise, there WILL be odors, and there WILL be accidents, spills, and unforeseen events. There can be no guarantees these things won't happen, and won't affect our little town and its residents. Because there is no "perfect," and because human error will always be there, the aftermath to your decision is huge. An asphalt plant does not belong here in Wellington, close to the Wellington Community Park, nearby subdivisions, downtown Wellington, an elementary school, in addition to the entirety of this small town. The consequences of anything not going "perfectly" are serious, now and into the future. This facility is also not appropriate for a "desirable town." When looking for a good place to raise families, retire, relocate, who is going to pick a town which has an asphalt processing plant so near to families, schools, parks? It is not a good move for the future of Wellington and attracting other types of businesses. If the asphalt plant is approved, what will be next with precedent set? Please deny the proposed location of the asphalt processing plant. There are many places that are more appropriate for a facility like this. Please keep our town as a desirable place to live.

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Planning Commission May 1, 2023 Public Comment - Submission #3065

Date Submitted: 4/28/2023

First and Last Name*

Email Address*

Shannon Evans

shannondevans@hotmail.com

Are you a Town of Wellington Resident? *

Address



Yes



No

Public Comment for the Planning Commission May 1, 2023 Meeting

As a concerned resident that lives and owns a home in Wellington, I donâ€™t agree with the idea of approving an asphalt plant that is in close proximity to Wellington Community Park, Buffalo Creek subdivision and would also affect the air quality/environment of the rest of the community/town for all the residents of Wellington. All of the toxins that are involved with asphalt plants can have so many negative effects on human health including, but not limited to cancer, autoimmune issues, neurologic issues. I am a board certified family medicine physician and have seen the effects industrial toxins have on humans and ask that you take into consideration your communitiesâ€™ health and well being and do not approve an asphalt plant right next to where children/adults play and people live. Sincerely, Shannon Evans

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Planning Commission May 1, 2023 Public Comment - Submission #3066

Date Submitted: 4/28/2023

First and Last Name*

Ryan Burtis

Email Address*

ryanbtownofwellington@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

3234 Wild West Lane

Public Comment for the Planning Commission May 1, 2023 Meeting

I wanted to share several concerns about proposed asphalt plant. There is the potential for the plant to be harmful to the long term residential growth of Wellington as well as a potential negative impact on the quality of life for existing residents of the town. In addition, the fact that a local ordinance needed to be modified in order for this proposed asphalt plant to be allowed is a concern. I am concerned about what other local ordinances may need to be modified in the future to prompt business or industrial growth at the expense of residential growth. Another concern is that any potential buyers or renters looking at houses in the future may be discouraged from purchasing or renting due to concerns about noises or smells coming from the plant. As a result, the asphalt plant may have a detrimental effect on residential growth.

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Planning Commission May 1, 2023 Public Comment - Submission #3067

Date Submitted: 4/28/2023

First and Last Name*

Kimberly and Kevin Paganelli

Email Address*

Paganellikimberly@gmail.com

Are you a Town of Wellington Resident? *

☒
Yes

☐
No

Address

7101, Grassy Range Drive

Public Comment for the Planning Commission May 1, 2023 Meeting

To whom it may concern, We were shocked to hear the plan for an Asphalt plant here in Wellington. Not only was this surprising to hear because Wellington is a small rural town, but the plan to put it near so many neighboring houses and schools was alarming to say the least. We chose to raise our family in Wellington for its small town feel, farming community, and an overall healthier environment in comparison to areas in Northern Colorado that are more densely populated. It is absolutely heartbreaking that if the plans for the Asphalt plant come to pass, we will be forced to leave Wellington. We had many hopes that Wellingtons economy and infrastructure would continue to expand, as our young children grew, and we could benefit as a family from more businesses and families moving to town. We strongly feel an Asphalt plant will be the death of this potential in our community. Toxic fumes and chemicals released into our environment as our children grow, will not encourage more families or businesses to Wellington. We ask you to consider our plea to pass on this plan, and keep our children safe, as well as ensure Wellington's continued growth and expansion for years to come.

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Planning Commission May 1, 2023 Public Comment - Submission #3068

Date Submitted: 4/28/2023

First and Last Name*

Maureen Kudola

Email Address*

Mktagray@gmail.com

Are you a Town of Wellington Resident? *

☒ Yes

☐ No

Address

9016 painted horse ln

Public Comment for the Planning Commission May 1, 2023 Meeting

I am writing this letter for those who it may concern, regarding the potential for the asphalt plant to be approved less than 2,640 feet from the Buffalo creek neighborhood. It is my assertion that because asphalt batch plants are known for emitting toxic chemicals, such as Formaldehyde, Acetaldehyde, xylene and others, this asphalt plant MUST be considered heavy industry that curates toxic chemicals. And as such the 1,000 foot setback currently up for approval is wrong according to town land use codes. The board should recognize the health and welfare hazards to its citizens that use the Wellington Community Park and certainly those that reside in Buffalo Creek. Some of the chemicals curated by asphalt plants have been shown to cause headaches, severe breathing issues, cancer and birth defects. It would be irresponsible of the town to do anything other than classify this asphalt plant batch as industry that curates chemicals and toxins. Not to mention the negative property value impacts that it will have for every homeowner in Buffalo Creek. Property values will stagnate if not drop, which is of great concern to the hundreds of Wellington citizens that live in the Buffalo Creek community.

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Print

Planning Commission May 1, 2023 Public Comment - Submission #3069

Date Submitted: 4/28/2023

First and Last Name*

Deborah Condos

Email Address*

dcondoscpp@gmail.com

Are you a Town of Wellington Resident? *



Yes



No

Address

8994 RAGING BULL LANE

Public Comment for the Planning Commission May 1, 2023 Meeting

Dear Planning Commissioners, ****FACTS=TRUTH**** ****Fact****: The Larimer County Health Department representative assigned to the Connell Site Plan Review, Lea Schneider, states in her attached letter to the Town of Wellington that "hot mix asphalt plants release air pollutants." "The primary pollutants of concern include particulate matter, carbon monoxide, nitrogen oxides, volatile organic compounds, and/or sulfur oxides," and, "Additional non-criteria pollutants regulated by APCD include hazardous air pollutants (HAPS) as defined in the Air Quality Control Commission (AQCC) regulations." The AQCC's website refers to the EPA's HAPS list. ****Fact****: The EPA website states that two, among several hazardous air pollutants (HAPS) are Acetaldehyde and Arsenic. The attached EPA fact sheet on Acetaldehyde states that this hazardous air pollutant is "mainly used as an intermediate in the synthesis of other chemicals. Acute (short-term) exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic (long-term) intoxication of acetaldehyde resemble those of alcoholism." ****Fact****: The second EPA fact sheet attached states this about the hazardous air pollutant, Arsenic, "Acute (short-term), high-level inhalation exposure to inorganic arsenic has resulted in respiratory effects (cough, dyspnea, chest pain), gastrointestinal effects (nausea, diarrhea, abdominal pain), and central and peripheral nervous system effects." Dyspnea, according to the Oxford dictionary, is difficult or labored breathing. The EPA fact sheet goes on to say that, "Chronic (long-term) inhalation exposure to inorganic arsenic in humans is associated with skin, cardiovascular, and neurological effects." All of the above is only a fraction of the reason I oppose the Connell asphalt plant being built in our backyards. The plant won't just be in our backyards. All of Wellington and the surrounding areas will be affected by the plant. I don't believe any citizen of Wellington wants to breathe hazardous air pollutants on a daily basis. Do you? For the sake of our health, our children and grandchildren's health and a thousand other reasons, please move to deny the site plan for Connell Resources asphalt plant! Thank you! Debbie Condos Wellington Buffalo Creek Resident

Optional File Attachment

Larimer Cnty Health Dept - Lea Schneider.pdf

Optional File Attachment

EPA Acetaldehyde Fact Sheet.pdf

Optional File Attachment

EPA Arsenic Compounds Fact Sheet.pdf

LARIMER COUNTY | HEALTH AND ENVIRONMENT

1525 Blue Spruce Drive, Fort Collins, Colorado 80524-2004, 970.498.6775, www.larimer.org/health/ehs/

TO: Paul Whalen
Senior Planner
Town of Wellington

FROM: Lea Schneider 
Environmental Health Planner
Larimer County Department of Public Health & Environment

DATE: December 21, 2022

SUBJECT: Connell's Wellington Asphalt Plant Site Plan Referral Review

Larimer Department of Health and Environment (LCDHE) has reviewed the site plan application materials provided in the referral email dated November 29, 2022. In addition, LCDHE met with Connell Resources, Inc. on December 21, 2022. The following LCDHE comments include requirements of associated regulations as well as recommendations for the Town to consider for additional public health protections when evaluating the application for compatibility to the residential areas.

As a result of the submitted materials and meeting with Connell Resources, Inc., it is understood that Connell's existing asphalt batch plant operating near Timnath, Colorado, is proposed to be relocated to Parcel 8928000019 on East County Road 66 between North County Roads 7 and 9. The proposed improvements for the Site Plan include an office building, storage lean-to structure, welding and mechanical shop, garage, washing and fueling areas; landscaping and screening; paved parking, access and truck service roads; the relocated batch plant with associated cold storage bins, storage tanks/silos, resource stockpiles.

The operation will import and stockpile sand and aggregate resources via haul trucks for use in asphalt production, as well as process reclaimed asphalt pavement (RAP) on-site. Public utilities will supply water and sewer for new structures, while raw/well water will be transported from off-site for dust control during operations. Normal operating hours are between 7am to 6pm, Monday through Saturday with occasional work outside of normal operating hours for special projects such as evening construction for major traffic corridor infrastructure.

Though the property for the asphalt operation is zoned for I-Industrial uses under the zoning designation of Town of Wellington, there are residential uses in the area as shown in the Larimer County Assessor map shown below in Figure 1. A platted undeveloped residential community appears to be adjacent to the west and an existing developed residential community and outdoor recreational area to the south which are less than 1500 feet from the south property line of the asphalt property. The unincorporated parcels near the plant are zoned O-Open which is intended for rural

residential and agriculture uses. For this reason, it is recommended that the Town consider the residential compatibility as part of this review.

Figure 1.



Noise. Asphalt operations include noise generating activities such as road traffic, imported materials haulers, dump trucks for asphalt, off-road construction equipment with backup alarms moving aggregate resources around the site, crushing activities for RAP, conveyor belts moving material to the batch plant. For this reason noise impacts are recommended to be evaluated as part of this review process. It is not known if the Town of Wellington has a local noise ordinance, but Larimer County and the State of Colorado have standards for noise.

The County has adopted a noise ordinance (Ordinance No. 97-03) which specifies maximum sound levels of 55 dbA from 7am to 7pm at unincorporated residential

property lines as defined in the Ordinance. The ordinance is available on the County's website at: <http://legacy.larimer.org/policies/noise.htm>

In the absence of a Town of Wellington noise ordinance, the Colorado Revised Statute – ARTICLE 12 – Noise Abatement establishes noise levels at the property lines based on the use of adjacent properties which include residential areas except the adjacent parcel to the south which is also zoned I-Industrial.

Some site mitigations have been proposed including earthen berms of at least 10 feet to be installed along the north and west property lines; one-way haul truck movement on the site; location of noise producing activity to the northeast of the property; upgrading batch plant equipment. The Health Department recommends that the Town request a Predictive Sound Analysis with noise contour mapping to demonstrate that the proposed berms and additional mitigation strategies are adequate to protect future developed properties to the west and the existing residential uses to the north, but also to the east and the developed Buffalo Creek subdivision to the south/southeast.

It is also recommended that the operator signage include contact information such as a phone number and/or email for neighbors to report concerns directly to the operator in order to respond quicker to feedback for repairing or adjusting the noise-inducing activity.

Air Quality for Operations. Hot mix asphalt plants release air pollutants that are regulated by the Air Pollution Control Division (APCD) at the Colorado Department of Public Health and Environment (CDPHE). The primary pollutants of concern include particulate matter, carbon monoxide, nitrogen oxides, volatile organic compounds, and/or sulfur oxides. These criteria pollutants are regulated to meet the Environmental Protection Agency's National Ambient Air Quality Standards (NAAQS) which can be harmful to public health and the environment when not properly controlled. Additional noncriteria pollutants regulated by APCD include hazardous air pollutants (HAPS) as defined in the Air Quality Control Commission (AQCC) regulations..

Connell Resources, Inc. currently holds an APCD permit (00LR0746) for the asphalt batch plant proposed to be relocated to Wellington. This facility is routinely inspected by Larimer County Department of Health and Environment as contractors of APCD. A new APEN will need to be applied for and reviewed by APCD in order to establish new limitations and controls as part of the final construction (operating) permit for the new site. It is recommended that the Town request copies of the future applications and dust control plan for further evaluation on adequate controls for the residential uses.

LCDHE will continue to inspect the facility under the new air permit even within the Town of Wellington. Due to the lack of open mining on the property, aggregate material arriving pre-processed, and the current asphalt plant permit emission thresholds being in compliance with the NAAQS, it is not known if air emission dispersion modeling will be required for the future air permitting and will be evaluated by APCD at the time of APEN submittal.

To further evaluate the emission levels in relation to public health, compliance with NAAQS, and residential and recreation area compatibility, it is recommended that the

Town consider requesting emission dispersion modeling independent of the APCD permitting process to predict potential pollutant exposure. Air dispersion models are tools to approximate concentrations from one or more facilities or sources of air pollutants. When an air pollutant is emitted into the atmosphere, it is transported and dispersed by various atmospheric processes. Algorithms and equations have been developed to approximate (model) these atmospheric processes and have been incorporated into various computer codes (computer models). APCD typically uses the results from these computer models in their review of qualifying APEN/air permit applications. A modeled prediction is used to demonstrate if the emitting source will be in compliance with the NAAQS (as well as Colorado Ambient Air Quality Standards - CAAQS). If the model predicts an exceedance of the NAAQS and/or CAAQS, the applicant has the opportunity to adjust the facility emissions through operating hours, source parameters, source configuration, and other mitigation strategies in order to demonstrate compliance with all state and federal standards. Modeling is a good opportunity to examine control measures and potentially demonstrate compatibility with the residential and outdoor recreational uses.

Odors. Hot asphalt operations can produce odors depending on equipment, fuels, materials and processing. As part of compliance with the future air permit from APCD, the operation will be required to prevent excessive odors to comply with Colorado's Air Quality Control Commission Regulation 2 for Odor Emission. The regulation limits the emission of odorous air within areas used predominantly as residential or commercial purposes. This property in review is surrounded by a mix of commercial and residential uses as well as public recreation, therefore the more strict residential threshold for odors shall be complied with. Please note that it is a violation if odors are detected at property lines after the odorous air has been diluted with seven (7) or more volumes of odor free air using a nasal ranger operated by certified staff. Larimer County staff are certified in odor compliance and will evaluate complaints. Please note that compliance with APCD permitting and Regulation 2, as well as properly maintained and operating equipment will reduce the amount of emissions and therefore odors released from the property but does not create an odor-free operation.

Wetlands. No information was noted in the application materials regarding the intermittent waterway identified on the Larimer County Assessor's topography map. In referencing the Wetland Mapper developed by the U.S. Fish and Wildlife Service, the intermittent waterway has a preliminary identification as a riverine wetland. It is not known if there were earlier applications and/or discussions related to the topic of potential wetlands and a need for delineation.



Fugitive Dust during Construction. Colorado's air quality laws include requirements for controlling fugitive dust emissions during construction activities. Projects that are fewer than 25 acres and less than six months are not required to complete an APEN, but are still required to control fugitive dust and off-site transport. Additional information is available on the APCD website: <https://cdphe.colorado.gov/apens-and-air-permits/air-permits-for-non-oil-gas>

Water Quality. Potential water quality impacts associated with asphalt batch plants include sediments from in the truck wash down and stormwater runoff, and chemicals associated with the asphalt bidding materials, fluids associated with trucks/off-road construction equipment, machinery and processing operations.

In this particular case, the submitted Ditesco drainage report indicates that a detention pond will be constructed in the southwest corner of the parcel with the intent to drain off-site. It is not known if there is a retention pond or other infrastructure to support the truck wash down area or other process water from the site.

Depending on the aforementioned process water and stormwater management, the non-extractive operations may be required to apply for either a 'Process and Stormwater Discharge Permit' or, if no process water will be discharged, a 'Stormwater Discharge Permit' from the Water Quality Control Division of the Colorado Department of Public Health and Environment. Please refer to the Water Quality Control Division's website: <https://www.colorado.gov/pacific/cdphe/wq-commerce-and-industry-permits>

A requirement for obtaining either permit is the preparation of a stormwater management plan. These plans must include identification of potential sources of pollution (including sediment, chemicals used in the mining operation, fuels, etc.) and selection of best management practices that will be implemented to control the potential pollutants. Under the terms of a state permit, the applicant is required to perform routine inspections and to prepare an annual report to address compliance with the stormwater management plan.

Fuel Storage Tanks. The Site Plan proposes the installation of on-site fuel storage and related pumping equipment. These items are regulated by the Colorado Department of Labor and Employment, Oil Inspection Section. Additional criteria may be required by the local fire authority. Information on their tank compliance plan submittal process is available at:

<https://ops.colorado.gov/Petroleum/TankCompliance>

Arsenic Compounds

Hazard Summary

Arsenic, a naturally occurring element, is found throughout the environment. For most people, exposure to arsenic, including to inorganic arsenic compounds, occurs through their diet. Acute (short-term), high-level inhalation exposure to inorganic arsenic has resulted in respiratory effects (cough, dyspnea, chest pain), gastrointestinal effects (nausea, diarrhea, abdominal pain), and central and peripheral nervous system effects. Chronic (long-term) inhalation exposure to inorganic arsenic in humans is associated with skin, cardiovascular, and neurological effects. Acute oral exposure to inorganic arsenic has resulted in effects on the digestive tract, respiratory tract, central nervous system (CNS), cardiovascular system, liver, and blood and has resulted in death. Chronic oral exposure to elevated levels of inorganic arsenic has resulted in gastrointestinal effects, anemia, peripheral neuropathy, skin lesions, hyperpigmentation, and liver and kidney damage in humans. EPA has concluded that inorganic arsenic is a human carcinogen. Evidence from human studies suggests that exposure to inorganic arsenic by inhalation may result in lung cancer, while exposure by ingestion may result in nonmelanoma skin cancer and bladder, kidney, liver, and lung cancers.

Arsine is a gas consisting of arsenic and hydrogen. It is extremely toxic to humans and can result in general malaise, headaches, apprehension, giddiness, shivering, thirst, vomiting, and abdominal pains with vomiting within a few hours of exposure. Arsine can be fatal if inhaled in sufficient quantities. EPA has not classified arsine for carcinogenicity.

Please Note:

- This fact sheet has a particular focus on inorganic arsenic compounds, including the gaseous arsenic compound arsine. The main sources of toxicity information for this fact sheet are EPA's Integrated Risk Information System (IRIS), which contains information on the carcinogenic effects of inorganic arsenic, including the unit cancer risk for inhalation exposure, and on effects of arsine; as well as the Agency for Toxic Substances and Disease Registry's (ATSDR's) Toxicological Profile for Arsenic.

Uses

- Inorganic arsenic is primarily used as a preservative to make wood resistant to rot and decay, although the use for certain residential items, such as decks and picnic tables, has been phased out. Inorganic arsenic is still used for this purpose in industrial applications. (1)
- The use of arsenic in agricultural or commercial pesticide applications has been restricted and is most recently limited to organic arsenic compounds in a limited number of approved uses. (1)
- Arsenic and its compounds have been used as alloy additives; in electronic devices, such as smartphones; in veterinary medicines; in pigment production; in glass manufacturing; as bronzing or decolorizing agents; in textile printing; in tanning; and other uses. (1,2)
- Until the 1940s, inorganic arsenic was used as a therapeutic agent in the treatment of various diseases, such as leukemia, psoriasis, and chronic bronchial asthma. Inorganic arsenic may still be used in homeopathic or folk remedies in the United States and other countries, and its use has reemerged in an FDA-approved treatment for

a specific type of leukemia. (1)

- Arsine is a gas that has much more limited usage than the other inorganic compounds. The use of arsine is primarily in electronics and semiconductor components manufacturing, organic syntheses, and lead-acid storage battery manufacturing. (2)

Sources and Potential Exposure

- Inorganic arsenic is found throughout the environment; it is released into the air by volcanoes, the weathering of arsenic-containing minerals and ores, and commercial and industrial processes. (1)
- General population exposure occurs through ingestion of contaminated drinking water or food. For most people, diet is the largest source of arsenic exposure, with smaller intakes from drinking water and air. Grains, produce, fish, and shellfish are significant sources of arsenic exposure via food. High arsenic levels have been found in fish and shellfish; however, arsenic in fish and shellfish exists primarily as two forms of organic arsenic (i.e., “fish arsenic”) that are essentially nontoxic. Inorganic arsenic compounds are the predominant forms to which people are exposed. (1)
- Elevated levels of inorganic arsenic may be present in soil, either from natural mineral deposits or contamination from human activities, which may lead to dermal or ingestion exposure. (1)
- Workers at metal smelting facilities and nearby residents may be exposed to above-average inorganic arsenic levels from arsenic released into the air. (1,2)
- Other sources of inorganic arsenic exposure include burning wood treated with an arsenical wood preservative or dermal contact with wood treated with arsenic. (1)
- Arsine is formed when arsenic comes in contact with an acid. Most exposures to arsine have occurred after unintentional formation of arsine in the workplace of chemical, smelting, and refining industries. (2,9)

Assessing Personal Exposure

- Arsenic can be measured in blood, urine, hair, and fingernails. Measurement of inorganic arsenic in the urine is the best way to determine recent exposure (within the previous 1 to 2 days), while measuring inorganic arsenic in hair or fingernails can detect high-level exposures that occurred over the prior 6 to 12 months. (1)

Health Hazard Information

Acute Effects:

- Inorganic Arsenic (other than arsine)
 - o Workers inhaling very high levels of arsenic over a short period have experienced respiratory tract symptoms (cough, chest pain, dyspnea, pulmonary edema), gastrointestinal effects (nausea, diarrhea, abdominal pain), and central and peripheral nervous system effects (peripheral neuropathy, frank encephalopathy). (1,2)
 - o Ingestion of high levels inorganic arsenic over a short period has resulted in death. Acute oral exposure to lower levels has resulted in effects on the digestive tract (constriction of the throat, dysphagia, nausea, vomiting, watery diarrhea), respiratory tract (respiratory distress, hemorrhagic bronchitis), CNS (encephalopathy, weakness, delirium), cardiovascular system (hypotension, shock), the liver (increased enzymes and size), and blood (anemia, leukopenia). (1,2)
- Arsine
 - o Inhaling high levels of arsine over very short periods has resulted in death; a half-hour exposure to 25 to 50 parts per million (ppm) can be lethal. (2,3)
 - o Acute arsine poisoning can cause pulmonary edema, massive hemolysis with subsequent hemolytic anemia, and can cause kidney, liver, and heart damage. (2)
 - o The major effects from short-term exposure to lower levels of arsine include headaches, vomiting,

abdominal pains, and effects on the blood, including hemolytic anemia, hemoglobinuria, and jaundice; these effects can lead to kidney failure. (2,3)

Chronic Effects (Noncancer):

- Inorganic Arsenic (other than arsine)
 - o Chronic inhalation exposure of humans to elevated levels of inorganic arsenic has been associated with effects on the cardiovascular system and skin (including dermatitis, conjunctivitis, pharyngitis and rhinitis) and with nerve damage. (1,2,4)
 - o EPA has not established a reference concentration (RfC) for inhalation exposure to inorganic arsenic. (4)
 - o The California Environmental Protection Agency (CalEPA) has established a chronic inhalation reference exposure level (REL) of 0.000015 milligrams per cubic meter (0.000015 mg/m³) estimated from an epidemiologic study indicating decreased intellectual function in 10-year-old children exposed to elevated arsenic in drinking water and assumptions for exposure and risk from inhalation exposure. The CalEPA REL is a concentration at or below which adverse health effects are not likely to occur. It is not a direct estimator of risk, but rather a reference point to gauge the potential effects. At lifetime exposures increasingly greater than the REL, the potential for adverse health effects increases. (4)
 - o Chronic oral exposure of humans to elevated levels of inorganic arsenic has been associated with effects on the gastrointestinal system, blood, skin, eyes, lungs, heart, CNS, liver, and kidneys. Such effects include anemia, peripheral neuropathy, skin lesions, hyperpigmentation, gangrene of the extremities, vascular lesions, and liver or kidney damage. (1,4).
 - o Some studies have reported an association between elevated arsenic levels in drinking water and neurocognitive or behavioral test results of school age children. (1)
 - o Animal studies have reported effects on the blood, liver, and kidneys from oral exposure to inorganic arsenic. (1,4)
 - o The EPA reference dose (RfD) for inorganic arsenic is 0.0003 milligrams per kilogram body weight per day (mg/kg/d) based on effects on the skin (hyperpigmentation and keratosis) and possible vascular effects reported in epidemiologic studies of exposure to contaminated drinking water . The RfD is an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious noncancer effects during a lifetime. (4)
 - o EPA has medium confidence in the study on which the RfD for inorganic arsenic was based because although an extremely large number of people were included in the assessment (>40,000), the doses were not well characterized, and other contaminants were present. While extensive, the supporting human toxicity database is somewhat flawed; therefore, EPA has assigned medium confidence to the RfD. (4)
- Arsine
 - o Long-term occupational exposure to arsine can damage skin and nerves and can affect the circulatory and hematopoietic systems and result in hemolytic anemia. At higher exposures, it may damage the spleen and kidney. (2, 3)
 - o The EPA RfC for arsine is 0.00005 mg/m³ based on effects on the blood and spleen, including hemolysis, abnormal red blood cell morphology, and increased spleen weight in rats, mice, and hamsters. (3)
 - o EPA has assigned medium confidence to the RfC based on medium confidence in the database. While there were three inhalation animal studies and a developmental/reproductive study, there were no data available on human exposure. However, EPA has high confidence in the animal studies on which the RfC is based because the sample sizes were adequate, statistical significance was reported, concentration dose-response relationships were documented, three species were investigated, and both a no-observed-adverse-effect level (NOAEL) and a lowest-observed-adverse-effect level (LOAEL) were identified. (3)

Reproductive/Developmental Effects:

- Inorganic Arsenic
 - o Studies have reported an association between maternal exposure to elevated arsenic levels in drinking water and low birth weights, neonatal death, and infant mortality. (1)
 - o Ingested inorganic arsenic can cross the placenta in humans, exposing the fetus to the chemical. (1)
 - o Oral animal studies have reported inorganic arsenic to produce developmental effects in offspring, including birth defects and neurobehavioral deficits. (1)
- Arsine
 - o Human studies have indicated higher than expected spontaneous abortion rates in women in the microelectronics industry who were exposed to arsine. However, these studies have several limitations, including small sample size and exposure to other chemicals in addition to arsine. (3)
 - o A National Toxicology Program (NTP) study found no adverse developmental effects in offspring of pregnant rats and mice exposed to arsine. (6)

Cancer Risk:

- Inorganic Arsenic
 - o Human occupational studies have shown that inhalation exposure to inorganic arsenic increases the risk of lung cancer. (1,4)
 - o Ingestion of inorganic arsenic in humans has been associated with an increased risk of nonmelanoma skin cancer and an increased risk of bladder, liver, kidney and lung cancers. (1,4)
 - o No animal inhalation studies reporting cancer effects from inorganic arsenic exposure were identified. Most oral animal studies have not shown an association between inorganic arsenic exposure and cancer; however, a study in mice involving exposure to inorganic arsenic in drinking water reported an increased risk of lung tumors. (1)
 - o EPA has concluded that inorganic arsenic is a human carcinogen. (4)
 - o EPA used a mathematical model with data from an occupational study of arsenic-exposed copper smelter workers to estimate the probability of a person developing cancer from continuously breathing air containing a specified concentration of inorganic arsenic. EPA calculated an inhalation unit risk estimate of 4.3×10^{-3} per $\mu\text{g}/\text{m}^3$. EPA estimates that, if an individual were to continuously breathe air containing inorganic arsenic at an average of $0.0002 \mu\text{g}/\text{m}^3$ ($2 \times 10^{-7} \text{ mg}/\text{m}^3$) over their entire lifetime, the person would theoretically have no more than a one-in-a-million increased chance of developing cancer as a direct result. Similarly, EPA estimates that continuously breathing air containing $0.002 \mu\text{g}/\text{m}^3$ ($2 \times 10^{-6} \text{ mg}/\text{m}^3$) would result in not greater than a one-in-a-hundred thousand increased chance of developing cancer, and air containing $0.02 \mu\text{g}/\text{m}^3$ ($2 \times 10^{-5} \text{ mg}/\text{m}^3$) would result in not greater than a one-in-ten thousand increased chance of developing cancer. For a detailed discussion of confidence in the potency estimates, please see IRIS. (4)
 - o EPA has calculated an oral cancer slope factor of 1.5 per $\text{mg}/\text{kg}/\text{d}$ for inorganic arsenic. The oral cancer slope factor is an estimate of the increased cancer risk from ingestion of 1 mg inorganic arsenic per kg body weight per day over a lifetime. (4)
- Arsine
 - o EPA has not classified arsine for carcinogenicity. (3)
 - o No cancer inhalation studies in humans or animals were available for arsine. (1)

Physical Properties

- Inorganic arsenic is a naturally occurring element in the earth's crust. (1)

- Pure inorganic arsenic is a gray-colored metal. Arsenic combined with elements such as oxygen, chlorine, and sulfur forms inorganic arsenic; inorganic arsenic compounds include arsenic pentoxide, arsenic trioxide, and arsenic acid. (1)
- The chemical symbol for arsenic is As, and it has a molecular weight of 74.92 g/mol. (2)
- The chemical formula for arsine is AsH₃, and it has a molecular weight of 77.95g/mol. (2)
- Arsine is an extremely flammable, colorless gas with a slight garlic-like odor. (2)
- Arsenic combined with carbon and hydrogen forms organic arsenic; organic arsenic compounds include arsanilic acid, arsenobetaine, and dimethylarsinic acid. (1)

Conversion Factors:

To convert concentrations in air (at 25 °C) from ppm to mg/m³:

$$\text{mg/m}^3 = (\text{ppm}) \times (\text{molecular weight of the compound}) / (24.45).$$

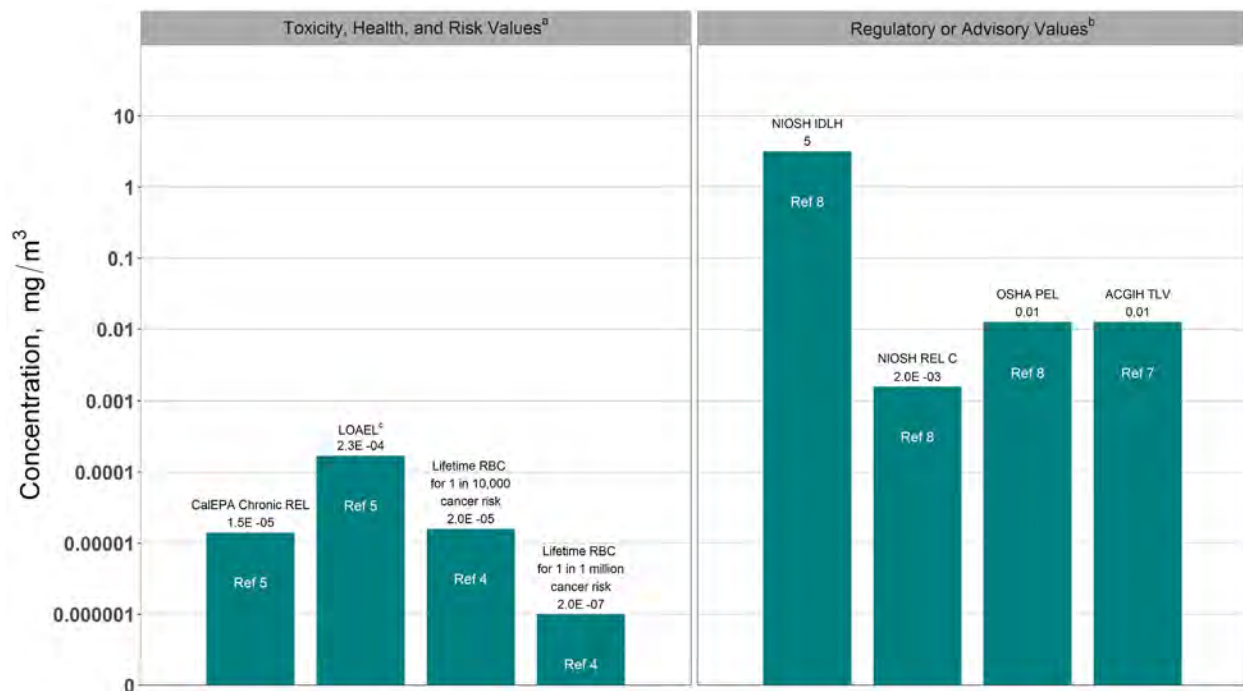
For inorganic arsenic: 1 ppm = 3.06 mg/m³.

For arsine: 1 ppm = 3.19 mg/m³

To convert concentrations in air from µg/m³ to mg/m³:

$$\text{mg/m}^3 = (\mu\text{g/m}^3) \times (1 \text{ mg}/1,000 \mu\text{g})$$

Health Data from Inhalation Exposure (Inorganic Arsenic)



ACGIH TLV — American Conference of Governmental Industrial Hygienists threshold limit value expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effects.

LOAEL (Lowest-Observed-Adverse-Effect Level) — The lowest dose or concentration at which there was an observed toxic or adverse effect of a target organism distinguished from a normal or untreated organism of the same species.

CalEPA Chronic REL — California EPA Office of Environmental Health Hazard Assessment (OEHHA) chronic reference exposure level (REL) is the concentration at or below which no adverse health effect is anticipated for a lifetime exposure.

NIOSH IDLH — National Institute for Occupational Safety and Health's immediately dangerous to life or health concentration; IDLH values are established (1) to ensure that a worker can escape from a given contaminated environment in the event of failure of the respiratory protection equipment and (2) to indicate a maximum level

above which only a highly reliable breathing apparatus, providing maximum worker protection, is permitted.

NIOSH REL C (ceiling value) — NIOSH's recommended exposure limit ceiling; the concentration that should not be exceeded at any time.

OSHA PEL — Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect, averaged over a normal 8-hour workday or a 40-hour workweek.

RBC (cancer risk-based concentration) — A calculated concentration of a chemical in air to which continuous exposure over a lifetime is estimated to be associated with a risk of contracting cancer not greater than the specified probability (e.g., 1-in-1 million).

^aToxicity, Health, and Risk numbers are toxicological values from animal testing or risk assessment values developed by EPA.

^bRegulatory numbers are values that have been incorporated in Government regulations, while advisory numbers are nonregulatory values provided by Government or other groups as advice. OSHA numbers are regulatory, whereas NIOSH, ACGIH, and AIHA numbers are advisory.

^cThe concentration presented here is the LOAEL (calculated from the oral level) from the critical study used as the basis for the CalEPA chronic REL.

Summary updated April 2021.

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Acetaldehyde

75-07-0

Hazard Summary

Acetaldehyde is mainly used as an intermediate in the synthesis of other chemicals. It is ubiquitous in the environment and may be formed in the body from the breakdown of ethanol. Acute (short-term) exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic (long-term) intoxication of acetaldehyde resemble those of alcoholism. Acetaldehyde is considered a probable human carcinogen (Group B2) based on inadequate human cancer studies and animal studies that have shown nasal tumors in rats and laryngeal tumors in hamsters.

Please Note: The main sources of information for this fact sheet are EPA's Health Assessment Document for Acetaldehyde (1) and the Integrated Risk Information System (IRIS) (4), which contains information on inhalation chronic toxicity of acetaldehyde and the RfC. Other secondary sources include the International Agency for Research on Cancer (IARC) Monographs on Chemicals Carcinogenic to Humans. (6)

Uses

- The predominant use of acetaldehyde is as an intermediate in the synthesis of other chemicals. (1)
- Acetaldehyde is used in the production of perfumes, polyester resins, and basic dyes. Acetaldehyde is also used as a fruit and fish preservative, as a flavoring agent, and as a denaturant for alcohol, in fuel compositions, for hardening gelatin, and as a solvent in the rubber, tanning, and paper industries. (1,2)

Sources and Potential Exposure

- Acetaldehyde is ubiquitous in the ambient environment. It is an intermediate product of higher plant respiration and formed as a product of incomplete wood combustion in fireplaces and woodstoves, coffee roasting, burning of tobacco, vehicle exhaust fumes, and coal refining and waste processing. Hence, many individuals are exposed to acetaldehyde by breathing ambient air. It should be noted that residential fireplaces and woodstoves are the two highest sources of emissions, followed by various industrial emissions. (1)
- In Los Angeles, California, levels of acetaldehyde up to 32 parts per billion (ppb) have been measured in the ambient environment. (1)
- Exposure may also occur in individuals occupationally exposed to acetaldehyde during its manufacture and use. (1,2)
- In addition, acetaldehyde is formed in the body from the breakdown of ethanol; this would be a source of acetaldehyde among those who consume alcoholic beverages. (1)

Assessing Personal Exposure

- Acetaldehyde can be detected in the blood and breath to determine whether or not exposure has occurred. (12)

Health Hazard Information

Acute Effects:

- The primary acute effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and

respiratory tract in humans. At higher exposure levels, erythema, coughing, pulmonary edema, and necrosis may also occur. (1)

- Acute inhalation of acetaldehyde resulted in a depressed respiratory rate and elevated blood pressure in experimental animals. (1)
- Tests involving acute exposure of rats, rabbits, and hamsters have demonstrated acetaldehyde to have low acute toxicity from inhalation and moderate acute toxicity from oral or dermal exposure. (3)

Chronic Effects (Noncancer):

- Symptoms of chronic intoxication of acetaldehyde in humans resemble those of alcoholism. (5)
- In hamsters, chronic inhalation exposure to acetaldehyde has produced changes in the nasal mucosa and trachea, growth retardation, slight anemia, and increased kidney weight. (1,4)
- The Reference Concentration (RfC) for acetaldehyde is 0.009 milligrams per cubic meter (mg/m^3) based on degeneration of olfactory epithelium in rats. The RfC is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups), that is likely to be without appreciable risk of deleterious noncancer effects during a lifetime. It is not a direct estimator of risk but rather a reference point to gauge the potential effects. At exposures increasingly greater than the RfC, the potential for adverse health effects increases. Lifetime exposure above the RfC does not imply that an adverse health effect would necessarily occur. (4)
- EPA has medium confidence in the principal studies because appropriate histopathology was performed on an adequate number of animals and a no-observed-adverse-effect level (NOAEL) and a lowest-observed-adverse-effect level (LOAEL) were identified, but the duration was short and only one species was tested; low confidence in the database due to the lack of chronic data establishing NOAELs and due to the lack of reproductive and developmental toxicity data; and, consequently, low confidence in the RfC. (4)
- EPA has not established a Reference Dose (RfD) for acetaldehyde. (4)

Reproductive/Developmental Effects:

- No information is available on the reproductive or developmental effects of acetaldehyde in humans.
- Acetaldehyde has been shown, in animals, to cross the placenta to the fetus. (1,4)
- Data from animal studies suggest that acetaldehyde may be a potential developmental toxin. In one study, a high incidence of embryonic resorptions was observed in mice injected with acetaldehyde. In rats exposed to acetaldehyde by injection, skeletal malformations, reduced birth weight, and increased postnatal mortality have been reported. (1,6)

Cancer Risk:

- Human data regarding the carcinogenic effects of acetaldehyde are inadequate. Only one epidemiology study is available that has several limitations including short duration, small number of subjects, and concurrent exposure to other chemicals and cigarettes. (1,4,6)
- An increased incidence of nasal tumors in rats and laryngeal tumors in hamsters has been observed following inhalation exposure to acetaldehyde. (1,4,6)
- EPA has classified acetaldehyde as a Group B2, probable human carcinogen. (1,4)
- EPA uses mathematical models, based on human and animal studies, to estimate the probability of a person developing cancer from breathing air containing a specified concentration of a chemical. EPA calculated an inhalation unit risk of $2.2 \times 10^{-6} (\mu\text{g}/\text{m}^3)^{-1}$. EPA estimates that, if an individual were to continuously breathe air containing acetaldehyde at an average of $0.5 \mu\text{g}/\text{m}^3$ ($5 \times 10^{-4} \text{mg}/\text{m}^3$) over his or her entire lifetime, that person would theoretically have no more than a one-in-a-million increased chance of developing cancer as a direct result of breathing air containing this chemical. Similarly, EPA estimates that breathing air containing $5.0 \mu\text{g}/\text{m}^3$ ($5 \times 10^{-3} \text{mg}/\text{m}^3$) would result in not greater than a one-in-a-hundred thousand increased chance of developing cancer, and air containing $50.0 \mu\text{g}/\text{m}^3$ ($5 \times 10^{-2} \text{mg}/\text{m}^3$) would result in not greater than a one-in-ten thousand increased chance of developing cancer. For a detailed discussion of confidence in the potency estimates, please see IRIS. (4)

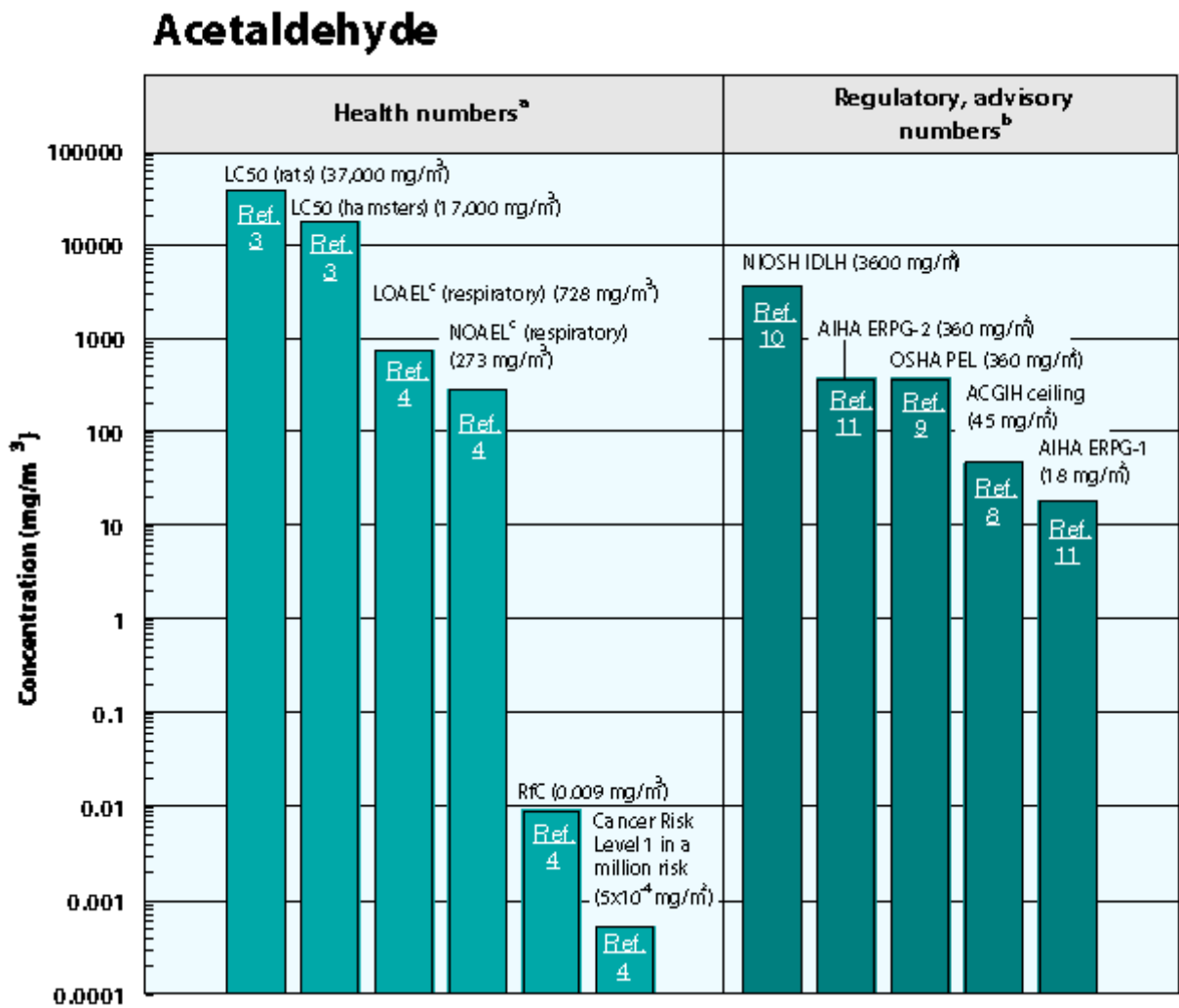
Physical Properties

- The chemical formula for acetaldehyde is CH_3CHO , and it has a molecular weight of 44.06 g/mol. (1)
- Acetaldehyde is a colorless mobile liquid that is flammable and miscible with water. (1,6)
- Acetaldehyde has a pungent suffocating odor, but at dilute concentrations it has a fruity and pleasant odor. The odor threshold of acetaldehyde is 0.05 parts per million (ppm) (0.09 mg/m^3). (1,7)
- The vapor pressure for acetaldehyde is 740 mm Hg at 20 °C, and it has a log octanol/water partition coefficient ($\log K_{ow}$) of 0.43. (1)

Conversion Factors (only for the gaseous form):

To convert concentrations in air (at 25°C) from ppm to mg/m^3 : $\text{mg}/\text{m}^3 = (\text{ppm}) \times (\text{molecular weight of the compound}) / (24.45)$. For acetaldehyde: 1 ppm = 1.8 mg/m^3 . To convert concentrations in air from $\mu\text{g}/\text{m}^3$ to mg/m^3 : $\text{mg}/\text{m}^3 = (\mu\text{g}/\text{m}^3) \times (1 \text{ mg}/1,000 \mu\text{g})$.

Health Data from Inhalation Exposure



AIHA ERPG--American Industrial Hygiene Association's emergency response planning guidelines. ERPG 1 is the maximum airborne concentration below which it is believed nearly all individuals could be exposed up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor; ERPG 2 is the maximum airborne concentration below which it is believed nearly all individuals could be exposed up to one hour without experiencing or developing irreversible or other serious health effects that could impair their abilities to take protective action.

ACGIH ceiling-- American Conference of Governmental and Industrial Hygienists' threshold limit value ceiling; the concentration of a substance that should not be exceeded during any part of the working exposure.

LC₅₀ (Lethal Concentration₅₀)--A calculated concentration of a chemical in air to which exposure for a specific length of time is expected to cause death in 50% of a defined experimental animal population.

NIOSH IDLH --National Institute of Occupational Safety and Health's immediately dangerous to life or health limit; NIOSH recommended exposure limit to ensure that a worker can escape from an exposure condition that is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from the environment.

OSHA PEL--Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-h workday or a 40-h workweek.

The health and regulatory values cited in this factsheet were obtained in December 1999.

^a Health Numbers are toxicological numbers from animal testing or risk assessment values developed by EPA.

^b Regulatory numbers are values that have been incorporated in Government regulations, while advisory numbers are nonregulatory values provided by the Government or other groups as advice. OSHA numbers are regulatory, whereas NIOSH, ACGIH, and AIHA numbers are advisory.

^c The LOAEL and NOAEL are from the critical study used as the basis for the EPA RfC.

Summary created in April 1992, updated in January 2000

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Print

Planning Commission May 1, 2023 Public Comment - Submission #3070

Date Submitted: 4/28/2023

First and Last Name*

Email Address* May 1, 2023 Agenda Packet

Sarah Mickschl

sarahmickschl@gmail.com

Are you a Town of Wellington Resident? *



Yes



No

Address

6915 GRASSY RANGE DR

Public Comment for the Planning Commission May 1, 2023 Meeting

I am strongly against the decision to approve the Asphalt Plant from being built at the current location within Wellington town limits. 1. The town of Wellington was re-zoned in 2022 with the land that Connell Resources wants to develop zoned as Heavy Industrial. As Wellington was re-zoned, Heavy Industrial land came with setback requirements of 1000ft linear and 45ft height restrictions. The claim by Connell Resources that the land is not suitable for Heavy Industrial use with current setbacks should have led town planners to decide that this property should be re-zoned to Light Industrial to limit the setback needs. The need for a greater setback of 2640ft is actually more appropriate given the language in the Land Use Code Section 4.03.21 B curating toxic chemicals. Especially since it is adjacent to a residential neighborhood, a park and school. Additionally, the asphalt plant will not only impact the nearby neighborhoods, but our entire small town as the air quality will be impacted. 2. As a homeowner, teacher and involved member of our community I have issues with the lack of informed decision making to grant the setback variance as well. It does not appear the town of Wellington has done any environmental (air quality, water quality and quantity, soil erosion and discharge), traffic impact, view shed impacts, noise, environmental justice for underserved communities, or economic impacts analysis that this will have on the health and safety of Wellington residents and wildlife such as migrating birds. The town must clearly understand and communicate to the public, the risks and/or benefits associated with the Asphalt Plant. This has yet to have been completed. Based on other locations where Asphalt Plants are located near neighborhoods, property values decreased 56% according to Blue Ridge Environmental Defense League (BREDL). BREDL also found that 45% of residents living within a half mile of a new asphalt plant reported a deterioration of their health, which began after the plant opened. Known toxins also come with an Asphalt Plant such as odor, formaldehyde, hexane, phenol, polycyclic organic matter, and toluene. The CDC's National Institute for Occupational Safety & Health states, "Known carcinogens have been found in asphalt fumes generated at work sites." Exposure to these air toxins may cause cancer, central nervous system problems, liver damage, respiratory problems, and skin irritation (EPA Asphalt Plant Emission Assessment Report 2000). As a mother and teacher, it seems very irresponsible of the Council not to have the health and safety of its residents as its first and foremost priority. It is also stated in the Land Use Code, Section 1.01.1 and Section 4.03.21, that the sole purpose of the code is for the health and safety of its residents. Clearly, the Asphalt Plant violates the Land Use Code and should not be approved. The town of Wellington has a number of human health and safety issues to deal with currently, they do not need to add another issue. The responsibility of the Town of Wellington and its elected representatives is the health, safety, and well being of its residents. If this asphalt plant is approved, the town is falling far short of this responsibility. 3. The economic impact on the residents and the town will be noticeable. Residents will lose property value and will likely look to move out of town. With issues Wellington is already trying to deal with (train crossings, water quality, water price, concentrated feed lots, close proximity to the highway), this will likely be the final thing to tilt residents to leave. Businesses will also likely leave and close as their consumers will leave town. 4. There are certainly better locations for the Asphalt Plant to be located. Connell Resources likes to mention that homes have been built in Fort Collins next to their plants, however that is a homeowners decision. With this approval in Wellington, homeowners were not able to make a decision to live next to an Asphalt Plant, the town of Wellington is poorly making that decision for them. As elected officials, you must stand up for your constituents. There are large swaths of county land in Larimer and Weld where this could be located away from residential areas. Connell Resources claims that the counties don't want the Asphalt Plants, but there is a process to get those approved there. There are also areas within Weld County where these plants are welcomed. Connell Resources also claimed that they could open in Carr (where they get their aggregate) but its too cold and windy for transporting. There are common mitigations such as lining and insulating trucks for transport. These plants exist in far colder places than the Front Range of Colorado. It's time for the town of Wellington to STOP being Fort Collins' dumping ground. Thank you for taking comments and I trust the right decision will be made regarding the health, safety, and viability of residents and the town of Wellington. Sarah Mickschl

Optional File Attachment

-Land Use Code-ADOPTED.pdf

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