From: Ruggerone@comcast.net
To: Public Comment
Subject: Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington
Date: Monday, May 2, 2022 3:51:48 PM
Attachments: Letter to PSCAA_GTR.pdf

Dear Mr. Renninger:

Please see my comments on the Cadman Asphalt Facility.

Greg Ruggerone, Ph.D.
Kenmore, WA

May 2, 2022

Brian Renninger
Engineer
Puget Sound Clean Air agency
1904 Third Avenue Suite 105
Seattle, Washington 98101

Email: PublicComment@pscleanair.gov

Dear Mr. Renninger,

I would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit. My wife and family have lived in Kenmore for 33 years. The City of Kenmore takes pride in providing a friendly, family-oriented city at the north end of Lake Washington, yet the continued operation of the Cadman Asphalt Facility on the shore of Lake Washington is not compatible with the Kenmore vision. I would like to see the industrial Cadman property transition to an area that supports families, recreation, and fish and wildlife. Since such a transition will likely take many years, our government agencies must ensure that the Cadman Asphalt Facility is operated so that it does not harm or disturb people, fish and wildlife. After listening to experts speak about the Cadman Asphalt Facility and the lack of sufficient monitoring, I submit the following comments that stem from those written by Jim Myers.

SEPA Environmental Checklist

3. Water (a2) - The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner appear to be within 200' of the Lake Washington shore. Additional actions are likely needed to prevent runoff to Lake Washington, especially given that these operations likely fall within the 200' buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the Lake Washington watershed.

3. Water (c1.) – No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, the proper agency should be consulted in order to protect fish and wildlife, including the ESA-listed species.

5. Animals (a) – Herons and other waterfowl are conspicuously missing. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore.

5. Animals (b) – Chinook salmon and steelhead are ESA listed as Threatened by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues.

7. Environmental Health (a) – Do the hydrocarbons stored on site present a significant risk of fire or explosion, not just spill.

8. Land and Shoreline Use (a) it is important to consider the public use of the Burke Gilman trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, and walkers, all of who would encounter direct emissions from the facility. (see also Environmental Checklist Section12a).

Draft Construction Permit

7 – 13. Emissions Limits

While it is an important step forward to require testing on items 7-13, it is not clear if the emissions criteria are suitably strict to protect public health, especially since people are living and recreating so close to the Cadman facility. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

22 and 23. Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is needed. During these tests the production output should be reported. It is noteworthy that in stack tests provided by Cadman (and used in subsequent modeling), production was only at 140 to 150 tons/hour, 75% of the permitted output. These results may be misleading if not adjusted to the maximum production of the facility.

Furthermore, there are several issues with the air quality modelling that accompanied the application.

> First, the model utilized meteorological data from Paine Field in Everett. Paine Field lies on the crest of a ridge line near the ocean, while the Cadman site is at the north end of Lake Washington, which offers a 25-mile funnel for winds, bounded on the East, North, and West sides by ridge lines. Thermal conditions at the lakeside often produce temperature inversions in the winter that trap air against the hills to the north of the Cadman site, i.e., the City of Kenmore.
>
> Sites within the Lake Washington watershed likely offer more relevant data, one would imagine that the municipal airfield in Renton, the University of Washington, or the NOAA facility at Sand Point would provide more reliable data. The Trinity modelling report notes (Section 2.2) that the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the Port of Everett. Similarly, background levels for PMs were calculated using an area average, while a PSCAA monitor located in Lake Forest Park would have provided more relevant data.

Furthermore, for air modeling Trinity consultants determined that the City of Kenmore was not urban, a determination that does not comport with the reality on the ground around downtown Kenmore.

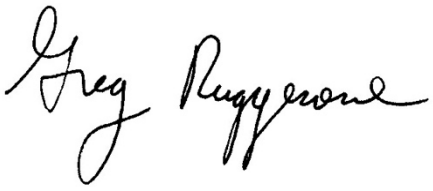
Secondly, when emissions testing was lacking the model utilized AP-42 to estimate emissions levels. For a variety of reasons (described best by the EPA in their precautionary notice Publication no. EPA 325-N-20-001-attached) this does not provide the necessary assurance of public safety.

Residents of Kenmore need actual testing of multiple emissions elements rather than relying on AP-42 estimates.

Monitoring and Complaints

The odor detection and reporting protocol provides a necessary effort to provide a response to public concerns. Residents, businesses, and visitors to Kenmore (including those who use the Burke Gillman) will have some recourse to odors. I encourage you to maintain these items in the final draft.

Sincerely,



Greg Ruggerone, Ph.D.
6148 NE 194th PL
Kenmore, WA 98028
Ruggerone@comcast.net

From:	David Morton
To:	Bridgit Baker; Bryan Hampson
Cc:	Brian Renninger; John Dawson; Public Comment; Cynthia Wang; Steve Van Slyke; Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall
Subject:	Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore
Date:	Wednesday, April 13, 2022 6:51:02 PM
Attachments:	1649900596660blob.jpg 1649900682567blob.jpg 1649900771536blob.jpg Email to Cascadia Law and TRC.docx

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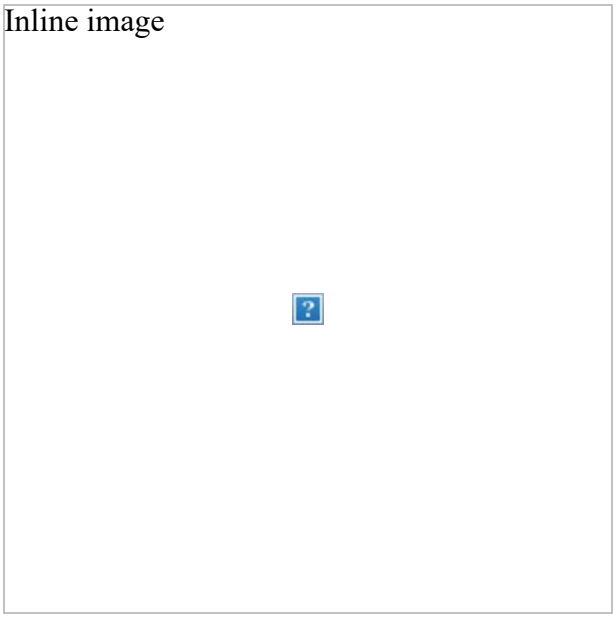
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In his presentation to Kenmore City Council on 4/11/22, Mr. McLerran recommended that "citizens… look at the Engineering Worksheet that was prepared by the permit review engineer at the agency" (Brian Renninger.) Here's an excerpt from the Worksheet:

<!--[if !supportLists]-->1. <!--[endif]-->On **page 9 of the Engineering Worksheet**, there is the following statement and table:

"The facility carried out **a stack test** of the dryer baghouse stack on **October 1, 2020**, for **particulate matter, carbon monoxide, and nitrogen oxides**. The test results are shown below:"

Inline image

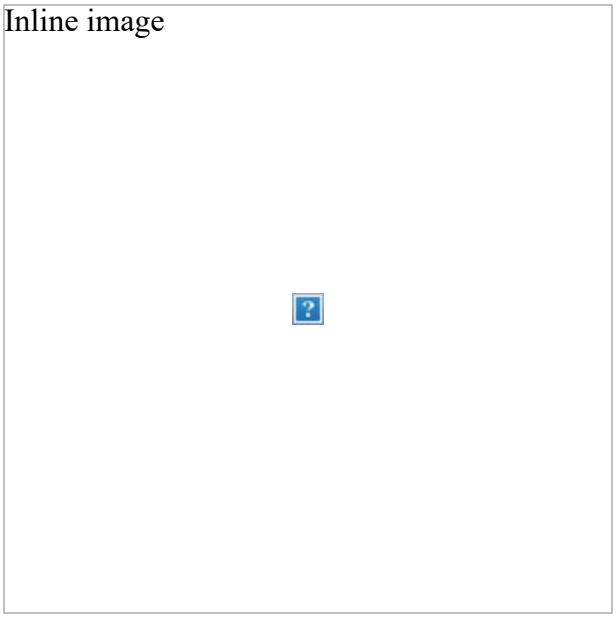


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2. <!--[endif]-->On **page 25 of the NAAQS Modeling Report for Cadman Materials, Inc / Kenmore, WA dated March 2022**, there is the front page of a Stack Test Report. The test date was **October 1, 2020**:

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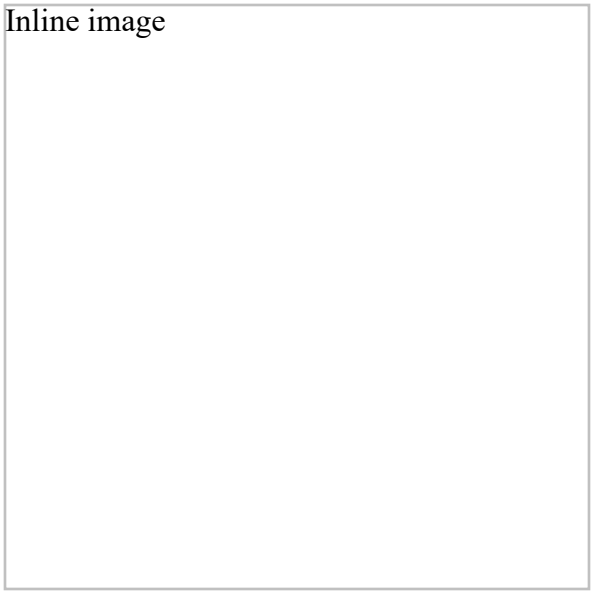


<!--[endif]-->

The title of the report says "**Tests for Particulate Matter, Opacity, Nitrogen Oxides and Carbon Monoxide**. There was **no VOC testing** at the Cadman asphalt plant in Kenmore on that day or any other day.

<!--[if !supportLists]-->3. <!--[endif]-->On **page 70 of the NAAQS Modeling Report for Cadman Materials, Inc / Kenmore, WA dated March 2022**, Table 3. shows annual emissions for VOC, but the footnote gives an AP-42 emission factor, meaning that the VOC emission value was calculated. It was not obtained by actual stack testing.

<!--[if !supportLists]-->**4.** <!--[endif]-->**On page 18 of the Engineering Worksheet**, the following table appears:



We know that there was no actual stack testing for SO_2, VOC, combined HAPs, or individual HAPs. Yet they appear in the table. Their annual emissions were **calculated using AP-42 emission factors**.

There are several other examples in the Engineering Worksheet and the NAAQS Modeling Report showing that PSCAA has yet to require any VOC testing at the asphalt plant in Kenmore and that there are no results of actual VOC tests performed at that plant.

On April 11, 2022, Mr. McLerran and Mr. Hoffnagle gave an "Update on the Draft Permit."

Mr. McLerran said the following:

<!--[if !supportLists]-->1. <!--[endif]-->"There was quite a bit of back and forth between the clean air agency and Cadman about what would be required for a complete application, things like modeling requirements by the clean air agency, stack testing requirements for volatile organic compounds, the VOCs that people have mentioned." … "And as part of the permit application, the clean air agency did require Cadman to do stack testing of the dryer for VOCs, the volatile organic compounds."

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Councilmember Srebnik made a comment that sounded like maybe she believed that VOC stack testing was done in October 2020. She said, "I'm glad that the testing that was done was the kind that folks asked for and that it did show that levels of toxic emissions were well below the accepted levels." Folks were asking for VOC testing at that time, and when the test results were publicly released, folks were disappointed that VOC testing had not been done.

I'd be grateful if Mr. McLerran could comment on this apparent contradiction. Has VOC testing already been done at the Kenmore asphalt plant? If so, please direct me to such test results.

Sincerely,

David Morton
206-909-5680

Parameter	Test Result Average
Total PM gr/dscf at 7 percent oxygen	0.004
Filterable PM gr/dscf at 7 percent oxygen	0.002
NOx ppmdv at 7 percent oxygen	30
CO ppmdv at 7 percent oxygen	92

Cadman Materials Inc.
Cadman Kenmore
Hot Mix Asphalt Plant

Performance Tests for
Particulate Matter, Opacity,
Nitrogen Oxides and Carbon Monoxide

Test Date: **October 1, 2020**
Report Number: **3128-20**

Prepared for:

Cairncross & Hempelmann
524 2nd Ave., Suite 500
Seattle, WA 98104

Prepared by:

Emission Technologies, Inc.
5090 Samish Way
Bellingham, WA 98229

Source	PM_{10} (tpy)	$PM_{2.5}$ (tpy)	SO_2 (tpy)	NO_x (tpy)	VOC (tpy)	CO (tpy)	Combined HAPs (tpy)	Maximum Individual HAP (tpy)
Stack Emissions								
Aggregate Dryer	3.7	3.5	0.5	10.0	0.8	59.2	0.8	0.3
HMA Silo Filling 1	--	--	--	--	1.2	--	0.0	0.0
Asphalt Tanks	0.2	0.24	--	--	0.0	0.0	0.0	0.0
Total Stack Emissions	*4.0*	*3.7*	*0.5*	*10.0*	*2.1*	*59.2*	*0. 8*	*0.3*

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From: Phyllis Finley
To: Public Comment
Subject: Cadman Asphalt PSCAA
Date: Wednesday, April 20, 2022 9:07:03 AM
Attachments: Cadman Asphalt PSCAA.docx

To: PSCCA
From: Phyllis Finley
Kenmore WA
Date: 4.20.2022
Re: Public (Written) Comments: Cadman, Order of Approval and Determination of Nonsignificance

The permit, as proposed, is better than no restrictions/requirements on Cadman for their continued operations.
The restrictions/requirements barely meet acceptable/common sense guidelines.
In my opinion, it's acceptable in the way a D- is acceptable. Yes, it's a passing grade, but barely.

My comments are divided into four categories:
(Puget Sound Clear Air Agency will be referred to as the Agency.)

1. My intuition
2. SEPA Checklist
3. NOC Worksheet No. 11861
4. Requests

1. **Intuitive Judgement**

The charts and scientific data presented in the documents have their place.
So does common sense.

This facility is in an urban area. Doesn't common sense tell us that its emissions impact people and their health?
This facility is in an environmentally sensitive area and near one of the most significant Biodiversity Corridors in our region. Doesn't common sense tell us that its emissions impact all living things as far as those emissions reach?

From psychologists such as B.F. Skinner, to writers such as Mark Twain, to a recent Forbes magazine article, it has been written that
"Past behavior is the best predictor of future behavior."

Based on that…there are some observations about Cadman's past behavior:

They have not been community environmental stewards.
They have broken the law.
They seem to respect neither the letter nor the spirit of environmental laws.

My intuition tells me that, left to their own devices, Cadman will continue their past pattern of behavior.

Assuming this is true, it is the responsibility of PSCCA to have the strictest measures in place to ensure that this is not possible.

2. SEPA Checklist

If I had broken the law and were now in the position of having to "fix" the situation, I would go out of my way to comply.
If I were an agency forcing compliance, I would now verify every bit of information provided by the offending company.

Neither has been accomplished with the SEPA checklist.

The SEPA Checklist submitted by Cadman is misleading, incomplete, and insufficient.
(As a retired teacher, this is the kind of assignment I would have handed right back, with the comment, "Turn it in again when you've finished it. Just putting a word in a blank doesn't constitute an answer.")
Is this a pattern of the type of compliance we can expect in the future?
PSCCA has apparently not verified the information submitted.

Examples:

Page 6, 2. AIR
b. Are there any off-site sources of emissions or odor that may affect your proposal.
Answer NO
If that is truly an honest answer, it is obvious the neither Cadman nor PSCAA has been paying attention for the last several years.

Page 6, 3. WATER
a. Surface
2 Will the project require work…adjacent to (withing 200 feet) the described waters?
Answer: NO
Has PSCCA verified that with a tape measure? Simple enough…

Page 8, 4. PLANTS
The only type of plant noted is Himalayan blackberry along the shoreline.

Page 9, 5. ANIMALS
Birds: Heron is not checked. There is an active heron rookery in Kenmore.
Ducks and other waterfowl are not included.

Mammals: None are checked. There ARE mammals near the site. You simply need to spend a short time on the Burke-Gilman Trail to know that. How about squirrels, rabbits, mice, rats, coyote…and in the water – otter, mink. Be sure to include mountain beaver.

Fish: Salmon isn't checked, trout isn't checked, shellfish (freshwater clams, crayfish) isn't checked.

Page 10, 7. ENVIRONMENTAL HEALTH
6 Proposed measure to reduce or control environment health hazards, if any:
Answer: None proposed as part of the proposed project.

If that's the complete answer from Cadman, the reply from PSCAA needs to be "PROPOSE SOME!"

3. <u>NOC Worksheet No. 11861</u>
Are statistics based on ACTUAL TESTING or on MODELING?

Page 8:
"…in addition, as explained by the applicant, and to the best of the Agency's knowledge, no cutback asphalt is used at this site…"

PSCAA is taking Cadman's word for it? The need to offer proof. PSCAA needs to make unannounced visits.

Page 10: BACT for Asphalt Dryer/Mixer
Particulate Matter
"…there is some concern that adding dilution air during an emission test could be used to demonstrate compliance with a limit…"

Is there any reason to believe that Cadman WON'T do that?

Page 15: BACT/RACT for Odor

"…Agency is setting into place a complaint response program…"
Is there any reason to believe that Cadman WILL comply?

Page 17: Facility-wide Emissions
Actual Emissions

"The facility has no record of reporting emissions so actual emission estimates are not known…
…the facility has the potential to be a reporting source."
Why just the "potential" and not actual?

Pages 22 – 31 are all reliant on Cadman's cooperation and diligence. SERIOUSLY? The Agency is relying on an Owner/Operator who isn't thorough enough to list ducks and heron on the SEPA checklist to develop their own plan to ensure continuous compliance with PSCAA regulations? This is alarming.

Page 22
J. Applicable Rules and Regulations
"…the owner or operator…shall develop and implement an…plan to ensure continuous compliance with Regulations…"

Page 26
5 "The owner shall maintain records…"

Page 27
15 "…the owner…shall calculate…"
16 "…the owner…shall notify…"
17 "…the owner…must report…"
18 "…the owner…shall record and limit…"

Page 28
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Page 29
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Page 30
27 "…the owner…shall establish a complaint response program…"

Page 31
28 "…the owner…shall maintain records required by this Order of Approval…"

4. Requests

The agency should:

- require that all statistics be based on actual testing and not modeling.
- not allow Cadman to have total control over its own record keeping.
- perform inspections at the Cadman facility without prior notice.
- provide to the public every previous notice of odor complaint.
- require the addition of plantings on site to mitigate the air quality that Cadman affects.

- require documentation that Cadman has conferred with the appropriate state and federal agencies regarding threatened or endangered fish.
- require/request that measures be taken to preserve/enhance wildlife in the vicinity.
- require verifiable measures to reduce or control environmental health hazards.
- be present for all testing to ensure accuracy of results (such as the addition of dilution air)
- require verifiable proof, for the public record, that Cadman is not using cutback asphalt.
- verify all future records submitted by Cadman.

From: Phyllis Finley
To: Public Comment
Subject: Cadman Oral Comments
Date: Tuesday, April 19, 2022 9:33:59 AM
Attachments: Cadman Asphalt PSCAA Oral comments.docx

To: PSCCA
From: Phyllis Finley
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Date: 4.18.2022
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So does common sense.

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~~6 Proposed measure to reduce or control environment health hazards, if any:~~
~~Answer: None proposed as part of the proposed project.~~

~~Page 11, 8. LAND AND SHORELINE USE~~
~~Nothing noted for this important waterway~~

3. **NOC Worksheet No. 11861**
4.

Are statistics in this worksheet based on ACTUAL TESTING or on MODELING?
This worksheet is of urgent concern.
Here are a few examples:

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~~The Agency is taking Cadman's word for it?~~

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Page 26 – 31 All of these start with "the owner"
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Seriously? The Agency is taking Cadman's word for all of these issues?
The same company who failed to list Heron and Ducks on the SEPA checklist?
Based on Cadman's past performance, my intuition tells me that this in not common sense.

5. Requests (12)

The agency should:

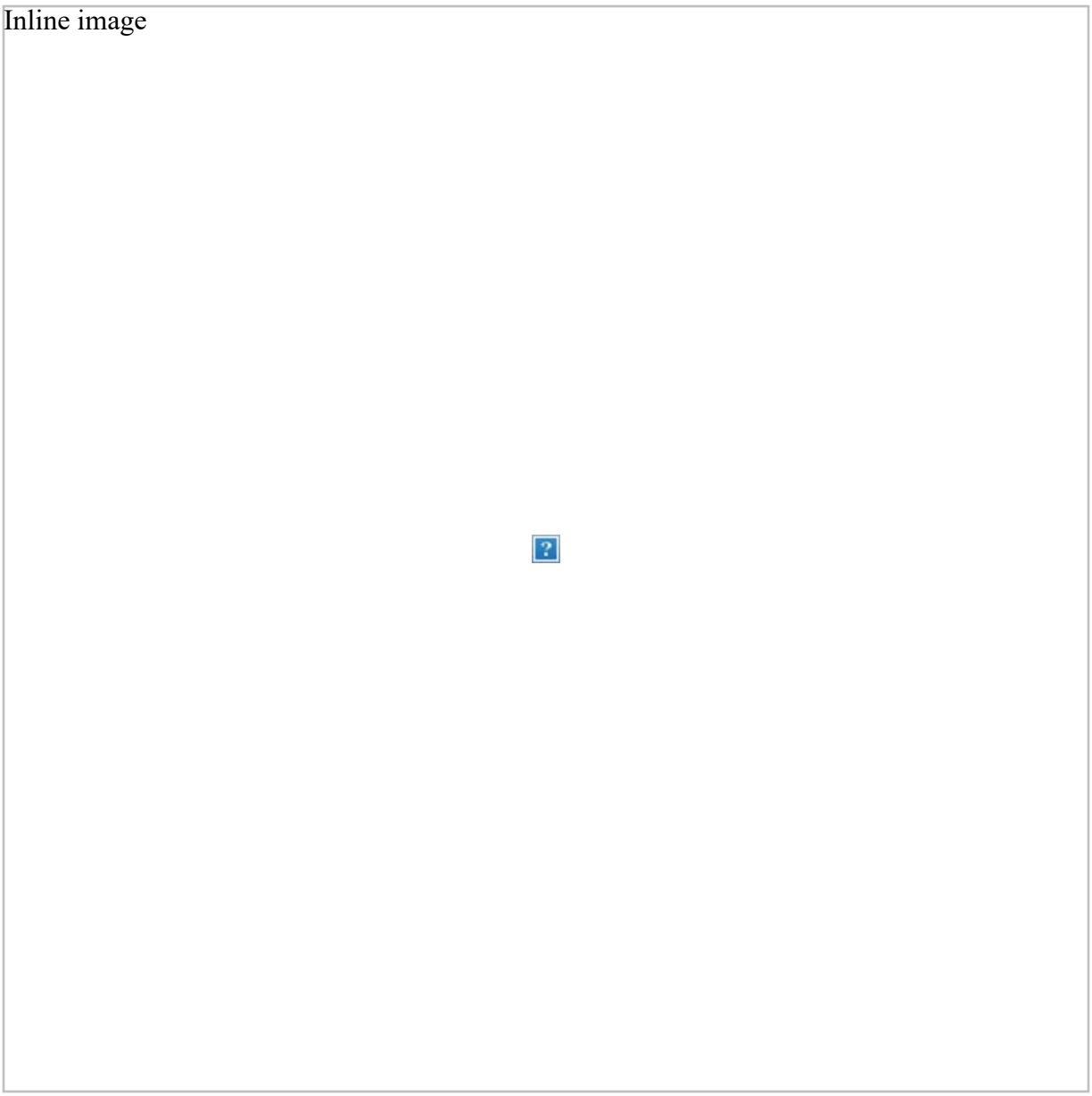
- require Cadman to complete the SEPA checklist with care and detail
- require that all statistics be based on actual testing and not modeling.
- not allow Cadman to have total control over its own record keeping.
- perform inspections at the Cadman facility without prior notice.
- make public every previous notice of odor complaint.
- ~~require the addition of plantings on site to mitigate the air quality that Cadman affects.~~
- require documentation that Cadman has conferred with the appropriate state and federal agencies regarding threatened or endangered fish.
- require/request that measures be taken to preserve/enhance wildlife in the vicinity.
- require verifiable measures to reduce or control environmental health hazards.
- be present for all testing to ensure accuracy of results (~~such as the addition of dilution air~~)
- require verifiable proof, for the public record, that Cadman is not using cutback asphalt.
- verify all future records submitted by Cadman.

From: David Morton
To: David Morton
Subject: Cadman plants in Kenmore as seen from helicopter on Sept. 21, 2017
Date: Monday, April 18, 2022 2:04:54 PM
Attachments: 1650314967679blob.jpg
1650315152074blob.jpg

Inline image



Inline image







From:	Bryan Hampson
To:	Public Comment; Brian Renninger
Cc:	Bridgit Baker
Subject:	City of Kenmore"s Comments on Cadman DNOC
Date:	Monday, May 2, 2022 3:30:44 PM
Attachments:	2022-05-02 - City of Kenmore Public Comments Draft Order of Approval (NOC No. 11861) Cadman Materials, Inc. - signed.pdf 2017-06-26 Interlocal Agreement PSCAA #14-C1261 Amend#3.pdf

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Hi Brian,

Thank you for the opportunity to comment. Attached are our comments as well as the ILA and an attachment from KC Health (included in the PDF with our comments). Looking forward to seeing the final NOC permit.

Regards,

Bryan

Bryan Hampson
Development Services Director | City of Kenmore
18120 68th Ave NE | Kenmore, WA 98028
Tel: (425) 398-8900 | Direct: (425) 984-6165
bhampson@kenmorewa.gov | www.kenmorewa.gov

City of Kenmore, Washington

May 2, 2022

Brian Renninger, Engineer
Puget Sound Clean Air Agency
Via email PublicComment@pscleanair.gov

Re: City of Kenmore Written Public Comments on the Draft Order of Approval (NOC No. 11861) and Determination of Nonsignificance, Cadman Materials, Inc., Kenmore Facility

Mr. Renninger,

The City of Kenmore appreciates this opportunity to comment on the draft Order of Approval (NOC No. 11861) from the Puget Sound Clean Air Agency (Clean Air Agency) for the Cadman asphalt plant located in Kenmore.

Over the last several years, many Kenmore residents have expressed concerns about odors and possible health effects of emissions from the Cadman facility. We appreciate that the draft permit is responsive to many of the concerns of Kenmore and its citizens and that the plant no longer has grandfathered status under clean air rules and regulations and is being required to meet current emission standards consistent with Best Available Control Technology (BACT) requirements.

However, the City of Kenmore and its residents remain concerned about odor impacts from the facility on the community and ask that the odor conditions in the permit be retained in full and improved. We appreciate that the permit requires odor monitoring in sensitive community locations including residential and commercial areas and in public spaces like our library and the Burke Gilman Trail. These are all places where odors have been reported.

We also appreciate the ongoing relationship between the City and the Clean Air Agency and would also like the Clean Air Agency to confirm that the City of Kenmore's field inspector retains the ability to accept odor complaints from citizens and forward those on to the Clean Air Agency as set forth in the attached Interlocal Agreement between the Clean Air Agency and the City of Kenmore dated June 26, 2017. In condition 25, the draft language regarding triggering of the requirements of condition 27, contains the following language: "If the Control Officer or a duly authorized representative communicates to the owner or operator …". We would like the Clean

Air Agency to confirm that the language in the permit regarding a "duly authorized representative" under this condition continues to include the Kenmore Responsible Official recognized at paragraph G.5 of the Interlocal Agreement. We would like the relationship created under the Interlocal Agreement to continue into the future. We also note that the Interlocal Agreement remains effective only until June 30, 2022, and staff will be recommending to the City Council to extend the duration of the relationship beyond that date as has been done several times previously. In addition, since the permit contains conditions regarding opacity from the stack and from the onsite storage tanks, we would request an extension to include expansion of the training and authority for the City inspector to include opacity inspections and compliance.

In addition, under condition 27, should the odor monitoring required under the condition detect an odor of Level 2 or greater, the "owner or operator shall immediately initiate corrective action to reduce the odor to Level 1 or less…". We fully support this language. However, under condition 28, under the complaint response program, the owner or operator "shall record and investigate complaints regarding air quality as soon as possible, but no later than one working day after receipt." Because odors are transitory, we request the language in condition 27 mirror that in condition 25 and require that the owner or operator respond to odor complaints "immediately". Waiting up to "one working day" to investigate an odor complaint is very likely to be ineffective and a more immediate response is likely to result in a proper corrective action.

In addition, odors from asphalt loaded into trucks can also be an odor and emissions source. We request that the draft permit be modified to require that trucks loaded with asphalt products at the facility be covered before they leave the fence line of the site to minimize offsite odor impacts on the surrounding community.

The draft permit contains conditions 22 and 23 requiring initial emissions testing within 90 days of receipt of the permit and then every 12 months for opacity and every 36 months for other permit limits. We would like the Clean Air Agency to confirm that stack testing will be conducted with equipment operated at levels consistent with the 200,000 tons per year permit authorization. This will ensure that testing reflects meeting permit limits with equipment operated at levels consistent with maximum allowed production levels. Community members have expressed particular concerns about emission testing of VOC levels, and we are pleased that the permit sets a VOC limit for the facility in condition 10 and requires source testing for total VOCs in condition 22. Testimony of citizens before the Kenmore City Council and the Clean Air Agency has included a request for more frequent stack testing than every 36 months for compliance with conditions 7, 8, 10, 11 and 12. We request the Clean Air Agency consider whether that is a more appropriate testing period and include it in the Clean Air Agency's response to comments.

The City is also concerned that while the draft permit sets limits on petroleum distillate in on-site storage tanks, there is no requirement for periodic testing of the tank contents. While the draft

permit does, at condition 20, require record keeping regarding the amounts and types of materials loaded in the tanks, and sets a 0% opacity limit for the tanks, there are no periodic testing requirements regarding the materials in the storage tanks. To address concerns from the community that prior Clean Air Agency inspection reports have identified medium cure (cutback) asphalt materials in the tanks, we request four additional conditions: 1) that the permit specifically prohibit the storage of medium cure (cutback) asphalt solvents; 2) that the permit prohibit production of cutback asphalt products; 3) that the permit require periodic testing of the contents of the storage tanks and provide for surprise inspections by the Clean Air Agency to test the materials contained in the tanks; and 4) that testing should include measurement of total VOCs from the tank vents. We appreciate that tank content testing was done in 2020 and found no medium cure (cutback) asphalt products and that Cadman has indicated they do not produce cutback asphalt products, but periodic tank content testing and VOC testing will provide confidence to the community that production of cutback asphalt will not be an issue going forward.

We also are pleased that air modeling regarding compliance with federal air quality standards at the facility fence line has been conducted. However, at the public hearing, the air modeler for Trinity Consultants was cut off on her time limit while indicating there may have been an error regarding modeling of PM emissions. Because her comment was incomplete it is difficult to evaluate the impact of any error that may have occurred. We have also received concerns from citizens that the ambient air modeling may not have been completed using the best available met data and may have been done with equipment operating at levels that are below the 200,000-ton production limit that would be authorized by the permit. Others have expressed concerns that emission factors under AP-42 may not reflect the best available emission data. We are aware of the Department of Ecology's review done for drum mix asphalt plants, which evaluated 20 different source test results that were newer than AP-42 emission factors. While we are also aware that drum mix plants are typically larger than batch mix facilities like Cadman, we would like the Clean Air Agency to confirm that proper emission factors have been used in the ambient air modeling. We request the Clean Air Agency review the ambient air modeling and specifically respond to these concerns in its response to comments. If there are modeling errors identified, we request that those be corrected and that permit limits and/or production levels be established under a final permit that ensure ambient air quality standards are not exceeded at the facility fence line.

We are pleased that a comprehensive air toxics analysis was required under WAC 173-460 and finds ASIL limits will be met. We have reviewed the Department of Ecology's air toxic review for their drum mix plant general permit and find the results for the Cadman facility to be consistent with that analysis - that even for a drum mix plant with production levels up to 300,000 tons per year, that all ASILs would be met.

We also would note that the environmental checklist prepared by Cadman for the permit application is missing details regarding the surrounding area conditions and wildlife. We would

note that community members have identified heron and other bird species in areas adjacent to the site and that the site modifications may be located within 200 feet of the shoreline. We would request that the responses in the environmental checklist be further reviewed and supplemented by the Clean Air Agency to make sure these issues are addressed in the final decision.

The City of Kenmore has recently received the data in the attached spreadsheet from the King County Health Department. We ask that the Clean Air Agency review this data and respond to whether it is relevant to the Cadman facility in the context of this Notice of Construction decision.

Thank you for this opportunity to comment on the draft Cadman permit. We look forward to reviewing a final permit from the Clean Air Agency.

Regards,

Rob Karlinsey

Rob Karlinsey,
City Manager

Cc: Dawn Reitan, City Attorney
Dennis McLerran, Cascadia Law Group
Gale Hoffnagle, TRC
Bryan Hampson, Development Services Director
Bridgit Baker, Code Enforcement Officer

ATTACHMENT FROM KC HEALTH

Hospitalization: Age Adjusted Rate

Diagnosis Group	Year	Geography	Age-Adjust	Age-Adjust	Age Adjusted Upper CI
ICD9:	Asthma (493)				
##Asthma (493)	2010-2015	State Total	60.79	60.03	61.56
##Asthma (493)	2010-2015	King	62.85	61.37	64.35
##Asthma (493)	2010-2015	98028_Kenmore_King	61.83	48.52	77.87
ICD10cm:	Asthma (J45)				
###Asthma (J45)	2016-2019	State Total	29.57	28.93	30.21
###Asthma (J45)	2016-2019	King	34.35	33.06	35.68
###Asthma (J45)	2016-2019	98028_Kenmore_King	22.07	13.38	34.74

Geography:
98028_Kenmore_King
Age: All(Combined)
Gender: All(Combined)

Statistics:
Primary Statistic:
Age Adjusted Rate
Standard Population:
2000 Standard Population
Suppression:
No Suppression
Population Multiplier:
Per 100,000
Run Date: 4/20/2022

WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2019. Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021.
OR State Hospital Discharge Data 1987-1999. Office for Oregon Health Policy and Research.
Oregon State Inpatient Database (SID) 2000-2018. Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality. Community Health Assessment Tool (CHAT), March 2020.

INTERLOCAL AGREEMENT FOR COOPERATIVE ODOR COMPLAINT INVESTIGATIONS

City of Kenmore Contract No. 14-C1261 (Amendment #3)

THIS INTERLOCAL AGREEMENT FOR COOPERATIVE ODOR COMPLAINT INVESTIGATIONS is made and entered into on this 26th day of June, 2017, by and between the City of Kenmore [hereinafter "Kenmore"], a municipal corporation, and the Puget Sound Clean Air Agency [hereinafter "PSCAA"], a multicounty public agency.

RECITALS:

A. The PSCAA is a multicounty air pollution control agency organized and activated in accordance with Chapter 70.94 RCW. Kenmore is located within the boundaries and the jurisdiction of the PSCAA.

B. The purpose and the public policy of the PSCAA is to secure and maintain such levels of air quality as will protect human health and safety, to prevent injury to plant and animal life and property, and to foster the comfort and convenience of the area's inhabitants.

C. Pursuant to the authority of RCW 70.94.141, the PSCAA has previously adopted Regulation 1 to control the emission of air contaminants from all sources within the agency's jurisdiction, to provide for the uniform administration and enforcement of said Regulation, and to carry out the requirements and purposes of the Washington Clean Air Act and the Federal Clean Air Act.

D. Section 9.11 of said Regulation 1 states, in part, as follows:

> (b) With respect to odor, the Agency may take enforcement action under this section if the Control Officer or a duly authorized representative has documented all of the following:
>
> (1) The detection by the Control Officer or a duly authorized representative of an odor at a level 2 or greater, according to the following odor scale:
>
> level 0 - no odor detected;
> level 1 - odor barely detected;
> level 2 - odor is distinct and definite, any unpleasant characteristics recognizable;
> level 3 - odor is objectionable enough or strong enough to cause attempts at avoidance; and
> level 4 - odor is so strong that a person does not want to remain present.

(2) An affidavit from a person making a complaint that demonstrates that they have experienced air contaminant emissions in sufficient quantities and of such characteristics and duration so as to unreasonably interfere with their enjoyment of life and property; and

(3) The source of the odor.

E. Kenmore and the PSCAA have determined that their mutual goal of ensuring clean air for Kenmore's citizens would be more efficiently attained if some of the odor complaint investigations described in Regulation 1, Section 9.11 (b) could be conducted by Kenmore within its jurisdiction, on behalf of the PSCAA.

F. Kenmore and the PSCAA are desirous of entering into an agreement to memorialize the terms and conditions under which Kenmore may conduct said odor complaint investigations on behalf of the PSCAA. In compliance with and under the authority of Chapter 39.34, RCW, the purpose of this Agreement is to specify said terms and conditions.

G. Given that (1) promoting and enforcing air quality is the primary responsibility of the PSCAA and not of Kenmore, (2) Kenmore is not mandated by State Law to investigate or enforce air quality complaints on behalf of the PSCAA, (3) Kenmore has limited resources, and (4) the full impact and workload requirement for Kenmore to handle air quality complaint investigations is unknown, this Agreement should be considered a temporary trial arrangement with a fixed end date and with the right of Kenmore or the PSCAA to terminate this Agreement at any time within the parameters set forth below.

Now, therefore, in consideration of the mutual promises made herein, it is hereby agreed as follows by the parties:

1. Odor Complaint Investigations. The PSCAA hereby authorizes Kenmore, on a non-exclusive basis, as Kenmore staff time and resources permit at the sole discretion of the Kenmore City Manager or his/her designee, and on behalf of the PSCAA, to conduct odor complaint investigation activities detailed in Regulation 1, Section 9.11(b) of the PSCAA, including but not limited to:

1.1 Quantifying the odor detected according to the following scale, on a written form furnished by the PSCAA:

level 0 - no odor detected;
level 1 - odor barely detected;
level 2 - odor is distinct and definite, any unpleasant characteristics recognizable;
level 3 - odor is objectionable enough or strong enough to cause attempts at avoidance; and
level 4 - odor is so strong that a person does not want to remain

present.

1.2 Interviewing the complainant(s) and obtaining from him/her/them a signed affidavit or other formal statement which describes the odor, the source of the emission, the person who the complainant believes is responsible for causing or allowing the odor, and distress or ill effects caused by the odor. Said affidavit or statement shall be completed on a form furnished to Kenmore by the PSCAA.

1.3 Determining and documenting the source of the odor, to the best of Kenmore's knowledge.

1.4 Prior to any investigation conducted by Kenmore, PSCAA shall provide all necessary training to Kenmore personnel who are tasked with conducting such investigations.

2. Submittal to PSCAA. With respect to each individual complaint, at such time as Kenmore has completed the investigation activities described in Section 1 above, Kenmore shall submit to the PSCAA any written documentation pertaining to said complaint. In its sole discretion, the PSCAA shall then determine whether or not to initiate any enforcement action.

3. Other Remedies. Nothing in this Agreement shall be construed to impair any cause of action or legal remedy which Kenmore may have for injury or damages arising from the emission of any odor in such place, manner or concentration as to constitute air pollution or a nuisance.

4. Agency Authority. Except as otherwise provided herein, neither party shall have agency authority to act for or bind the other party in any matter. This Agreement does not preclude or discourage the PSCAA from responding to and investigating air quality complaints within Kenmore. The PSCAA recognizes that Kenmore may not have the time and resources, given other competing Kenmore priorities, to respond to all air quality complaints in Kenmore.

5. Responsible Official. The Kenmore official responsible for conducting odor complaint investigations shall be the City Manager or his/ her designees. For purposes of Regulation 1, Section 9.11(b), said official(s) shall be the "duly authorized representative" of the PSCAA referenced therein.

6. Financing. The cost of conducting the odor complaint investigations performed by Kenmore described in Section 1 above shall be borne exclusively by Kenmore. The cost of any enforcement action taken as a result of the investigation shall be borne exclusively by the PSCAA.

7. Administrator. The administrator of this Agreement shall be Kim Cole of the PSCAA, or her successor, and she or her successor shall be responsible for administering the cooperative undertaking described herein.

8. Duration and Termination. This Agreement shall continue in full force and effect from the effective date of this Agreement through June 30, 2022; provided that at any time during this Agreement either party may give the other party thirty (30) days written notice of the former's intent to terminate this Agreement. Upon the termination of this Agreement, Kenmore shall submit to the PSCAA any written documentation secured with respect to an ongoing complaint investigation.

9. Notices. All notices and other communications hereunder shall be deemed to have been duly given if delivered or mailed, certified mail, with postage prepaid (a) if to Kenmore, to:

City of Kenmore
Bryan Hampson
Development Services Director
18120 68th Ave NE
Kenmore, WA 98028

or to such other person or place as Kenmore shall furnish to the PSCAA in writing, or (b) if to the PSCAA, to:

The Puget Sound Clean Air Agency
Kim Cole
Supervising Inspector
1904 Third Ave, Ste 105
Seattle, WA 98101

or to such other person or place as the PSCAA shall furnish to Kenmore in writing.

10. Severability. If any part of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

11. Counterparts. This Agreement may be signed in two counterparts and, if so signed, shall be deemed one integrated Agreement.

12. Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to the subject matter of this Agreement. There are no promises, terms, conditions or obligations other than those contained herein, and this Agreement shall supersede all previous communications, negotiations, representations or agreements, either verbal or written, between the parties hereto concerning the subject matter of this Agreement.

13. Amendment. This Agreement may not be modified or amended except by writing signed by both parties hereto.

14. Successors. This Agreement shall inure to the benefit of and be binding upon the parties, their respective successors and assigns, but no right or obligation arising hereunder may be assigned or transferred by any party without the prior written consent of the other party.

15. Governing Law. This Agreement shall be interpreted in accordance with the laws of the state of Washington.

16. Headings. The headings in this Agreement are intended solely for convenience of reference and shall be given no effect in the interpretation of this Agreement.

17. Filing. Pursuant to RCW 39.34.040, this Agreement shall be filed with the King County Division of Records or alternatively, listed by subject on the PSCAA and Kenmore web sites or other electronically retrievable public sources.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the date first above written.

CITY OF KENMORE

By: Rob Karlinsey
Title: City Manager
Date: 6/19/17

APPROVED AS TO FORM BY:

Rod Kaseguma, City Attorney
Date: 6/19/17

PUGET SOUND CLEAN AIR AGENCY

By: Steve Van Slyke
Title: Director – Compliance
Date: 6/26/17

APPROVED AS TO FORM BY:

Jennifer Dold, General Counsel
Date: 6/26/17

From:	Amelia Westling
To:	Public Comment
Cc:	Nancy Rogers; Maxwell Burke
Subject:	Comment Letters | Draft Order of Approval No. 11861
Date:	Monday, May 2, 2022 3:35:39 PM
Attachments:	Cadman Materials Comment Letter on Draft Order of Approval 11861 (04554354).PDF Cairncross Hempelmann Comment Letter on Draft Order of Approval 11861 (04554352).PDF

Good Afternoon,

Attached please find the following comment letters regarding the above referenced matter.

- Cadman Materials Comment Letter on Draft Order of Approval 11861
- Cairncross & Hempelmann Comment Letter on Draft Order of Approval 11861

Please respond to confirm receipt of both letters.

Thank you,

Amelia Westling
Legal Assistant
Pronouns: she/her/hers
CH& | **Cairncross & Hempelmann**
524 Second Avenue | Suite 500 | Seattle, WA 98104-2323
d: 206-254-4427 | f: 206-587-2308
AWestling@Cairncross.com | cairncross.com

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7554 185th Avenue NE, Ste 100
Redmond, WA 98052
Phone 425-867-1234
Fax 425-861-9282

May 2, 2022

Puget Sound Clean Air Agency
Attn: Brian Renninger, Engineer
1904 Third Avenue, Suite 105
Seattle, WA 98101
PublicComment@pscleanair.gov

Re: **Public Comment on Proposed Order of Approval No. 11861**
Cadman Materials, 6431 NE 175th Street, Kenmore, WA 98115

Dear Mr. Renninger:

Cadman Materials (Cadman) appreciates the opportunity to submit the following comments in response to Proposed Order of Approval No. 11861 (the Draft Permit) as drafted by the Puget Sound Clean Air Agency (the Agency) for the Cadman Kenmore Asphalt Plant.

The Kenmore Asphalt plant has been part of the Kenmore community since the 1960s. Cadman acquired the Kenmore Asphalt plant recently, in 2017. As a member of the community, Cadman Materials is committed to be a good neighbor by operating in a safe and responsible manner and in compliance with all applicable regulations. Aligned with our corporate philosophy, Cadman believes in engaging in a manner which builds transparency and creates credibility and trust in the communities where we operate.

Cadman has reviewed the Draft Permit and related documents and respectfully submits the following comments on the scope of the Agency's review and on specific conditions within the Draft Permit. This letter is accompanied by a letter from Cadman's legal counsel at Cairncross & Hempelmann (the Legal Letter).

1. Request for Correction to Emission limits Stated in Condition Nos. 7 and 8 (particulate matter emission limits, corrected to 7% O_2).

Cadman recognizes that setting limits based on particulate matter (PM) emission rates used in the dispersion model is appropriate. However, we, and our experts at Trinity Consultants, discovered an error between the initial draft conditions provided to Cadman and the Draft Permit released on March 3, 2022. This error needs to be corrected. An email was provided to Mr. Brian Renninger on April 12, 2022, from Trinity Consultants describing the error (attached here for ease of reference).

Specifically, as summarized in the tables below, the basis for the model emission rates were 0.0013 gr/dscf filterable PM and 0.0039 gr/dscf condensable PM at actual test conditions of 14.67% O_2. When corrected from actual conditions to 7% O_2, the corresponding concentrations are 0.0029 gr/dscf filterable PM and 0.0087 gr/dscf condensable PM. The corresponding total PM concentration is 0.0116 gr/dscf. Therefore, Cadman requests Condition 7 be updated to 0.0029 gr/dscf and Condition 8 be updated to 0.0116 gr/dscf (corrected to 7% O_2).

The initial draft conditions provided to Cadman applied the appropriate concentration listed in the source test report when setting the filterable concentration (0.002 gr/dscf at 7% O_2 x 130%), but an error in the reported value of 0.002 gr/dscf was discovered.

- As shown in Table 2 below, the conversion of the source test result (0.0013 gr/dscf) at actual conditions of 14.67% O_2 to 7% O_2 is 0.0029, not 0.002 gr/dscf.

- The Draft Permit also used the source test result of 0.004 gr/dscf for total PM, but this was the uncorrected concentration. The concentration corrected to 7% O_2 was not reported in the source test report. When calculated, the tested concentration corrected to 7% O_2 is 0.0089 gr/dscf. When applying the 130% safety factor to this value, the corresponding limit would be the same proposed value (0.0116 gr/dscf total PM, corrected to 7% O_2).

All corrections to 7% O_2 are based on the following equation:

$$Cadj = \frac{Cmeas(20.9-7)}{(20.9-\%O2)}$$

Table 1. Model Concentration Summary

Modeled concentration	(PM)_f)	(gr/dscf)	@ Actual	0.0013
Modeled concentration	(PM)_cond)	(gr/dscf)	@ Actual	0.0039
Modeled concentration	(PM_total)	(gr/dscf)	@ Actual	0.0052

Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0029**
Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0087**
Modeled concentration	(PM_total)	(gr/dscf)	@ 7% O_2	**0.0116**

Table 2. Source Test Summary

Run -->	1	2	3	Average
O2	14.65	14.68	14.67	14.67
PM_f (gr/dscf)	0.0012	0.0014	0.0014	0.0013
PM_f (gr/dscf), 7%O2	**0.0027**	**0.0031**	**0.0031**	**0.0030**
PM_t (gr/dscf)	0.0032	0.0046	0.0042	0.0040
PM_t (gr/dscf), 7%O2	**0.0071**	**0.0103**	**0.0094**	**0.0089**

For these reasons, Cadman requests Condition 7 be updated to 0.0029 gr/dscf and Condition 8 be updated to 0.0116 gr/dscf (corrected to 7% O_2).

2. Request for Correction to Scope of Permit related to asphaltic cement tanks and converting the restrictions of Conditions 13 and 20 precluding storage and, therefore, use of "Cutback" Asphalt, into elements of a Cadman proposal, rather than permit conditions.

The Draft Permit covers the replacement of condensers on two hot asphaltic cement tanks. Specifically, as stated on page 2 of the NOC Worksheet, the Agency asserts: "In 2017 the condenser on the smaller tank was moved to the larger tank and a new condenser was installed on the smaller tank." The Agency claims this change constituted a replacement of a control device per WAC-173-400-114 and, therefore, the change should have triggered an NOC and is now within the scope of the Draft Permit. Cadman disagrees.

As described in the original 2019 NOC Permit application letter, on pages 2 to 3, in April 2011 both asphalt tanks were fitted with condensing filters. As correctly noted by the Agency in the NOC Worksheet, page 2, that addition "did not require new permits." Then, as described in the original 2019 NOC Permit application letter, in 2017, due to problems with corrosion, the condensing filter on the primary tank needed to be replaced. The previous owner moved the filter from the second tank to the primary tank, stopped use of the second tank, and ordered a new filter for the second tank and, upon its arrival in August 2017, installed the new filter on the second tank. The NOC Worksheet asserts, incorrectly, that this action "constituted replacement of a control device per WAC 173-400-114 which required permitting review." The Agency ignores that WAC-173-400-114(1) specifically states "*[r]eplacement or substantial alteration of control technology does not include routine maintenance, repair, or similar parts replacement*." The replacement of the filter on a storage tank, triggered by a problem with the original condenser corroding, cannot be interpreted as anything but routine maintenance and similar parts replacement. Replacing the tank condensers with tank condensers did not change or alter the control technology in use. This change is outside the authority of the Agency to regulate.

Cadman acknowledges the Agency likely made this ruling in order to include the storage tanks within the scope of the Draft Permit, allowing the Agency to address misinformation coming from members of the community regarding the contents of the tank. Specifically, members of the community have repeatedly asserted that Cadman is storing and using "cutback asphalt." Cadman is not using cutback asphalt, has not used cutback asphalt, and has no intention of using cutback asphalt at the Kenmore Plant. Cadman agrees with the Agency's determination that the passive condensers installed on the tanks are equivalent to BACT and, therefore, meet the less stringent measure of RACT, so long as the tanks are limited to storage of standard hot mix asphalt cement.

The Draft Permit includes both Condition 13 and Condition 20 related to the asphalt cement storage tanks. As the asphalt cement tanks are outside of the legal scope of this Draft Permit, Cadman requests

Condition 13 and 20 be removed from the permit, in addition to other references to the asphalt cement tanks found in the permit description and conditions 22, 25, and 27. Notwithstanding the fact that the inclusion of the storage tanks is outside of the scope of this Draft Permit, Cadman is willing – outside of this NOC process - to abide by the terms of Condition Nos. 13 and 20. However, Cadman asks the Agency to explicitly classify those conditions as voluntary offers from Cadman, and not as requirements imposed on Cadman now or in the future for inspections, city, or agency compliance efforts or for future permit reviews. Alternatively, if the Agency's processes do not allow for that stand-alone commitment, Cadman requests the Agency to remove Conditions 13 and 20 from the Permit and Cadman will commit to keeping records of the tank contents available to the Agency or the Community upon request. Aligned with our commitment to be transparent, we are happy to cooperate with the City of Kenmore or community members to facilitate testing by any qualified consultant they choose to hire to test the content of the tanks.

3. Request for Correction to Condition 22 to call for emission testing every five years rather than every three years to reduce waste and be consistent with all other known asphalt plant permits.

The Draft Permit, Condition 22 states "[t]he owner or operator shall also test emissions for compliance with Conditions 7, 8, 10, 11, and 12 at least once every 36 months."

Cadman requests Condition 22 be revised to be consistent with all previous Agency permits for asphalt plants which set the compliance test requirement at once every five (5) years. For example, each of the following permits requires emission source testing only once every five (5) years:

Permit	Issued	Source Test Frequency	Permittee
Puget Sound Clean Air Agency			
NOC11891	Nov 21, 2019	Every 5 years	Cadman
NOC11812	Dec 17, 2019	Every 5 years	Cadman
NOC11274	May 18, 2017	Every 5 years	Pyramid Materials
NOC11328	Jan 23, 2018	Every 5 years	Icon Materials
NOC11613	Sep 18, 2018	Every 5 years	Puget Paving
Southwest Clean Air Agency			
ADP 19-3335 19-3335ADP.pdf (swcleanair.gov)	May 30, 2019	Every 5 years	Lakeside
ADP CL-2082 16-3199ADP.pdf (swcleanair.gov)	Nov 15, 2016	Every 5 years	Granite
WA Department of Ecology			
Asphalt Plant General Order	April 18, 2011	Every 5 years	All plants regulated by Ecology

Imposing a three-year period for Cadman to conduct emissions test has no risk-based justification as there are no special or atypical considerations present which would justify diverging from the requirements in place for other asphalt plants. Every compliance test will result in additional emissions,

product waste, and costs to Cadman. This is because compliance tests require the plant to run at maximum capacity for an extended amount of time, resulting in additional emissions which would otherwise not occur, and excess asphalt which would not otherwise have been manufactured. For example, on a typical production day, the batch plant operations call for pre-heating the aggregates, storing the heated aggregate in the hot bins, and then preparing small batches of asphalt as needed. In contrast, conducting a compliance test requires maximum production consistently over three, one-hour runs. Forcing Cadman to conduct its emissions test every three years will result in increasing plant operations, which would force Cadman to act in contradiction to what the surrounding community is requesting.

Condition 22 should be revised to require the compliance tests occur at least once every five (5) years rather than every 36 months.

4. Request for Elimination of Conditions 25 through 27, and reliance instead on Agency Regulation.

Condition 25, 26, and 27 introduce a variety of requirements related to odor.

Combined, these conditions appear to be an attempt by the Agency to expand its enforcement authority well beyond the requirements of Agency Regulation I, Section 9.11 (b), including by reducing the odor level required for compliance with the Regulation. These conditions are outside the scope of the Agency's regulatory authority.

Cadman understands the City of Kenmore has been coordinating with the Agency and the area's local State representative to introduce State legislation which would expand the Washington State nuisance regulations related to odor. However, that legislation has not passed. The conditions in the Draft Permit appear to be a carefully worded step to expand the scope of nuisance rules absent legislative authority.

In addition to those legal problems, as more fully discussed in the Legal Letter, Cadman has the following concerns with these conditions:

- The scope of these conditions is limited to emissions from the drum dryer, baghouse, and unless modified as requested earlier in this letter, the asphalt cement tanks. To Cadman's knowledge, there is no odor identification training provided to either the Control Officer or their duly authorized representative. Without a confirmed ability of these individuals to accurately identify the potential odor source and trace it back to a specific piece of equipment, these conditions provide the unfettered ability to assign responsibility based on assumption rather than fact.

  By way of comparison, opacity monitoring has a scientifically proven method which requires training and certification. Without a defined expectation or the use of accepted technology for odor monitoring by the Control Officer or their duly authorized representative, these conditions, as written, deny a legitimate expectation for consistent and unbiased application of the standard.

This is particularly concerning given the many other industrial and petroleum uses near the Kenmore Plant, including: Kenmore Air, Harbor Village Marina, North Lake Marina, multiple automotive oil change and repair businesses, and Bothell-Everett Highway, for instance.

- The intent of BACT and RACT is to provide feasible control technology. The use of monitoring, recordkeeping, and reporting-keeping is an administrative action, not a control technology. The Agency supported defining monitoring as a control technology because, as they stated in the NOC Worksheet, the Agency is not aware of any effective economical odor control technology applicable to the asphalt industry. However, on May 29, 2018, the Agency's Executive Director presented an "Air Quality Briefing" to the Kenmore City Council, in which he specifically identified control technologies for use as best management practices for odor control at asphalt plants, most of which are already in place at the Kenmore asphalt plant.

- In fact, the Kenmore Plant already has installed the following Agency recommended BMPs, which are BACT.

    - The asphalt cement storage tanks use passive vapor condensers.
    - The silo loading is designed so the vapor/fumes are routed to the baghouse where media filtration is in use.
    - The truck loading area includes a partial enclosure, as well as a scavenger duct to collect emissions from the truck loading process and duct the emissions to the baghouse for filtration.
    - The asphalt transportation includes limits on odor by the use of covered loads and by the use of temperature limitations, via the warm mix asphalt process.
    - Odor potential has been minimized by switching to a warm mix asphalt process, using higher-grade asphalt cement, and by use of an odor neutralizer (EcoSorb).

- As such, the inclusion of the odor monitoring condition is contrary to the prior position taken by the Agency that there are methods an asphalt plant can use to reduce odor, and the Agency's position ignores that Cadman is using those available control technologies.

- The onerous monitoring condition amounts to a research project on odor in Kenmore, which should not be the responsibility of one business when there are numerous potential odor sources in the vicinity.

  In 2014, the Agency conducted a community odor monitoring project in the Everett/Marysville area to provide data about the various odors in the community, assist with the community learning more about the odors they experience, and providing information to facilities about their odor emissions.[1] Despite the presence of various odor sources in Kenmore, the Agency has not offered similar technical assistance to the community. Rather than impose Conditions 25

[1] See, PSCAA-Odor-Study-Final-Report-2014-PDF (pscleanair.gov) (last accessed April 5, 2022).

through 27 on the Kenmore Plant, the Agency should work with the community to conduct a similar broad study.

Additionally, the Agency has closely coordinated with the City of Kenmore and the local state legislator to introduce new legislation aimed at expanding the scope of the Washington State nuisance law. This proposed legislation did not pass. Further discussion on this issue is provided in the Legal Letter.

Cadman objects to the inclusion of Conditions 25, 26, and 27, and requests they be removed from the Draft Permit.

Summary

Cadman is, and has always been, willing and available to discuss our operations with the Agency and accept any technical assistance the Agency is able to provide. Cadman is willing to make economical alterations to the operations with the goal of addressing community concerns, however, the extent to which we are able to make changes is significantly limited due the City of Kenmore's rezoning which caused the asphalt plant to become a legal non-conforming use.

Cadman proposes the Agency pause their final permit determination to take time to work together with Cadman and technical experts, including the City of Kenmore's consultant, to develop odor conditions which are both achievable and within the Agency's legislative authority to require.

Sincerely,

Jamie Tremain
VP & GM Materials
Cadman Materials, Inc.

Cc. Christy McDonough, Land & Environment Manager
Nancy Rogers, Cairncross & Hempelmann

Attachment

Email to Mr. Brian Renninger from Trinity Consultants dated on April 12, 2022

From:	Anna Henolson
To:	Brian Renninger
Cc:	McDonough, Christy M (Redmond) USA
Subject:	Draft for NOC11861 - Cadman Kenmore - Request to Update Conditions 7 and 8
Date:	Tuesday, April 12, 2022 11:41:58 AM
Attachments:	image001.png image002.png 3128-120 Revised April 2022 rw05.pdf

External Email - Please use proper judgment and caution when opening attachments, clicking links, or responding. Report suspicious emails with SPAM PHISH button.

Hello Brian,

In advance of next week's public hearing and Cadman's written comments on the draft permit for NOC11861, we are sending the information below as it relates to a substantive correction needed to draft worksheet and permit document as it relates to Conditions 7 and 8.

As summarized in the tables below, the basis for the model emission rates were 0.0013 gr/dscf filterable PM and 0.0039 gr/dscf condensable PM at actual test conditions of 14.67% O_2. When corrected from actual conditions to 7% O_2, the corresponding concentrations are 0.0029 gr/dscf filterable PM and 0.0087 gr/dscf condensable PM. The corresponding total PM concentration is 0.0116 gr/dscf. Therefore, Condition 7 should be updated to 0.0029 gr/dscf and Condition 8 should be updated to 0.0116 gr/dscf (corrected to 7% O_2).

Note the draft permit and worksheet applied the appropriate concentration listed in the source test report when setting the filterable concentration (0.002 gr/dscf at 7% O_2 x 130%), but an error in the reported value of 0.002 gr/dscf was discovered in the source test report itself. An updated version of the report is attached.

- As shown in Table 2 below, the conversion of the source test result (0.0013 gr/dscf) at actual conditions of 14.67% O_2 to 7% O_2 is actually 0.0029, not 0.002 gr/dscf.
- The draft permit also used the source test result of 0.004 gr/dscf for total PM, but this was the uncorrected concentration. When calculated, the tested concentration corrected to 7% O_2 is 0.0089 gr/dscf. When applying the 130% safety factor to this value, the corresponding limit would be the same proposed value (0.0116 gr/dscf total PM, corrected to 7% O_2).

All corrections to 7% O_2 are based on the following equation:

$$Cadj = \frac{Cmeas(20.9-7)}{(20.9-\%O2)}$$

Table 1. Model Concentration Summary

Modeled concentration	(PM)_f)	(gr/dscf)	@ Actual	0.0013
Modeled concentration	(PM)_cond)	(gr/dscf)	@ Actual	0.0039
Modeled concentration	(PM_total)	(gr/dscf)	@ Actual	0.0052

Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0029**
Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0087**
Modeled concentration	(PM_total)	(gr/dscf)	@ 7% O_2	**0.0116**

Table 2. Source Test Summary

Run -->	1	2	3	Average
O2	14.65	14.68	14.67	14.67
PM_f (gr/dscf)	0.0012	0.0014	0.0014	0.0013
PM_f (gr/dscf), 7%O2	**0.0027**	**0.0031**	**0.0031**	**0.0030**
PM_t (gr/dscf)	0.0032	0.0046	0.0042	0.0040
PM_t (gr/dscf), 7%O2	**0.0071**	**0.0103**	**0.0094**	**0.0089**

Best Regards,
Anna

Anna Henolson, P.E. (she/her)
Principal Consultant

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20819 72nd Avenue S., Suite 610, Kent, WA 98032
Email: ahenolson@trinityconsultants.com

Trinity Consultants

Cadman Materials
Kenmore Asphalt Plant

Performance Tests for Particulate Matter, Opacity, Nitrogen Oxides and Carbon Monoxide

Test Date: **October 1, 2020**
Report Number: **3128-20**
(Revised 4/6/22)

Prepared for:

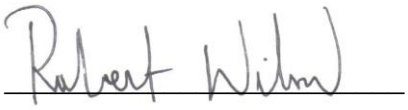
Cadman Materials
6431 NE 175th, St.
Kenmore, WA 98028

Prepared by:

Emission Technologies, Inc.
5090 Samish Way
Bellingham, WA 98229

Report Certification

The emission testing for this report was carried out under my direction and supervision. In addition, I have reviewed all analysis and test results, and certify that the test and report meet EPA requirements and that, to the best of my knowledge, this test report is authentic and accurate.

Date: October 9, 2020 Signed: 

Project Manager,

Rob Wilson

I have reviewed all analysis and test results, and certify that, to the best of my knowledge, this test report is authentic and accurate.

Date: October 9, 2020 Signed: 

Quality Assurance Manager,

Danny Dizon P.E.

Reproducing portions of this test report may omit critical substantiating documentation or be taken out of context so due care must be exercised in this regard.

Test Date: October 1, 2020

Date Issued: October 9, 2020

Revision Log

Revision No.	Revision Date	Revised Sections	Notes	Initials
0.001	4/6/22	Table 1.2 and Table 2.2	Corrected oxygen value in PM @ 7% adjustment	RW

INVOLVED PARTIES

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1. REPORT TEXT

1.1 Purpose

Emission Technologies, Inc. (ETI) was contracted by Cadman Materials, Inc. to perform air quality testing on the Cadman Kenmore Hot Mix Asphalt Plant located in Kenmore, WA. The testing protocol was developed by ETI to include pollutant parameters typically measured at new asphalt plant installations in the Seattle area. The testing methods used met both United States Environmental Protection Agency (EPA) and Puget Sound Clean Air Authority (PSCAA) rules, regulations and guidelines.

1.2 Test Overview

On October 1, 2020, ETI provided personnel and equipment to perform the emission measurement tests presented in Table 1.1. Source tests for each parameter are specified following the standard Environmental Protection Agency (EPA) methods listed in 40 CFR 60. Following, Table 1.1 outlines the emission sampling protocol that was employed.

Table 1.1 Test Protocol

Parameters	Test Method	Sample Series	Time per Run
Sample Port Location	EPA Method 1	Pre-Test Activity	Pre-Test Activity
Flows and Moisture	EPA Method 2, 3A, and 4	3 runs	60 minutes
Particulate (PM)	EPA Method 5 with PSCAA Resolution No. 540	3 runs	60 minutes
Opacity	EPA Method 9	3 runs	60 minutes
Oxide of Nitrogen (NO_X)	EPA Method 7E	3 runs	60 minutes
Carbon Monoxide (CO)	EPA Method 10	3 runs	60 minutes

Testing was conducted on the rectangular stack with 5 sampling ports. Gas samples were extracted from three different points (16.7, 50.0, and 83.3 percent of the stack along a traverse across the diameter of the stack during stable operating conditions.) No significant variations in pollutant concentrations were observed among the points.

1.3 Overview of the Sampling Methods

A brief description of each sampling method is given below. A complete method text from the Environmental Protection Agency (EPA) can be found at the following web site:
http://www.epa.gov/ttn/emc/.

Calculations are performed retaining at least five significant figures for intermediate results. The final number is rounded according to EPA "Performance Test Calculation Guidelines".

EPA Methods 3A, 7E and 10 for the Determination of O_2, NO_x and CO

The testing methodology for O_2, NO_x and CO utilizes continuously operated gas analyzers. Sample gases are extracted through a heated probe/glass fiber filter assembly. A calibration gas purge valve is fitted ahead of the filter assembly for introducing calibration gases to the analyzer system. The samples are transported through Teflon sample lines to a portable unit containing the analyzers. Each of the samples is conditioned while a constant sample extraction rate is maintained. The analyzers detect the concentration of analyte gas within the sample and produced an electrical output signal proportional to the analyte gas concentration. The electrical signal is recorded on a digital data acquisition system.

Instrument calibrations (zero and span checks) and linearity determinations are accomplished as described in EPA Method 7E, by sending EPA Protocol 1 calibration gases to a location ahead of the filter assembly. A 3-point analyzer calibration error check (±2% of calibration span) is made before the first test run and any time there was a failed system bias test or drift test. System bias and drift checks (≤5% and ≤3% of calibration span respectively) are carried out before and after each run. A NO_2-NO conversion efficiency (≥90% of certified test gas concentration) is conducted. Calibration span means the upper limit of the analyzer's calibration that is set by the choice of high-level calibration gas.

All components of the gas sampling and calibration system are constructed of Teflon, 316 stainless steel, or glass. The sample vacuum/pressure pump head are constructed of 316 stainless steel, Viton O-rings, and a Teflon coated diaphragm.

A stratification test is performed to determine the appropriate number of sample traverse points. Three points on a line passing through the stack centroidal area are used. The points are spaced at 16.7, 50.0, and 83.3 percent of the measurement line. The diluent or the pollutant concentration are

evaluated to determine potential stratification of the stack gasses. If the concentration at each traverse point differs from the mean concentration for all traverse points by no more than ±5.0 percent of the mean concentration; or ±0.5 ppm (whichever is less restrictive), the gas stream is considered unstratified and samples may be collected from a single point. If the 5.0 percent or 0.5 ppm criterion is not met, but the concentration at each traverse point differs from the mean concentration for all traverse points by no more than ±10.0 percent of the mean; or ±1.0 ppm (whichever is less restrictive), the gas stream is considered to be minimally stratified, samples may be taken from the three points. If the gas stream is found to be stratified, because the 10.0 percent or 1.0 ppm criterion for a 3-point test is not met twelve traverse points are utilized for the test in accordance with Method 1.

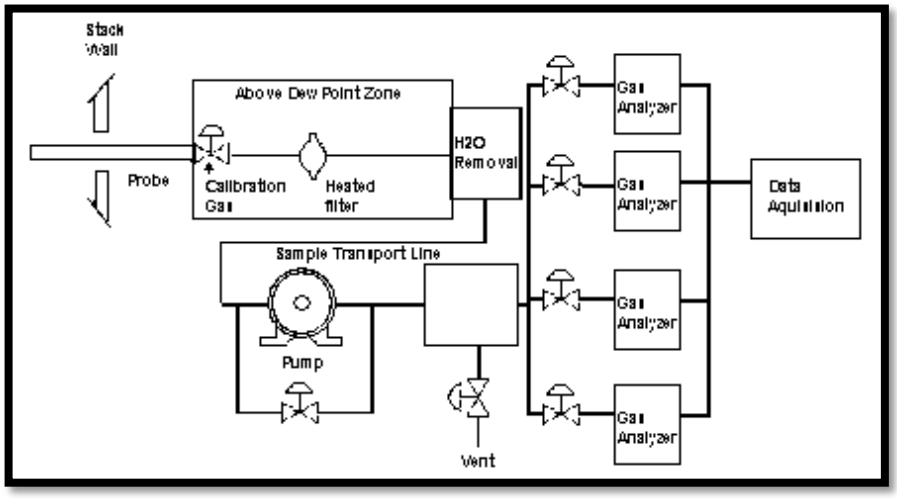


Figure 1.1 Gas Sampling Diagram

EPA Method 5 - Determination of Particulate with PSCAA Resolution 540

Particulate matter was withdrawn isokinetically from the source and collected on a glass fiber filter maintained at a temperature in the range of 248° ± 25° F. The particulate mass, which includes any material that condenses at or above the filtration temperature, was determined gravimetrically after removal of uncombined water. The sampling train used for these tests consisted of a heated borosilicate glass nozzle/probe assembly, a glass filter holder inside a heated filter box, glass impingers, umbilical cords, the control box and the sampling pump. Before and after each Method 5 test run, the probe and nozzle were washed. The weight of the particulate collected in the probe and nozzle wash was added to the weight collected on the filter to obtain front half particulate levels.

The condensable particulate matter (CPM), back half fraction, is the material that condenses after passing through the filter and is analyzed using EPA Method 5 modified by PSCAA board resolution

540. The method uses a Method 5 sampling train with the impinger contents recovered and impingers rinsed with acetone - the organic and aqueous fractions of the recovered impinger liquid are separated. The organic, aqueous and acetone wash fractions are then taken to dryness and residues weighed. The total of all back half fractions represents the Back-half particulate.

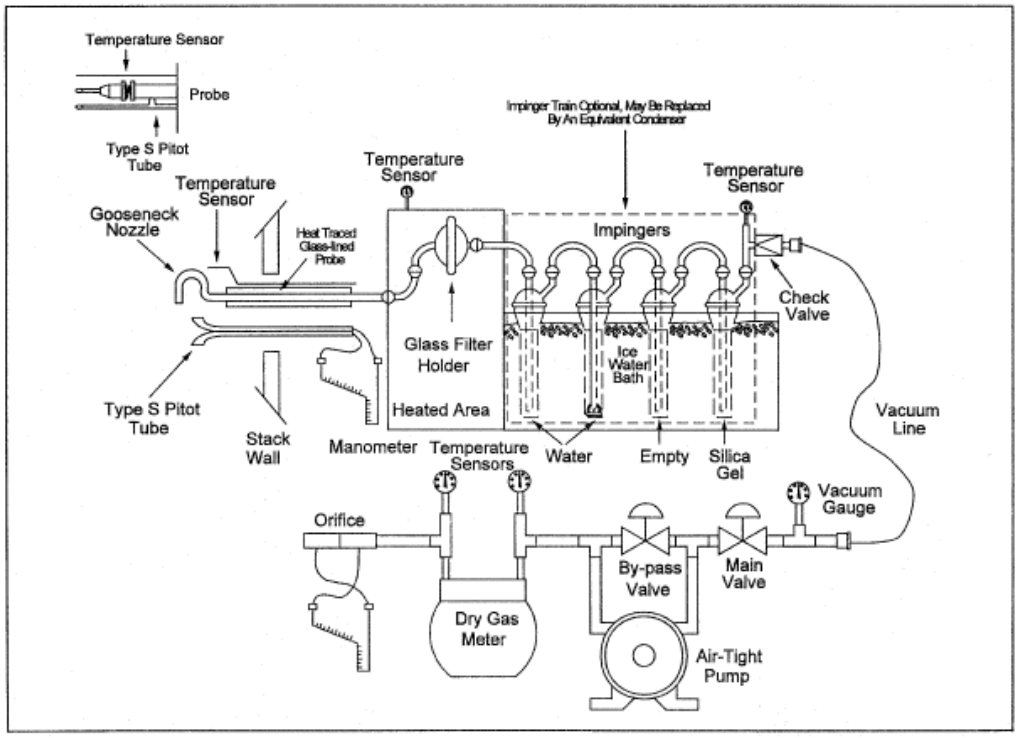


Figure 1.2 EPA Method 5 Sampling Train Diagram

EPA Method 9 - Visual Determination of Opacity

This method is applicable for the determination of the opacity of emissions from stationary sources by a qualified observer. The method includes procedures for the training and certification of observers and procedures to be used in the field for determination of plume opacity. The opacity of emissions from stationary sources is determined at the point of greatest opacity in that portion of the plume where water vapor is not present. The observer does not look at the plume continuously, but instead observes the plume momentarily at 15-second intervals. Opacity is determined as an average of 24 consecutive observations recorded at 15-second intervals. Sets need not be consecutive in time and no two sets can overlap.

1.4 Results

The results of the tests are summarized in Table 1.2 below. The plant does not have specified regulatory limits, although the results were under the typical regulatory limits set by the EPA and PSCAA for modern facilities.

Table 1.2 Performance Test Results

Parameter	Test Result Average
TOTAL PM gr/dscf @ 7% O2	0.0089
PM Filterable gr/dscf @ 7% O2	0.0030
NO_x ppmdv @ 3% O_2	39
CO ppmdv @ 3% O_2	118
Opacity, %	0.0

1.5 Anomalies

There were no anomalies during the test.

1.6 Process Overview

Figure 1.3 below illustrates a conceptual diagram of the testing arrangement.

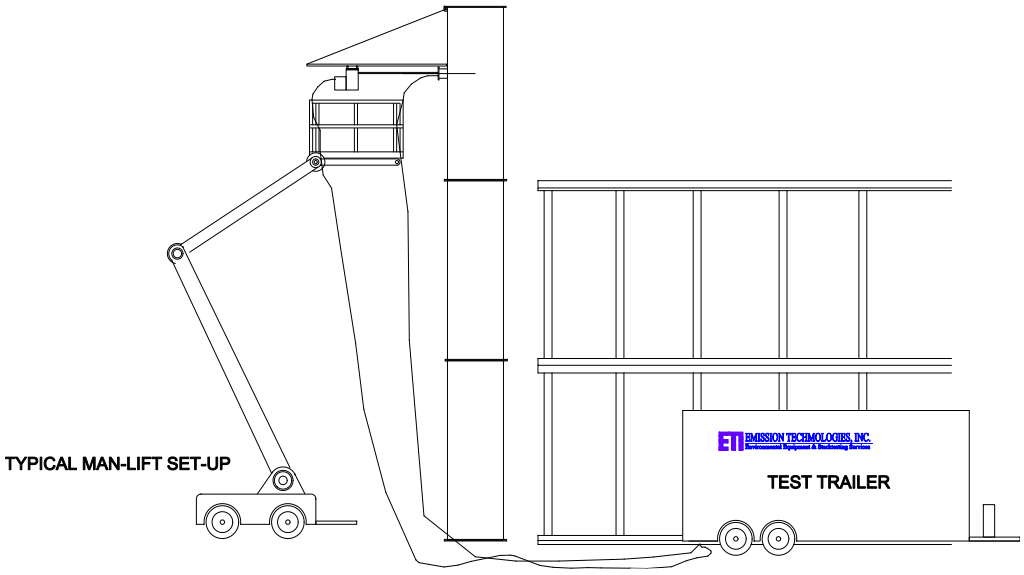


Figure 1.3 **Typical Test arrangement**

1.7 Participants

The following participants were involved for ETI with the testing program:

- Mr. Rob Wilson, Project Manager
- Mr. Robert Howell, Field Technician
- Mr. Danny Dizon P.E., Quality Assurance

2. SUMMARY

Table 2.1 Gas Summary

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

O_2	Run Number			Average
	1	2	3	
%	14.65	14.68	14.67	**14.7**
CO_2	**Run Number:**			**Average**
	1	**2**	**3**	
%	4.01	4.10	4.04	**4.1**
NO_x	**Run Number:**			**Average**
	1	**2**	**3**	
ppmdv	13.7	13.4	13.9	**13.7**
ppmdv @ 3% O_2	39.3	38.6	39.9	**39.3**
CO	**Run Number:**			**Average**
	1	**2**	**3**	
ppmdv	40.1	41.5	41.8	**41.1**
ppmdv @ 3% O_2	114.7	119.3	120.1	**118.0**

Table 2.2 Particulate M5 Summary

Client: Cadman Kenmore
Unit: Kenmore

Date: 10/01/20
ETI Job Number: 3128-20

Filterable Catch	**Run Number**			
	1	**2**	**3**	**Average**
P&N Acetone wash, mg	1.3	1.0	1.1	**1.13**
Acetone Blank	ND	ND	ND	
Filter, mg	1.8	2.4	2.6	
Blank Filter	ND	ND	ND	
mg (Filterable)	3.1	3.4	3.7	**3.40**
Condensable Catch	**Run Number**			
	1	**2**	**3**	**Average**
Organic Fraction				
mg	1.0	0.7	0.8	**0.83**
Blank, mg	ND	ND	ND	
Inorganic Fraction				
mg	3.5	7.1	6.0	**5.53**
Inorganic Blank, mg	0.4	0.4	0.4	
Acetone Wash - PSCAA				
Impinger Acetone Wash, mg	0.7	0.6	0.9	**0.73**
Acetone Blank, mg	ND	ND	ND	
Total Front Half	**Run Number**			
	1	**2**	**3**	**Average**
mg	3.10	3.40	3.70	**3.40**
gr/dscf	0.0012	0.0014	0.0014	**0.0014**
gr/dscf @ 7%O_2	0.0028	0.0031	0.0032	**0.0030**
Total Back Half	**Run Number**			
	1	**2**	**3**	**Average**
mg	4.75	8.05	7.05	**6.62**
gr/dscf	0.0019	0.0033	0.0028	**0.0026**
gr/dscf @ 7%O_2	0.0042	0.0073	0.0061	**0.0059**
Total Particulate	**Run Number**			
	1	**2**	**3**	**Average**
mg	7.85	11.45	10.75	**10.02**
gr/dscf	0.0032	0.0046	0.0042	**0.004**
gr/dscf @ 7%O_2	0.0070	0.0104	0.0094	**0.0089**

Table 2.3 Opacity Summary

Client: Cadman Kenmore
Unit: Hot Mix Asphalt Plant **ETI Job Number:** 3128-20

Opacity EPA 9										Opacity EPA 9										Opacity EPA 9									
Run 1 - Number of Observations = 240										Run 2 - Number of Observations = 240										Run 3 - Number of Observations = 240									
1	0	0	0	0	31	0	0	0	0	1	0	0	0	0	31	0	0	0	0	1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0	2	0	0	0	0	32	0	0	0	0	2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0	3	0	0	0	0	33	0	0	0	0	3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0	4	0	0	0	0	34	0	0	0	0	4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0	5	0	0	0	0	35	0	0	0	0	5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0	6	0	0	0	0	36	0	0	0	0	6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0	7	0	0	0	0	37	0	0	0	0	7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0	8	0	0	0	0	38	0	0	0	0	8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0	9	0	0	0	0	39	0	0	0	0	9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0	10	0	0	0	0	40	0	0	0	0	10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0	11	0	0	0	0	41	0	0	0	0	11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0	12	0	0	0	0	42	0	0	0	0	12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0	13	0	0	0	0	43	0	0	0	0	13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0	14	0	0	0	0	44	0	0	0	0	14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0	15	0	0	0	0	45	0	0	0	0	15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0	16	0	0	0	0	46	0	0	0	0	16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0	17	0	0	0	0	47	0	0	0	0	17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0	18	0	0	0	0	48	0	0	0	0	18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0	19	0	0	0	0	49	0	0	0	0	19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0	20	0	0	0	0	50	0	0	0	0	20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0	21	0	0	0	0	51	0	0	0	0	21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0	22	0	0	0	0	52	0	0	0	0	22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0	23	0	0	0	0	53	0	0	0	0	23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0	24	0	0	0	0	54	0	0	0	0	24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0	25	0	0	0	0	55	0	0	0	0	25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0	26	0	0	0	0	56	0	0	0	0	26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0	27	0	0	0	0	57	0	0	0	0	27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0	28	0	0	0	0	58	0	0	0	0	28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0	29	0	0	0	0	59	0	0	0	0	29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0	30	0	0	0	0	60	0	0	0	0	30	0	0	0	0	60	0	0	0	0
Opacity Sum					**0.0%**					**Opacity Sum**					**0.0%**					**Opacity Sum**					**0.0%**				
Opacity Average					**0.0%**					**Opacity Average**					**0.0%**					**Opacity Average**					**0.0%**				
																				Opacity Average of 3 Runs					**0.0%**				

3. CALIBRATION DATA

Table 3.1 Analyzer and Calibration Gas Information

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

Instrument Information:

Instrument	Channel	Make	Model	Serial No.
O_2	1	Horiba	PG250	6103006
CO_2	2	Horiba	PG250	6103006
NO_x	3	Horiba	PG250	6103006
CO	4	Horiba	PG250	6103006
Recorders	-			

Calibration Information:

Instrument	Units	Zero	Span	Range	Gas Cyl. No.	Gas Flow (L/min)
O_2	%	N_2	12.15	21.02	EB0052889	5.0
O_2	%	N_2	21.02	21.02	EB0042808	5.0
CO_2	%	N_2	11.63	20.87	EB0052889	5.0
CO_2	%	N_2	20.87	20.87	EB0042808	5.0
NO_x	ppmdv	N_2	24.96	53.20	CC702109	5.0
NO_x	ppmdv	N_2	53.20	53.20	SX63432	5.0
CO	ppmdv	N_2	24.30	51.80	CC702109	5.0
CO	ppmdv	N_2	51.80	51.80	SX63432	5.0

Table 3.2 O_2 Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.10	0.10	0.48%
Mid-Range Gas	12.15	12.10	0.05	0.24%
High-Range Gas	21.02	21.00	0.02	0.10%

40 CFR 60 Method 3A-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5% absolute difference

System Bias must be ≤5.0% of calibration span or 0.5% absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5% absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = Mid 12.15

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv)		Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
		Direct	System				
Zero Gas	**Pre**	0.10	0.15	0.05		0.24%	
Upscale Gas		12.10	12.15	0.05		0.24%	
Zero Gas	**1**	0.10	0.20	0.10	0.05	0.48%	0.24%
Upscale Gas		12.10	12.10	0.00	0.05	0.00%	0.24%
Zero Gas	**2**	0.10	0.20	0.10	0.00	0.48%	0.00%
Upscale Gas		12.10	12.20	0.10	0.10	0.48%	0.48%
Zero Gas	**3**	0.10	0.10	0.00	0.10	0.00%	0.48%
Upscale Gas		12.10	12.10	0.00	0.10	0.00%	0.48%

Table 3.3 CO_2 Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.10	0.10	0.48%
Mid-Range Gas	11.63	11.50	0.13	0.62%
High-Range Gas	20.87	21.00	0.13	0.62%

40 CFR 60 Method 3A-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5% absolute difference

System Bias must be ≤5.0% of calibration span or 0.5% absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5% absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = Mid 11.63

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv)		Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
		Direct	System				
Zero Gas	**Pre**	0.10	0.20	0.10		0.48%	
Upscale Gas		11.50	11.40	0.10		0.48%	
Zero Gas	**1**	0.10	0.25	0.15	0.05	0.72%	0.24%
Upscale Gas		11.50	11.50	0.00	0.10	0.00%	0.48%
Zero Gas	**2**	0.10	0.20	0.10	0.05	0.48%	0.24%
Upscale Gas		11.50	11.40	0.10	0.10	0.48%	0.48%
Zero Gas	**3**	0.10	0.15	0.05	0.05	0.24%	0.24%
Upscale Gas		11.50	11.45	0.05	0.05	0.24%	0.24%

Table 3.4 NO_x Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.30	0.3	0.56%
Mid-Range Gas	24.96	24.60	0.4	0.68%
High-Range Gas	53.20	53.10	0.1	0.19%

40 CFR 60 Method 7E-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5 ppmv absolute difference

System Bias must be ≤5.0% of calibration span or 0.5 ppmv absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5 ppmv absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = MID 25.0

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv) Direct	System	Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
Zero Gas	**Pre**	0.30	0.10	0.2		0.38%	
Upscale Gas		24.60	24.40	0.2		0.38%	
Zero Gas	**1**	0.30	0.20	0.1	0.1	0.19%	0.19%
Upscale Gas		24.60	24.80	0.2	0.4	0.38%	0.75%
Zero Gas	**2**	0.30	0.20	0.1	0.0	0.19%	0.00%
Upscale Gas		24.60	24.30	0.3	0.5	0.56%	0.94%
Zero Gas	**3**	0.30	0.20	0.1	0.0	0.19%	0.00%
Upscale Gas		24.60	24.50	0.1	0.2	0.19%	0.38%

Table 3.5 CO Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.00	0.0	0.00%
Mid-Range Gas	24.30	24.50	0.2	0.39%
High-Range Gas	51.80	51.90	0.1	0.19%

40 CFR 60 Method 10-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5 ppmv absolute difference

System Bias must be ≤5.0% of calibration span or 0.5 ppmv absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5 ppmv absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = High 51.8

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv) Direct	System	Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
Zero Gas	**Pre**	0.00	0.20	0.2		0.39%	
Upscale Gas		51.80	52.30	0.5		0.97%	
Zero Gas	**1**	0.00	0.10	0.1	0.1	0.19%	0.19%
Upscale Gas		51.80	52.40	0.6	0.1	1.16%	0.19%
Zero Gas	**2**	0.00	0.30	0.3	0.2	0.58%	0.39%
Upscale Gas		51.80	52.40	0.6	0.0	1.16%	0.00%
Zero Gas	**3**	0.00	-0.10	0.1	0.4	0.19%	0.77%
Upscale Gas		51.80	52.50	0.7	0.1	1.35%	0.19%

4. ETI FIELD TEST DATA

Table 4.1 Field Data – Gases Run 1

Client: Cadman Kenmore					**Run:** 1
Unit: Hot Mix Asphalt Plant					**Start Time:** 8:02
Date: 10/01/20					**End Time:** 9:01
Raw Emission Data: **Measurement Time**	**O_2 %**	**CO_2 %**	**NO_x ppmdv**	**CO ppmdv**	
8:02	15.6	3.7	13.8	47	
8:03	15.5	3.8	14.0	46	
8:04	15.6	3.8	14.0	46	
8:05	15.4	3.8	14.0	45	
8:06	15.3	3.9	14.5	44	
8:07	15.0	3.9	13.0	40	
8:08	14.9	3.9	13.0	41	
8:09	14.5	3.9	13.0	44	
8:10	14.7	4.0	12.4	42	
8:11	14.6	4.0	12.5	42	
8:12	14.4	4.1	12.6	43	
8:13	14.3	4.1	13.6	39	
8:14	14.6	4.2	14.0	40	
8:15	14.3	4.3	15.0	39	
8:16	14.4	4.3	14.4	41	
8:17	14.4	4.3	14.4	42	
8:18	14.2	4.4	14.6	40	
8:19	14.3	4.3	14.0	39	
8:20	14.4	4.3	14.0	40	
8:21	14.3	4.2	14.1	40	
8:22	14.4	4.2	14.4	41	
8:23	14.7	4.2	14.0	41	
8:24	14.5	4.2	14.1	42	
8:25	14.4	4.1	14.0	40	
8:26	14.6	4.0	13.5	39	
8:27	14.5	4.0	13.5	41	
8:28	14.7	4.0	13.5	39	
8:29	14.8	3.9	13.8	37	
8:30	14.5	4.0	13.5	38	
8:31	14.4	4.0	13.6	36	
8:32	14.3	4.1	13.8	36	
8:33	14.5	4.2	13.9	35	
8:34	14.6	4.3	13.5	38	
8:35	14.7	4.3	12.5	39	
8:36	14.5	4.2	12.5	40	
8:37	14.2	4.4	12.9	38	
8:38	14.1	4.0	12.6	39	
8:39	13.9	4.3	12.6	40	
8:40	13.8	4.0	12.7	41	
8:41	14.1	4.1	12.6	42	
8:42	14.0	4.1	12.8	43	
8:43	13.9	4.1	12.6	44	
8:44	13.9	4.1	12.9	42	
8:45	13.9	4.1	12.5	43	
8:46	13.8	4.2	12.8	41	
8:47	13.9	4.2	13.0	40	
8:48	13.7	3.8	13.1	40	
8:49	13.6	3.7	13.1	41	
8:50	13.8	4.0	13.0	41	
8:51	14.1	4.2	13.0	42	
8:52	14.5	4.1	13.1	42	
8:53	14.4	4.1	13.3	43	
8:54	14.4	4.1	13.4	41	
8:55	14.4	4.1	13.0	40	
8:56	14.3	4.2	13.0	42	
8:57	14.4	4.2	13.0	41	
8:58	14.2	4.1	13.0	42	
8:59	14.1	4.1	13.1	42	
9:00	14.1	4.1	13.2	43	
9:01	14.1	4.1	13.1	45	
Raw Avg:	**14.59**	**4.09**	**13.6**	**40.5**	
Bias Corrected Emissions:	**14.65**	**4.01**	**13.7**	**40.1**	

Table 4.2 Field Data – Gases Run 2

Client: Cadman Kenmore					**Run:** 2
Unit: Hot Mix Asphalt Plant					**Start Time:** 9:29
Date: 10/01/20					**End Time:** 10:28
Raw Emission Data: **Measurement Time**	**O_2 %**	**CO_2 %**	**NO_x ppmdv**	**CO ppmdv**	
9:29	15.1	3.9	12.1	48.1	
9:30	15.0	4.0	12.8	46.2	
9:31	15.0	4.0	13.2	45.1	
9:32	14.9	4.1	13.7	44.7	
9:33	14.9	4.2	13.3	44.8	
9:34	14.9	4.2	13.3	45.0	
9:35	14.8	4.1	13.1	45.3	
9:36	14.8	4.1	13.3	45.1	
9:37	14.7	4.3	13.4	45.4	
9:38	14.5	4.5	13.2	45.5	
9:39	14.2	4.4	13.4	43.2	
9:40	14.4	4.4	13.5	44.1	
9:41	14.4	4.5	13.7	43.5	
9:42	14.3	4.6	13.8	42.8	
9:43	14.1	4.6	13.9	42.5	
9:44	14.3	4.6	13.8	42.6	
9:45	14.2	4.4	14.2	43.1	
9:46	14.1	4.3	14.2	42.8	
9:47	14.4	4.5	14.5	43.2	
9:48	14.6	4.4	14.1	41.2	
9:49	14.6	4.4	13.9	40.8	
9:50	14.8	4.5	13.8	39.9	
9:51	14.9	4.6	13.7	39.5	
9:52	14.7	4.2	13.9	39.0	
9:53	14.9	4.1	13.4	38.6	
9:54	14.9	4.2	13.1	38.0	
9:55	15.0	4.2	13.0	38.0	
9:56	15.1	4.0	12.9	37.5	
9:57	15.3	3.9	12.8	37.3	
9:58	15.0	3.9	12.6	37.0	
9:59	15.2	4.0	12.9	37.0	
10:00	15.2	3.8	12.6	36.9	
10:01	15.3	3.9	12.8	38.7	
10:02	15.1	4.0	13.0	40.1	
10:03	15.1	4.1	12.9	40.9	
10:04	15.0	4.3	13.0	42.0	
10:05	14.8	4.1	13.2	41.3	
10:06	15.0	4.4	13.2	41.5	
10:07	15.0	4.4	13.4	42.0	
10:08	14.9	4.5	13.5	42.5	
10:09	14.8	4.6	13.5	42.8	
10:10	14.6	4.4	13.5	42.4	
10:11	14.5	4.3	13.6	42.3	
10:12	14.5	4.1	13.3	42.0	
10:13	14.6	4.3	13.3	42.5	
10:14	14.5	4.1	13.4	42.8	
10:15	14.4	3.8	13.2	43.1	
10:16	14.4	3.7	13.0	42.9	
10:17	13.8	4.5	13.1	43.0	
10:18	14.1	4.1	13.5	42.8	
10:19	14.5	4.3	13.1	42.6	
10:20	14.4	4.1	13.0	42.0	
10:21	14.4	4.0	12.8	42.1	
10:22	14.4	3.9	12.9	41.5	
10:23	14.3	3.8	12.8	41.7	
10:24	14.4	3.8	13.0	41.5	
10:25	14.2	3.9	12.9	41.6	
10:26	14.1	3.9	13.1	41.3	
10:27	14.1	4.0	13.0	42.1	
10:28	14.1	4.0	13.0	42.6	
Raw Avg:	**14.64**	**4.19**	**13.3**	**42.0**	
Bias Corrected Emissions:	**14.68**	**4.10**	**13.4**	**41.5**	

Table 4.3 Field Data – Gases Run 3

Client: Cadman Kenmore
Unit: Hot Mix Asphalt Plant
Date: 10/01/20

Run: 3
Start Time: 11:11
End Time: 12:10

Raw Emission Data: Measurement Time	O_2 %	CO_2 %	NO_x ppmdv	CO ppmdv
11:11	15.4	3.7	13.4	40.0
11:12	15.3	3.7	13.5	41.6
11:13	15.4	3.7	13.6	41.5
11:14	15.4	3.8	13.6	41.3
11:15	15.2	3.8	13.8	41.5
11:16	15.1	3.8	13.6	42.0
11:17	15.2	3.8	13.7	42.5
11:18	15.0	3.9	13.6	42.8
11:19	15.1	3.8	13.3	42.4
11:20	14.8	3.8	14.0	42.3
11:21	14.9	4.1	14.2	42.0
11:22	15.1	3.9	14.0	42.5
11:23	15.0	3.9	13.9	42.8
11:24	15.0	4.0	14.0	43.1
11:25	14.9	3.8	13.7	42.9
11:26	15.1	3.9	13.8	41.1
11:27	15.1	3.9	13.7	41.3
11:28	15.0	3.9	13.5	41.3
11:29	14.9	4.0	13.9	41.7
11:30	14.8	4.0	13.6	41.6
11:31	14.7	4.1	14.0	41.5
11:32	14.5	4.1	13.9	41.3
11:33	14.4	4.0	13.8	41.5
11:34	14.7	4.2	14.0	41.4
11:35	15.0	4.2	14.1	41.9
11:36	14.8	4.1	14.2	42.0
11:37	14.5	4.2	14.1	42.5
11:38	14.4	4.3	14.3	43.9
11:39	14.4	4.3	14.3	42.0
11:40	14.4	4.4	14.3	41.9
11:41	14.3	4.5	14.3	41.8
11:42	14.3	4.5	14.4	41.6
11:43	14.3	4.4	14.2	41.5
11:44	14.4	4.4	14.2	41.3
11:45	14.4	4.3	14.6	41.5
11:46	14.3	4.5	14.3	42.0
11:47	14.3	4.1	14.6	42.5
11:48	14.2	4.3	14.7	42.8
11:49	14.2	4.4	14.8	42.4
11:50	14.3	4.3	14.5	42.3
11:51	14.3	4.2	14.0	42.0
11:52	14.4	4.0	13.4	42.5
11:53	14.2	4.3	13.1	42.8
11:54	14.3	4.4	13.0	43.1
11:55	14.4	4.2	12.9	42.9
11:56	14.5	4.0	13.0	43.4
11:57	14.4	4.1	13.0	43.5
11:58	14.5	3.9	13.1	42.9
11:59	14.6	4.0	12.8	43.6
12:00	14.3	4.0	12.7	43.8
12:01	14.6	3.9	12.5	43.9
12:02	14.5	4.0	12.8	43.9
12:03	14.3	4.1	13.1	43.9
12:04	14.4	4.0	13.0	43.6
12:05	14.5	4.1	12.9	42.7
12:06	14.4	4.2	13.0	42.6
12:07	14.5	4.2	12.8	42.5
12:08	14.4	4.1	12.9	42.5
12:09	14.2	4.1	13.0	42.8
12:10	14.3	4.3	13.1	43.0
Raw Avg:	**14.64**	**4.08**	**13.7**	**42.3**
Bias Corrected Emissions:	**14.67**	**4.04**	**13.9**	**41.8**

Table 4.4 Field Data – Particulate Run 1

Location: Cadman Kenmore Start Time: 8:05 AM RUN No. 1 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature	68 °F	Standard Pressure	29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA		EQUIPMENT	ESTIMATES	H20	761.7	846.8
% Moisture:	15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	642.0	679.4
Barometric:	29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	653.7	658.3
Static Press:	-0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	851.6	857.7
Stack Press:	29.69 in Hg	PITOT: eti6	Est. Dn: 0.22 inches			
%CO2:	4.0 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2:	14.5 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.002	cf	Liquid Vol. (ml)
%N2/CO:	81.50 %	Dn: 0.225 in	DGM post Leak check	0.001	cf	
Md:	29.22 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	4.4"	133.2
Ms:	27.54 lb/lb-mole	# of Points: 25 points	DGM Vacuum	12.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot ΔP (in. H_2O)	Gas Temperatures (°F) DGM			Orifice Press. ΔH (in H_2O)		Pump Vac. (in Hg)	Gas Temps (°F)		Imp. Exit	% ISO	K FACTOR = 1.758 Vs (fps)
	Begin	End			Inlet	Outlet	Stack	Ideal	Actual		Probe	Filter			
1	0.00	2.50	377.627	0.540	63.0	64.0	194	0.911	1.000	3	250	252	60	105.6	47.20
2	2.50	5.00	379.018	0.610	63.0	64.0	193	1.030	1.100	3	250	251	59	102.5	50.13
3	5.00	7.50	380.453	0.620	65.0	64.0	193	1.049	1.100	3	250	251	59	102.2	50.54
4	7.50	10.00	381.899	0.780	66.0	65.0	193	1.321	1.400	3	521	251	59	101.6	56.69
5	10.00	12.50	383.512	0.860	66.0	65.0	193	1.456	1.500	3	251	251	59	105.0	59.52
6	12.50	15.00	385.263	0.470	67.0	65.0	194	0.796	1.000	3	251	251	59	103.9	44.04
7	15.00	17.50	386.545	0.490	67.0	65.0	193	0.832	1.000	3	251	251	58	101.6	44.93
8	17.50	20.00	387.827	0.520	67.0	65.0	194	0.881	1.000	3	252	251	58	94.4	46.32
9	20.00	22.50	389.053	0.590	68.0	65.0	193	1.002	1.100	3	252	251	58	108.2	49.30
10	22.50	25.00	390.551	0.680	68.0	65.0	191	1.158	1.200	3	252	251	58	104.2	52.85
11	25.00	27.50	392.102	0.650	68.0	66.0	191	1.108	1.200	3	251	251	58	106.4	51.67
12	27.50	30.00	393.652	0.650	68.0	66.0	190	1.110	1.200	4	251	251	58	106.2	51.63
13	30.00	32.50	395.200	0.670	69.0	66.0	190	1.145	1.200	4	250	251	57	104.9	52.42
14	32.50	35.00	396.755	0.710	69.0	66.0	189	1.215	1.300	4	250	251	57	102.0	53.92
15	35.00	37.50	398.311	0.800	69.0	66.0	190	1.366	1.400	4	250	251	57	101.7	57.28
16	37.50	40.00	399.957	0.720	69.0	66.0	190	1.230	1.300	4	250	251	57	99.3	54.34
17	40.00	42.50	401.482	0.700	70.0	66.0	191	1.195	1.300	4	250	251	57	99.4	53.62
18	42.50	45.00	402.988	0.690	70.0	67.0	191	1.180	1.200	4	250	251	56	103.7	53.23
19	45.00	47.50	404.549	0.760	70.0	67.0	191	1.299	1.400	4	251	251	56	100.4	55.87
20	47.50	50.00	406.135	0.700	70.0	67.0	192	1.195	1.300	4	251	251	56	104.4	53.66
21	50.00	52.50	407.717	0.770	70.0	67.0	192	1.314	1.400	4	251	251	56	100.5	56.28
22	52.50	55.00	409.313	0.790	70.0	67.0	192	1.348	1.400	4	251	251	57	105.7	57.00
23	55.00	57.50	411.013	0.800	70.0	68.0	192	1.366	1.400	4	251	251	57	103.5	57.36
24	57.50	60.00	412.690	0.760	70.0	68.0	192	1.298	1.400	4	251	251	58	107.8	55.91
25	60.00	62.50	414.393	0.560	70.0	68.0	191	0.959	1.000	4	251	251	59	101.2	47.96
	Final DGM:		415.767												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	38.140 ft^3	0.819 in	67.0 °F	191.8 °F	4	1.232 in		

Table 4.5 Field Data – Particulate Run 2

Location: Cadman Kenmore Start Time: 9:29 AM RUN No. 2 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature 68 °F	Standard Pressure 29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA	EQUIPMENT	ESTIMATES	H20	720.9	815.6
% Moisture: 15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	745.2	770.2
Barometric: 29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	653.1	665.1
Static Press: -0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	802.4	811.4
Stack Press: 29.69 in Hg	PITOT: eti6	Est. Dn: 0.247 inches			
%CO2: 4.2 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2: 14.6 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.002	cf	Liquid Vol. (ml)
%N2/CO: 81.20 %	Dn: 0.225 in	DGM post Leak check	0.004	cf	
Md: 29.26 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	4.0"	140.7
Ms: 27.57 lb/lb-mole	# of Points: 25 points	DGM Vacuum	10.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot ΔP (in. H_2O)	Gas Temperatures (°F) DGM			Orifice Press. ΔH (in H_2O)		Pump Vac. (in Hg)	Gas Temps (°F)		K FACTOR = 1.758 Imp. Exit	% ISO	Vs (fps)
	Begin	End			Inlet	Outlet	Stack	Ideal	Actual		Probe	Filter			
1	0.00	2.50	426.625	0.530	66.0	68.0	172	0.931	1.000	3	251	252	60	103.8	45.94
2	2.50	5.00	428.011	0.530	66.0	68.0	180	0.920	1.000	3	250	251	60	105.9	46.23
3	5.00	7.50	429.416	0.710	67.0	69.0	180	1.233	1.300	3	250	251	60	97.2	53.51
4	7.50	10.00	430.910	0.780	67.0	69.0	182	1.350	1.400	3	521	251	60	102.1	56.17
5	10.00	12.50	432.553	0.810	67.0	69.0	184	1.398	1.500	3	251	251	59	105.7	57.33
6	12.50	15.00	434.282	0.510	68.0	69.0	185	0.880	1.000	3	252	251	59	95.9	45.53
7	15.00	17.50	435.529	0.540	68.0	69.0	185	0.932	1.000	3	252	251	58	93.1	46.85
8	17.50	20.00	436.775	0.610	70.0	69.0	191	1.045	1.100	3	252	251	58	104.4	50.02
9	20.00	22.50	438.255	0.720	70.0	69.0	191	1.233	1.300	4	252	251	58	97.1	54.35
10	22.50	25.00	439.750	0.690	70.0	70.0	191	1.183	1.200	4	252	251	58	103.3	53.20
11	25.00	27.50	441.308	0.680	70.0	70.0	191	1.166	1.200	4	251	251	58	103.4	52.82
12	27.50	30.00	442.857	0.680	71.0	70.0	192	1.165	1.200	4	251	251	58	103.6	52.86
13	30.00	32.50	444.409	0.660	71.0	70.0	192	1.131	1.200	4	250	251	57	105.2	52.07
14	32.50	35.00	445.961	0.720	71.0	70.0	192	1.233	1.300	4	250	251	57	100.2	54.39
15	35.00	37.50	447.505	0.780	71.0	70.0	192	1.336	1.400	4	250	251	57	93.4	56.61
16	37.50	40.00	449.002	0.660	72.0	70.0	192	1.132	1.200	4	250	251	57	98.5	52.07
17	40.00	42.50	450.457	0.670	72.0	70.0	192	1.149	1.200	4	250	251	57	99.2	52.47
18	42.50	45.00	451.933	0.640	72.0	70.0	193	1.096	1.200	4	250	251	56	103.3	51.32
19	45.00	47.50	453.435	0.660	73.0	70.0	193	1.131	1.200	4	251	251	56	101.7	52.11
20	47.50	50.00	454.938	0.670	73.0	70.0	193	1.148	1.200	4	251	251	56	100.4	52.51
21	50.00	52.50	456.433	0.660	73.0	70.0	193	1.131	1.200	4	251	251	56	100.0	52.11
22	52.50	55.00	457.910	0.660	74.0	71.0	193	1.133	1.200	4	251	251	57	101.5	52.11
23	55.00	57.50	459.412	0.730	74.0	71.0	193	1.253	1.300	4	251	251	60	100.1	54.81
24	57.50	60.00	460.970	0.690	74.0	71.0	193	1.185	1.200	4	251	251	60	101.8	53.29
25	60.00	62.50	462.511	0.550	74.0	71.0	193	0.945	1.000	4	251	251	60	106.6	47.57
	Final DGM:		463.952												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	37.327 ft^3	0.812 in	70.1 °F	189.1 °F	4	1.200 in		

Table 4.6 Field Data – Particulate Run 3

Location: Cadman Kenmore Start Time: 11:11 AM RUN No. 3 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature	68 °F	Standard Pressure	29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA		EQUIPMENT	ESTIMATES	H20	606.4	707.4
% Moisture:	15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	797.3	815.2
Barometric:	29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	662.7	672.7
Static Press:	-0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	817.3	827.1
Stack Press:	29.69 in Hg	PITOT: eti6	Est. Dn: 0.247 inches			
%CO2:	4.00 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2:	14.50 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.005	cf	Liquid Vol. (ml)
%N2/CO:	81.50 %	Dn: 0.225 in	DGM post Leak check	0.001	cf	
Md:	29.22 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	5.4"	138.7
Ms:	27.54 lb/lb-mole	# of Points: 25 points	DGM Vacuum	14.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter	Pitot ΔP	Gas Temperatures (°F)			Orifice Press. ΔH (in H_20)		Pump Vac.	Gas Temps (°F)		K FACTOR = 1.758		
					DGM								Imp.	% ISO	Vs
	Begin	End	Reading (ft^3)	(in. H_2O)	Inlet	Outlet	Stack	Ideal	Actual	(in Hg)	Probe	Filter	Exit		(fps)
1	0.00	2.50	472.462	0.560	68.0	69.0	172	0.987	1.000	3	250	252	58	108.5	47.25
2	2.50	5.00	473.956	0.630	68.0	69.0	175	1.104	1.200	3	250	251	58	102.6	50.24
3	5.00	7.50	475.450	0.640	68.0	69.0	180	1.113	1.200	3	250	251	59	102.2	50.83
4	7.50	10.00	476.944	0.800	69.0	69.0	183	1.385	1.500	3	521	251	59	102.2	56.97
5	10.00	12.50	478.611	0.880	69.0	69.0	184	1.521	1.600	3	251	251	59	99.1	59.79
6	12.50	15.00	480.304	0.490	70.0	69.0	188	0.844	1.000	3	251	251	59	105.6	44.76
7	15.00	17.50	481.650	0.510	70.0	69.0	188	0.878	1.000	3	251	251	60	106.4	45.66
8	17.50	20.00	483.033	0.540	71.0	69.0	191	0.926	1.000	3	252	251	60	103.7	47.09
9	20.00	22.50	484.419	0.610	71.0	69.0	190	1.048	1.100	4	252	250	60	105.4	50.01
10	22.50	25.00	485.917	0.700	72.0	69.0	194	1.195	1.300	4	252	250	59	103.9	53.74
11	25.00	27.50	487.494	0.670	73.0	70.0	196	1.143	1.200	4	251	250	58	106.4	52.66
12	27.50	30.00	489.075	0.670	73.0	70.0	193	1.148	1.200	4	251	250	58	106.0	52.54
13	30.00	32.50	490.654	0.690	74.0	70.0	192	1.186	1.200	4	250	250	58	104.1	53.27
14	32.50	35.00	492.230	0.730	74.0	70.0	192	1.254	1.300	4	250	250	58	101.5	54.80
15	35.00	37.50	493.811	0.820	75.0	70.0	192	1.409	1.500	4	250	250	58	106.4	58.08
16	37.50	40.00	495.567	0.740	75.0	70.0	192	1.272	1.300	4	250	250	57	100.6	55.17
17	40.00	42.50	497.146	0.720	75.0	70.0	192	1.238	1.300	4	250	250	57	102.0	54.42
18	42.50	45.00	498.725	0.710	75.0	70.0	192	1.221	1.300	4	250	250	57	102.7	54.04
19	45.00	47.50	500.304	0.780	77.0	71.0	193	1.342	1.400	4	251	250	57	106.0	56.69
20	47.50	50.00	502.014	0.720	77.0	71.0	193	1.240	1.300	4	251	250	57	101.6	54.46
21	50.00	52.50	503.590	0.790	77.0	71.0	193	1.360	1.400	4	251	250	57	104.5	57.05
22	52.50	55.00	505.288	0.810	77.0	71.0	193	1.394	1.500	4	251	250	57	103.6	57.76
23	55.00	57.50	506.991	0.820	77.0	71.0	193	1.411	1.500	4	251	250	57	102.3	58.12
24	57.50	60.00	508.683	0.780	77.0	71.0	193	1.342	1.400	4	251	250	58	104.3	56.69
25	60.00	62.50	510.366	0.580	77.0	71.0	193	0.999	1.000	4	251	250	59	106.6	48.88
	Final DGM:		511.851												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	39.389 ft^3	0.832 in	71.5 °F	189.5 °F	4	1.268 in		

Table 4.7 Field Data – Particulate M5 Summary

Client: Cadman Kenmore **Date:** 10/01/20

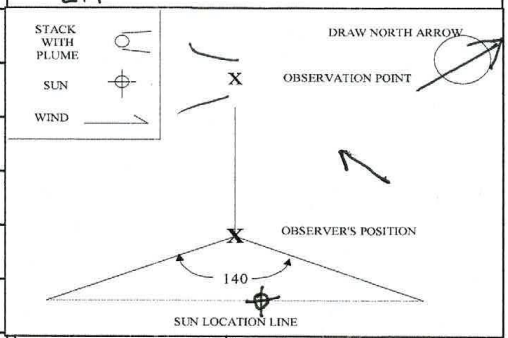
Unit: Hot Mix Asphalt Plant **ETI Job Number:** 3128-20

			Run Number: 1	2	3
Field Data:					
	Run Start Time:		8:02	9:29	11:11
	Run Finish Time:		9:12	10:38	12:26
θ	Sample Time, minutes		62.5	62.5	62.5
	Stack Shape (Circle or Rectangle):			Rectangle	
V_m	Dry Gas Meter Reading,dcf ……	.....INITIAL:	377.627	426.625	472.462
		FINAL:	415.767	463.952	511.851
V_m	Volume of dry gas sampled, dcf		38.140	37.327	39.389
Y	Meter box calibration factor		1.007	1.007	1.007
P_{bar}	Barometric pressure, inches Hg		29.70	29.70	29.70
P_{static}	Stack static pressure, inches H_2O		-0.20	-0.20	-0.20
ΔH	Differential meter press, inches H_2O		1.232	1.200	1.268
T_m	Meter temperature, degrees F		67.00	70.10	71.50
V_{lc}	Volume of H_2O collected, ml		133.2	140.7	137.6
$\%O_2$	Percent of oxygen in stack gas		14.65	14.68	14.67
$\%CO_2$	Percent carbon dioxide in stack gas		4.01	4.10	4.04
C_p	Type-S pitot tube coefficient		0.84	0.84	0.84
$\sqrt{\Delta P}_{avg}$	Ave. square root of pitot readings, (inches $H_2O)^{1/2}$		0.819	0.812	0.832
T_s	Stack temperature, degrees F		191.80	189.10	189.50
D_s	Stack diameter, feet - CIRCLE				
L_s, W_s	Stack dimensions, feet - RECTANGLE			3.20	2.71
D_n	Nozzle diameter, inches		0.225	0.225	0.225
A_n	Nozzle area, ft^2		0.000276	0.000276	0.000276
Calculated Values:					
$V_{m(std)}$	Meter corrected volume,dscf		38.313	37.275	39.237
$V_{w(std)}$	Volume of water vapor,dscf		6.280	6.634	6.488
B_{ws}	Fraction of H_2O vapor		0.1408	0.1511	0.1419
$\%N_2$	Percent nitrogen in stack gas		81.34	81.22	81.29
M_d	Dry molecular weight of stack gas, lb/lb-mole		29.23	29.24	29.23
M_w	Wet molecular weight of stack gas, lb/lb-mole		27.65	27.55	27.64
A_d	Cross sectional area of stack, ft^2		8.67	8.67	8.67
P_s	Absolute stack gas pressure, inches Hg		29.69	29.69	29.69
V_s	Average stack gas velocity, ft/sec		52.41	51.95	53.16
Q_{std}	Average stack volumetric flowrate, wscfm		21,919	21,816	22,309
Q_{std}	Average stack volumetric flowrate, dscfm		18,832	18,520	19,143
I	Percent isokinetic sampling		102.3	101.2	103.1

Table 4.8 Field Data Opacity Run 1

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RWW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: grey/blue sky / Sky Conditions: blue & smokey	
Wind Speed: 0-5 mph / Wind Direction: NE	
OBSERVATION DATE: 10/1/20 / START TIME: 0802 am	



sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	RUN 1
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
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15	0	0	0	0	
16	0	0	0	0	
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25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

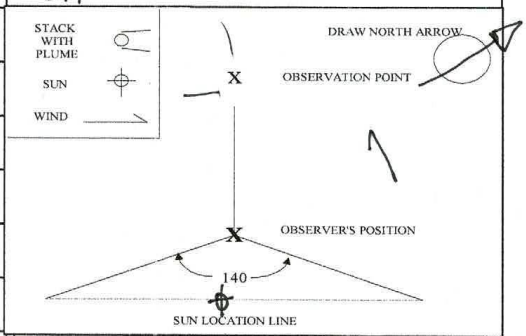
OBSERVATION DATE: 10/1/20 / START TIME: continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Table 4.9 Field Data Opacity Run 2

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RWW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: gray/blue sky	Sky Conditions: blue & smokey
Wind Speed: 0-5 mph	Wind Direction: NE
OBSERVATION DATE: 10/1/20	START TIME: 0929 am



sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	Run 2
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

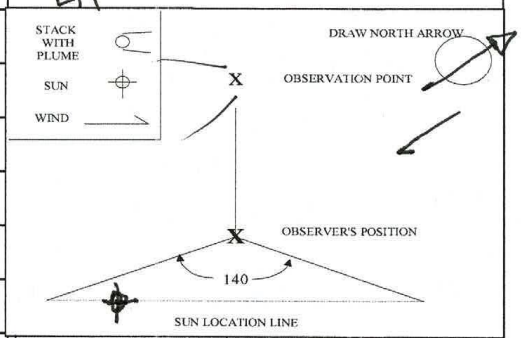
OBSERVATION DATE: 10/1/20 — START TIME: Continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Table 4.10 Field Data Opacity Run 3

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RJW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: ~~Kenmore~~ Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: gray & blue / Sky Conditions: blue & smokey	
Wind Speed: 0-5 / Wind Direction: N	



OBSERVATION DATE: 10/1/20 — START TIME: 11:11 am

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	R3
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

OBSERVATION DATE: 10/1/20 — START TIME: Continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

5. PROCESS DATA

Cadman Kenmore Asphalt - 10/1/2020

Comments	Time	Fuel	Rate of Production
Start of Run 1 - 8:02	8:00	Nat Gas	150 TPH
	8:15	Nat Gas	135 TPH
	8:30	Nat Gas	140 TPH
	8:45	Nat Gas	150 TPH
End of Run 1 - 09:12	9:00	Nat Gas	140 TPH
Start of Run 2 - 9:29	9:30	Nat Gas	140 TPH
	9:45	Nat Gas	135 TPH
	10:00	Nat Gas	140 TPH
	10:15	Nat Gas	150 TPH
End of Run 2 - 10:38	10:30	Nat Gas	140 TPH
Start of Run 3 - 11:11	11:15	Nat Gas	150 TPH
	11:30	Nat Gas	135 TPH
	11:45	Nat Gas	140 TPH
	12:00	Nat Gas	150 TPH
	12:15	Nat Gas	140 TPH
End of Run 3 - 12:26	12:30	Nat Gas	150 TPH

6. QUALITY ASSURANCE AND QUALITY CONTROL

6.1 ETI Quality Assurance/Quality Control Document

Emission Technologies, Inc. continued success is an example of their pride taken in quality testing.

Analytical procedures and environmental measurement data are structured with a quality assurance program which equals or exceeds the minimum QA/QC requirements set forth by the U.S. Environmental Protection Agency (EPA) for each applicable method.

ETI executes the following topics through every test project to ensure valid measurement data:

* Preventable Maintenance
* Pre-test and Post-test Calibration
* Blanks and Spiked Samples
* Field System Checks
* QA/QC Matrix Tables
* Employment of QA/QC Officer

The following table is an activity matrix for Method 8 from the EPA Quality Assurance Handbook for Air Pollution Measurement Systems. By diligently following such activity matrix tables, Emission Technologies, Inc. reports justifiable, valid measurement data.

TABLE 1.1 ACTIVITY MATRIX FOR PROCUREMENT OF APPARATUS & SUPPLIES

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Sampling			
Sampling probe with heating system	Capable of 100° C (212° F) exit air at flow rate of 20 L/min	Visually check; run heating system checkout	Repair, return to supplier, or reject
Probe nozzle	Stainless steel (316); sharp, tapered, leading edge (angle ≤30°); difference between measured ID's ≤0.1 mm (0.004 in.); no nicks, dents, or corrosion. uniquely identified (Meth. 5, Sec. 3.4.2)	Visually check before each test; use a micrometer to measure ID before field use after each repair	Reshape and sharpen, return to the supplier, or reject
Pitot tube	Type-S (Meth. 2, Sec. 3.1.2); attached to probe with impact (high pressure) opening plane even with or above nozzle entry plane	Calibrate according to Meth. 2, Sec. 3.1.2	Repair or return to supplier

TABLE 1.1 (CONTINUED)

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Differential pressure gauge (manometer)	Criteria in Meth. 2, Sec. 3.1.2; agree within 5% of gauge-oil manometer used to calibrate	Check against gauge-oil manometer at a minimum of three points: [0.64(0.025), 12.7(0.5), 25.4(1.0)] mm (in.) H_20	As above
Vacuum gauge	0-760 mm Hg range; $\pm$25 mm (1 in.) Hg accuracy at 380 mm (15 in.) Hg	Check against a mercury U-tube manometer upon receipt	Adjust or return to supplier
Vacuum pump	Capable of maintaining a flow rate of 0.03-0.05 m^3/ min (1-1.7 ft^3/ min) for pump inlet vacuum of 380 mm (15 in.) Hg with pump out-let at 760 mm (29.92 in.) Hg; leak free at 380 mm (15 in.) Hg	Check upon receipt for leaks and capacity	Repair or return to supplier
Orifice meter	ΔH @ of 46.74 $\pm$6.35 mm (1.84 $\pm$0.25 in.) (recommended)	Visually check upon receipt for damage; calibrate against wet test meter	Repair, if possible. otherwise, return to supplier
Impingers	Standard stock glass; pressure drop across impingers not excessive	Visually check upon receipt, check pressure drop (Method 8, Sec. 3.7.1)	Return to supplier
Filter holder	Leak free (Method 8, Sec. 3.7.1)	Visually check before use	As above
Filters	Glass fiber without organic binder designed to remove 99.95% ($\leq$0.05% penetration) of 0.3-μm dioctyl phthalate smoke particles	Manufacture's guarantee that filters meet ASTM standard method D2986-71. observe under light for defects	Return to supplier and replace

TABLE 1.1 (CONTINUED)

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Hydrogen peroxide	30% H_2O_2 reagent grade or certified ACS	Upon receipt, check label for grade or certification	Replace or return to supplier
Potassium iodide	KI reagent grade or certified ACS	As above	As above
Thorin indicator	1-(o-arsonophenylazo)-2-naphthol-3,6 disulfonic acid disodium salt, reagent grade or certified ACS	Upon receipt, check label for grade or certification	As above
Barium perchlorate trihydrate solution	$Ba(ClO_4)_2$ -$3H_20$, - reagent grade or certified ACS	As above	As above
Sulfuric acid solution	H_2SO_4, 0.0100N $\pm$ 0.0002N	Certified by manufacturer, or standardize against 0.0100N NaOH previously standardized against potassium acid phthalate (primary standard grade)	As above
NO_x Chemiluminescence Analyzer	NO_x to NO conversion efficiency $\geq$ 90%	Before each field test; Introduce a concentration of 40-60 ppm NO_2 to the analyzer in direct cal mode. Calculate converter efficiency: $\text{Eff}_{NO_2} = \frac{C_{Dir}}{C_V} \times 100$	Repair

6.2 Opacity Certification Certificate

Based on the criteria established by British Columbia Ministry of Environment in the "Source Testing Code for the Visual Measurement of the Opacity of Emissions from Stationary Sources" and the score achieved, this

Certificate

is presented to

Robert Wilson

in recognition of successful completion of the
EPA Method 9 Visible Emissions Certification Course
June 18, 2020 Vancouver, British Columbia.

plewes
environmental

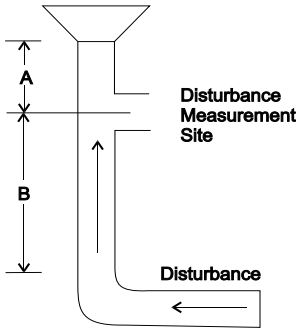
David Plewes
Certifying Instructor
Plewes Environmental Limited

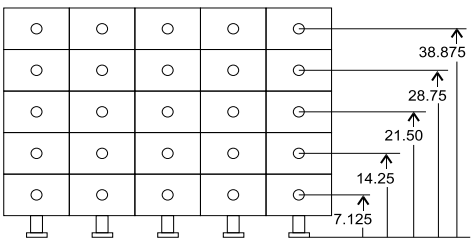
6.3 Sample Site Selection and Stratification Check

Client: Cadman Kenmore **Date:** 10/01/20

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

Traverse Point	% of Diameter Distance	Actual Distance	O_2 or CO_2 Conc. (%)	O_2 or CO_2 Conc. % diff. of mean	SO_2 Conc. ppmdv	SO_2 Conc.% diff. of mean	NO_x Conc. ppmdv	NO_x Conc. % diff. of mean	CO Conc. ppmdv	CO Conc. % diff. of mean
1	16.7	10.4	14.60	0.1%	-	-	14.1	0.2%		
2	50.0	21.3	14.45	-1.0%	-	-	13.8	-1.9%		
3	83.3	32.1	14.72	0.9%	-	-	14.3	1.7%		
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
		Mean:	14.59		-		14.1			





Traverse Type: gaseous Flow Straighteners? N

Stack Shape: rectangle Stack Extensions? N

Stack Construction: steel Sample Orientation: Horizontal

Stack Dimension (inches), 32.5" x 38.5

For 7E Gaseous Samples	
	12 point sample: >10% of mean
	3 point sample: ≤10% or ±1 ppm of mean
	1 point sample: ≤5% or ±0.5 ppm of mean

Number of Test Ports: 5

Stack Equivalent Diameter: (inches): 35

Port Length (inches): 5

# of Traverse Pts. (Gaseous): 1

# of Traverse Pts. (Particulates): 25

# of Traverse Pts. (Flows): 25

Distance Downstream From Flow Disturbance (inches): 108

Distance Upstream From Flow Disturbance (inches): 96

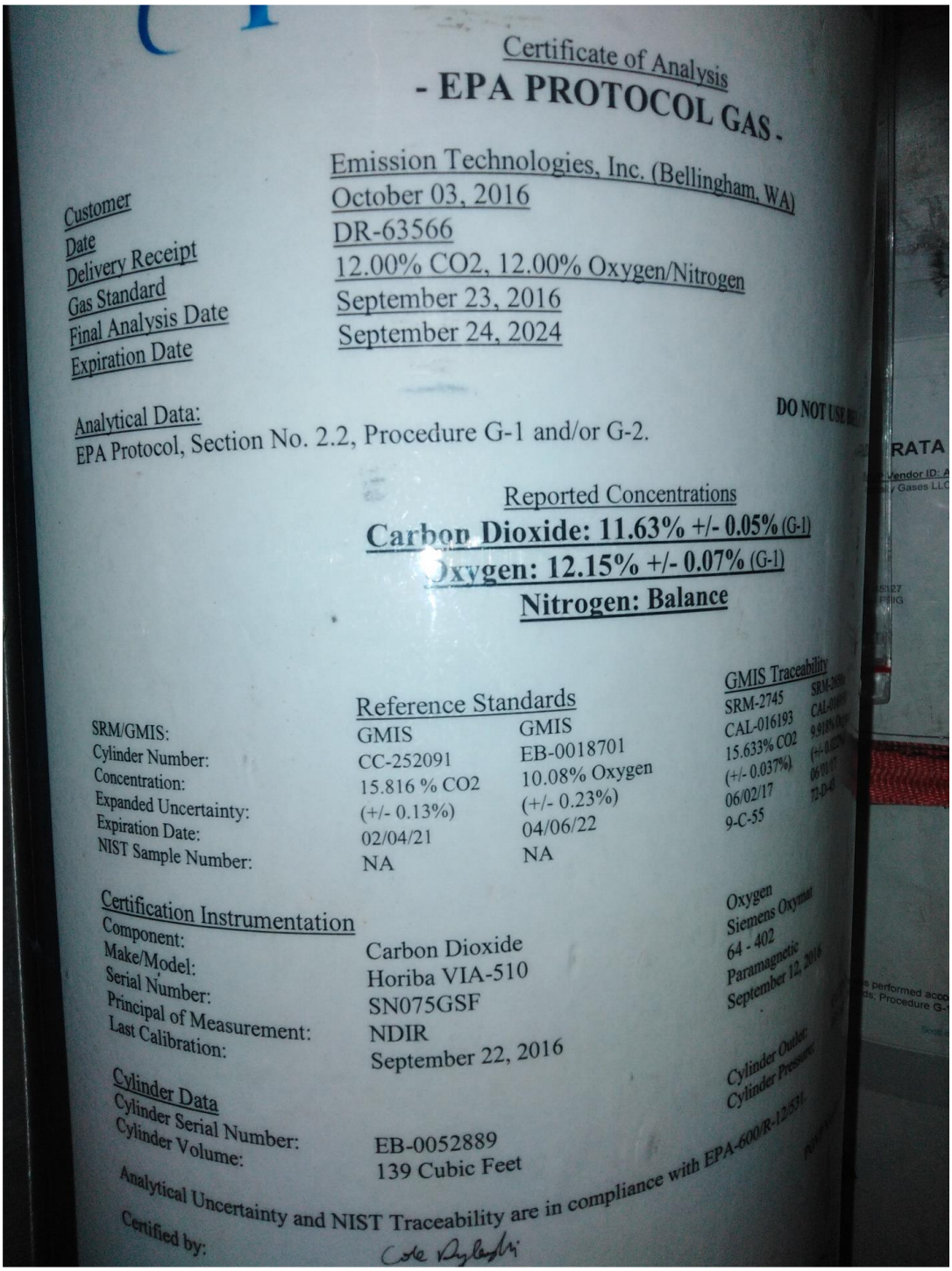
Stack Diameters Downstream: 3.1

Stack Diameters Upstream: 2.7

Cyclonic Flow: N

Does stack Meet EPA Method 1 Criteria? Y

6.4 Calibration Gas Certificates



Certificate of Analysis
- EPA PROTOCOL GAS -

Customer	Emission Technologies, Inc. (Bellingham, WA)
Date	October 03, 2016
Delivery Receipt	DR-63566
Gas Standard	12.00% CO2, 12.00% Oxygen/Nitrogen
Final Analysis Date	September 23, 2016
Expiration Date	September 24, 2024

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

DO NOT USE BE

Reported Concentrations

Carbon Dioxide: 11.63% +/- 0.05% (G-1)
Oxygen: 12.15% +/- 0.07% (G-1)
Nitrogen: Balance

Reference Standards

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-252091	EB-0018701
Concentration:	15.816 % CO2	10.08% Oxygen
Expanded Uncertainty:	(+/- 0.13%)	(+/- 0.23%)
Expiration Date:	02/04/21	04/06/22
NIST Sample Number:	NA	NA

GMIS Traceability

SRM-2745	SRM-2636
CAL-016193	CAL-016193
15.633% CO2	9.918% O2
(+/- 0.037%)	(+/- 0.02%
06/02/17	06/01/17
9-C-55	72-D-43

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Horiba VIA-510	Siemens Oxymat
Serial Number:	SN075GSF	64 - 402
Principal of Measurement:	NDIR	Paramagnetic
Last Calibration:	September 22, 2016	September 12, 2016

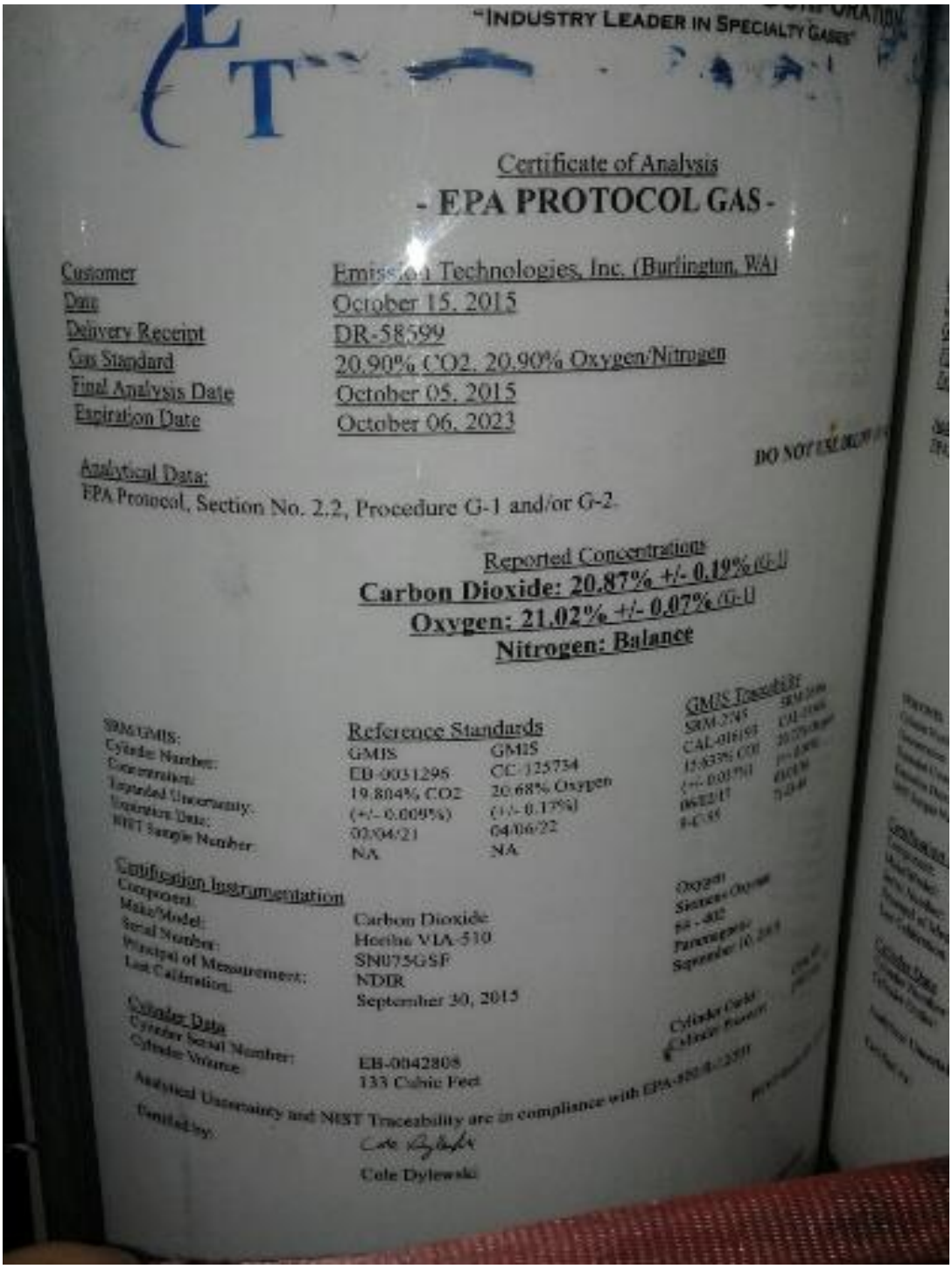
Cylinder Data

Cylinder Serial Number:	EB-0052889
Cylinder Volume:	139 Cubic Feet

Cylinder Outlet:
Cylinder Pressure:

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:



"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Emission Technologies, Inc. (Burlington, WA)
Date	October 15, 2015
Delivery Receipt	DR-58599
Gas Standard	20.90% CO2, 20.90% Oxygen/Nitrogen
Final Analysis Date	October 05, 2015
Expiration Date	October 06, 2023

DO NOT USE BELOW

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations
Carbon Dioxide: 20.87% +/- 0.19% (G-1)
Oxygen: 21.02% +/- 0.07% (G-1)
Nitrogen: Balance

	Reference Standards	
906/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0031295	CC-125734
Concentration:	19.804% CO2	20.68% Oxygen
Expanded Uncertainty:	(+/- 0.009%)	(+/- 0.17%)
Expiration Date:	02/04/21	04/06/22
NIST Sample Number:	NA	NA

GMIS Traceability
SRM-2745
CAL-016193
15.835% CO2
(+/- 0.017%)
06/22/17
84C55

Oxygen
Siemens Oxymat
6E - 302
Paramagnetic
Separation 10.243

Certification Instrumentation

Component:	Carbon Dioxide
Make/Model:	Horiba VIA-510
Serial Number:	SN075GSF
Principal of Measurement:	NDIR
Last Calibration:	September 30, 2015

Cylinder Data

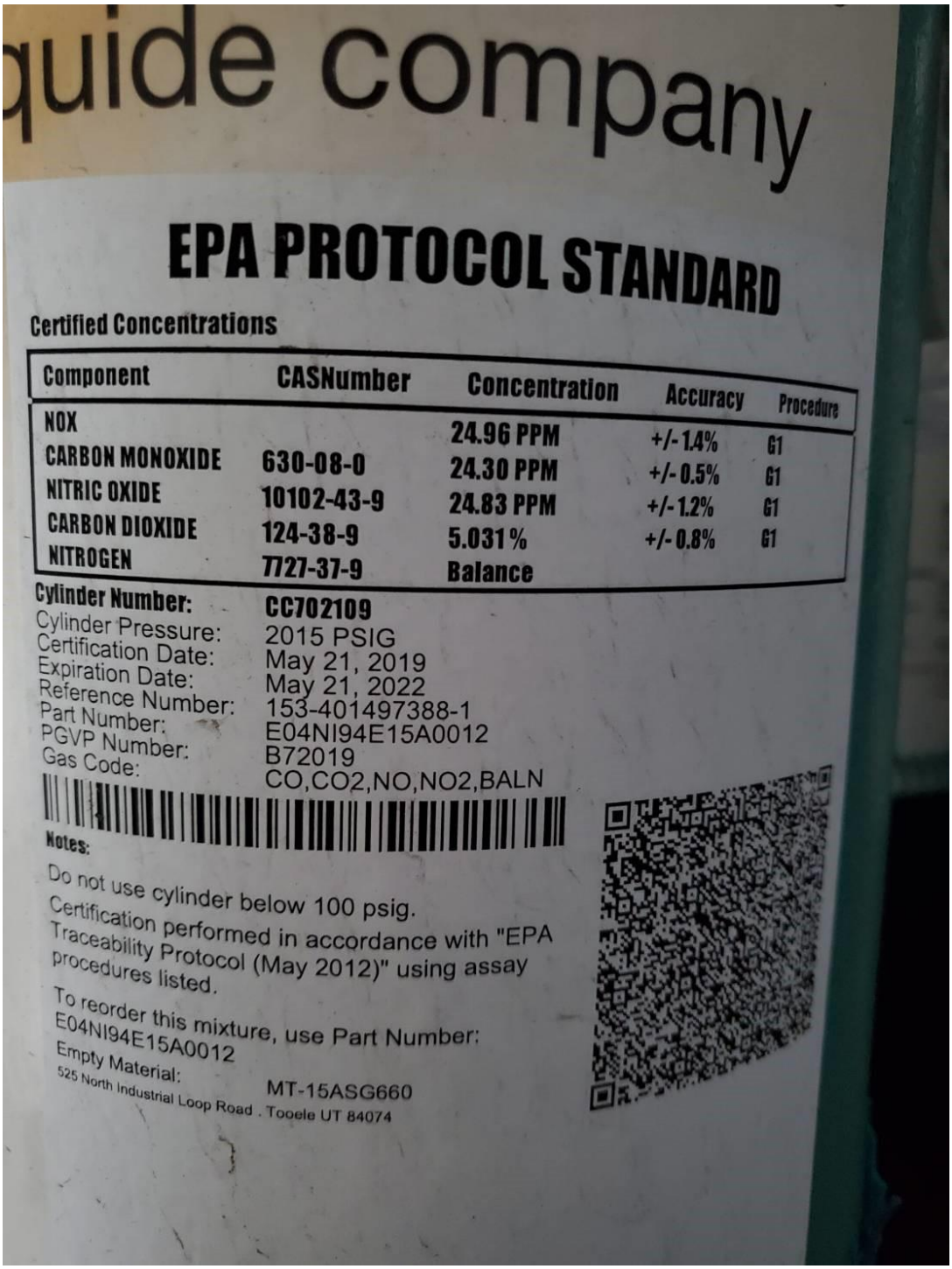
Cylinder Serial Number:	EB-0042808
Cylinder Volume:	133 Cubic Feet

Cylinder Code
Cylinder Pressure

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531

Certified by:

Cole Dylewski



quide company

EPA PROTOCOL STANDARD

Certified Concentrations

Component	CASNumber	Concentration	Accuracy	Procedure
NOX		24.96 PPM	+/- 1.4%	G1
CARBON MONOXIDE	630-08-0	24.30 PPM	+/- 0.5%	G1
NITRIC OXIDE	10102-43-9	24.83 PPM	+/- 1.2%	G1
CARBON DIOXIDE	124-38-9	5.031 %	+/- 0.8%	G1
NITROGEN	7727-37-9	Balance		

Cylinder Number: CC702109
Cylinder Pressure: 2015 PSIG
Certification Date: May 21, 2019
Expiration Date: May 21, 2022
Reference Number: 153-401497388-1
Part Number: E04NI94E15A0012
PGVP Number: B72019
Gas Code: CO,CO2,NO,NO2,BALN

Notes:

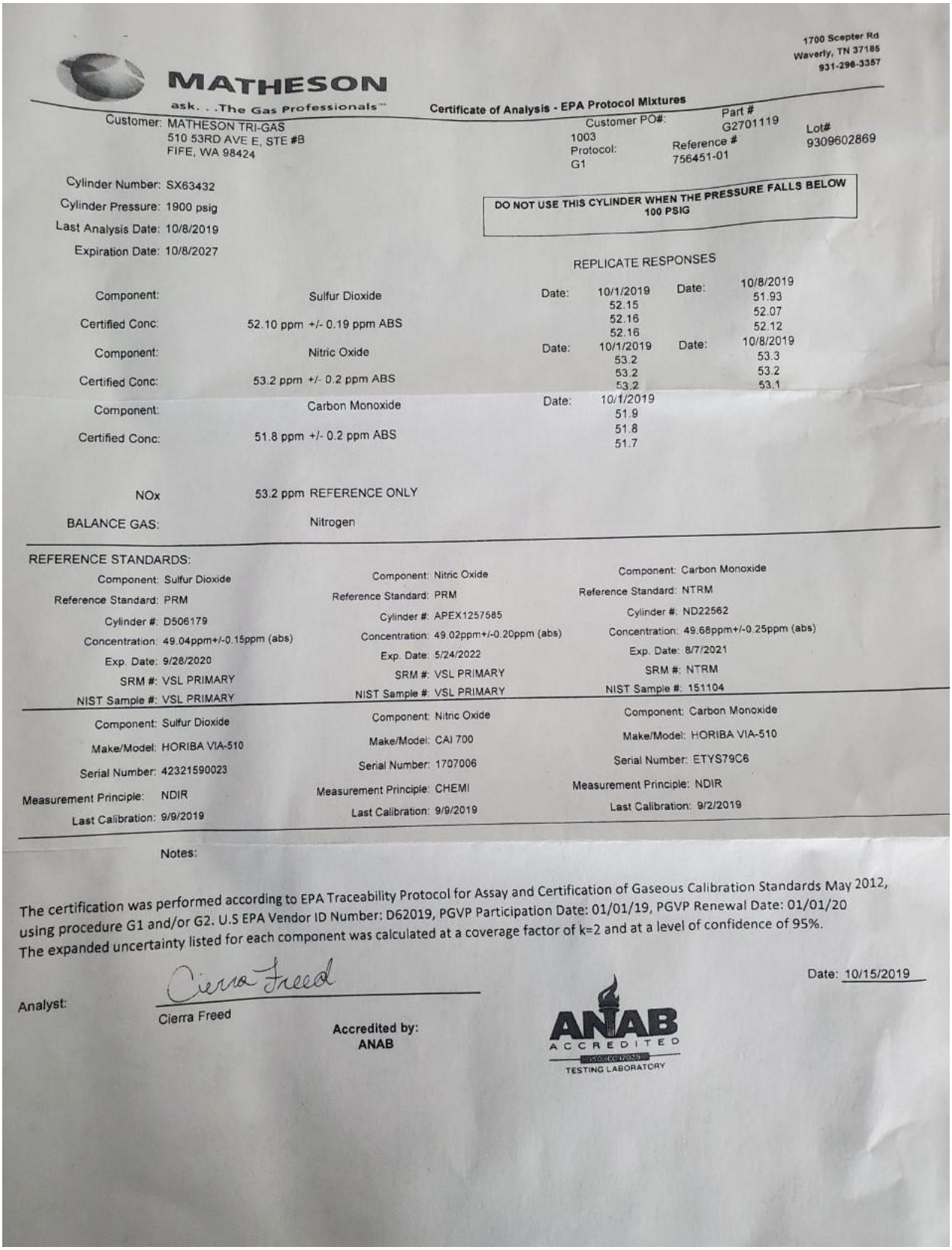
Do not use cylinder below 100 psig.

Certification performed in accordance with "EPA Traceability Protocol (May 2012)" using assay procedures listed.

To reorder this mixture, use Part Number: E04NI94E15A0012

Empty Material: MT-15ASG660

525 North Industrial Loop Road . Tooele UT 84074



MATHESON
ask. . .The Gas Professionals™

1700 Scepter Rd
Waverly, TN 37185
931-296-3357

Certificate of Analysis - EPA Protocol Mixtures

Customer: MATHESON TRI-GAS
510 53RD AVE E, STE #B
FIFE, WA 98424

Customer PO#: 1003
Protocol: G1
Part # G2701119
Reference # 756451-01
Lot# 9309602869

Cylinder Number: SX63432
Cylinder Pressure: 1900 psig
Last Analysis Date: 10/8/2019
Expiration Date: 10/8/2027

DO NOT USE THIS CYLINDER WHEN THE PRESSURE FALLS BELOW 100 PSIG

REPLICATE RESPONSES

Component:	Sulfur Dioxide	Date:	10/1/2019	Date:	10/8/2019
			52.15		51.93
Certified Conc:	52.10 ppm +/- 0.19 ppm ABS		52.16		52.07
			52.16		52.12
Component:	Nitric Oxide	Date:	10/1/2019	Date:	10/8/2019
			53.2		53.3
Certified Conc:	53.2 ppm +/- 0.2 ppm ABS		53.2		53.2
			53.2		53.1
Component:	Carbon Monoxide	Date:	10/1/2019		
			51.9		
Certified Conc:	51.8 ppm +/- 0.2 ppm ABS		51.8		
			51.7		

NOx 53.2 ppm REFERENCE ONLY

BALANCE GAS: Nitrogen

REFERENCE STANDARDS:

Component: Sulfur Dioxide	Component: Nitric Oxide	Component: Carbon Monoxide
Reference Standard: PRM	Reference Standard: PRM	Reference Standard: NTRM
Cylinder #: D506179	Cylinder #: APEX1257585	Cylinder #: ND22562
Concentration: 49.04ppm+/-0.15ppm (abs)	Concentration: 49.02ppm+/-0.20ppm (abs)	Concentration: 49.68ppm+/-0.25ppm (abs)
Exp. Date: 9/28/2020	Exp. Date: 5/24/2022	Exp. Date: 8/7/2021
SRM #: VSL PRIMARY	SRM #: VSL PRIMARY	SRM #: NTRM
NIST Sample #: VSL PRIMARY	NIST Sample #: VSL PRIMARY	NIST Sample #: 151104

Component: Sulfur Dioxide	Component: Nitric Oxide	Component: Carbon Monoxide
Make/Model: HORIBA VIA-510	Make/Model: CAI 700	Make/Model: HORIBA VIA-510
Serial Number: 42321590023	Serial Number: 1707006	Serial Number: ETYS79C6
Measurement Principle: NDIR	Measurement Principle: CHEMI	Measurement Principle: NDIR
Last Calibration: 9/9/2019	Last Calibration: 9/9/2019	Last Calibration: 9/2/2019

Notes:

The certification was performed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards May 2012, using procedure G1 and/or G2. U.S EPA Vendor ID Number: D62019, PGVP Participation Date: 01/01/19, PGVP Renewal Date: 01/01/20
The expanded uncertainty listed for each component was calculated at a coverage factor of k=2 and at a level of confidence of 95%.

Analyst: Cierra Freed
Cierra Freed

Date: 10/15/2019

Accredited by:
ANAB

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

6.5 NO_x Converter Check

EPA Method 7E - NOx Analyzer Converter Efficiency Check

Make: HORIBA
Model: PG-250
S/N: 6103006

Date: 10/08/20
Performed By: Rob Wilson

Zero NO Calibration Gas

Cylinder Conc.:	0.0 ppm	
Cylinder S/N:	EB47257	
Analyzer Response:	0.0 ppm	
ACE:	0.0%	**PASS**
	Eq. 7E-1	

Mid NO Calibration Gas

Cylinder Conc.:	24.96 ppm	
Cylinder S/N:	CC702109	
Analyzer Response:	24.60 ppm	
ACE:	-0.7%	**PASS**
	Eq. 7E-1	

High NO Calibration Gas

Cylinder Conc.:	53.2 ppm	
Cylinder S/N:	SX63432	
Analyzer Response:	53.1 ppm	
ACE:	-0.19%	**PASS**
	Eq. 7E-1	

NO_2 Calibration Gas

Cylinder Conc.:	45.5 ppm	
Cylinder S/N:	CC509578	
Analyzer Response:	43.4 ppm	
Converter Efficiency:	95.4%	**PASS**
	Eq. 7E-7	

I certifiy that the above listed analyzer meets the requirements set forth in EPA Method 7E for converting NO_2 to NO.

Signature: Robert Wilson

6.6 Meter Calibrations

Pre-Test Meter Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES



1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

					INITIAL	FINAL	AVG (P_{bar})
DATE:	8/22/2020	METER SERIAL #:	L001	BAROMETRIC PRESSURE (in Hg):	29.81	29.81	29.81
METER PART #:	HF-L	CRITICAL ORIFICE SET SERIAL #:	1543s				

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
19	1	0.5079	16	946.768	952.325	5.557	58	56	58	57	59	57.5	8.5	1.4	5.6695	5.6562	0.998		1.81
19	2	0.5079	16	952.325	957.872	5.547	58	58	59	59	61	59.3	8.5	1.4	5.6403	5.6562	1.003		1.81
19	3	0.5079	16	957.872	963.420	5.548	58	59	60	61	63	60.8	8.5	1.4	5.6250	5.6562	1.006		1.80
																AVG =	1.002	-0.49	
16	1	0.4313	16	963.650	969.150	5.500	59	60	62	63	64	62.3	9.9	1.0	5.5549	5.5889	1.006		1.78
16	2	0.4313	16	969.150	974.760	5.610	59	62	63	64	65	63.5	10.1	1.0	5.6524	5.7018	1.009		1.78
16	3	0.4313	16	974.760	980.355	5.595	59	63	63	65	65	64.0	10.1	1.0	5.6319	5.7018	1.012		1.78
																AVG =	1.009	0.21	
11	1	0.3177	16	980.827	986.30	5.473	61	63	64	65	66	64.5	13.4	0.6	5.4978	5.5615	1.012		1.80
11	2	0.3177	16	986.30	991.785	5.485	61	64	65	67	67	65.8	13.4	0.6	5.4967	5.5615	1.012		1.80
11	3	0.3177	16	991.785	997.350	5.565	61	65	65	67	68	66.3	13.5	0.6	5.5716	5.6030	1.006		1.80
																AVG =	1.010	0.27	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.007

AVERAGE $\Delta H_@$ = 1.80

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right)^2 \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

Post-Test Meter Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

Quality - Service - Reliability

DATE: 10/8/2020 | METER SERIAL #: L001 | BAROMETRIC PRESSURE (in Hg): INITIAL 29.72, FINAL 29.72, AVG (P_{bar}) 29.72

METER PART #: HF-L | CRITICAL ORIFICE SET SERIAL #: 1543s

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
11	1	0.3177	18	980.827	986.900	6.073	57	56	57	55	55	55.8	15.0	0.6	6.1853	6.2308	1.007		1.83
11	2	0.3177	18	986.90	992.965	6.065	57	57	59	55	57	57.0	15.0	0.6	6.1622	6.2308	1.011		1.82
11	3	0.3177	18	992.965	999.020	6.055	58	59	60	57	58	58.5	15.0	0.6	6.1343	6.2248	1.015		1.82
																AVG =	1.011	0.00	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.011

AVERAGE $\Delta H_@$ = 1.82

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right)^2 \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

END OF TEST REPORT

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May 2, 2022

VIA EMAIL

Brian Renninger, Engineer
Puget Sound Clean Air Agency
publiccomment@pscleanair.gov

Re: Comment Letter on Draft Order of Approval for Notice of Construction No. 11861; Cadman Materials, 6431 NE 175th Street, Kenmore, WA 98028

Dear Mr. Renninger:

This law firm represents Cadman Materials regarding its asphalt plant in Kenmore, Washington ("**Plant**"). Following discussions with the Agency that began with a Notice of Violation, Cadman applied for a Notice of Construction ("**NOC**") (No. 11861) related to maintenance activities at the Plant. The Puget Sound Clean Air Agency ("**Agency**") issued a Determination of Non-significance and a draft Order of Approval for the NOC ("**Draft Permit**").

This letter supplements Cadman's contemporaneously filed public comment letter ("**Cadman Letter**") on the Draft Permit. This letter specifically provides legal argument on certain proposed conditions in the Draft Permit. As explained below and in the Cadman Letter, Conditions 7 and 8 contain errors that should be corrected; the end result of the restricComment tions in Conditions 13 and 20 matches Cadman's existing and planned future operations but those matters should be treated as voluntary elements of Cadman's proposal, not as permit conditions tied to the Notice of Violation or the NOC; Condition 22 should be revised to match the five-year emission period applied to all other known asphalt plants; and Conditions 25 through 27 should be modified or deleted entirely because they are illegal.

The Washington State Clean Air Act, and the Agency's own declared public policy, include maintaining air quality *together with* a policy to "promote the economic and social development" of the Puget Sound region. RCW 70A.15.1005; Agency Regulation I, Section 1.01. Cadman's experts, the Agency's experts, and the City of Kenmore's experts have all agreed air emissions from the Kenmore Plant are well below applicable toxic standards, meaning the emissions are protective of public health and safety. At the Agency's April 18 public hearing, odors from the Kenmore Plant were alleged by some – but not all – community members to be a concern; however, the evidence is plain that those odors are not toxic. Asphalt is a commonplace material, used to pave roads, recreational trails, parking lots, playgrounds, and more. By its nature, asphalt needs to be produced near to where it will be used. Authorizing the

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Kenmore Plant to continue operating so as to provide the asphalt product necessary for the economic and social development of this area of Puget Sound region, while protecting the public health, is consistent with the Agency's declared public policy.

Therefore, as described in Cadman's letter and below, Cadman requests the Agency correct certain aspects of the current Worksheet and Draft Permit, and that the Agency meet with Cadman representatives to craft different odor conditions. These revised odor conditions should address community concerns, should be crafted to keep within the bounds of the Agency's legal authority, should be fair, and should be feasible to implement.

1. Request for Correction to Emission Limits in Condition Nos. 7 and 8 (particulate matter emission limits).

Please see the Cadman Letter describing the errors in Conditions 7 and 8.

2. Request for Correction to Scope of Permit related to asphalt cement tanks, and converting the restrictions of Conditions 13 and 20 precluding storage and, therefore, use of "Cutback" Asphalt, into elements of a Cadman proposal, rather than permit conditions.

The effect of the restrictions found in Conditions 13 and 20 matches Cadman's current and planned future operations. Cadman does not use and has no plans to use "cutback asphalt" at the Plant. However, the Agency has no authority to impose those conditions, so Cadman requests the Agency address community concerns about cutback asphalt as detailed in the Cadman Letter.

The Agency claims it can regulate the storage tanks and impose Conditions 13 and 20 because changes to the tanks' condensing filters in 2017 allegedly "constituted replacement of a control device per WAC 173-400-114 which required permitting review." *See* NOC 11861 Worksheet ("**Worksheet**").

The Agency is incorrect. The 2017 changes to the condensers constituted "routine maintenance, repair or similar parts replacement," a type of activity that is exempt from permitting review. WAC 173-400-114(1) states in relevant part: "Any person proposing to replace or substantially alter the emission control technology installed on an existing stationary source or emission unit shall file a notice of construction application …. Replacement or substantial alteration of control technology does not include *routine* maintenance, repair or *similar parts replacement*." (Emphasis added.) When the condensing filter for the Plant's primary storage tank began to corrode, Cadman moved the secondary tank's condensing filter to the primary tank and then ordered and installed a new and similar condensing filter on the secondary tank. Nothing meaningfully changed in the nature, type, or level of control technology. Accordingly, these actions constituted routine maintenance and similar parts replacement, not full replacement or substantial alteration.

Despite the Agency's inability to regulate the tanks, Cadman has heard the community concern about the possible use of cutback asphalt. Because Cadman does not use and has no plans to use "cutback

asphalt" at the Plant, Cadman is willing – outside this Permit process – to commit to no use of cutback asphalt. Please see the Cadman Letter for the details of this commitment.

3. Condition 22, Regarding Emissions Testing, should be Revised.

As described in the Cadman Letter, all other air permits for asphalt plants require emission source testing every five years, not every three years. Nothing in the Worksheet or Draft Permit explains why the Agency chose a three-year testing period for the Plant. Cadman is aware of no unique features of the Kenmore Plant that require more frequent testing. The Agency should be treating like facilities alike and should not impose significant costs and burdens on one facility that are not imposed on similar (competing) facilities. Indeed, another public policy the Agency is called upon to advance is to assure that the "costs of protecting the air resource ... shall be shared as equitably as possible among all sources whose emissions cause air pollution." RCW 70A.15.1005. Finally, given the local community concern about plant emissions, the Agency should recognize that less frequent testing means fewer overall emissions, because each test requires running the Kenmore Plant at capacity. Condition 22 should be revised to require testing every five years.

4. Conditions 25–27, Regarding Odor Monitoring and Emissions Complaints, should be Modified or Deleted.

Per Draft Permit Conditions 25 and 26, if the Control Officer communicates to Cadman that he or she has detected an odor at or above Level 2 (as defined in Regulation I, Section 9.11(b)) and that the odor is attributable to the Plant, Cadman must initiate an investigation of the odor and take corrective action to reduce the odor within 24 hours.[1] Cadman must also develop a detailed report of the investigation.

Regardless of whether odors have been detected, Condition 27 requires Cadman to hire a person to monitor odors from certain locations away from the Plant, once per week during dryer operation. If the hired odor monitor detects odors at Level 2 or above, Cadman must take immediate corrective action.

Herein, Conditions 25–27 are referred to as the "**Odor Conditions**." The Cadman Letter details many objections to the Odor Conditions, and below we expand on those objections.

a. The Odor Conditions exceed Agency authority because the Conditions could prohibit lawful emissions.

The Odor Conditions go beyond the scope of the Washington Clean Air Act ("**Act**") and the Agency's own regulations. The Act defines "air pollution" as "presence in the outdoor atmosphere of one or more air contaminants in sufficient quantities and of such characteristics and duration as is, or is likely to be,

[1] Conditions 25 and 26 seem to incorrectly reference other conditions. Condition 25 references Condition 27 in the fourth line—we presume it is supposed to reference Condition 26. Condition 26 references itself (Condition 26) in the first line—we presume it is supposed to reference Condition 25.

injurious to human health, plant or animal life, or property, or which unreasonably interfere with enjoyment of life and property." RCW 70A.15.1030(2). Likewise, the Agency nuisance regulation states that "[i]t shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property." Regulation I, § 9.11(a).

But the Odor Conditions could prohibit the Plant's emissions even if they (a) are not injurious to human health, plant or animal life, or property, or (b) do not unreasonably interfere with enjoyment of life and property.

As for harm to life and property, the evidence shows that the Plant's emissions are not harmful because they are well below objective emission standards. Moreover, detectible odor is not inherently harmful to life or property.

Regarding unreasonable interference with enjoyment of life and property, the Odor Conditions simply ignore that concept entirely. Under the Odor Conditions, odor emissions can be prohibited even if they do not interfere with life and property, or even if the interference is reasonable. Such prohibitions exceed the Act and the Agency regulations. *See* RCW 70A.15.1030(2); Regulation I, Section 9.11(a); *cf. Kitsap Cty. v. Kitsap Rifle & Revolver Club*, 184 Wn. App. 252, 276 (2014) ("nuisance liability exists only when the conduct is unreasonable"); *Lakey v. Puget Sound Energy, Inc.*, 176 Wn.2d 909, 923 (2013) ("We determine the reasonableness of a defendant's conduct by weighing the harm to the aggrieved party against the social utility of the activity.").

For example, Condition 25 fails to accurately incorporate all provisions of Regulation I, Section 9.11. As drafted, Condition 25 would allow the Agency to force Cadman to respond to allegations of odor, regardless of whether any person's property is disturbed, let alone whether that interference is reasonable. In other words, Condition 25 would allow mere passersby to make allegations to the Agency, and then for the Agency to force Cadman to act without the necessary affidavit confirming that the person making the complaint has "experienced air contaminant emissions in sufficient quantities and of such characteristics and duration so as to unreasonably interfere with their enjoyment of life and property." The Act does not grant such authority, and Condition 25 is illegal.

Recent attempts to amend the Act illustrate the illegal nature of Condition 25. For example, House Bill 1057 of the 2021 legislative session would have added the following to the definition of "air pollution: "'enjoyment of life and property' may include a person's use or enjoyment of a public park, public recreational facility or trail, or publicly owned commons of any municipal government or state agency." As described by the proponents of HB 1057, the proposed language was necessary because, under the current Act, air authorities may "act on complaints only from those who have a possessory right in the property from which they are experiencing odors." HB 1057, Bill Report (emphasis added). HB 1057 did not pass. Now, instead of amending the Act, the Agency is trying to broaden its authority through

permit conditions applicable to the Kenmore Plant alone. The Agency cannot exercise authority it was never given.

Finally, the Odor Conditions ignore the fact that air contaminants must be of "sufficient quantities" and "duration" to be unlawful. *See* RCW 70A.15.1030(2); Regulation I, Section 9.11(a). Here, any odor emanating from the Plant is necessarily brief because an asphalt batch plant, as its name implies, operates only when needed. The time period during which odors might be released are limited by the nature of the operation itself, and simply cannot be present 24 hours a day, seven days a week.

b. The Odor Conditions circumvent existing rules and procedures that ensure due process.

The Odor Conditions also circumvent due process rules and protections set by the Act and the Agency's own regulations. As described above, prior to taking an enforcement action related to odor emissions, Agency regulations require a Control Officer to obtain an "affidavit from a person making a complaint that demonstrates that they have experienced [odor] emissions in sufficient quantities and of such characteristics and duration so as to unreasonably interfere with their enjoyment of life and property." Regulation I, Section 9.11(b). Condition 25 omits the requirement for an affidavit. (And, as explained above, it omits the requirement for unreasonable interference with enjoyment of life and property.)

Also, the Act and Agency regulations require the Agency to give 30 days' written notice before initiating any "formal enforcement action," and the notice "may include an order directing that necessary corrective action be taken within a reasonable time." RCW 70A.15.2520 (emphasis added); Regulation I, § 3.09(a) (same). Here, the Odor Conditions do not require written notice, and they require that corrective action for an alleged odor violation be taken "immediately", "as soon as possible," and "within 24 hours." *See* Conditions 26 and 27.

The relevant statutes and regulations do not grant the Agency—let alone ordinary citizens—the authority to cease asphalt operations simply because an odor complaint has been made. In fact, when an alleged violation occurs, the owner must be given an opportunity to comply; after such opportunity, the Agency may petition a court for a restraining order or temporary or permanent injunction, thereby ensuring due process. *See* RCW 70A.15.3140; Regulation I, § 3.15(a). Even during "air pollution episodes" (i.e., meteorological emergencies), only certain government actors and agencies may issue an order to immediately reduce or discontinue emissions. *See* RCW 70A.15.6000 through 70A.15.6040; WAC 173-435-060. Such orders are then reviewed by superior court. RCW 70A.15.6030; WAC 173-435-060(8).

c. The Odor Conditions do not constitute control technology.

The Agency position seems to be that the relevant proposed Odor Conditions constitute control technology, such as best available control technology ("**BACT**") and reasonably available control

technology ("**RACT**"). On page 16 of the Worksheet, the Agency states:

> Odor from the asphaltic cement storage tank condensers is subject to RACT. Odor from the drum dryer (including its contribution to the baghouse emissions) is subject to BACT. Odor from the scavenger duct from the truck loadout, flight conveyor to the two asphaltic concrete storage silos is subject to RACT.

The Agency then states: "BACT is often thought of an emission limit reflective of use of a particular control technology. However, BACT can also be considered operational practices and techniques that result in reduced emissions – including monitoring and recordkeeping activities." Worksheet at 17. Yet the Agency admits that it "has not identified any cost-effective odor control technology applicable to the hot mix asphalt industry equipment capable of meeting a limit of zero odor at the fence line." *Id*. Then, despite acknowledging that lack of any available "odor control technology," the Agency created an onerous and unique to the Plant "complaint response program, fence line and near field odor monitoring, recordkeeping, reporting, and response provisions," and the Agency declared these onerous programs to be "BACT/RACT odor mitigation practices." *Id.*

The Agency's position is flawed because control technology concerns technologies and production processes that directly limit emissions, not subjective human-based odor monitoring and complaint systems that do not directly limit emissions. The definition of BACT states:

> "Best available control technology" (BACT) means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation under this chapter emitted from or that results from any new or modified stationary source, that the permitting authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such a source or modification through application of production processes and available methods, systems, and techniques, including fuel cleaning, clean fuels, or treatment or innovative fuel combustion techniques for control of each such a pollutant. In no event shall application of "best available control technology" result in emissions of any pollutants that will exceed the emissions allowed by any applicable standard under 40 C.F.R. Part 60 and Part 61, as they exist on July 25, 1993, or their later enactments as adopted by reference by the director by rule. Emissions from any source utilizing clean fuels, or any other means, to comply with this subsection shall not be allowed to increase above levels that would have been required under the definition of BACT as it existed prior to enactment of the federal clean air act amendments of 1990.

RCW 70A.15.1030(6) (emphasis added). RACT, a lesser standard than BACT, also concerns technology that actually limits emissions:

> "Reasonably available control technology" (RACT) means the lowest emission limit that

> a particular source or source category is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. RACT is determined on a case-by-case basis for an individual source or source category taking into account the impact of the source upon air quality, the availability of additional controls, the emission reduction to be achieved by additional controls, the impact of additional controls on air quality, and the capital and operating costs of the additional controls. RACT requirements for a source or source category shall be adopted only after notice and opportunity for comment are afforded.

RCW 70A.15.1030(10).

Notably, we have not found any Pollution Control Hearings Board case or cases in federal or Washington courts in which subjective human-based odor monitoring or complaint system was considered a control technology.

As described in the Cadman Letter, the Plant already utilizes the BACT for odor recognized by the Agency for an asphalt plant. These measures are all that Cadman can legally be required to use and the Odor Conditions should be deleted.

d. Even if the Odor Conditions somehow constitute control technology, the Agency has not done the required consideration and balancing of the costs of such conditions.

As seen above in the definitions of BACT and RACT, the Agency must consider and balance the costs of control technology. Specifically, the permitting authority must take "into account energy, environmental, and economic impacts and other costs" when determining whether a certain BACT is "achievable." *See* RCW 70A.15.1030(6). Likewise, for RACT, "technological and economic feasibility" must be considered, and the following must be taken into account: "the impact of the source upon air quality, the availability of additional controls, the emission reduction to be achieved by additional controls, the impact of additional controls on air quality, and the capital and operating costs of the additional controls." RCW 70A.15.1030(10).

Likewise, the Agency must assure that the "costs of protecting the air resource ... shall be shared as equitably as possible among all sources whose emissions cause air pollution." RCW 70A.15.1005. However, the practical outcome of Condition 27 is an obligation on Cadman – just one company – to monitor ALL community odors during any week the Kenmore Plant dryer is in operation. That the agency seeks to obtain information on odor emissions in the Kenmore area is understandable, but it is not appropriate for the Agency to place the cost and burden of that study on just one company.

Even if the Odor Conditions somehow constitute control technology, the Agency has not demonstrated that it considered and balanced the various costs of instituting the Odor Conditions, versus the negligible impact the Odor Conditions are likely to have on odor. Compliance with the Odor Conditions imposes

additional costs on Cadman to operate the Kenmore Plant, including the cost to hire a consultant to conduct the odor monitoring program of Condition 27. In addition, if the plant was forced to simply shut down in the face of unsubstantiated complaints, or odors that existed for brief duration but did not unreasonably interfere with enjoyment of life and property, then the cost would be much larger due to lost business and potential legal damages from lawsuits brought by customers who were unable to timely complete their paving projects.

While these costs will largely fall on Cadman, other costs of imposing onerous and unique Odor Conditions on the Plant will be borne by many local governments and the community at large. The Agency's analysis is silent regarding the importance of asphalt paving for municipal roadways, trails, playgrounds, and parks, as well as parking lots for commercial development and liners for municipal water supply reservoirs. If the Plant alone or, worse, all asphalt plants in the region were subjected to the Odor Conditions, the manufacture and delivery of asphalt would become completely unpredictable. For example, the Agency has failed to consider the air pollution impact of the Odor Conditions on a local road paving project. Such a project could take weeks if not months longer to complete because the asphalt needed to complete the work would be manufactured sporadically, in between shut-down periods driven by the Odor Conditions. In turn, the added air emissions from vehicles idling and detouring the paused paving project would increase regional air pollution impacts.

The Odor Conditions are not legally justified, are not good policy, and they should be deleted.

e. The Odor Conditions are not reasonably necessary.

Finally, the Agency has no authority under the Act to require owners to institute human-based odor monitoring or to apply enforcement above and beyond State law and the Agency regulations. For notices of construction, an approval "may provide such conditions as are reasonably necessary to assure the maintenance of compliance with this chapter and the applicable rules and regulations adopted under this chapter." RCW 70A.15.2210(3) (emphasis added); *see also* RCW 70A.15.1005(a) ("it is the purpose of this chapter to … provide for the use of all known, available, and reasonable methods to reduce, prevent, and control air pollution.") (emphasis added). The Odor Conditions should be deleted or, at the very least, modified on the basis that they are unreasonable, for all of the reasons set forth above.

CONCLUSION

To meet its declared policy and purpose, which plainly includes support of economic development, and to assure compliance with law, we ask that the Agency take a step back from the current form of the Draft Permit. Cadman requests the Agency correct certain aspects of the current Worksheet and Draft Permit, and the Agency meet with Cadman representatives to craft different odor conditions. This process would likely be aided by inclusion of other industry representatives, and Cadman is open to the idea of including the City of Kenmore's outside expert team in the discussions.

Thank you for your attention to these comments.

Very truly yours,



Nancy Bainbridge Rogers



Maxwell C. Burke

NBR:MCB:alw

From:	Eric A
To:	Public Comment
Subject:	Comments r.e. Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington
Date:	Monday, May 2, 2022 10:17:58 AM
Attachments:	EA letter to PSCAA.pdf

Please consider the comments in my attached letter.

Thank you,

Eric Adman

Brian Renninger, Engineer
Puget Sound Clean Air agency
1904 Third Avenue Suite 105
Seattle, Washington 98101

Email: PublicComment@pscleanair.gov

Dear Mr. Renninger,

I am a Kenmore resident concerned with our environment, and I would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit.

For those of us who reside, work, and recreate in the cities of north Lake Washington we value a healthy environment both for ourselves and the natural ecosystems that we share this wonderful region with. This draft permit and the permitting process needs to ensure that every legal and required environmental protection of the Cadman operation is implemented as much as possible.

Detailed comments:

SEPA Environmental Checklist

3. Water (a2) - The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner appear by my Google Earth measurements to be within 200' of the Lake Washington shore. Added measures may need to be taken to reduce any runoff to Lake Washington, especially given that this work may fall within the 200' buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the watershed.

3. Water (c1.) – No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, has the proper agency should be consulted.

5. Animals (a) – Herons and other waterfowl are conspicuously missing. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore.

5. Animals (b) – Chinook salmon and steelhead are ESA listed as Threatened by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues.

7. Environmental Health (a) – I would think that hydrocarbons stored on site also present a significant risk of fire or explosion, not just spill.

8. Land and Shoreline Use (a) I think it is important to consider the public use of the Burke Gilman trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, walkers, etc all of who would be in the direct emissions from the facility. (see also Environmental Checklist Section12a).

Draft Construction Permit

7 – 13. Emissions Limits

While it is a great step forward to require testing on items 7-13, it is not clear if the emissions criteria are suitably strict to protect public health. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

22 and 23. Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is advisable. In addition, during these tests the production output should be included. It is noteworthy that in stack tests provided by Cadman (and used in subsequent modeling), production was only at 140 to 150 tons/hour, 75% of the permitted output. If 200 tons/hour is the capacity (see A. Description), then one would presume that that should the emissions test levels also.

This would also be a relevant time to point out several issues with the air quality modelling that accompanied the application.

> Firstly, the model utilized meteorological data from Paine Field in Everett. Paine Field lies on the crest of a ridge line near the ocean, while the Cadman site is at the north end of Lake Washington, which offers a 25-mile funnel for winds, bounded on the East, North, and West sides by ridge lines. Thermal conditions at the Lakeside often produce temperature inversions in the winter that trap air against the hills to the north of the Cadman site. Sites within the Lake Washington watershed likely offer more relevant data, one would imagine that the municipal airfield in Renton, the University of Washington, or the NOAA facility at Sand Point would all provide more reliable data. The Trinity modelling report notes (Section 2.2) the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the port of Everett. Similarly, background levels for PMs were calculated using an area average, while a PSCAA monitor located in Lake Forest Park would have provided more relevant data. Furthermore, for air modeling Trinity consultants determined that Kenmore was not urban, a determination that does not comport with the reality on the ground around downtown Kenmore.
>
> Secondly, where emissions testing was lacking the model utilized AP-42 to estimate emissions levels. For a variety of reasons (described best by the EPA in their precautionary notice Publication no. EPA 325-N-20-001-attached) this does not provide the necessary assurance of public safety. This provides further support for actual testing of multiple emissions elements rather than relying on AP-42 estimates.

Monitoring and Complaints

The odor detection and reporting protocol provides a necessary effort to provide a response to public concerns. Residents, businesses, and visitors to Kenmore (including those who use the Burke Gillman) will have some recourse to odors. I encourage you to maintain these items in the final draft.

Thank you,

Eric Adman
7815 NE 192 St
Kenmore, WA 98028

ericladman@gmail.com

From:	kim.josund@gmail.com
To:	Public Comment
Subject:	COMMENTS: Application No. 11861 for the Cadman Asphalt Facility
Date:	Monday, May 2, 2022 12:56:27 PM
Attachments:	LFPSF Comments PSCAA Cadman Permit 05_02_2022.pdf

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Please find attached our comments re: Application No. 11861 for the Cadman Asphalt Facility

Kim Josund

Lake Forest Park Stewardship Foundation
www.lfpsf.org

Lake Forest Park
STEWARDSHIP
FOUNDATION

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PO Box 82861
Kenmore, WA 98028
(206) 361-7076
info@lfpsf.org
LFPSF.ORG

Puget Sound Clean Air Agency
Attn: Brian Renninger Engineer
1904 Third Avenue Suite 105
Seattle, Washington 98101

RE: Application No. 11861 for the Cadman Asphalt Facility

Dear Mr. Renninger, May 2, 2022

The Stewardship Foundation is an environmental conservation and advocacy organization for Lake Forest Park, a city that shares the north Lake Washington shoreline with Kenmore, WA. Our citizens swim in the same waters, breathe the same air, and use the same trails, parks, and businesses.

Lake Forest Park residents, especially those who live nearby to the Cadman facility on the lake shore or on the "up lake slope" (north of the plant), and users of the Civic Club and the Burke Gilman trails have long noticed and been impacted by the noxious fumes emitted by the Cadman facility. There have been years of complaints of eye and lung irritation due to short-term exposure to emissions such as "combined hazardous air pollutants," volatile organic compounds, and sulfur dioxide. Not as much is known about the long-term health impacts of air or water contamination by the facility but concerns are mounting. Over time, as population density has increased and more and more people live nearby and use the shoreline, more have questioned whether heavy industrial activities really belong in such a populated and environmentally sensitive area.

The Cadman facility is bordered by the Burke-Gilman Trail, a high-use public trail for biking and walking, including many families with children. There are public parks with play areas nearby. This facility is within a few hundred feet of Lake Washington, which is known habitat to threatened and endangered species, including Chinook salmon, Steelhead and Bullhead Trout. Restoring north Lake WA salmon runs is currently the focus of much time, energy, and scientific expertise. In addition, the Cadman facility is very near to a heron rookery and habitat used by bald eagles. Any permitting must monitor, measure and mitigate potential surface water runoff to the lake, and air quality impacts to humans and wildlife.

The long history of Cadman and previous industrial uses of north Lake WA should not preclude recognition of the environmental damages caused by the mixing, loading or transport of Cadman's products or the component materials stored and brought to the site. Cadman should *not* be "grandfathered" to allow shortcuts or avoidance of highest and best controls and clean-up to protect people and the natural environment. This includes regular inspections and disclosure of exactly what is being made at the plant, and what and how the component materials are used and stored. It is not enough to "reduce odors" if underlying toxic emissions to water or air continue.

The records show that testing, monitoring, and enforcement have been lacking over the years. This current permit should not allow the facility to continue "doing what they want now and reporting it later." The currently proposed permit lacks enforcement provisions. Penalties and mitigation must be clearly outlined and assessed to reflect the real damage already done, and the future risk to human and environmental health.

Sincerely,
Kim Josund, President

From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger; John Dawson
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; tomh@pscleanair.gov; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; MayorCouncil; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 4/11/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Division regarding the draft Order of Approval of NOC #11861)
Date:	Monday, April 11, 2022 11:41:30 AM
Attachments:	Fiftieth Talk to Kenmore City Council.docx 16101-52 Evaluation Narrative (with yellow highlighting).pdf

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Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Division,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document (**containing blue and underlined hyperlinks**) and appears in the body of this email below:

In May 2020, Kenmore resident Vicki Grayland told me about the air quality problems caused by Cadman's asphalt plant in Kenmore. Then Elizabeth Mooney and Janet Hayes of Kenmore told me about the long history of environmental concerns involving Kenmore's asphalt and concrete plants. Janet showed me public records from PSCAA, and I soon found out that the asphalt plant was ***illegally using medium-curing cutback asphalt to manufacture their product**, which is **hot mix asphalt**.

Medium-curing cutback asphalt is a product made by refineries by thinning asphalt cement (or binder) with kerosene. PSCAA defines **CUTBACK ASPHALT as an asphalt (cement or binder) that has been blended with more than 7% petroleum distillates (such as kerosene).** To clarify, the Kenmore plant was **not manufacturing cutback asphalt**. They **used** it **as an ingredient**, mixing it with hot aggregate **to manufacture hot mix asphalt**. Kerosene was not burned in this process. Like paint thinner, the kerosene evaporated into the air.

Mixing medium-curing cutback asphalt with hot aggregate in Cadman's pugmill mixer caused huge volumes of kerosene vapors to evaporate. These VOC emissions greatly exceeded estimates obtained by simply applying AP-42 emission factors. Many people experienced ill health effects from the plant's stench and fumes.

It's obvious from the PSCAA ***Onsite Compliance Evaluation of the asphalt plant on Sept. 11, 2017**, that **Cadman routinely used medium-curing cutback asphalt** and stored it in their 25,000-gallon asphalt cement storage tank. Cadman now says that "**cutback asphalt is not currently in use and there is no proposal to use cutback asphalt**." So that Cadman does not

continue to mix cutback asphalt with hot aggregate, the **Order of Approval** contains **Condition #20 which prohibits the storage of cutback asphalt in the two asphalt cement storage tanks**.

I made my first public comment at a Kenmore City Council meeting in September 2020. For the sake of Kenmore residents, my objective was and is to stop Cadman's use of cutback asphalt and as a result to stop their stench and toxic asphalt fumes. Today, in my 50th testimony to Kenmore City Council, I hope that you **please support PSCAA's issuance of Order of Approval No. 11861.**

* See the yellow highlighted portion of the attached file: 16101-52 Evaluation Narrative (with yellow highlighting).pdf

Sincerely,

Dr. David Morton
206-909-5680

pscleanair.org
Puget Sound Clean Air Agency

Evaluation Narrative Report

Compliance Department

Reg #: **16101** Evaluation #: **52**

Type: **Onsite Compliance**

Inspection Date: **09/11/2017**

Inspected By: **TJH - Tom Hudson**

Linked NOVs / WWs:

Facility: **Cadman Materials, Inc. (Cadman)**

Address: **6431 NE 175th St**
Kenmore, WA 98028

Personal Protective Equipment Used

- [ ] None
- [ ] Hard Hat
- [ ] Goggles
- [x] Safety Glasses
- [ ] Hearing Protection
- [ ] Respirator
- [x] Safety Shoes
- [ ] Rubber Boots
- [ ] Leather Gloves
- [ ] Chemical Gloves
- [ ] Coveralls
- [ ] Tyvek
- [x] Safety Vest
- [ ] Other

Evaluation Narrative:

On this date at 10:30 I arrived at Ostrum's Pharmacy to conduct visual observations of the Cemex asphalt facility prior to conducting an unannounced inspection. The aggregate drier was in operation. The plume was going straight up there were no residual VEs. I stayed at this location for approximately 5 minutes. There were no asphalt odors detected.

I then drove to the plant arriving at 10:40 hours. Prior to entering the facility's control room, I observed that all the interior roadways were all wet and that there were no VEs from the roadways or material piles. The water vapor plume from the drier was still going straight up. I contacted Justin Bauer operator and informed him that I wanted to conduct an inspection. He informed me that Cadman had recently purchased Cemex. I asked what the differential pressure on the baghouse was. He said about 2". The asphalt temperature was about 320 F. Mr. Bauer said that was a little hot. He usually tries to keep the temp at 275 F when he has a steady stream of customers.

I informed him that I had received a complaint on 9/9/17. I asked if they had operated on that date. He said yes, they were operating until about 1:00 PM.

I reviewed the O & M Plan 1/1/17 – 8/31/17. All the logs were complete. The O & M plan lists the normal operating range as 2 – 7" wc but the it usually stays between 4 – 7 " wc. I did not see any incidences where the differential pressure readings exceeded the normal operating range. The fugitive dust plan is pinned to the wall and called for the operator to check for visible emissions and to take necessary action to abate the emissions.

I observed the 2 asphalt tanks. There were no loading operations on-going. I could not detect any

asphalt odor from the tanks. I observed that the condensation trap on the 70-22 asphalt had been removed. Mr. Bauer said the condensation equipment on the medium cure asphalt had broken down so Cemex removed the condensation unit from the 70-22 previous asphalt and reinstalled it on the medium cure asphalt tank. He said medium cure tank received regular refills and the 70-22 was almost full and not used very often so it did not require additional shipments. I asked if he could confirm that no shipment of 70-22 would be received before the repair is completed. He said he would ask his boss and have him email an answer to me.

At this point I concluded my inspection and left the facility.

From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger; John Dawson
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; sframe@king5.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; Puget Sound Clean Air Tom H.; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; MayorCouncil; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 4/18/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Division regarding the draft Order of Approval of NOC #11861)
Date:	Monday, April 18, 2022 12:00:21 PM
Attachments:	16101-52 Evaluation Narrative (with yellow highlighting).pdf Fifty First Talk to Kenmore City Council.docx

---

Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Division,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

It's been suggested that a stack test of the VOC emissions from Cadman's asphalt plant in Kenmore has been done in the last 4 years, and that the VOC emissions comply with PSCAA regulations.

But if we look at the Engineering (or NOC) Worksheet on **pages 17 and 18 under "Actual Emissions"**, we find the following comment: "The facility has no record of reporting emissions…" Prior to the **stack emission test on October 1, 2020**, the asphalt plant in Kenmore had **never** had its stack emissions tested for anything. Its **VOC** emissions have **never** been tested.

EPA document AP-42, Chapter 11.1 has a good overview discussion of asphalt plant operation and typical emissions to the air. In the late **1990's**, the EPA monitored 11 strictly controlled hot mix asphalt (or HMA) facilities for several years. VOCs, HAPs, and many other parameters were analyzed and tabulated in AP-42. Emissions from the Cadman asphalt plant were NOT analyzed and tabulated in this report.

The results were published in December 2000, in a document called Emission Assessment Report AP-42, Section 11.1. The emissions values and emission factors from those 11 strictly controlled HMA facilities are used by the EPA as a model for the theoretical emissions of hot mix asphalt facilities in the US. But for the model to work, HMA facilities must use solvent-free binder because the control facilities used solvent-free binder. There is **clear evidence*** that the Cadman asphalt plant in Kenmore has NOT been using the same binder used by the control hot mix asphalt facilities modeled in document AP-42.

It has been estimated that an HMA facility which produces 100,000 to 200,000 tons of hot mix asphalt per year emits from 3 to 15 tons per year of VOCs. At this rate, over the last 50 years, the asphalt plant in Kenmore has evaporated to the air 150 to 750 tons of VOCs known to include toxic and carcinogenic chemicals.

PSCAA's air pollution standards are based on the principle of "acceptable risk" and assume that asphalt facilities operate perfectly, and that the owners can be trusted to operate on an honor system where they follow all the laws and regulations that apply to their facility without adequate government oversight.

***** See the yellow highlighted portion of the attached file: 16101-52 Evaluation Narrative (with yellow highlighting).pdf (Medium cure asphalt is cutback asphalt)

pscleanair.org
Puget Sound Clean Air Agency

Evaluation Narrative Report

Compliance Department

Reg #: **16101** Evaluation #: **52**

Type: **Onsite Compliance**

Inspection Date: **09/11/2017**

Inspected By: **TJH - Tom Hudson**

Linked NOVs / WWs:

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Address: **6431 NE 175th St**
Kenmore, WA 98028

Personal Protective Equipment Used

- [ ] None
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- [ ] Goggles
- [x] Safety Glasses
- [ ] Hearing Protection
- [ ] Respirator
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From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger; John Dawson
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; sframe@king5.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; Puget Sound Clean Air Tom H.; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; MayorCouncil; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 4/25/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Division supporting issuance of draft Order of Approval of NOC #11861)
Date:	Monday, April 25, 2022 11:38:59 AM
Attachments:	Fifty Second Talk to Kenmore City Council.docx WSDOT"s testing of Cadman"s asphalt binder and PSCAA Inspection report 2.png 16101-52 Evaluation Narrative (with yellow highlighting).pdf

---

Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Division,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

I support the issuance of Order of Approval #11861.

Cadman acquired the Cemex asphalt plant in Kenmore on June 30, 2017. Along with equipment, materials, and some workers, Cadman also acquired responsibility for several violations of PSCAA's regulations.

WashDOT tested the plant's asphalt cement binder in May, July, and August of 2017*. WashDOT has not tested the plant's asphalt cement since August 26, 2017, almost 5 years ago*.

A PSCAA onsite inspection report from Sept. 11, 2017** shows that Cadman was using cutback asphalt as binder just 16 days after WashDOT's last test of Cadman's asphalt cement. PSCAA inspector Hudson's report** contains 3 references to a 25,000-gallon storage tank containing **medium-curing cutback asphalt** that was **used frequently** for making asphalt paving mix.

In PSCAA's public hearing on April 18, we heard that Cadman does not use nor plans to use cutback asphalt. We hope that's true. We also heard that asphalt paving mix is essential for roads. But that doesn't mean that people have to breathe toxic fumes from Cadman's asphalt plant.

At the hearing, we heard that frequent VOC testing would cause the plant to make wasted batches of unused paving mix. VOC testing should be conducted during the plant's normal operations. It would make sense to test for VOCs while the plant is making paving mix that will be used for a paving project.

PSCAA estimates that this plant emits 2.5 tons of VOC emissions per year. This estimate uses an AP-42 emission factor intended for calculating VOC emissions from asphalt facilities that **use solvent-free asphalt cement to make hot mix asphalt**. Using that AP-42 emission factor **does not provide a valid estimate of VOC emissions** from an asphalt facility like Cadman's that **uses cutback asphalt to make warm mix asphalt**.

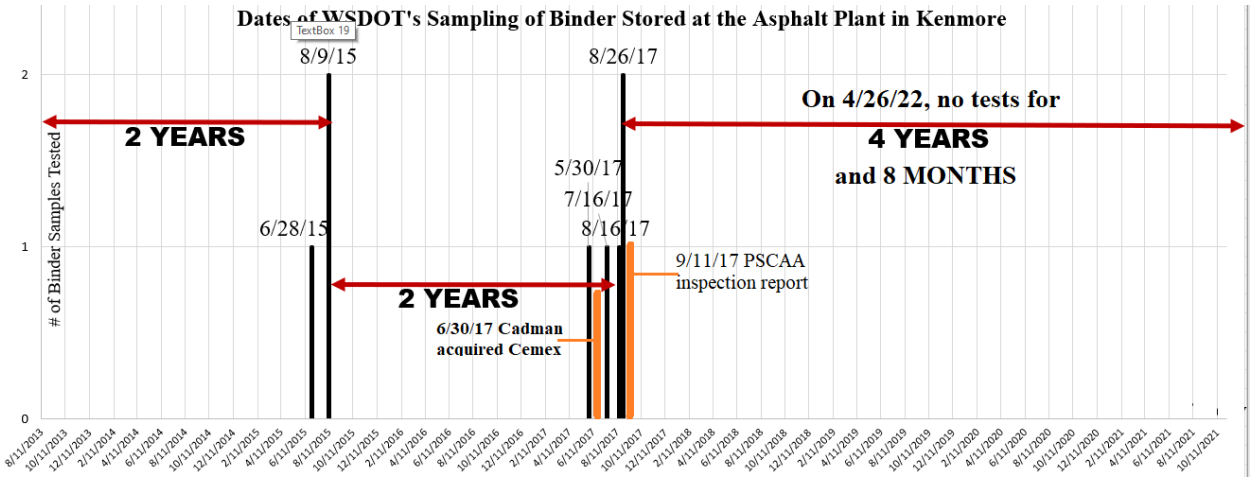
Cadman's batch mix asphalt plant is **capable of evaporating hundreds of gallons of kerosene into the air per day**. **By using an emission factor that does not apply to Cadman's asphalt plant**, PSCAA estimates that Cadman evaporates only about **5 gallons of VOCs per day**. **Breathing kerosene vapors** can irritate the nose and throat and cause headaches, dizziness, nausea, vomiting, confusion, and cancer in humans. **Fume incinerators and fume oxidizers that eliminate over 99% of VOCs** are available for hot mix asphalt plants.

*See attached file: WSDOT's testing of Cadman's asphalt binder and PSCAA Inspection report 2.png

**See attached file: 16101-52 Evaluation Narrative (with yellow highlighting).pdf

Sincerely,

David Morton
206-909-5680


Dates of WSDOT's Sampling of Binder Stored at the Asphalt Plant in Kenmore
TextBox 19
8/9/15
8/26/17
On 4/26/22, no tests for
4 YEARS
and 8 MONTHS
2 YEARS
5/30/17
7/16/17
8/16/17
6/28/15
9/11/17 PSCAA
inspection report
2 YEARS
6/30/17 Cadman
acquired Cemex
# of Binder Samples Tested
2
1
0

pscleanair.org
Puget Sound Clean Air Agency

Evaluation Narrative Report

Compliance Department

Reg #: **16101** Evaluation #: **52**

Type: **Onsite Compliance**

Inspection Date: **09/11/2017**

Inspected By: **TJH - Tom Hudson**

Linked NOVs / WWs:

Facility: **Cadman Materials, Inc. (Cadman)**

Address: **6431 NE 175th St**
Kenmore, WA 98028

Personal Protective Equipment Used

- [ ] None
- [ ] Hard Hat
- [ ] Goggles
- [x] Safety Glasses
- [ ] Hearing Protection
- [ ] Respirator
- [x] Safety Shoes
- [ ] Rubber Boots
- [ ] Leather Gloves
- [ ] Chemical Gloves
- [ ] Coveralls
- [ ] Tyvek
- [x] Safety Vest
- [ ] Other

Evaluation Narrative:

On this date at 10:30 I arrived at Ostrum's Pharmacy to conduct visual observations of the Cemex asphalt facility prior to conducting an unannounced inspection. The aggregate drier was in operation. The plume was going straight up there were no residual VEs. I stayed at this location for approximately 5 minutes. There were no asphalt odors detected.

I then drove to the plant arriving at 10:40 hours. Prior to entering the facility's control room, I observed that all the interior roadways were all wet and that there were no VEs from the roadways or material piles. The water vapor plume from the drier was still going straight up. I contacted Justin Bauer operator and informed him that I wanted to conduct an inspection. He informed me that Cadman had recently purchased Cemex. I asked what the differential pressure on the baghouse was. He said about 2". The asphalt temperature was about 320 F. Mr. Bauer said that was a little hot. He usually tries to keep the temp at 275 F when he has a steady stream of customers.

I informed him that I had received a complaint on 9/9/17. I asked if they had operated on that date. He said yes, they were operating until about 1:00 PM.

I reviewed the O & M Plan 1/1/17 – 8/31/17. All the logs were complete. The O & M plan lists the normal operating range as 2 – 7" wc but the it usually stays between 4 – 7 " wc. I did not see any incidences where the differential pressure readings exceeded the normal operating range. The fugitive dust plan is pinned to the wall and called for the operator to check for visible emissions and to take necessary action to abate the emissions.

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asphalt odor from the tanks. I observed that the condensation trap on the 70-22 asphalt had been removed. Mr. Bauer said the condensation equipment on the medium cure asphalt had broken down so Cemex removed the condensation unit from the 70-22 previous asphalt and reinstalled it on the medium cure asphalt tank. He said medium cure tank received regular refills and the 70-22 was almost full and not used very often so it did not require additional shipments. I asked if he could confirm that no shipment of 70-22 would be received before the repair is completed. He said he would ask his boss and have him email an answer to me.

At this point I concluded my inspection and left the facility.

From:	David Morton
To:	Eric Baker; Megan Dunn; Brombaugh; Betty Capestany; Public Comment; Brian Renninger; caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Bryan Hampson; rob.treece@usor.com; Puget Sound Clean Air Tom H.; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; John Dawson; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; S. Chao; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; ryan.countryman@snoco.org; cfranklin@everettwa.gov; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Cc:	mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; Jenny Lybeck; MayorCouncil; City Hall; Corina Pfeil Councilmember; Joe Marshall; Nigel Herbig; Rob Karlinsey; Debra Srebnik; Melanie OCain; David Baker; Milton Curtis; Anastasiya Warhol; Angela Kugler
Subject:	David Morton"s 3-minute comment during "Petitions from the Public" at the April 27, 2022 PSCAA Board of Directors meeting
Date:	Wednesday, April 27, 2022 9:38:42 PM
Attachments:	Fourteenth Talk to PSCAA.docx WSDOT"s testing of Cadman"s asphalt binder and PSCAA Inspection report 2.png 16101-52 Evaluation Narrative (with yellow highlighting).pdf

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Hello PSCAA Board Members, Executive Director, Management, and Engineering Division,

I intend to virtually attend tomorrow morning's PSCAA Board of Directors meeting. I will "Raise Hand" to speak during "Petitions from the Public," and if called on, will read my 3-minute comment, which is intended for the Board and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

I support the issuance of Order of Approval 11861.

Cadman acquired the Cemex asphalt plant in Kenmore on June 30, 2017. Along with equipment, materials, and some workers, Cadman also acquired responsibility for several violations of PSCAA's regulations.

WashDOT tested the plant's asphalt cement binder in May, July, and August of 2017*. WashDOT has not tested the plant's asphalt cement since August 26, 2017, almost 5 years ago*.

A PSCAA onsite inspection report from Sept. 11, 2017** shows that Cadman was using cutback asphalt as binder just 16 days after WashDOT's last test of Cadman's asphalt cement. PSCAA inspector Hudson's report** contains 3 references to a 25,000-gallon storage tank containing **medium-curing cutback asphalt** that was **used frequently** for making asphalt paving mix.

In PSCAA's public hearing on April 18, we heard that Cadman does not use nor plans to use cutback asphalt. We hope that's true. We also heard that asphalt paving mix is essential for roads. But that doesn't mean that people have to breathe toxic fumes from Cadman's asphalt plant.

At the hearing, we heard that frequent VOC testing would cause the plant to make wasted batches of unused paving mix. VOC testing should be conducted during the plant's normal operations. It would make sense to test for VOCs while the plant is making paving mix that

will be used for a paving project.

PSCAA estimates that this plant emits 2.5 tons of VOC emissions per year. This estimate, which uses an AP-42 emission factor, is valid only for asphalt facilities that **use solvent-free asphalt cement to make hot mix asphalt**. Using that AP-42 emission factor **does not provide a valid estimate of VOC emissions** from an asphalt facility like Cadman's that **uses cutback asphalt to make warm mix asphalt**.

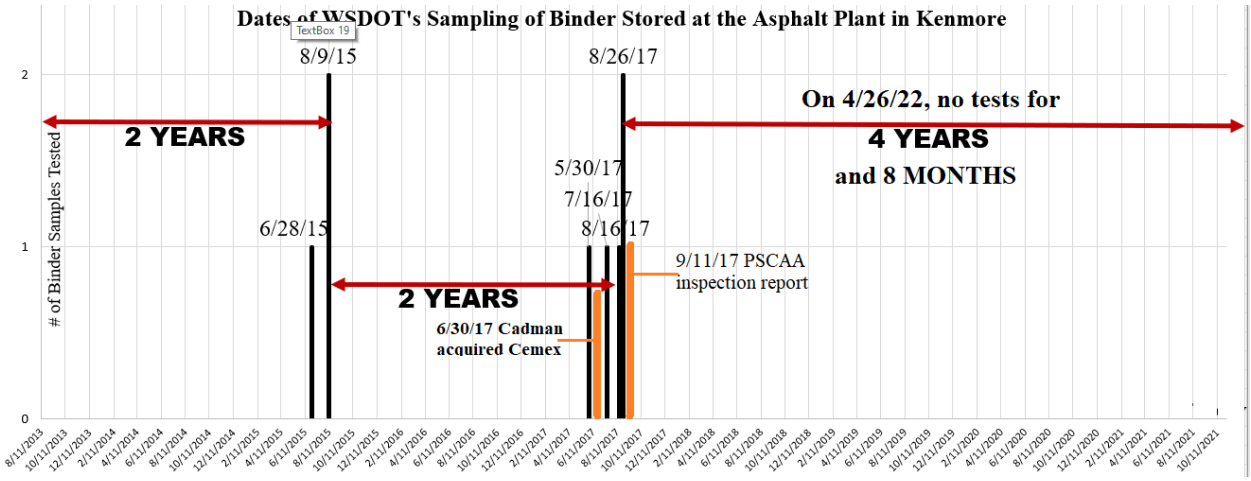
Cadman's batch mix asphalt plant is **capable of evaporating hundreds of gallons of kerosene into the air per day**. **By using an emission factor that does not apply to Cadman's asphalt plant**, PSCAA estimates that Cadman evaporates only about **5 gallons of VOCs per day**. **Breathing kerosene vapors** can irritate the nose and throat and cause headaches, dizziness, nausea, vomiting, confusion, and cancer in humans. Fume incinerators and fume oxidizers that eliminate over 99% of VOCs are available for hot mix asphalt plants.

*See attached file: WSDOT's testing of Cadman's asphalt binder and PSCAA Inspection report 2.png

**See attached file: 16101-52 Evaluation Narrative (with yellow highlighting).pdf

Sincerely,

Dr. David Morton
206-909-5680


Dates of WSDOT's Sampling of Binder Stored at the Asphalt Plant in Kenmore
TextBox 19
8/9/15
8/26/17
On 4/26/22, no tests for
4 YEARS
and 8 MONTHS
2 YEARS
5/30/17
7/16/17
8/16/17
6/28/15
9/11/17 PSCAA
inspection report
2 YEARS
6/30/17 Cadman
acquired Cemex
# of Binder Samples Tested
2
1
0

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At this point I concluded my inspection and left the facility.

From: Anna Henolson
To: Brian Renninger
Cc: McDonough, Christy M (Redmond) USA
Subject: Draft for NOC11861 - Cadman Kenmore - Request to Update Conditions 7 and 8
Date: Tuesday, April 12, 2022 11:42:11 AM
Attachments: image001.png
image002.png
3128-120 Revised April 2022 rw05.pdf

Hello Brian,
In advance of next week's public hearing and Cadman's written comments on the draft permit for NOC11861, we are sending the information below as it relates to a substantive correction needed to draft worksheet and permit document as it relates to Conditions 7 and 8.
As summarized in the tables below, the basis for the model emission rates were 0.0013 gr/dscf filterable PM and 0.0039 gr/dscf condensable PM at actual test conditions of 14.67% O_2. When corrected from actual conditions to 7% O_2, the corresponding concentrations are 0.0029 gr/dscf filterable PM and 0.0087 gr/dscf condensable PM. The corresponding total PM concentration is 0.0116 gr/dscf. Therefore, Condition 7 should be updated to 0.0029 gr/dscf and Condition 8 should be updated to 0.0116 gr/dscf (corrected to 7% O_2).
Note the draft permit and worksheet applied the appropriate concentration listed in the source test report when setting the filterable concentration (0.002 gr/dscf at 7% O_2 x 130%), but an error in the reported value of 0.002 gr/dscf was discovered in the source test report itself. An updated version of the report is attached.

- As shown in Table 2 below, the conversion of the source test result (0.0013 gr/dscf) at actual conditions of 14.67% O_2 to 7% O_2 is actually 0.0029, not 0.002 gr/dscf.
- The draft permit also used the source test result of 0.004 gr/dscf for total PM, but this was the uncorrected concentration. When calculated, the tested concentration corrected to 7% O_2 is 0.0089 gr/dscf. When applying the 130% safety factor to this value, the corresponding limit would be the same proposed value (0.0116 gr/dscf total PM, corrected to 7% O_2).

All corrections to 7% O_2 are based on the following equation:



Table 1. Model Concentration Summary

Modeled concentration	(PM)_f)	(gr/dscf)	@ Actual	0.0013
Modeled concentration	(PM)_cond)	(gr/dscf)	@ Actual	0.0039
Modeled concentration	(PM_total)	(gr/dscf)	@ Actual	0.0052

Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0029**
Modeled concentration	(PM)_f)	(gr/dscf)	@ 7% O_2	**0.0087**
Modeled concentration	(PM_total)	(gr/dscf)	@ 7% O_2	**0.0116**

Table 2. Source Test Summary

Run -->	1	2	3	Average
O2	14.65	14.68	14.67	14.67
PM_f (gr/dscf)	0.0012	0.0014	0.0014	0.0013
PM_f (gr/dscf), 7%O2	**0.0027**	**0.0031**	**0.0031**	**0.0030**
PM_t (gr/dscf)	0.0032	0.0046	0.0042	0.0040
PM_t (gr/dscf), 7%O2	**0.0071**	**0.0103**	**0.0094**	**0.0089**

Best Regards,
Anna

Anna Henolson, P.E. (she/her)
Principal Consultant
P: 253.867.5600 x 4808 | D 253.262.5892
20819 72nd Avenue S., Suite 610, Kent, WA 98032
Email: ahenolson@trinityconsultants.com

$$Cadj = \frac{Cmeas(20.9 - 7)}{(20.9 - \%O2)}$$

Trinity Consultants

Cadman Materials
Kenmore Asphalt Plant

Performance Tests for Particulate Matter, Opacity, Nitrogen Oxides and Carbon Monoxide

Test Date: **October 1, 2020**
Report Number: **3128-20**
(Revised 4/6/22)

Prepared for:

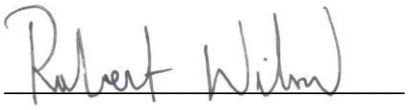
Cadman Materials
6431 NE 175th, St.
Kenmore, WA 98028

Prepared by:

Emission Technologies, Inc.
5090 Samish Way
Bellingham, WA 98229

Report Certification

The emission testing for this report was carried out under my direction and supervision. In addition, I have reviewed all analysis and test results, and certify that the test and report meet EPA requirements and that, to the best of my knowledge, this test report is authentic and accurate.

Date: October 9, 2020 Signed: 

Project Manager,

Rob Wilson

I have reviewed all analysis and test results, and certify that, to the best of my knowledge, this test report is authentic and accurate.

Date: October 9, 2020 Signed: 

Quality Assurance Manager,

Danny Dizon P.E.

Reproducing portions of this test report may omit critical substantiating documentation or be taken out of context so due care must be exercised in this regard.

Test Date: October 1, 2020

Date Issued: October 9, 2020

Revision Log

Revision No.	Revision Date	Revised Sections	Notes	Initials
0.001	4/6/22	Table 1.2 and Table 2.2	Corrected oxygen value in PM @ 7% adjustment	RW

INVOLVED PARTIES

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Land Manager, Pacific Northwest
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Phone: (425) 961-7325
Mobil: (425) 698-3226
E-mail: christy.mcdonough@lehighhanson.com

Emission Technologies, Inc.

Contact:
Rob Wilson
3642 Tree Farm Ct.
Bellingham, WA 98226

Phone: (800) 507-9018
Phone: (360) 757-1210
E-mail: robwilson@stacktester.com

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1. REPORT TEXT

1.1 Purpose

Emission Technologies, Inc. (ETI) was contracted by Cadman Materials, Inc. to perform air quality testing on the Cadman Kenmore Hot Mix Asphalt Plant located in Kenmore, WA. The testing protocol was developed by ETI to include pollutant parameters typically measured at new asphalt plant installations in the Seattle area. The testing methods used met both United States Environmental Protection Agency (EPA) and Puget Sound Clean Air Authority (PSCAA) rules, regulations and guidelines.

1.2 Test Overview

On October 1, 2020, ETI provided personnel and equipment to perform the emission measurement tests presented in Table 1.1. Source tests for each parameter are specified following the standard Environmental Protection Agency (EPA) methods listed in 40 CFR 60. Following, Table 1.1 outlines the emission sampling protocol that was employed.

Table 1.1 Test Protocol

Parameters	Test Method	Sample Series	Time per Run
Sample Port Location	EPA Method 1	Pre-Test Activity	Pre-Test Activity
Flows and Moisture	EPA Method 2, 3A, and 4	3 runs	60 minutes
Particulate (PM)	EPA Method 5 with PSCAA Resolution No. 540	3 runs	60 minutes
Opacity	EPA Method 9	3 runs	60 minutes
Oxide of Nitrogen (NO_X)	EPA Method 7E	3 runs	60 minutes
Carbon Monoxide (CO)	EPA Method 10	3 runs	60 minutes

Testing was conducted on the rectangular stack with 5 sampling ports. Gas samples were extracted from three different points (16.7, 50.0, and 83.3 percent of the stack along a traverse across the diameter of the stack during stable operating conditions.) No significant variations in pollutant concentrations were observed among the points.

1.3 Overview of the Sampling Methods

A brief description of each sampling method is given below. A complete method text from the Environmental Protection Agency (EPA) can be found at the following web site:
http://www.epa.gov/ttn/emc/.

Calculations are performed retaining at least five significant figures for intermediate results. The final number is rounded according to EPA "Performance Test Calculation Guidelines".

EPA Methods 3A, 7E and 10 for the Determination of O_2, NO_x and CO

The testing methodology for O_2, NO_x and CO utilizes continuously operated gas analyzers. Sample gases are extracted through a heated probe/glass fiber filter assembly. A calibration gas purge valve is fitted ahead of the filter assembly for introducing calibration gases to the analyzer system. The samples are transported through Teflon sample lines to a portable unit containing the analyzers. Each of the samples is conditioned while a constant sample extraction rate is maintained. The analyzers detect the concentration of analyte gas within the sample and produced an electrical output signal proportional to the analyte gas concentration. The electrical signal is recorded on a digital data acquisition system.

Instrument calibrations (zero and span checks) and linearity determinations are accomplished as described in EPA Method 7E, by sending EPA Protocol 1 calibration gases to a location ahead of the filter assembly. A 3-point analyzer calibration error check (±2% of calibration span) is made before the first test run and any time there was a failed system bias test or drift test. System bias and drift checks (≤5% and ≤3% of calibration span respectively) are carried out before and after each run. A NO_2-NO conversion efficiency (≥90% of certified test gas concentration) is conducted. Calibration span means the upper limit of the analyzer's calibration that is set by the choice of high-level calibration gas.

All components of the gas sampling and calibration system are constructed of Teflon, 316 stainless steel, or glass. The sample vacuum/pressure pump head are constructed of 316 stainless steel, Viton O-rings, and a Teflon coated diaphragm.

A stratification test is performed to determine the appropriate number of sample traverse points. Three points on a line passing through the stack centroidal area are used. The points are spaced at 16.7, 50.0, and 83.3 percent of the measurement line. The diluent or the pollutant concentration are

evaluated to determine potential stratification of the stack gasses. If the concentration at each traverse point differs from the mean concentration for all traverse points by no more than ±5.0 percent of the mean concentration; or ±0.5 ppm (whichever is less restrictive), the gas stream is considered unstratified and samples may be collected from a single point. If the 5.0 percent or 0.5 ppm criterion is not met, but the concentration at each traverse point differs from the mean concentration for all traverse points by no more than ±10.0 percent of the mean; or ±1.0 ppm (whichever is less restrictive), the gas stream is considered to be minimally stratified, samples may be taken from the three points. If the gas stream is found to be stratified, because the 10.0 percent or 1.0 ppm criterion for a 3-point test is not met twelve traverse points are utilized for the test in accordance with Method 1.

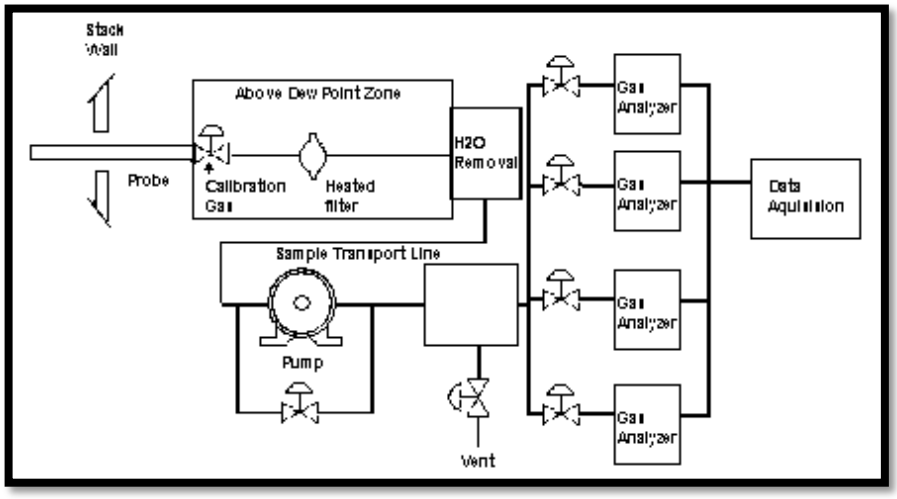


Figure 1.1 Gas Sampling Diagram

EPA Method 5 - Determination of Particulate with PSCAA Resolution 540

Particulate matter was withdrawn isokinetically from the source and collected on a glass fiber filter maintained at a temperature in the range of 248° ± 25° F. The particulate mass, which includes any material that condenses at or above the filtration temperature, was determined gravimetrically after removal of uncombined water. The sampling train used for these tests consisted of a heated borosilicate glass nozzle/probe assembly, a glass filter holder inside a heated filter box, glass impingers, umbilical cords, the control box and the sampling pump. Before and after each Method 5 test run, the probe and nozzle were washed. The weight of the particulate collected in the probe and nozzle wash was added to the weight collected on the filter to obtain front half particulate levels.

The condensable particulate matter (CPM), back half fraction, is the material that condenses after passing through the filter and is analyzed using EPA Method 5 modified by PSCAA board resolution

540. The method uses a Method 5 sampling train with the impinger contents recovered and impingers rinsed with acetone - the organic and aqueous fractions of the recovered impinger liquid are separated. The organic, aqueous and acetone wash fractions are then taken to dryness and residues weighed. The total of all back half fractions represents the Back-half particulate.

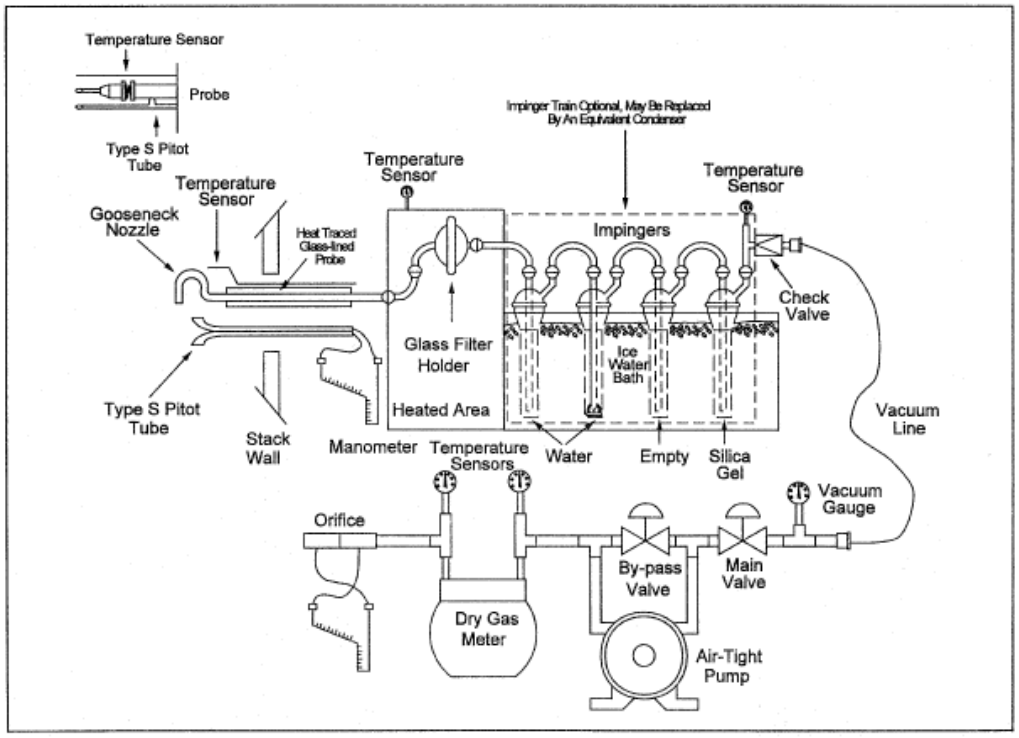


Figure 1.2 EPA Method 5 Sampling Train Diagram

EPA Method 9 - Visual Determination of Opacity

This method is applicable for the determination of the opacity of emissions from stationary sources by a qualified observer. The method includes procedures for the training and certification of observers and procedures to be used in the field for determination of plume opacity. The opacity of emissions from stationary sources is determined at the point of greatest opacity in that portion of the plume where water vapor is not present. The observer does not look at the plume continuously, but instead observes the plume momentarily at 15-second intervals. Opacity is determined as an average of 24 consecutive observations recorded at 15-second intervals. Sets need not be consecutive in time and no two sets can overlap.

1.4 Results

The results of the tests are summarized in Table 1.2 below. The plant does not have specified regulatory limits, although the results were under the typical regulatory limits set by the EPA and PSCAA for modern facilities.

Table 1.2 Performance Test Results

Parameter	Test Result Average
TOTAL PM gr/dscf @ 7% O2	0.0089
PM Filterable gr/dscf @ 7% O2	0.0030
NO_x ppmdv @ 3% O_2	39
CO ppmdv @ 3% O_2	118
Opacity, %	0.0

1.5 Anomalies

There were no anomalies during the test.

1.6 Process Overview

Figure 1.3 below illustrates a conceptual diagram of the testing arrangement.

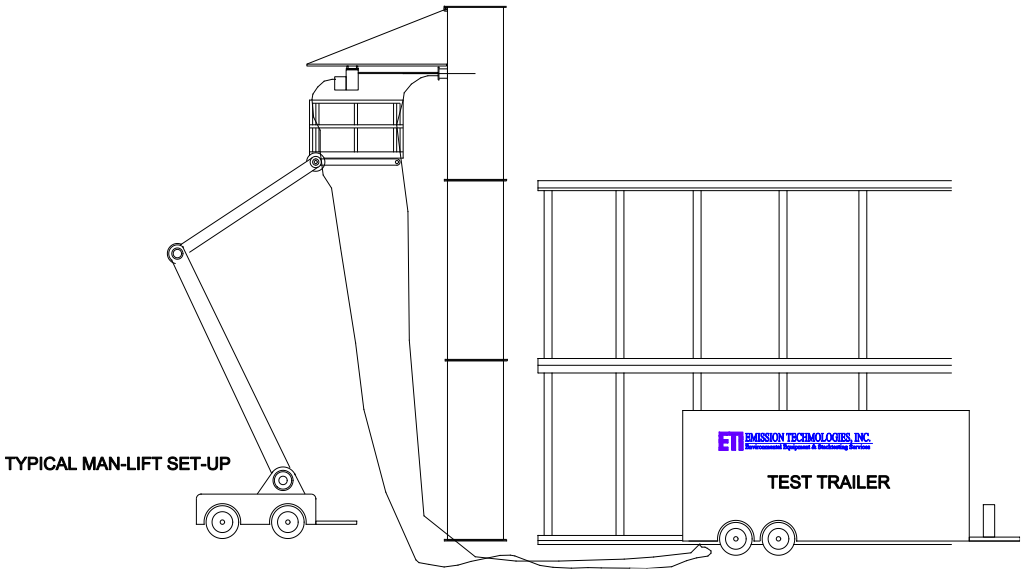


Figure 1.3 **Typical Test arrangement**

1.7 Participants

The following participants were involved for ETI with the testing program:

- Mr. Rob Wilson, Project Manager
- Mr. Robert Howell, Field Technician
- Mr. Danny Dizon P.E., Quality Assurance

2. SUMMARY

Table 2.1 Gas Summary

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

O_2	Run Number			Average
	1	2	3	
%	14.65	14.68	14.67	**14.7**
CO_2	**Run Number:**			**Average**
	1	**2**	**3**	
%	4.01	4.10	4.04	**4.1**
NO_x	**Run Number:**			**Average**
	1	**2**	**3**	
ppmdv	13.7	13.4	13.9	**13.7**
ppmdv @ 3% O_2	39.3	38.6	39.9	**39.3**
CO	**Run Number:**			**Average**
	1	**2**	**3**	
ppmdv	40.1	41.5	41.8	**41.1**
ppmdv @ 3% O_2	114.7	119.3	120.1	**118.0**

Table 2.2 Particulate M5 Summary

Client: Cadman Kenmore
Unit: Kenmore

Date: 10/01/20
ETI Job Number: 3128-20

Filterable Catch	**Run Number**			
	1	**2**	**3**	**Average**
P&N Acetone wash, mg	1.3	1.0	1.1	**1.13**
Acetone Blank	ND	ND	ND	
Filter, mg	1.8	2.4	2.6	
Blank Filter	ND	ND	ND	
mg (Filterable)	3.1	3.4	3.7	**3.40**
Condensable Catch	**Run Number**			
	1	**2**	**3**	**Average**
Organic Fraction				
mg	1.0	0.7	0.8	**0.83**
Blank, mg	ND	ND	ND	
Inorganic Fraction				
mg	3.5	7.1	6.0	**5.53**
Inorganic Blank, mg	0.4	0.4	0.4	
Acetone Wash - PSCAA				
Impinger Acetone Wash, mg	0.7	0.6	0.9	**0.73**
Acetone Blank, mg	ND	ND	ND	
Total Front Half	**Run Number**			
	1	**2**	**3**	**Average**
mg	3.10	3.40	3.70	**3.40**
gr/dscf	0.0012	0.0014	0.0014	**0.0014**
gr/dscf @ 7%O_2	0.0028	0.0031	0.0032	**0.0030**
Total Back Half	**Run Number**			
	1	**2**	**3**	**Average**
mg	4.75	8.05	7.05	**6.62**
gr/dscf	0.0019	0.0033	0.0028	**0.0026**
gr/dscf @ 7%O_2	0.0042	0.0073	0.0061	**0.0059**
Total Particulate	**Run Number**			
	1	**2**	**3**	**Average**
mg	7.85	11.45	10.75	**10.02**
gr/dscf	0.0032	0.0046	0.0042	**0.004**
gr/dscf @ 7%O_2	0.0070	0.0104	0.0094	**0.0089**

Table 2.3 Opacity Summary

Client: Cadman Kenmore
Unit: Hot Mix Asphalt Plant **ETI Job Number:** 3128-20

Opacity EPA 9										Opacity EPA 9										Opacity EPA 9									
Run 1 - Number of Observations = 240										Run 2 - Number of Observations = 240										Run 3 - Number of Observations = 240									
1	0	0	0	0	31	0	0	0	0	1	0	0	0	0	31	0	0	0	0	1	0	0	0	0	31	0	0	0	0
2	0	0	0	0	32	0	0	0	0	2	0	0	0	0	32	0	0	0	0	2	0	0	0	0	32	0	0	0	0
3	0	0	0	0	33	0	0	0	0	3	0	0	0	0	33	0	0	0	0	3	0	0	0	0	33	0	0	0	0
4	0	0	0	0	34	0	0	0	0	4	0	0	0	0	34	0	0	0	0	4	0	0	0	0	34	0	0	0	0
5	0	0	0	0	35	0	0	0	0	5	0	0	0	0	35	0	0	0	0	5	0	0	0	0	35	0	0	0	0
6	0	0	0	0	36	0	0	0	0	6	0	0	0	0	36	0	0	0	0	6	0	0	0	0	36	0	0	0	0
7	0	0	0	0	37	0	0	0	0	7	0	0	0	0	37	0	0	0	0	7	0	0	0	0	37	0	0	0	0
8	0	0	0	0	38	0	0	0	0	8	0	0	0	0	38	0	0	0	0	8	0	0	0	0	38	0	0	0	0
9	0	0	0	0	39	0	0	0	0	9	0	0	0	0	39	0	0	0	0	9	0	0	0	0	39	0	0	0	0
10	0	0	0	0	40	0	0	0	0	10	0	0	0	0	40	0	0	0	0	10	0	0	0	0	40	0	0	0	0
11	0	0	0	0	41	0	0	0	0	11	0	0	0	0	41	0	0	0	0	11	0	0	0	0	41	0	0	0	0
12	0	0	0	0	42	0	0	0	0	12	0	0	0	0	42	0	0	0	0	12	0	0	0	0	42	0	0	0	0
13	0	0	0	0	43	0	0	0	0	13	0	0	0	0	43	0	0	0	0	13	0	0	0	0	43	0	0	0	0
14	0	0	0	0	44	0	0	0	0	14	0	0	0	0	44	0	0	0	0	14	0	0	0	0	44	0	0	0	0
15	0	0	0	0	45	0	0	0	0	15	0	0	0	0	45	0	0	0	0	15	0	0	0	0	45	0	0	0	0
16	0	0	0	0	46	0	0	0	0	16	0	0	0	0	46	0	0	0	0	16	0	0	0	0	46	0	0	0	0
17	0	0	0	0	47	0	0	0	0	17	0	0	0	0	47	0	0	0	0	17	0	0	0	0	47	0	0	0	0
18	0	0	0	0	48	0	0	0	0	18	0	0	0	0	48	0	0	0	0	18	0	0	0	0	48	0	0	0	0
19	0	0	0	0	49	0	0	0	0	19	0	0	0	0	49	0	0	0	0	19	0	0	0	0	49	0	0	0	0
20	0	0	0	0	50	0	0	0	0	20	0	0	0	0	50	0	0	0	0	20	0	0	0	0	50	0	0	0	0
21	0	0	0	0	51	0	0	0	0	21	0	0	0	0	51	0	0	0	0	21	0	0	0	0	51	0	0	0	0
22	0	0	0	0	52	0	0	0	0	22	0	0	0	0	52	0	0	0	0	22	0	0	0	0	52	0	0	0	0
23	0	0	0	0	53	0	0	0	0	23	0	0	0	0	53	0	0	0	0	23	0	0	0	0	53	0	0	0	0
24	0	0	0	0	54	0	0	0	0	24	0	0	0	0	54	0	0	0	0	24	0	0	0	0	54	0	0	0	0
25	0	0	0	0	55	0	0	0	0	25	0	0	0	0	55	0	0	0	0	25	0	0	0	0	55	0	0	0	0
26	0	0	0	0	56	0	0	0	0	26	0	0	0	0	56	0	0	0	0	26	0	0	0	0	56	0	0	0	0
27	0	0	0	0	57	0	0	0	0	27	0	0	0	0	57	0	0	0	0	27	0	0	0	0	57	0	0	0	0
28	0	0	0	0	58	0	0	0	0	28	0	0	0	0	58	0	0	0	0	28	0	0	0	0	58	0	0	0	0
29	0	0	0	0	59	0	0	0	0	29	0	0	0	0	59	0	0	0	0	29	0	0	0	0	59	0	0	0	0
30	0	0	0	0	60	0	0	0	0	30	0	0	0	0	60	0	0	0	0	30	0	0	0	0	60	0	0	0	0
Opacity Sum					**0.0%**					**Opacity Sum**					**0.0%**					**Opacity Sum**					**0.0%**				
Opacity Average					**0.0%**					**Opacity Average**					**0.0%**					**Opacity Average**					**0.0%**				
																				Opacity Average of 3 Runs					**0.0%**				

3. CALIBRATION DATA

Table 3.1 Analyzer and Calibration Gas Information

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

Instrument Information:

Instrument	Channel	Make	Model	Serial No.
O_2	1	Horiba	PG250	6103006
CO_2	2	Horiba	PG250	6103006
NO_x	3	Horiba	PG250	6103006
CO	4	Horiba	PG250	6103006
Recorders	-			

Calibration Information:

Instrument	Units	Zero	Span	Range	Gas Cyl. No.	Gas Flow (L/min)
O_2	%	N_2	12.15	21.02	EB0052889	5.0
O_2	%	N_2	21.02	21.02	EB0042808	5.0
CO_2	%	N_2	11.63	20.87	EB0052889	5.0
CO_2	%	N_2	20.87	20.87	EB0042808	5.0
NO_x	ppmdv	N_2	24.96	53.20	CC702109	5.0
NO_x	ppmdv	N_2	53.20	53.20	SX63432	5.0
CO	ppmdv	N_2	24.30	51.80	CC702109	5.0
CO	ppmdv	N_2	51.80	51.80	SX63432	5.0

Table 3.2 O_2 Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.10	0.10	0.48%
Mid-Range Gas	12.15	12.10	0.05	0.24%
High-Range Gas	21.02	21.00	0.02	0.10%

40 CFR 60 Method 3A-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5% absolute difference

System Bias must be ≤5.0% of calibration span or 0.5% absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5% absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = Mid 12.15

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv)		Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
		Direct	System				
Zero Gas	**Pre**	0.10	0.15	0.05		0.24%	
Upscale Gas		12.10	12.15	0.05		0.24%	
Zero Gas	**1**	0.10	0.20	0.10	0.05	0.48%	0.24%
Upscale Gas		12.10	12.10	0.00	0.05	0.00%	0.24%
Zero Gas	**2**	0.10	0.20	0.10	0.00	0.48%	0.00%
Upscale Gas		12.10	12.20	0.10	0.10	0.48%	0.48%
Zero Gas	**3**	0.10	0.10	0.00	0.10	0.00%	0.48%
Upscale Gas		12.10	12.10	0.00	0.10	0.00%	0.48%

Table 3.3 CO_2 Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.10	0.10	0.48%
Mid-Range Gas	11.63	11.50	0.13	0.62%
High-Range Gas	20.87	21.00	0.13	0.62%

40 CFR 60 Method 3A-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5% absolute difference

System Bias must be ≤5.0% of calibration span or 0.5% absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5% absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = Mid 11.63

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv)		Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
		Direct	System				
Zero Gas	**Pre**	0.10	0.20	0.10		0.48%	
Upscale Gas		11.50	11.40	0.10		0.48%	
Zero Gas	**1**	0.10	0.25	0.15	0.05	0.72%	0.24%
Upscale Gas		11.50	11.50	0.00	0.10	0.00%	0.48%
Zero Gas	**2**	0.10	0.20	0.10	0.05	0.48%	0.24%
Upscale Gas		11.50	11.40	0.10	0.10	0.48%	0.48%
Zero Gas	**3**	0.10	0.15	0.05	0.05	0.24%	0.24%
Upscale Gas		11.50	11.45	0.05	0.05	0.24%	0.24%

Table 3.4 NO_x Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.30	0.3	0.56%
Mid-Range Gas	24.96	24.60	0.4	0.68%
High-Range Gas	53.20	53.10	0.1	0.19%

40 CFR 60 Method 7E-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5 ppmv absolute difference

System Bias must be ≤5.0% of calibration span or 0.5 ppmv absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5 ppmv absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = MID 25.0

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv) Direct	System	Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
Zero Gas	**Pre**	0.30	0.10	0.2		0.38%	
Upscale Gas		24.60	24.40	0.2		0.38%	
Zero Gas	**1**	0.30	0.20	0.1	0.1	0.19%	0.19%
Upscale Gas		24.60	24.80	0.2	0.4	0.38%	0.75%
Zero Gas	**2**	0.30	0.20	0.1	0.0	0.19%	0.00%
Upscale Gas		24.60	24.30	0.3	0.5	0.56%	0.94%
Zero Gas	**3**	0.30	0.20	0.1	0.0	0.19%	0.00%
Upscale Gas		24.60	24.50	0.1	0.2	0.19%	0.38%

Table 3.5 CO Analyzer Calibration Data

Client: Cadman Kenmore **Date:** 10/01/20

Site: Kenmore

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

3-Point Linearity Check (Internal Cal)	Direct Calibration Mode			
	Cylinder Value (ppmdv)	Calibration Response (ppmdv)	Difference from Cylinder Value	Difference (% of Calibration Span)
Zero Gas	0.00	0.00	0.0	0.00%
Mid-Range Gas	24.30	24.50	0.2	0.39%
High-Range Gas	51.80	51.90	0.1	0.19%

40 CFR 60 Method 10-13.0

Analyzer calibration error ≤2.0% of calibration span or 0.5 ppmv absolute difference

System Bias must be ≤5.0% of calibration span or 0.5 ppmv absolute difference

Calibration Drift must be ≤3.0% of calibration span or 0.5 ppmv absolute difference

Calibration Span = High-Range Gas Cylinder Value

Bias Gas = High 51.8

System Bias and Calibration Drift Assessments	Run	Analyzer Calibration Response (ppmdv) Direct	System	Direct - System Difference	Pre - Post System Response	System Bias	Calibration Drift
Zero Gas	**Pre**	0.00	0.20	0.2		0.39%	
Upscale Gas		51.80	52.30	0.5		0.97%	
Zero Gas	**1**	0.00	0.10	0.1	0.1	0.19%	0.19%
Upscale Gas		51.80	52.40	0.6	0.1	1.16%	0.19%
Zero Gas	**2**	0.00	0.30	0.3	0.2	0.58%	0.39%
Upscale Gas		51.80	52.40	0.6	0.0	1.16%	0.00%
Zero Gas	**3**	0.00	-0.10	0.1	0.4	0.19%	0.77%
Upscale Gas		51.80	52.50	0.7	0.1	1.35%	0.19%

4. ETI FIELD TEST DATA

Table 4.1 Field Data – Gases Run 1

Client: Cadman Kenmore					**Run:** 1
Unit: Hot Mix Asphalt Plant					**Start Time:** 8:02
Date: 10/01/20					**End Time:** 9:01
Raw Emission Data: **Measurement Time**	**O_2 %**	**CO_2 %**	**NO_x ppmdv**	**CO ppmdv**	
8:02	15.6	3.7	13.8	47	
8:03	15.5	3.8	14.0	46	
8:04	15.6	3.8	14.0	46	
8:05	15.4	3.8	14.0	45	
8:06	15.3	3.9	14.5	44	
8:07	15.0	3.9	13.0	40	
8:08	14.9	3.9	13.0	41	
8:09	14.5	3.9	13.0	44	
8:10	14.7	4.0	12.4	42	
8:11	14.6	4.0	12.5	42	
8:12	14.4	4.1	12.6	43	
8:13	14.3	4.1	13.6	39	
8:14	14.6	4.2	14.0	40	
8:15	14.3	4.3	15.0	39	
8:16	14.4	4.3	14.4	41	
8:17	14.4	4.3	14.4	42	
8:18	14.2	4.4	14.6	40	
8:19	14.3	4.3	14.0	39	
8:20	14.4	4.3	14.0	40	
8:21	14.3	4.2	14.1	40	
8:22	14.4	4.2	14.4	41	
8:23	14.7	4.2	14.0	41	
8:24	14.5	4.2	14.1	42	
8:25	14.4	4.1	14.0	40	
8:26	14.6	4.0	13.5	39	
8:27	14.5	4.0	13.5	41	
8:28	14.7	4.0	13.5	39	
8:29	14.8	3.9	13.8	37	
8:30	14.5	4.0	13.5	38	
8:31	14.4	4.0	13.6	36	
8:32	14.3	4.1	13.8	36	
8:33	14.5	4.2	13.9	35	
8:34	14.6	4.3	13.5	38	
8:35	14.7	4.3	12.5	39	
8:36	14.5	4.2	12.5	40	
8:37	14.2	4.4	12.9	38	
8:38	14.1	4.0	12.6	39	
8:39	13.9	4.3	12.6	40	
8:40	13.8	4.0	12.7	41	
8:41	14.1	4.1	12.6	42	
8:42	14.0	4.1	12.8	43	
8:43	13.9	4.1	12.6	44	
8:44	13.9	4.1	12.9	42	
8:45	13.9	4.1	12.5	43	
8:46	13.8	4.2	12.8	41	
8:47	13.9	4.2	13.0	40	
8:48	13.7	3.8	13.1	40	
8:49	13.6	3.7	13.1	41	
8:50	13.8	4.0	13.0	41	
8:51	14.1	4.2	13.0	42	
8:52	14.5	4.1	13.1	42	
8:53	14.4	4.1	13.3	43	
8:54	14.4	4.1	13.4	41	
8:55	14.4	4.1	13.0	40	
8:56	14.3	4.2	13.0	42	
8:57	14.4	4.2	13.0	41	
8:58	14.2	4.1	13.0	42	
8:59	14.1	4.1	13.1	42	
9:00	14.1	4.1	13.2	43	
9:01	14.1	4.1	13.1	45	
Raw Avg:	**14.59**	**4.09**	**13.6**	**40.5**	
Bias Corrected Emissions:	**14.65**	**4.01**	**13.7**	**40.1**	

Table 4.2 Field Data – Gases Run 2

Client: Cadman Kenmore					**Run:** 2
Unit: Hot Mix Asphalt Plant					**Start Time:** 9:29
Date: 10/01/20					**End Time:** 10:28
Raw Emission Data: **Measurement Time**	**O_2 %**	**CO_2 %**	**NO_x ppmdv**	**CO ppmdv**	
9:29	15.1	3.9	12.1	48.1	
9:30	15.0	4.0	12.8	46.2	
9:31	15.0	4.0	13.2	45.1	
9:32	14.9	4.1	13.7	44.7	
9:33	14.9	4.2	13.3	44.8	
9:34	14.9	4.2	13.3	45.0	
9:35	14.8	4.1	13.1	45.3	
9:36	14.8	4.1	13.3	45.1	
9:37	14.7	4.3	13.4	45.4	
9:38	14.5	4.5	13.2	45.5	
9:39	14.2	4.4	13.4	43.2	
9:40	14.4	4.4	13.5	44.1	
9:41	14.4	4.5	13.7	43.5	
9:42	14.3	4.6	13.8	42.8	
9:43	14.1	4.6	13.9	42.5	
9:44	14.3	4.6	13.8	42.6	
9:45	14.2	4.4	14.2	43.1	
9:46	14.1	4.3	14.2	42.8	
9:47	14.4	4.5	14.5	43.2	
9:48	14.6	4.4	14.1	41.2	
9:49	14.6	4.4	13.9	40.8	
9:50	14.8	4.5	13.8	39.9	
9:51	14.9	4.6	13.7	39.5	
9:52	14.7	4.2	13.9	39.0	
9:53	14.9	4.1	13.4	38.6	
9:54	14.9	4.2	13.1	38.0	
9:55	15.0	4.2	13.0	38.0	
9:56	15.1	4.0	12.9	37.5	
9:57	15.3	3.9	12.8	37.3	
9:58	15.0	3.9	12.6	37.0	
9:59	15.2	4.0	12.9	37.0	
10:00	15.2	3.8	12.6	36.9	
10:01	15.3	3.9	12.8	38.7	
10:02	15.1	4.0	13.0	40.1	
10:03	15.1	4.1	12.9	40.9	
10:04	15.0	4.3	13.0	42.0	
10:05	14.8	4.1	13.2	41.3	
10:06	15.0	4.4	13.2	41.5	
10:07	15.0	4.4	13.4	42.0	
10:08	14.9	4.5	13.5	42.5	
10:09	14.8	4.6	13.5	42.8	
10:10	14.6	4.4	13.5	42.4	
10:11	14.5	4.3	13.6	42.3	
10:12	14.5	4.1	13.3	42.0	
10:13	14.6	4.3	13.3	42.5	
10:14	14.5	4.1	13.4	42.8	
10:15	14.4	3.8	13.2	43.1	
10:16	14.4	3.7	13.0	42.9	
10:17	13.8	4.5	13.1	43.0	
10:18	14.1	4.1	13.5	42.8	
10:19	14.5	4.3	13.1	42.6	
10:20	14.4	4.1	13.0	42.0	
10:21	14.4	4.0	12.8	42.1	
10:22	14.4	3.9	12.9	41.5	
10:23	14.3	3.8	12.8	41.7	
10:24	14.4	3.8	13.0	41.5	
10:25	14.2	3.9	12.9	41.6	
10:26	14.1	3.9	13.1	41.3	
10:27	14.1	4.0	13.0	42.1	
10:28	14.1	4.0	13.0	42.6	
Raw Avg:	**14.64**	**4.19**	**13.3**	**42.0**	
Bias Corrected Emissions:	**14.68**	**4.10**	**13.4**	**41.5**	

Table 4.3 Field Data – Gases Run 3

Client: Cadman Kenmore
Unit: Hot Mix Asphalt Plant
Date: 10/01/20

Run: 3
Start Time: 11:11
End Time: 12:10

Raw Emission Data: Measurement Time	O_2 %	CO_2 %	NO_x ppmdv	CO ppmdv
11:11	15.4	3.7	13.4	40.0
11:12	15.3	3.7	13.5	41.6
11:13	15.4	3.7	13.6	41.5
11:14	15.4	3.8	13.6	41.3
11:15	15.2	3.8	13.8	41.5
11:16	15.1	3.8	13.6	42.0
11:17	15.2	3.8	13.7	42.5
11:18	15.0	3.9	13.6	42.8
11:19	15.1	3.8	13.3	42.4
11:20	14.8	3.8	14.0	42.3
11:21	14.9	4.1	14.2	42.0
11:22	15.1	3.9	14.0	42.5
11:23	15.0	3.9	13.9	42.8
11:24	15.0	4.0	14.0	43.1
11:25	14.9	3.8	13.7	42.9
11:26	15.1	3.9	13.8	41.1
11:27	15.1	3.9	13.7	41.3
11:28	15.0	3.9	13.5	41.3
11:29	14.9	4.0	13.9	41.7
11:30	14.8	4.0	13.6	41.6
11:31	14.7	4.1	14.0	41.5
11:32	14.5	4.1	13.9	41.3
11:33	14.4	4.0	13.8	41.5
11:34	14.7	4.2	14.0	41.4
11:35	15.0	4.2	14.1	41.9
11:36	14.8	4.1	14.2	42.0
11:37	14.5	4.2	14.1	42.5
11:38	14.4	4.3	14.3	43.9
11:39	14.4	4.3	14.3	42.0
11:40	14.4	4.4	14.3	41.9
11:41	14.3	4.5	14.3	41.8
11:42	14.3	4.5	14.4	41.6
11:43	14.3	4.4	14.2	41.5
11:44	14.4	4.4	14.2	41.3
11:45	14.4	4.3	14.6	41.5
11:46	14.3	4.5	14.3	42.0
11:47	14.3	4.1	14.6	42.5
11:48	14.2	4.3	14.7	42.8
11:49	14.2	4.4	14.8	42.4
11:50	14.3	4.3	14.5	42.3
11:51	14.3	4.2	14.0	42.0
11:52	14.4	4.0	13.4	42.5
11:53	14.2	4.3	13.1	42.8
11:54	14.3	4.4	13.0	43.1
11:55	14.4	4.2	12.9	42.9
11:56	14.5	4.0	13.0	43.4
11:57	14.4	4.1	13.0	43.5
11:58	14.5	3.9	13.1	42.9
11:59	14.6	4.0	12.8	43.6
12:00	14.3	4.0	12.7	43.8
12:01	14.6	3.9	12.5	43.9
12:02	14.5	4.0	12.8	43.9
12:03	14.3	4.1	13.1	43.9
12:04	14.4	4.0	13.0	43.6
12:05	14.5	4.1	12.9	42.7
12:06	14.4	4.2	13.0	42.6
12:07	14.5	4.2	12.8	42.5
12:08	14.4	4.1	12.9	42.5
12:09	14.2	4.1	13.0	42.8
12:10	14.3	4.3	13.1	43.0
Raw Avg:	**14.64**	**4.08**	**13.7**	**42.3**
Bias Corrected Emissions:	**14.67**	**4.04**	**13.9**	**41.8**

Table 4.4 Field Data – Particulate Run 1

Location: Cadman Kenmore Start Time: 8:05 AM RUN No. 1 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature	68 °F	Standard Pressure	29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA		EQUIPMENT	ESTIMATES	H20	761.7	846.8
% Moisture:	15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	642.0	679.4
Barometric:	29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	653.7	658.3
Static Press:	-0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	851.6	857.7
Stack Press:	29.69 in Hg	PITOT: eti6	Est. Dn: 0.22 inches			
%CO2:	4.0 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2:	14.5 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.002	cf	Liquid Vol. (ml)
%N2/CO:	81.50 %	Dn: 0.225 in	DGM post Leak check	0.001	cf	
Md:	29.22 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	4.4"	133.2
Ms:	27.54 lb/lb-mole	# of Points: 25 points	DGM Vacuum	12.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot ΔP (in. H_2O)	Gas Temperatures (°F) DGM			Orifice Press. ΔH (in H_2O)		Pump Vac. (in Hg)	Gas Temps (°F)		Imp. Exit	% ISO	K FACTOR = 1.758 Vs (fps)
	Begin	End			Inlet	Outlet	Stack	Ideal	Actual		Probe	Filter			
1	0.00	2.50	377.627	0.540	63.0	64.0	194	0.911	1.000	3	250	252	60	105.6	47.20
2	2.50	5.00	379.018	0.610	63.0	64.0	193	1.030	1.100	3	250	251	59	102.5	50.13
3	5.00	7.50	380.453	0.620	65.0	64.0	193	1.049	1.100	3	250	251	59	102.2	50.54
4	7.50	10.00	381.899	0.780	66.0	65.0	193	1.321	1.400	3	521	251	59	101.6	56.69
5	10.00	12.50	383.512	0.860	66.0	65.0	193	1.456	1.500	3	251	251	59	105.0	59.52
6	12.50	15.00	385.263	0.470	67.0	65.0	194	0.796	1.000	3	251	251	59	103.9	44.04
7	15.00	17.50	386.545	0.490	67.0	65.0	193	0.832	1.000	3	251	251	58	101.6	44.93
8	17.50	20.00	387.827	0.520	67.0	65.0	194	0.881	1.000	3	252	251	58	94.4	46.32
9	20.00	22.50	389.053	0.590	68.0	65.0	193	1.002	1.100	3	252	251	58	108.2	49.30
10	22.50	25.00	390.551	0.680	68.0	65.0	191	1.158	1.200	3	252	251	58	104.2	52.85
11	25.00	27.50	392.102	0.650	68.0	66.0	191	1.108	1.200	3	251	251	58	106.4	51.67
12	27.50	30.00	393.652	0.650	68.0	66.0	190	1.110	1.200	4	251	251	58	106.2	51.63
13	30.00	32.50	395.200	0.670	69.0	66.0	190	1.145	1.200	4	250	251	57	104.9	52.42
14	32.50	35.00	396.755	0.710	69.0	66.0	189	1.215	1.300	4	250	251	57	102.0	53.92
15	35.00	37.50	398.311	0.800	69.0	66.0	190	1.366	1.400	4	250	251	57	101.7	57.28
16	37.50	40.00	399.957	0.720	69.0	66.0	190	1.230	1.300	4	250	251	57	99.3	54.34
17	40.00	42.50	401.482	0.700	70.0	66.0	191	1.195	1.300	4	250	251	57	99.4	53.62
18	42.50	45.00	402.988	0.690	70.0	67.0	191	1.180	1.200	4	250	251	56	103.7	53.23
19	45.00	47.50	404.549	0.760	70.0	67.0	191	1.299	1.400	4	251	251	56	100.4	55.87
20	47.50	50.00	406.135	0.700	70.0	67.0	192	1.195	1.300	4	251	251	56	104.4	53.66
21	50.00	52.50	407.717	0.770	70.0	67.0	192	1.314	1.400	4	251	251	56	100.5	56.28
22	52.50	55.00	409.313	0.790	70.0	67.0	192	1.348	1.400	4	251	251	57	105.7	57.00
23	55.00	57.50	411.013	0.800	70.0	68.0	192	1.366	1.400	4	251	251	57	103.5	57.36
24	57.50	60.00	412.690	0.760	70.0	68.0	192	1.298	1.400	4	251	251	58	107.8	55.91
25	60.00	62.50	414.393	0.560	70.0	68.0	191	0.959	1.000	4	251	251	59	101.2	47.96
	Final DGM:		415.767												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	38.140 ft^3	0.819 in	67.0 °F	191.8 °F	4	1.232 in		

Table 4.5 Field Data – Particulate Run 2

Location: Cadman Kenmore Start Time: 9:29 AM RUN No. 2 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature 68 °F	Standard Pressure 29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA	EQUIPMENT	ESTIMATES	H20	720.9	815.6
% Moisture: 15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	745.2	770.2
Barometric: 29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	653.1	665.1
Static Press: -0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	802.4	811.4
Stack Press: 29.69 in Hg	PITOT: eti6	Est. Dn: 0.247 inches			
%CO2: 4.2 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2: 14.6 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.002	cf	Liquid Vol. (ml)
%N2/CO: 81.20 %	Dn: 0.225 in	DGM post Leak check	0.004	cf	
Md: 29.26 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	4.0"	140.7
Ms: 27.57 lb/lb-mole	# of Points: 25 points	DGM Vacuum	10.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter Reading (ft^3)	Pitot ΔP (in. H_2O)	Gas Temperatures (°F) DGM			Orifice Press. ΔH (in H_2O)		Pump Vac. (in Hg)	Gas Temps (°F)		K FACTOR = 1.758 Imp. Exit	% ISO	Vs (fps)
	Begin	End			Inlet	Outlet	Stack	Ideal	Actual		Probe	Filter			
1	0.00	2.50	426.625	0.530	66.0	68.0	172	0.931	1.000	3	251	252	60	103.8	45.94
2	2.50	5.00	428.011	0.530	66.0	68.0	180	0.920	1.000	3	250	251	60	105.9	46.23
3	5.00	7.50	429.416	0.710	67.0	69.0	180	1.233	1.300	3	250	251	60	97.2	53.51
4	7.50	10.00	430.910	0.780	67.0	69.0	182	1.350	1.400	3	521	251	60	102.1	56.17
5	10.00	12.50	432.553	0.810	67.0	69.0	184	1.398	1.500	3	251	251	59	105.7	57.33
6	12.50	15.00	434.282	0.510	68.0	69.0	185	0.880	1.000	3	252	251	59	95.9	45.53
7	15.00	17.50	435.529	0.540	68.0	69.0	185	0.932	1.000	3	252	251	58	93.1	46.85
8	17.50	20.00	436.775	0.610	70.0	69.0	191	1.045	1.100	3	252	251	58	104.4	50.02
9	20.00	22.50	438.255	0.720	70.0	69.0	191	1.233	1.300	4	252	251	58	97.1	54.35
10	22.50	25.00	439.750	0.690	70.0	70.0	191	1.183	1.200	4	252	251	58	103.3	53.20
11	25.00	27.50	441.308	0.680	70.0	70.0	191	1.166	1.200	4	251	251	58	103.4	52.82
12	27.50	30.00	442.857	0.680	71.0	70.0	192	1.165	1.200	4	251	251	58	103.6	52.86
13	30.00	32.50	444.409	0.660	71.0	70.0	192	1.131	1.200	4	250	251	57	105.2	52.07
14	32.50	35.00	445.961	0.720	71.0	70.0	192	1.233	1.300	4	250	251	57	100.2	54.39
15	35.00	37.50	447.505	0.780	71.0	70.0	192	1.336	1.400	4	250	251	57	93.4	56.61
16	37.50	40.00	449.002	0.660	72.0	70.0	192	1.132	1.200	4	250	251	57	98.5	52.07
17	40.00	42.50	450.457	0.670	72.0	70.0	192	1.149	1.200	4	250	251	57	99.2	52.47
18	42.50	45.00	451.933	0.640	72.0	70.0	193	1.096	1.200	4	250	251	56	103.3	51.32
19	45.00	47.50	453.435	0.660	73.0	70.0	193	1.131	1.200	4	251	251	56	101.7	52.11
20	47.50	50.00	454.938	0.670	73.0	70.0	193	1.148	1.200	4	251	251	56	100.4	52.51
21	50.00	52.50	456.433	0.660	73.0	70.0	193	1.131	1.200	4	251	251	56	100.0	52.11
22	52.50	55.00	457.910	0.660	74.0	71.0	193	1.133	1.200	4	251	251	57	101.5	52.11
23	55.00	57.50	459.412	0.730	74.0	71.0	193	1.253	1.300	4	251	251	60	100.1	54.81
24	57.50	60.00	460.970	0.690	74.0	71.0	193	1.185	1.200	4	251	251	60	101.8	53.29
25	60.00	62.50	462.511	0.550	74.0	71.0	193	0.945	1.000	4	251	251	60	106.6	47.57
	Final DGM:		463.952												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	37.327 ft^3	0.812 in	70.1 °F	189.1 °F	4	1.200 in		

Table 4.6 Field Data – Particulate Run 3

Location: Cadman Kenmore Start Time: 11:11 AM RUN No. 3 of 3

Date: 10/01/20 JOB No. 3128-20

Standard Temperature	68 °F	Standard Pressure	29.92 in Hg	IMPINGERS	INITIAL WT	FINAL WT
STACK DATA		EQUIPMENT	ESTIMATES	H20	606.4	707.4
% Moisture:	15 % est.	METER BOX: L	Est. Tm: 75 °F	H20	797.3	815.2
Barometric:	29.70 in Hg	Y: 1.007	Est. Ts: 180 °F	Empty	662.7	672.7
Static Press:	-0.20 in H_2O	ΔH@: 1.8 in H_2O	Est. dP: 0.7 in H_2O	Silical	817.3	827.1
Stack Press:	29.69 in Hg	PITOT: eti6	Est. Dn: 0.247 inches			
%CO2:	4.00 %	Cp: 0.84	LEAK CHECKS			FINAL CATCH
%O2:	14.50 %	NOZZLE: ETI-22.2a	DGM pre Leak check	0.005	cf	Liquid Vol. (ml)
%N2/CO:	81.50 %	Dn: 0.225 in	DGM post Leak check	0.001	cf	
Md:	29.22 lb/lb-mole	Stack Area: 8.670 ft^2	Pitot Leak check	good	5.4"	138.7
Ms:	27.54 lb/lb-mole	# of Points: 25 points	DGM Vacuum	14.000	in. Hg	

Sample Point	Sample Time (minutes)		Dry Gas Meter	Pitot ΔP	Gas Temperatures (°F)			Orifice Press. ΔH (in H_20)		Pump Vac.	Gas Temps (°F)		K FACTOR = 1.758		
					DGM								Imp.	% ISO	Vs
	Begin	End	Reading (ft^3)	(in. H_2O)	Inlet	Outlet	Stack	Ideal	Actual	(in Hg)	Probe	Filter	Exit		(fps)
1	0.00	2.50	472.462	0.560	68.0	69.0	172	0.987	1.000	3	250	252	58	108.5	47.25
2	2.50	5.00	473.956	0.630	68.0	69.0	175	1.104	1.200	3	250	251	58	102.6	50.24
3	5.00	7.50	475.450	0.640	68.0	69.0	180	1.113	1.200	3	250	251	59	102.2	50.83
4	7.50	10.00	476.944	0.800	69.0	69.0	183	1.385	1.500	3	521	251	59	102.2	56.97
5	10.00	12.50	478.611	0.880	69.0	69.0	184	1.521	1.600	3	251	251	59	99.1	59.79
6	12.50	15.00	480.304	0.490	70.0	69.0	188	0.844	1.000	3	251	251	59	105.6	44.76
7	15.00	17.50	481.650	0.510	70.0	69.0	188	0.878	1.000	3	251	251	60	106.4	45.66
8	17.50	20.00	483.033	0.540	71.0	69.0	191	0.926	1.000	3	252	251	60	103.7	47.09
9	20.00	22.50	484.419	0.610	71.0	69.0	190	1.048	1.100	4	252	250	60	105.4	50.01
10	22.50	25.00	485.917	0.700	72.0	69.0	194	1.195	1.300	4	252	250	59	103.9	53.74
11	25.00	27.50	487.494	0.670	73.0	70.0	196	1.143	1.200	4	251	250	58	106.4	52.66
12	27.50	30.00	489.075	0.670	73.0	70.0	193	1.148	1.200	4	251	250	58	106.0	52.54
13	30.00	32.50	490.654	0.690	74.0	70.0	192	1.186	1.200	4	250	250	58	104.1	53.27
14	32.50	35.00	492.230	0.730	74.0	70.0	192	1.254	1.300	4	250	250	58	101.5	54.80
15	35.00	37.50	493.811	0.820	75.0	70.0	192	1.409	1.500	4	250	250	58	106.4	58.08
16	37.50	40.00	495.567	0.740	75.0	70.0	192	1.272	1.300	4	250	250	57	100.6	55.17
17	40.00	42.50	497.146	0.720	75.0	70.0	192	1.238	1.300	4	250	250	57	102.0	54.42
18	42.50	45.00	498.725	0.710	75.0	70.0	192	1.221	1.300	4	250	250	57	102.7	54.04
19	45.00	47.50	500.304	0.780	77.0	71.0	193	1.342	1.400	4	251	250	57	106.0	56.69
20	47.50	50.00	502.014	0.720	77.0	71.0	193	1.240	1.300	4	251	250	57	101.6	54.46
21	50.00	52.50	503.590	0.790	77.0	71.0	193	1.360	1.400	4	251	250	57	104.5	57.05
22	52.50	55.00	505.288	0.810	77.0	71.0	193	1.394	1.500	4	251	250	57	103.6	57.76
23	55.00	57.50	506.991	0.820	77.0	71.0	193	1.411	1.500	4	251	250	57	102.3	58.12
24	57.50	60.00	508.683	0.780	77.0	71.0	193	1.342	1.400	4	251	250	58	104.3	56.69
25	60.00	62.50	510.366	0.580	77.0	71.0	193	0.999	1.000	4	251	250	59	106.6	48.88
	Final DGM:		511.851												

RESULTS	Run Time	Vm	ΔP (H_2O)	Tm	Ts	Vac.	ΔH (H_2O)		
	62.50 min	39.389 ft^3	0.832 in	71.5 °F	189.5 °F	4	1.268 in		

Table 4.7 Field Data – Particulate M5 Summary

Client: Cadman Kenmore **Date:** 10/01/20

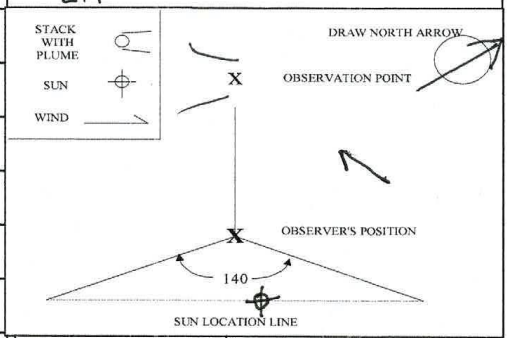
Unit: Hot Mix Asphalt Plant **ETI Job Number:** 3128-20

			Run Number: 1	2	3
Field Data:					
	Run Start Time:		8:02	9:29	11:11
	Run Finish Time:		9:12	10:38	12:26
θ	Sample Time, minutes		62.5	62.5	62.5
	Stack Shape (Circle or Rectangle):			Rectangle	
V_m	Dry Gas Meter Reading,dcf ……	.....INITIAL:	377.627	426.625	472.462
		FINAL:	415.767	463.952	511.851
V_m	Volume of dry gas sampled, dcf		38.140	37.327	39.389
Y	Meter box calibration factor		1.007	1.007	1.007
P_{bar}	Barometric pressure, inches Hg		29.70	29.70	29.70
P_{static}	Stack static pressure, inches H_2O		-0.20	-0.20	-0.20
ΔH	Differential meter press, inches H_2O		1.232	1.200	1.268
T_m	Meter temperature, degrees F		67.00	70.10	71.50
V_{lc}	Volume of H_2O collected, ml		133.2	140.7	137.6
$\%O_2$	Percent of oxygen in stack gas		14.65	14.68	14.67
$\%CO_2$	Percent carbon dioxide in stack gas		4.01	4.10	4.04
C_p	Type-S pitot tube coefficient		0.84	0.84	0.84
$\sqrt{\Delta P}_{avg}$	Ave. square root of pitot readings, (inches $H_2O)^{1/2}$		0.819	0.812	0.832
T_s	Stack temperature, degrees F		191.80	189.10	189.50
D_s	Stack diameter, feet - CIRCLE				
L_s, W_s	Stack dimensions, feet - RECTANGLE			3.20	2.71
D_n	Nozzle diameter, inches		0.225	0.225	0.225
A_n	Nozzle area, ft^2		0.000276	0.000276	0.000276
Calculated Values:					
$V_{m(std)}$	Meter corrected volume,dscf		38.313	37.275	39.237
$V_{w(std)}$	Volume of water vapor,dscf		6.280	6.634	6.488
B_{ws}	Fraction of H_2O vapor		0.1408	0.1511	0.1419
$\%N_2$	Percent nitrogen in stack gas		81.34	81.22	81.29
M_d	Dry molecular weight of stack gas, lb/lb-mole		29.23	29.24	29.23
M_w	Wet molecular weight of stack gas, lb/lb-mole		27.65	27.55	27.64
A_d	Cross sectional area of stack, ft^2		8.67	8.67	8.67
P_s	Absolute stack gas pressure, inches Hg		29.69	29.69	29.69
V_s	Average stack gas velocity, ft/sec		52.41	51.95	53.16
Q_{std}	Average stack volumetric flowrate, wscfm		21,919	21,816	22,309
Q_{std}	Average stack volumetric flowrate, dscfm		18,832	18,520	19,143
I	Percent isokinetic sampling		102.3	101.2	103.1

Table 4.8 Field Data Opacity Run 1

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RWW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: grey/blue sky / Sky Conditions: blue & smokey	
Wind Speed: 0-5 mph / Wind Direction: NE	
OBSERVATION DATE: 10/1/20 / START TIME: 0802 am	



sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	RUN 1
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

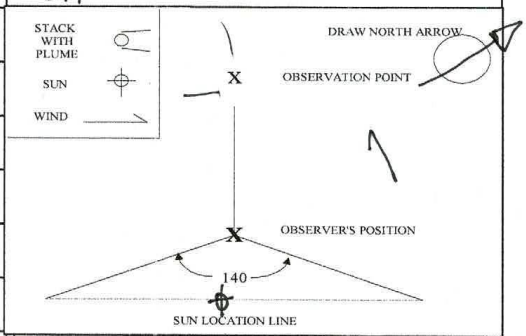
OBSERVATION DATE: 10/1/20 / START TIME: continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Table 4.9 Field Data Opacity Run 2

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RWW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: gray/blue sky	Sky Conditions: blue & smokey
Wind Speed: 0-5 mph	Wind Direction: NE
OBSERVATION DATE: 10/1/20	START TIME: 0929 am



sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	Run 2
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

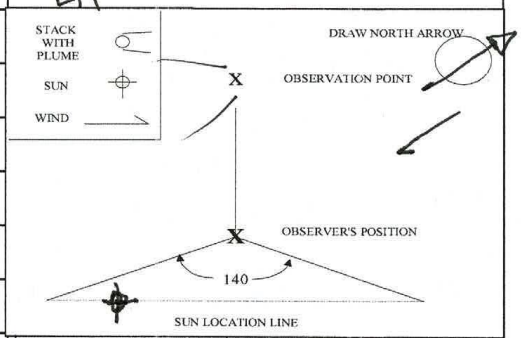
OBSERVATION DATE: 10/1/20 — START TIME: Continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

Table 4.10 Field Data Opacity Run 3

OPACITY OBSERVATION FORM

Plant Name: Cadman Kenmore	Observer: RJW
Facility Type: Asphalt	Observer's Organization: ETI
Emission Location: ~~Kenmore~~ Outlet Stack	
City: Kenmore / State: WA / Zip: 98028	
Describe Plume Backgound: Sky & Trees	
Distance From Observer: 70'	
Background Color: gray & blue / Sky Conditions: blue & smokey	
Wind Speed: 0-5 / Wind Direction: N	



OBSERVATION DATE: 10/1/20 — START TIME: 11:11 am

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	R3
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

OBSERVATION DATE: 10/1/20 — START TIME: Continued

sec / min	0	15	30	45	COMMENTS
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	
12	0	0	0	0	
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	
18	0	0	0	0	
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	
30	0	0	0	0	

5. PROCESS DATA

Cadman Kenmore Asphalt - 10/1/2020

Comments	Time	Fuel	Rate of Production
Start of Run 1 - 8:02	8:00	Nat Gas	150 TPH
	8:15	Nat Gas	135 TPH
	8:30	Nat Gas	140 TPH
	8:45	Nat Gas	150 TPH
End of Run 1 - 09:12	9:00	Nat Gas	140 TPH
Start of Run 2 - 9:29	9:30	Nat Gas	140 TPH
	9:45	Nat Gas	135 TPH
	10:00	Nat Gas	140 TPH
	10:15	Nat Gas	150 TPH
End of Run 2 - 10:38	10:30	Nat Gas	140 TPH
Start of Run 3 - 11:11	11:15	Nat Gas	150 TPH
	11:30	Nat Gas	135 TPH
	11:45	Nat Gas	140 TPH
	12:00	Nat Gas	150 TPH
	12:15	Nat Gas	140 TPH
End of Run 3 - 12:26	12:30	Nat Gas	150 TPH

6. QUALITY ASSURANCE AND QUALITY CONTROL

6.1 ETI Quality Assurance/Quality Control Document

Emission Technologies, Inc. continued success is an example of their pride taken in quality testing.

Analytical procedures and environmental measurement data are structured with a quality assurance program which equals or exceeds the minimum QA/QC requirements set forth by the U.S. Environmental Protection Agency (EPA) for each applicable method.

ETI executes the following topics through every test project to ensure valid measurement data:

* Preventable Maintenance
* Pre-test and Post-test Calibration
* Blanks and Spiked Samples
* Field System Checks
* QA/QC Matrix Tables
* Employment of QA/QC Officer

The following table is an activity matrix for Method 8 from the EPA Quality Assurance Handbook for Air Pollution Measurement Systems. By diligently following such activity matrix tables, Emission Technologies, Inc. reports justifiable, valid measurement data.

TABLE 1.1 ACTIVITY MATRIX FOR PROCUREMENT OF APPARATUS & SUPPLIES

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Sampling			
Sampling probe with heating system	Capable of 100° C (212° F) exit air at flow rate of 20 L/min	Visually check; run heating system checkout	Repair, return to supplier, or reject
Probe nozzle	Stainless steel (316); sharp, tapered, leading edge (angle ≤30°); difference between measured ID's ≤0.1 mm (0.004 in.); no nicks, dents, or corrosion. uniquely identified (Meth. 5, Sec. 3.4.2)	Visually check before each test; use a micrometer to measure ID before field use after each repair	Reshape and sharpen, return to the supplier, or reject
Pitot tube	Type-S (Meth. 2, Sec. 3.1.2); attached to probe with impact (high pressure) opening plane even with or above nozzle entry plane	Calibrate according to Meth. 2, Sec. 3.1.2	Repair or return to supplier

TABLE 1.1 (CONTINUED)

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Differential pressure gauge (manometer)	Criteria in Meth. 2, Sec. 3.1.2; agree within 5% of gauge-oil manometer used to calibrate	Check against gauge-oil manometer at a minimum of three points: [0.64(0.025), 12.7(0.5), 25.4(1.0)] mm (in.) H_20	As above
Vacuum gauge	0-760 mm Hg range; $\pm$25 mm (1 in.) Hg accuracy at 380 mm (15 in.) Hg	Check against a mercury U-tube manometer upon receipt	Adjust or return to supplier
Vacuum pump	Capable of maintaining a flow rate of 0.03-0.05 m^3/ min (1-1.7 ft^3/ min) for pump inlet vacuum of 380 mm (15 in.) Hg with pump out-let at 760 mm (29.92 in.) Hg; leak free at 380 mm (15 in.) Hg	Check upon receipt for leaks and capacity	Repair or return to supplier
Orifice meter	ΔH @ of 46.74 $\pm$6.35 mm (1.84 $\pm$0.25 in.) (recommended)	Visually check upon receipt for damage; calibrate against wet test meter	Repair, if possible. otherwise, return to supplier
Impingers	Standard stock glass; pressure drop across impingers not excessive	Visually check upon receipt, check pressure drop (Method 8, Sec. 3.7.1)	Return to supplier
Filter holder	Leak free (Method 8, Sec. 3.7.1)	Visually check before use	As above
Filters	Glass fiber without organic binder designed to remove 99.95% ($\leq$0.05% penetration) of 0.3-μm dioctyl phthalate smoke particles	Manufacture's guarantee that filters meet ASTM standard method D2986-71. observe under light for defects	Return to supplier and replace

TABLE 1.1 (CONTINUED)

APPARATUS	ACCEPTANCE LIMITS	FREQUENCY AND METHOD OF MEASUREMENT	ACTION IF REQUIREMENTS ARE NOT MET
Hydrogen peroxide	30% H_2O_2 reagent grade or certified ACS	Upon receipt, check label for grade or certification	Replace or return to supplier
Potassium iodide	KI reagent grade or certified ACS	As above	As above
Thorin indicator	1-(o-arsonophenylazo)-2-naphthol-3,6 disulfonic acid disodium salt, reagent grade or certified ACS	Upon receipt, check label for grade or certification	As above
Barium perchlorate trihydrate solution	$Ba(ClO_4)_2$ -$3H_20$, - reagent grade or certified ACS	As above	As above
Sulfuric acid solution	H_2SO_4, 0.0100N $\pm$ 0.0002N	Certified by manufacturer, or standardize against 0.0100N NaOH previously standardized against potassium acid phthalate (primary standard grade)	As above
NO_x Chemiluminescence Analyzer	NO_x to NO conversion efficiency $\geq$ 90%	Before each field test; Introduce a concentration of 40-60 ppm NO_2 to the analyzer in direct cal mode. Calculate converter efficiency: $\text{Eff}_{NO_2} = \frac{C_{Dir}}{C_V} \times 100$	Repair

6.2 Opacity Certification Certificate

Based on the criteria established by British Columbia Ministry of Environment in the "Source Testing Code for the Visual Measurement of the Opacity of Emissions from Stationary Sources" and the score achieved, this

Certificate

is presented to

Robert Wilson

in recognition of successful completion of the
EPA Method 9 Visible Emissions Certification Course
June 18, 2020 Vancouver, British Columbia.

plewes
environmental

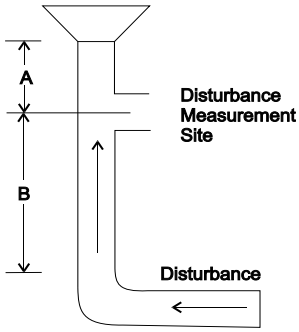
David Plewes
Certifying Instructor
Plewes Environmental Limited

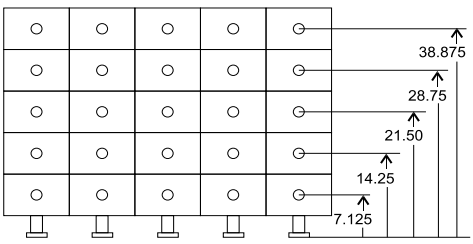
6.3 Sample Site Selection and Stratification Check

Client: Cadman Kenmore **Date:** 10/01/20

Unit: Hot Mix Asphalt Plant **ETI Job No:** 3128-20

Traverse Point	% of Diameter Distance	Actual Distance	O_2 or CO_2 Conc. (%)	O_2 or CO_2 Conc. % diff. of mean	SO_2 Conc. ppmdv	SO_2 Conc.% diff. of mean	NO_x Conc. ppmdv	NO_x Conc. % diff. of mean	CO Conc. ppmdv	CO Conc. % diff. of mean
1	16.7	10.4	14.60	0.1%	-	-	14.1	0.2%		
2	50.0	21.3	14.45	-1.0%	-	-	13.8	-1.9%		
3	83.3	32.1	14.72	0.9%	-	-	14.3	1.7%		
4	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-
		Mean:	14.59		-		14.1			





Traverse Type: gaseous Flow Straighteners? N

Stack Shape: rectangle Stack Extensions? N

Stack Construction: steel Sample Orientation: Horizontal

Stack Dimension (inches), 32.5" x 38.5

For 7E Gaseous Samples	
	12 point sample: >10% of mean
	3 point sample: ≤10% or ±1 ppm of mean
	1 point sample: ≤5% or ±0.5 ppm of mean

Number of Test Ports: 5

Stack Equivalent Diameter: (inches): 35

Port Length (inches): 5

# of Traverse Pts. (Gaseous): 1

# of Traverse Pts. (Particulates): 25

# of Traverse Pts. (Flows): 25

Distance Downstream From Flow Disturbance (inches): 108

Distance Upstream From Flow Disturbance (inches): 96

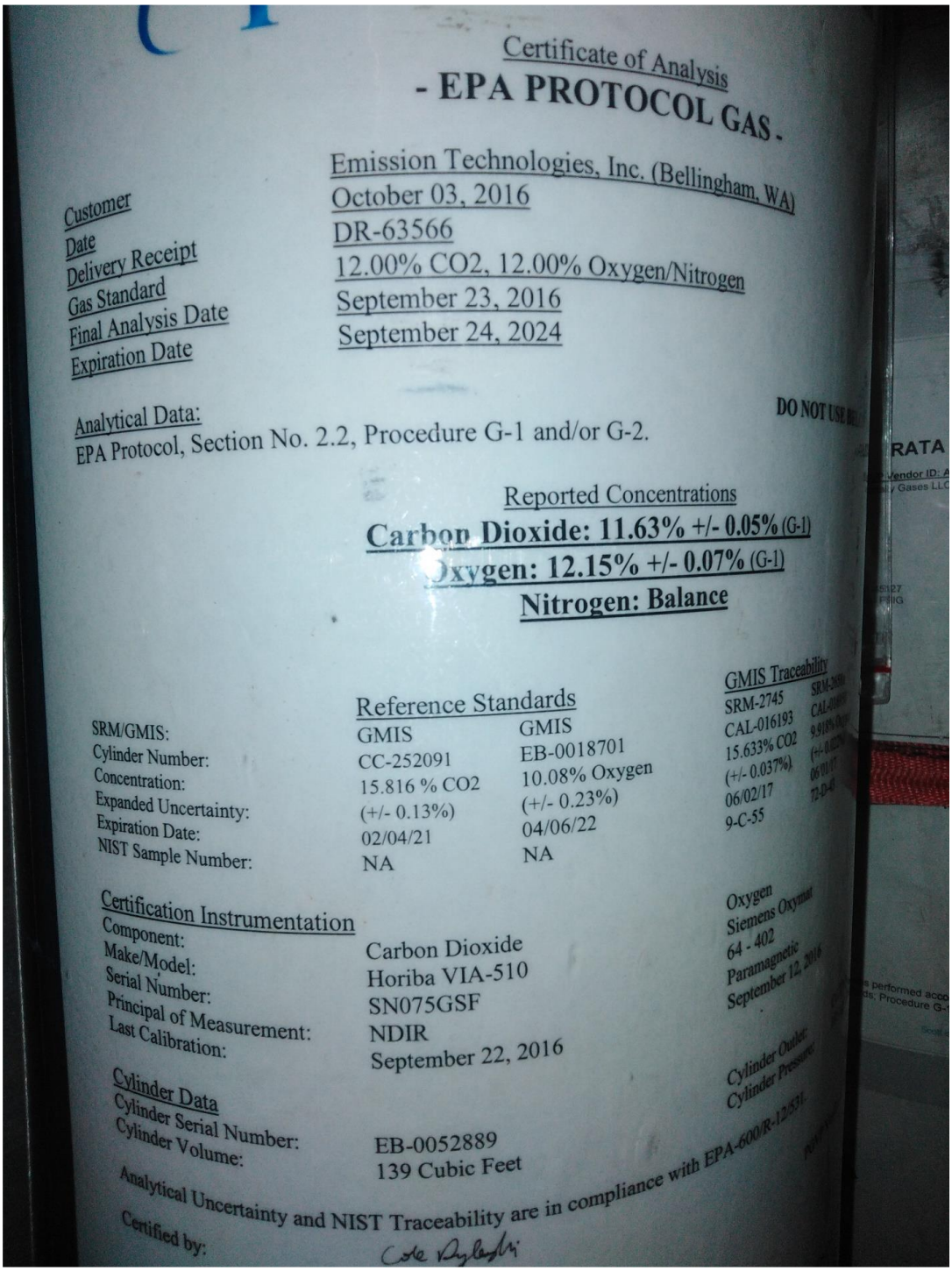
Stack Diameters Downstream: 3.1

Stack Diameters Upstream: 2.7

Cyclonic Flow: N

Does stack Meet EPA Method 1 Criteria? Y

6.4 Calibration Gas Certificates



Certificate of Analysis
- EPA PROTOCOL GAS -

Customer	Emission Technologies, Inc. (Bellingham, WA)
Date	October 03, 2016
Delivery Receipt	DR-63566
Gas Standard	12.00% CO2, 12.00% Oxygen/Nitrogen
Final Analysis Date	September 23, 2016
Expiration Date	September 24, 2024

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

DO NOT USE BE

Reported Concentrations

Carbon Dioxide: 11.63% +/- 0.05% (G-1)
Oxygen: 12.15% +/- 0.07% (G-1)
Nitrogen: Balance

Reference Standards

SRM/GMIS:	GMIS	GMIS
Cylinder Number:	CC-252091	EB-0018701
Concentration:	15.816 % CO2	10.08% Oxygen
Expanded Uncertainty:	(+/- 0.13%)	(+/- 0.23%)
Expiration Date:	02/04/21	04/06/22
NIST Sample Number:	NA	NA

GMIS Traceability

SRM-2745	SRM-2636
CAL-016193	CAL-016193
15.633% CO2	9.918% O2
(+/- 0.037%)	(+/- 0.02%
06/02/17	06/01/17
9-C-55	72-D-43

Certification Instrumentation

Component:	Carbon Dioxide	Oxygen
Make/Model:	Horiba VIA-510	Siemens Oxymat
Serial Number:	SN075GSF	64 - 402
Principal of Measurement:	NDIR	Paramagnetic
Last Calibration:	September 22, 2016	September 12, 2016

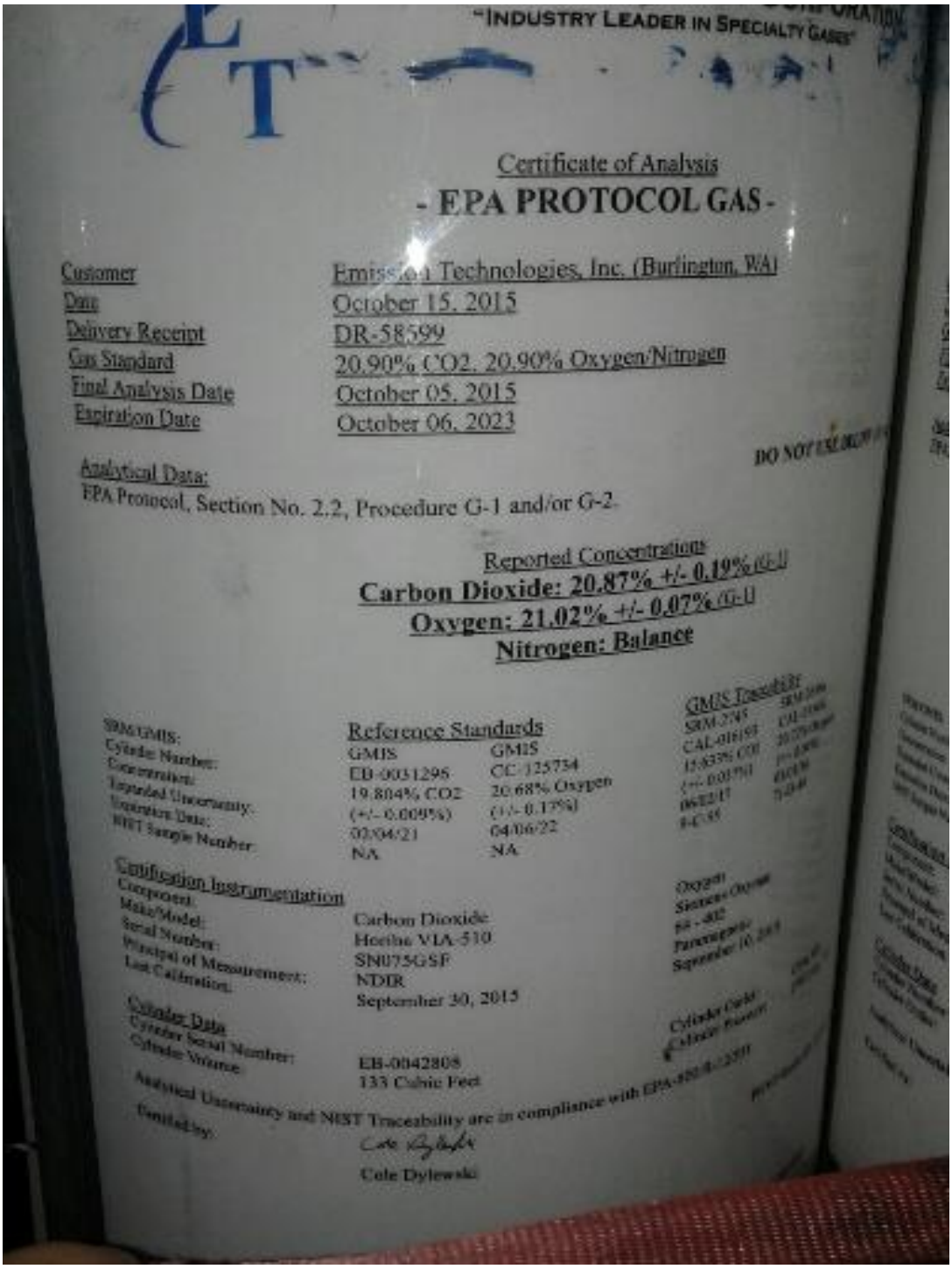
Cylinder Data

Cylinder Serial Number:	EB-0052889
Cylinder Volume:	139 Cubic Feet

Cylinder Outlet:
Cylinder Pressure:

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531.

Certified by:



"INDUSTRY LEADER IN SPECIALTY GASES"

Certificate of Analysis

- EPA PROTOCOL GAS -

Customer	Emission Technologies, Inc. (Burlington, WA)
Date	October 15, 2015
Delivery Receipt	DR-58599
Gas Standard	20.90% CO2, 20.90% Oxygen/Nitrogen
Final Analysis Date	October 05, 2015
Expiration Date	October 06, 2023

DO NOT USE BELOW

Analytical Data:
EPA Protocol, Section No. 2.2, Procedure G-1 and/or G-2.

Reported Concentrations
Carbon Dioxide: 20.87% +/- 0.19% (G-1)
Oxygen: 21.02% +/- 0.07% (G-1)
Nitrogen: Balance

	Reference Standards	
906/GMIS:	GMIS	GMIS
Cylinder Number:	EB-0031295	CC-125734
Concentration:	19.804% CO2	20.68% Oxygen
Expanded Uncertainty:	(+/- 0.009%)	(+/- 0.17%)
Expiration Date:	02/04/21	04/06/22
NIST Sample Number:	NA	NA

GMIS Traceability
SRM-2745
CAL-016193
15.835% CO2
(+/- 0.017%)
06/22/17
84C55

Oxygen
Siemens Oxymat
6E - 302
Paramagnetic
Separation 10.243

Certification Instrumentation

Component:	Carbon Dioxide
Make/Model:	Horiba VIA-510
Serial Number:	SN075GSF
Principal of Measurement:	NDIR
Last Calibration:	September 30, 2015

Cylinder Data

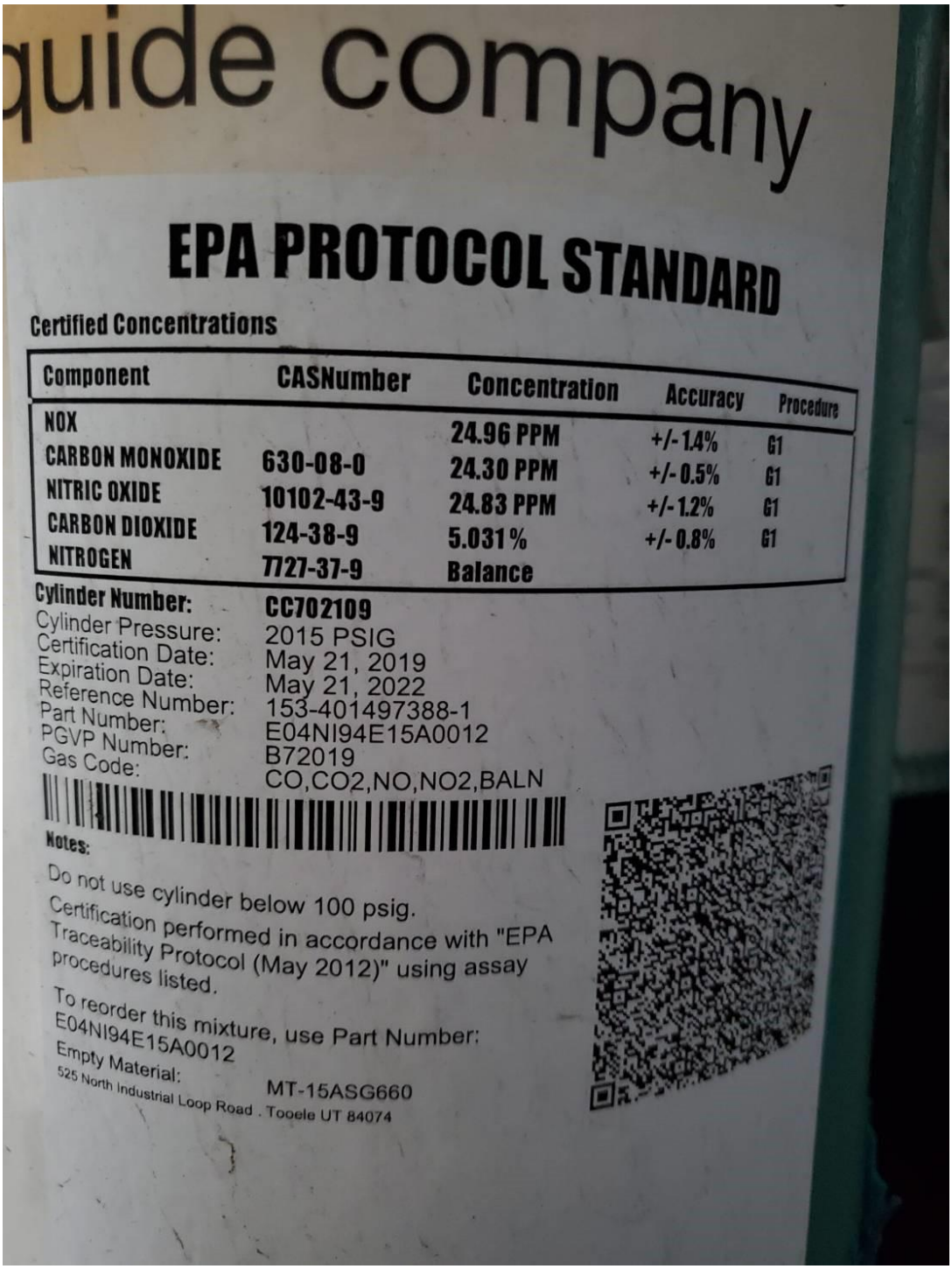
Cylinder Serial Number:	EB-0042808
Cylinder Volume:	133 Cubic Feet

Cylinder Code
Cylinder Pressure

Analytical Uncertainty and NIST Traceability are in compliance with EPA-600/R-12/531

Certified by:

Cole Dylewski



quide company

EPA PROTOCOL STANDARD

Certified Concentrations

Component	CASNumber	Concentration	Accuracy	Procedure
NOX		24.96 PPM	+/- 1.4%	G1
CARBON MONOXIDE	630-08-0	24.30 PPM	+/- 0.5%	G1
NITRIC OXIDE	10102-43-9	24.83 PPM	+/- 1.2%	G1
CARBON DIOXIDE	124-38-9	5.031 %	+/- 0.8%	G1
NITROGEN	7727-37-9	Balance		

Cylinder Number: CC702109
Cylinder Pressure: 2015 PSIG
Certification Date: May 21, 2019
Expiration Date: May 21, 2022
Reference Number: 153-401497388-1
Part Number: E04NI94E15A0012
PGVP Number: B72019
Gas Code: CO,CO2,NO,NO2,BALN

Notes:

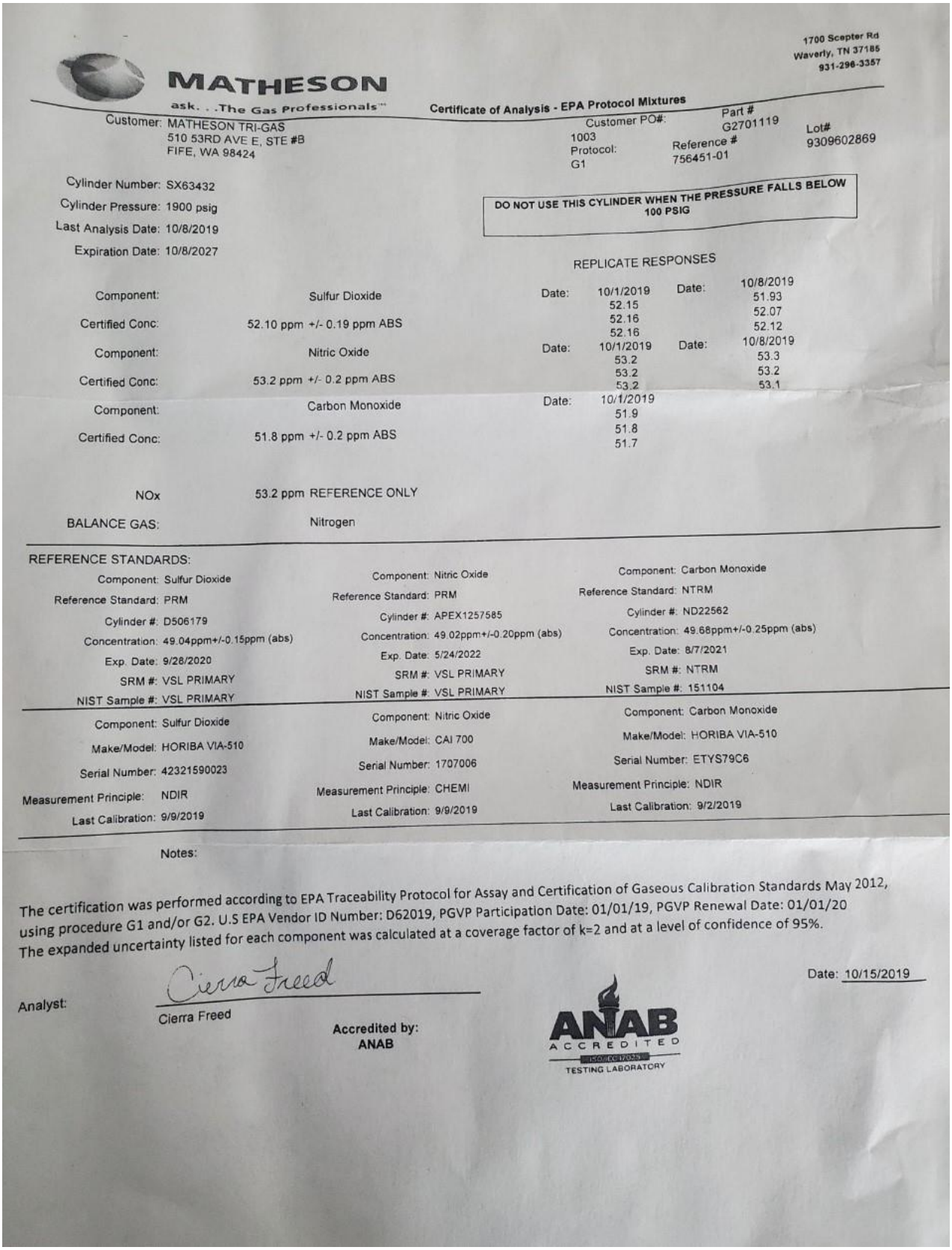
Do not use cylinder below 100 psig.

Certification performed in accordance with "EPA Traceability Protocol (May 2012)" using assay procedures listed.

To reorder this mixture, use Part Number: E04NI94E15A0012

Empty Material: MT-15ASG660

525 North Industrial Loop Road . Tooele UT 84074



MATHESON
ask. . .The Gas Professionals™

1700 Scepter Rd
Waverly, TN 37185
931-296-3357

Certificate of Analysis - EPA Protocol Mixtures

Customer: MATHESON TRI-GAS
510 53RD AVE E, STE #B
FIFE, WA 98424

Customer PO#: 1003
Protocol: G1
Part # G2701119
Reference # 756451-01
Lot# 9309602869

Cylinder Number: SX63432
Cylinder Pressure: 1900 psig
Last Analysis Date: 10/8/2019
Expiration Date: 10/8/2027

DO NOT USE THIS CYLINDER WHEN THE PRESSURE FALLS BELOW 100 PSIG

REPLICATE RESPONSES

Component:	Sulfur Dioxide	Date:	10/1/2019	Date:	10/8/2019
			52.15		51.93
Certified Conc:	52.10 ppm +/- 0.19 ppm ABS		52.16		52.07
			52.16		52.12
Component:	Nitric Oxide	Date:	10/1/2019	Date:	10/8/2019
			53.2		53.3
Certified Conc:	53.2 ppm +/- 0.2 ppm ABS		53.2		53.2
			53.2		53.1
Component:	Carbon Monoxide	Date:	10/1/2019		
			51.9		
Certified Conc:	51.8 ppm +/- 0.2 ppm ABS		51.8		
			51.7		

NOx 53.2 ppm REFERENCE ONLY

BALANCE GAS: Nitrogen

REFERENCE STANDARDS:

Component: Sulfur Dioxide	Component: Nitric Oxide	Component: Carbon Monoxide
Reference Standard: PRM	Reference Standard: PRM	Reference Standard: NTRM
Cylinder #: D506179	Cylinder #: APEX1257585	Cylinder #: ND22562
Concentration: 49.04ppm+/-0.15ppm (abs)	Concentration: 49.02ppm+/-0.20ppm (abs)	Concentration: 49.68ppm+/-0.25ppm (abs)
Exp. Date: 9/28/2020	Exp. Date: 5/24/2022	Exp. Date: 8/7/2021
SRM #: VSL PRIMARY	SRM #: VSL PRIMARY	SRM #: NTRM
NIST Sample #: VSL PRIMARY	NIST Sample #: VSL PRIMARY	NIST Sample #: 151104

Component: Sulfur Dioxide	Component: Nitric Oxide	Component: Carbon Monoxide
Make/Model: HORIBA VIA-510	Make/Model: CAI 700	Make/Model: HORIBA VIA-510
Serial Number: 42321590023	Serial Number: 1707006	Serial Number: ETYS79C6
Measurement Principle: NDIR	Measurement Principle: CHEMI	Measurement Principle: NDIR
Last Calibration: 9/9/2019	Last Calibration: 9/9/2019	Last Calibration: 9/2/2019

Notes:

The certification was performed according to EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards May 2012, using procedure G1 and/or G2. U.S EPA Vendor ID Number: D62019, PGVP Participation Date: 01/01/19, PGVP Renewal Date: 01/01/20
The expanded uncertainty listed for each component was calculated at a coverage factor of k=2 and at a level of confidence of 95%.

Analyst: Cierra Freed
Cierra Freed

Date: 10/15/2019

Accredited by:
ANAB

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

6.5 NO_x Converter Check

EPA Method 7E - NOx Analyzer Converter Efficiency Check

Make: HORIBA
Model: PG-250
S/N: 6103006

Date: 10/08/20
Performed By: Rob Wilson

Zero NO Calibration Gas

Cylinder Conc.:	0.0 ppm	
Cylinder S/N:	EB47257	
Analyzer Response:	0.0 ppm	
ACE:	0.0%	**PASS**
	Eq. 7E-1	

Mid NO Calibration Gas

Cylinder Conc.:	24.96 ppm	
Cylinder S/N:	CC702109	
Analyzer Response:	24.60 ppm	
ACE:	-0.7%	**PASS**
	Eq. 7E-1	

High NO Calibration Gas

Cylinder Conc.:	53.2 ppm	
Cylinder S/N:	SX63432	
Analyzer Response:	53.1 ppm	
ACE:	-0.19%	**PASS**
	Eq. 7E-1	

NO_2 Calibration Gas

Cylinder Conc.:	45.5 ppm	
Cylinder S/N:	CC509578	
Analyzer Response:	43.4 ppm	
Converter Efficiency:	95.4%	**PASS**
	Eq. 7E-7	

I certifiy that the above listed analyzer meets the requirements set forth in EPA Method 7E for converting NO_2 to NO.

Signature: Robert Wilson

6.6 Meter Calibrations

Pre-Test Meter Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES



1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

					INITIAL	FINAL	AVG (P_{bar})
DATE:	8/22/2020	METER SERIAL #:	L001	BAROMETRIC PRESSURE (in Hg):	29.81	29.81	29.81
METER PART #:	HF-L	CRITICAL ORIFICE SET SERIAL #:	1543s				

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
19	1	0.5079	16	946.768	952.325	5.557	58	56	58	57	59	57.5	8.5	1.4	5.6695	5.6562	0.998		1.81
19	2	0.5079	16	952.325	957.872	5.547	58	58	59	59	61	59.3	8.5	1.4	5.6403	5.6562	1.003		1.81
19	3	0.5079	16	957.872	963.420	5.548	58	59	60	61	63	60.8	8.5	1.4	5.6250	5.6562	1.006		1.80
																AVG =	1.002	-0.49	
16	1	0.4313	16	963.650	969.150	5.500	59	60	62	63	64	62.3	9.9	1.0	5.5549	5.5889	1.006		1.78
16	2	0.4313	16	969.150	974.760	5.610	59	62	63	64	65	63.5	10.1	1.0	5.6524	5.7018	1.009		1.78
16	3	0.4313	16	974.760	980.355	5.595	59	63	63	65	65	64.0	10.1	1.0	5.6319	5.7018	1.012		1.78
																AVG =	1.009	0.21	
11	1	0.3177	16	980.827	986.30	5.473	61	63	64	65	66	64.5	13.4	0.6	5.4978	5.5615	1.012		1.80
11	2	0.3177	16	986.30	991.785	5.485	61	64	65	67	67	65.8	13.4	0.6	5.4967	5.5615	1.012		1.80
11	3	0.3177	16	991.785	997.350	5.565	61	65	65	67	68	66.3	13.5	0.6	5.5716	5.6030	1.006		1.80
																AVG =	1.010	0.27	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.007

AVERAGE $\Delta H_@$ = 1.80

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right)^2 \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

Post-Test Meter Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record readings in outlined boxes below, other columns are automatically calculated.

Quality - Service - Reliability

DATE: 10/8/2020 | METER SERIAL #: L001 | BAROMETRIC PRESSURE (in Hg): INITIAL 29.72, FINAL 29.72, AVG (P_{bar}) 29.72

METER PART #: HF-L | CRITICAL ORIFICE SET SERIAL #: 1543s

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
11	1	0.3177	18	980.827	986.900	6.073	57	56	57	55	55	55.8	15.0	0.6	6.1853	6.2308	1.007		1.83
11	2	0.3177	18	986.90	992.965	6.065	57	57	59	55	57	57.0	15.0	0.6	6.1622	6.2308	1.011		1.82
11	3	0.3177	18	992.965	999.020	6.055	58	59	60	57	58	58.5	15.0	0.6	6.1343	6.2248	1.015		1.82
																AVG =	1.011	0.00	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.011

AVERAGE $\Delta H_@$ = 1.82

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr(std)}}\right)^2 \Delta H \left(\frac{V_{m(std)}}{V_m}\right)$$

END OF TEST REPORT

From:	John Dawson
To:	Public Comment
Subject:	Fwd: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment
Date:	Thursday, March 3, 2022 12:40:40 PM
Attachments:	image001.png 16101-52 Evaluation Narrative.pdf

From: David Morton <davidwardmorton@yahoo.com>
Sent: Thursday, March 3, 2022 12:30:08 PM
To: David Morton <davidwardmorton@yahoo.com>
Subject: Fw: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment

Hello, all those interested in **PSCAA's Order of Approval for Cadman Materials - Kenmore**,

(See the email below from John Dawson of PSCAA.)

The permitting action is **open for comment** beginning today, **3/3/22 through 5/2/22**.

Public hearing is on **4/18/22**.

Notice that, "**The replacement of the condensers makes the contents of the asphaltic cement storage tanks into review.**"

These storage tanks are "the 2 asphalt tanks" mentioned in the **attached "Evaluation Narrative Report," 16101-52 Evaluation Narrative.pdf**. The report refers to the 25,000-gallon tank as the "**medium cure (cutback) asphalt tank**," and the 10,000-gallon tank is called the (PG)"70-22 asphalt" (cement tank).

Mr. Dawson's email says that "emissions due to the project are...volatile organic compounds of 2.1 T(ons) P(er) Y(ear)..." This assessment is based on the assumption that the plant uses solvent-free binders such as PG70-22 asphalt cement. However, if the plant uses cutback asphalt as binder, VOC emissions are likely to be thousands of times higher than PSCAA's assessment. PSCAA's predictions of VOC emissions from asphalt plants is a result of simply applying the AP-42 emission factor for VOCs. **AP-42 cautions that** "Care should be taken to (en)sure that the ... raw material input (is that) of the source(s) analyzed to produce the emission factor." In this case, this means that, **before simply applying AP-42 emission factors**," PSCAA should ensure that hot mix asphalt plants use solvent-free asphalt cement as binder, not cutback asphalt which typically consists of about 35% kerosene.

David Morton
206-909-5680

----- Forwarded Message -----
From: John Dawson <johnd@pscleanair.gov>
To: John Dawson <johnd@pscleanair.gov>
Sent: Thursday, March 3, 2022, 05:33:13 AM PST
Subject: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment

You have expressed interest in updates regarding permitting by Puget Sound Clean Air Agency for Cadman Materials – Kenmore. Information regarding a permitting action that is open for comment beginning on 3/3/2022 is available below, and on the PSCAA website at https://www.pscleanair.gov/175/Permits-Open-for-Comment. This public notice will be published in the Seattle Times and the Daily Journal of Commerce on 3/3/2022.

A public hearing on this action will be held by Zoom on April 18, 2022, and comments are being accepted through May 2, 2022. More information is given in the full public notice below.

John Dawson, Ph.D., P.E.

Engineering Manager

1904 3rd Ave #105, Seattle, WA 98101

DIRECT 206-689-4060
FAX 206-343-7522

WEBSITE pscleanair.gov

PUBLIC NOTICE

PUGET SOUND CLEAN AIR AGENCY

Proposed Order of Approval No. 11861

Cadman Materials

6431 NE 175th Street, Kenmore, WA 98115

The Puget Sound Clean Air Agency is providing public notice for a proposed permit and public hearing for Cadman Materials to replace a drum dryer and burner, substantially alter an existing baghouse, and replace passive condensers on two asphaltic cement storage tanks. The replacement of the condensers makes the **contents of the asphaltic cement storage tanks into review**. The substantial alteration of the baghouse makes the truck loading scavenger duct and the flight conveyors to the existing asphaltic concrete storage silos into review. Emissions from the pugmill are not under review as part of this project. This Notice of Construction is the result of an enforcement action because all the proposed changes were carried out prior to submitting the application. This Notice of Construction includes only the equipment listed above. **Emissions due to the project are** particulate matter of 4.0 tons per year (TPY), particulate matter of less than 2.5 micrometers in diameter 3.7 TPY, sulfur dioxide of 0.5 TPY, nitrogen oxides of 10.0 TPY, **volatile organic compounds of 2.1 TPY**, carbon monoxide of 59.2 TPY, combined hazardous air pollutants (HAP) of 0.8 TPY, and maximum individual HAP of 0.3 TPY.

PRELIMINARY DETERMINATION

The Agency has completed a review of application No. 11861. Based on this review, the Agency has made a preliminary determination that the proposal meets all the requirements of Regulations I, II, and III, and draft Order No. 11861 should be approved. The Agency, as the lead agency for this proposal, has also made a preliminary determination that the proposal would not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed Environmental Checklist and other information on file at the Agency. This information is available to the public upon request. The Determination of Nonsignificance (DNS) for this proposal is issued in accordance with WAC 197-11-340(1), WAC 197-11-970, and Puget Sound Clean Air Agency Regulation I, Sections 2.07 and 2.12; Puget Sound Clean Air Agency will not act on this proposal before May 2, 2022.

PUBLIC COMMENT

The proposed Order of Approval, Determination of Nonsignificance, and information considered in making this preliminary determination are on file and available for inspection at the Agency's office located at 1904 Third Avenue, Suite 105, Seattle, Washington, telephone (206) 343-8800 or on the Agency webpage at https://www.pscleanair.gov/175/Permits-Open-for-Comment. Written comments with respect to the proposed Order and Determination of Nonsignificance must be mailed to Brian Renninger, Engineer, at Puget Sound Clean Air Agency, 1904 Third Avenue, Suite 105, Seattle, Washington 98101, faxed to the Engineering Manager at (206) 343-7522, or e-mailed to PublicComment@pscleanair.gov by May 2, 2022.

A public hearing on the proposed Order of Approval and Determination of Nonsignificance will be held at 4 pm on April 18, 2022:

Join Zoom Meeting https://us06web.zoom.us/j/87940110708

Meeting ID: 879 4011 0708

Passcode: 106048

888 788 0099 US Toll-free

All comments received during the comment period will become part of the public record. Once the Agency has reviewed and responded to comments from the public, the proposed Order of Approval will, if necessary, be revised and either denied or issued in final form.

pscleanair.org
Puget Sound Clean Air Agency

Evaluation Narrative Report

Compliance Department

Reg #: **16101** Evaluation #: **52**

Type: **Onsite Compliance**

Inspection Date: **09/11/2017**

Inspected By: **TJH - Tom Hudson**

Linked NOVs / WWs:

Facility: **Cadman Materials, Inc. (Cadman)**

Address: **6431 NE 175th St**
Kenmore, WA 98028

Personal Protective Equipment Used

- [ ] None
- [ ] Hard Hat
- [ ] Goggles
- [x] Safety Glasses
- [ ] Hearing Protection
- [ ] Respirator
- [x] Safety Shoes
- [ ] Rubber Boots
- [ ] Leather Gloves
- [ ] Chemical Gloves
- [ ] Coveralls
- [ ] Tyvek
- [x] Safety Vest
- [ ] Other

Evaluation Narrative:

On this date at 10:30 I arrived at Ostrum's Pharmacy to conduct visual observations of the Cemex asphalt facility prior to conducting an unannounced inspection. The aggregate drier was in operation. The plume was going straight up there were no residual VEs. I stayed at this location for approximately 5 minutes. There were no asphalt odors detected.

I then drove to the plant arriving at 10:40 hours. Prior to entering the facility's control room, I observed that all the interior roadways were all wet and that there were no VEs from the roadways or material piles. The water vapor plume from the drier was still going straight up. I contacted Justin Bauer operator and informed him that I wanted to conduct an inspection. He informed me that Cadman had recently purchased Cemex. I asked what the differential pressure on the baghouse was. He said about 2". The asphalt temperature was about 320 F. Mr. Bauer said that was a little hot. He usually tries to keep the temp at 275 F when he has a steady stream of customers.

I informed him that I had received a complaint on 9/9/17. I asked if they had operated on that date. He said yes, they were operating until about 1:00 PM.

I reviewed the O & M Plan 1/1/17 – 8/31/17. All the logs were complete. The O & M plan lists the normal operating range as 2 – 7" wc but the it usually stays between 4 – 7 " wc. I did not see any incidences where the differential pressure readings exceeded the normal operating range. The fugitive dust plan is pinned to the wall and called for the operator to check for visible emissions and to take necessary action to abate the emissions.

I observed the 2 asphalt tanks. There were no loading operations on-going. I could not detect any

asphalt odor from the tanks. I observed that the condensation trap on the 70-22 asphalt had been removed. Mr. Bauer said the condensation equipment on the medium cure asphalt had broken down so Cemex removed the condensation unit from the 70-22 previous asphalt and reinstalled it on the medium cure asphalt tank. He said medium cure tank received regular refills and the 70-22 was almost full and not used very often so it did not require additional shipments. I asked if he could confirm that no shipment of 70-22 would be received before the repair is completed. He said he would ask his boss and have him email an answer to me.

At this point I concluded my inspection and left the facility.

From:	Elizabeth Mooney
To:	Public Comment
Cc:	Elizabeth Mooney; Robin Ryan Agnew; Orlay Johnson; Jim Myers; Patrick O"Brien; Janet Hays; Richard Honour; Rep. Pollet; David Morton
Subject:	Fwd: Renninger Letter re Proposed Order of Approval No. 11861
Date:	Monday, May 2, 2022 11:18:37 AM
Attachments:	Brian Renninger.docx

Dear PSCAA-

Here is a comment letter attached we were circulating among our citizens last week. It's been hard to educate our community about this pending permit and its importance.

It has been very difficult to alert the public about the egregious environmental injustice in Kenmore at the Cadman (previously Cemex) plant on Calportland land. Why, you may ask. More often than not people believe Cadman's (landowner Calportland) emissions are safe- "just steam, just water vapor" - and people trust there is an agency that is protecting public health. It has been hard to explain all the complexities of why the agency couldn't do that, until, maybe now! Thank you for this draft permit giving us a window of hope for clean air. I have to say it is still hard to understand why there was no stop work order despite the fact that PSCAA had issued a violation to Cadman regarding the installed equipment and violation. But here we are.

I believe: We need a better way to inform the public who are affected by the emissions. Since it is hard to give full disclosure to all citizens without a bill board, please, can you require a big billboard near/ above the plant that gives a phone number to call when people - bikers, walkers, drivers-detect bad emissions?

People biking on the Burke Gilman Trail or people driving on Bothell Highway, SR522 need a quick and safe way to know who to contact. They need something better than the existing PSCAA or City complaint line. The system to make complaints brings good hearted intelligent hard working inspectors, but it's usually too late and way too complicated, and inefficient. So, ultimately this resulted in lack of trust, and discouragement in people who are most impacted by emissions entering into their homes causing headache, sinus problems, unpleasant experiences. We need a billboard.

The emissions can be disturbing causing nausea and other health reactions when walking, smelling and breathing the emissions from that plant.

There is so much confusion in our community because most people think an agency is protecting their public health. The situation with the draft permit hearing has also led to citizens not realizing that there will be no upcoming in person hearing. With City Hall closed, it is hard to get messages across via social media and zoom hearings. Highlighting this: Right now one of our citizens thinks that there is an upcoming hearing and I will try as best I can to help him and other people know today is the very last day to comment on a draft permit that took over a year to produce.

I suppose it would be lovely to ask if there could be a public hearing in person at Kenmore City Hall after May 2 if you do not receive many comments via this method?

So , after many years of citizens talking to the PSCAA agency, making odor complaints,

please remove the data gaps via comprehensive testing by an unbiased scientific lab as soon as possible. Now would be great. Please regulate this facility according to modern and best standards.

Since I am concerned that there will be glitches in our communication and emails and computers, I am sending this email and the letter that was drafted over a week ago by one of our citizens. I hope that you will include it and this email in the public comments so that we can have some Environmental Justice.

I think the complexities of an unregulated asphalt plant that started working before there were stricter regulations, has made it hard for us to understand how this pollution issue could happen in Kenmore Washington. A lot of folks are dumbfounded, look incredulous when they learn the details…as well they should be! But now we have a chance to have PSCAA hold the corporations' feet to the fire and make them test that old facility and its stack emissions comprehensively. We need all the dangerous toxins tested. Whether Cadman can make those emissions safe for us to breathe next to the Burke Gilman Trail or in peoples' homes and businesses remains to be seen. So please continue your hard work on making them do the testing at their stack and the testing of their impact in our environment (such as diesel trucks' emissions contaminating the soils with toxins as was discovered in the Duwamish near the Malarky (sp?) asphalt plant).

I do believe the checklist that you accepted as a DNS from Cadman is unfair to people and the environment. Please look into the effects of doing heavy industry business in such an urban residential area. The effects of asphalt emissions and diesel trucks on people and threatened species is not addressed on the shoreline of Lake Washington. We know in science that the combining of toxins makes an even more dangerous concoction. These should be addressed via the Shoreline Master Plan prior to assuming there is no danger of this business activity. Also, please look into the tug/barge traffic - emissions as well- at the berthing channel and the effects of churning sediments. All of these heavy industry activities in such close proximity to our sensitive shoreline, residences, businesses, Burke Gilman Trail, contribute , I believe, to significant adverse environmental - and cumulative - impacts that should not be overlooked on our Shoreline Master Plan and/or by the lead agency of this draft permit.

Please look at what they discovered at the Duwamish near the Malarky plant. We need testing of the soils perhaps and that would probably be an agency with whom you may consult. Have you put out that request to the proper agency? Please see what was discovered and reported in 2009 at Duwamish. This dioxin pollution apparently came from the trucks that were transporting the asphalt and other product. This heavy industry is not compatible with residential urban life.

Thank you.
Elizabeth Mooney

Brian Renninger
Engineer
Puget Sound Clean Air agency
1904 Third Avenue Suite 105
Settle, Washington 98101

Dear Mr. Renninger,

I would like to place make comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit.

Environmental Checklist

3. Water (a2) - The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner appear by my Google Earth measurements to be within 200' of the Lake Washington shore. Added measures may need to be taken to reduce any runoff to Lake Washington, especially given that this work may fall within the 200' buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the watershed.

3. Water (c1.) – No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, the proper agency should be consulted.

5. Animals (a) – Herons and other waterfowl are conspicuously missing. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore.

5. Animals (b) – Chinook salmon and steelhead are ESA listed as Threatened by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues.

7. Environmental Health (a) – I would think that hydrocarbons stored on site also present a significant risk of fire or explosion, not just spill.

8. Land and Shoreline Use (a) I think it is important to consider the public use of the Burke Gilman trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, walkers, etc all of who would be in the direct emissions from the facility. (see also 12a).

New Construction Permit

Emissions Limits

While it is a great step forward to require testing on items 7-13, it is not clear if the emissions criteria are suitably strict to protect public health. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

22/23 Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is advisable. In addition, during these tests the production output should be included. It is noteworthy that in stack tests provided by Cadman (and used in subsequent modeling), production was only at 140 to 150 tons/hour, 75% of the permitted output. If 200 tons/hour is the capacity (see A. Description), then one would presume that that should the emissions test levels also.

This would also be a relevant time to point out several issues with the air quality modelling that accompanied the application.

Firstly, the model utilized meteorological data from Paine Field in Everett. Paine Field lies on the crest of a ridge line near the ocean, while the Cadman site is at the north end of Lake Washington, which offers a 25 mile funnel for winds, bounded on the East, North, and West sides by ridge lines. Thermal conditions at the Lakeside often produce temperature inversions in the winter that trap air against the hills to the north of the Cadman site. Sites within the Lake Washington watershed likely offer more relevant data, one would imagine that the municipal airfield in Renton, the University of Washington, or the NOAA facility at Sand Point would all provide more reliable data. The Trinity modelling report notes (Section 2.2) the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the port of Everett. Similarly, background levels for PMs were calculated using an area average, while a PSCAA monitor located in Lake Forest Park would have provided more relevant data. Furthermore, for air modeling Trinity consultants determined that Kenmore was not urban, a determination that does not comport with the reality on the ground around downtown Kenmore.

Secondly, where emissions testing was lacking the model utilized AR-42 to estimate emissions levels. For a variety of reasons (described best by the EPA in their precautionary notice Publication no. EPA 325-N-20-001-attached). This provides further support for actual testing of multiple emissions elements rather than relying on AR-42 estimates.

Monitoring and Complaints

The odor detection and reporting protocol provides a necessary effort to provide a response to public concerns. Residents, businesses, and visitors to Kenmore (including those who use the Burke Gillman) will have some recourse to odors. I encourage you to maintain these items in the final draft.

Thank you,

Jim Myers
5934 NE 201st St
Kenmore, WA 98028

oda1959@comcast.net

From:	Janet Hays
To:	Public Comment
Subject:	Janet Hays Public Comment for Draft Permit 11861, Kenmore Cadmen
Date:	Monday, May 2, 2022 9:17:56 PM
Attachments:	thumbnail_IMG_5772.jpg thumbnail_IMG_5780.jpg thumbnail_IMG_5781.jpg thumbnail_IMG_5787.jpg thumbnail_IMG_5788.jpg thumbnail_IMG_5789.jpg thumbnail_P1120628 (Small)22.jpg thumbnail_P1120630 (Small)44.jpg thumbnail_P1120635 (Small)77.jpg thumbnail_P1120641 (Small)1313.jpg thumbnail_P1120644 (Small)1515.jpg thumbnail_P1120640 (Small)1212.jpg

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I am writing my comment as a resident of Kenmore living 700 feet from the Asphalt Plant's stack, since 2004. NE 181st is is 600 feet from the stack. The first 6 pictures were taken today the stack was assembled in August 2021. The second 6 pics are from inception until August 2021 The plant and the stack with emissions is literally under my nose.

This Asphalt Plant began as Knowle's Construction Company(plant manager Sterling Johnson), Sterling Asphalt Inc, Cemex, and is currently Cadman.

I do not support the draft permit as is. The draft permit does not address the health and safety of Lake Washington, fish and wildlife, or the community, and people that drive, bike, walk, shop, stop or are just passing through Kenmore.

I have a number of concerns about the application and permit process including the the use of weather data from Paine Field being used as "similar" to the weather conditions at the asphalt plant being inappropriate.

As has been noted in meetings and likely in a number of comments, there are numerous concerns with the modeling done on the Cadman asphalt plant located in Kenmore, WA, to support the application for the plant’s new or revised air permit. The purpose here is to focus on a couple of the issues of concern and the outcomes of continued operation with an increase in the permitted annual production from the plant.

When looking at the stack sampling data used in the model, the testing was done at production rates substantially less than the maximum production rate requested in the permit. The outcome of this is that pollutants which were claimed to be within regulatory defined safe limits, may well not be in real world conditions. If more accurate conditions for the worst-case scenario would have been used the modeling results may well have substantiated the need for additional data collection and review.
The weather data collected for the site is also seriously lacking due to not being collected from the area of the plant itself, or anywhere that could be considered suitably identical to the

plant area conditions. Data was collected from Paine Field, over 10 miles from the plant, at considerably higher elevation than the plant, and within topography that doesn't match that of the plant vicinity. In addition, Paine field has been modified by construction to be very flat, and without any contour roughness, including tall buildings or trees over a long linear distance. This is due not only to the construction of the taxiways and runways themselves, but the required operational and safety zone conditions as required by the relevant FAA regulations and circulars, such as FAA Circular 150.

As a result, the weather data collected from Paine Field is not a realistic substitute for modelling purposes for the plant site, and deviates in ways that could underestimate the impacts from plant pollutants released to the air.

Also, there is great concern in the community that the basic conditions of the air discharge of pollutants from this facility are very much different than from most industrial air discharges. The plant is virtually at the same level as Lake Washington. The stack height is only 26 feet. The adjoining main road State Route 522 is higher than the plant, and the majority of the nearby residents live at higher elevations above the plant, including those residents closest to the plant. As a result, many residents and nearby workers are subject to the plant pollution in nearfield conditions where little dispersion has taken place. This concern is magnified when there are inversion conditions known to occur in the plant vicinity where the pollution is being trapped within the partial bowl shape of the surrounding area, with the pollution generated at the bottom of the bowl. This leads to a concern that with the variance in conditions from the area weather data was collected from as compared to the area pollutants are being released from the model as constructed could significantly underestimate the impacts of air pollution from the plant on the surround population.

At a minimum, the permit should restrict the annual production rate to be consistent with (90% to 100%) of the production rates during stack sampling for the data used in the model. Alternatively, agency review of the model should adjust the pollutant results used as inputs and adjust them to reflect the production rate as requested in the application, including determining is the resulting corrected values require additional data collection to appropriately meet regulatory requirements, both as to regulatory review and decision making, and related permit conditions.

The Puget Sound Clean Air Agency should take these steps to meet its responsibility to adequately protect air quality, including the health and wellbeing of the surrounding population.

Also, the position and elevation of the present population as compared to the plant stack height must be carefully considered, including during inversion, or air stagnation conditions known to occur in this area.

Thank you,
Jane Hays


Gate A






















Gate A

From:	Patrick O"Brien
To:	Public Comment; Bothell Kenmore Chamber of Commerce
Cc:	Kenmore City Council; Vicki Grayland; Rep. Pollet; Janet Hays; Elizabeth; Jon Culver
Subject:	Kenmore Asphalt plant has a long list breaking the law. That and knowledge of this topic of reasons is why NOT to grant any new permits.
Date:	Friday, April 22, 2022 6:15:52 PM
Attachments:	Cadman Kenmore Dryer SEPA Checklist V1 2020-0121 Signed.pdf applsci-10-04632.pdf PEOB Revised Reconstructing Pollutant Dispersion Information by Defining Exhaust Source Parameters with Inverse Model.docx COMPLAINT CONCERNING R7 Stacy email ODOR TOXIC EMISSIONS.docx 03312022 V5Kenmore Asphalt Plant Letter Word Document.docx

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1.) Cadman lied on their SPEA Checklist.
2.) This Applied Science study does provide a comparison and link to serious health hazards for the varied methods of producing asphalt. Asphalt production is a health hazard, safety nuisance and water hazard.
3.) Pollution Dispersion model.
4.) Thousands of Kenmore Citizens urge the closing of this location for asphalt production in their nuisance filings.
5.) Recent Letters and topics concerning this Asphalt plant
6.) Criminal charges must be filed against the Asphalt plant ownership and managers for obstruction, collusion, racketeering, assault with known poisonous chemicals. There are more charges above and beyond these.

Prove you are here doing what is right, not expedient.

Patrick E. O'Brien
6330 N.E. 181st Street
Kenmore, Wa. 98028

applied sciences

MDPI

Article

Impact of Polycyclic Aromatic Hydrocarbons (PAHs) from an Asphalt Mix Plant in a Suburban Residential Area

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Abstract: Polycyclic aromatic hydrocarbons (PAHs), an important class of hazardous airborne pollutants, are mutagenic and carcinogenic substances known to be released during the paving of asphalt. In this study, PAHs emitted from an asphalt mix plant were analyzed to investigate the effects on a suburban residential area. Black carbon, organic carbon, elemental carbon, and PAHs in fine particulate matter ($PM_{2.5}$) were analyzed in a village near the asphalt mix plant. The results of wind direction analysis revealed that the village was meteorologically affected by emissions from the asphalt mix plant. PAHs in $PM_{2.5}$ ranged from 0.51 to 60.73 ng/m^3, with an average of 11.54 ng/m^3. Seasonal PAHs were highest in winter, followed in order by spring, autumn, and summer. The diagnostic ratios between PAHs indicate that the source of PAHs could be incomplete combustion of petrogenic origin. The maximum black carbon concentration in the intensive periods reaches up to 14.17 μg/m^3 during mix plant operation periods. Seasonal $\sum BaP_{TEF}$ values based on Toxic Equivalence Factor were: winter (2.284 ng/m^3), spring (0.575 ng/m^3), autumn (0.550 ng/m^3), and summer (0.176 ng/m^3). The values are about 6.5 times higher than the concentration in another background area and more than three times higher than those in the capital city, Seoul, in the Republic of Korea. In conclusion, primary emissions from the point source can be considered the major contributor to pollution in the residential area.

Keywords: PAHs; asphalt mix plant; organic carbon; elemental carbon; toxic equivalence factor

1. Introduction

Air pollutants are generally known to be harmful to humans and the environment. According to a recent study on long-term exposure to fine particulate matter ($PM_{2.5}$), each 10 μg/m^3 increase in the concentration of $PM_{2.5}$ in the atmosphere increases total deaths by 4%, cardiovascular deaths by 6%, and cancer deaths by 8% [1]. Therefore, organic species in $PM_{2.5}$, one class of air pollutants, have also been classified as separate carcinogens [2]. In addition, some of the components of particulate matter are toxic chemicals [3]. Recently, the International Agency for Research on Cancer (IARC) classified the mix of substances found in outdoor air as a carcinogenic substance in 'Group 1' [4]. Among the various organic compounds that make up $PM_{2.5}$, polycyclic aromatic hydrocarbons (PAHs) are considered to be representative toxic chemicals because they have many combustion sources and they include compounds which pose health risks, such as benzo(a)pyrene [4].

PAHs are organic pollutants that are widely distributed in the environment due to natural occurrences such as volcanic eruptions and wildfires and are also artificially generated through incomplete combustion of fuels such as gasoline, diesel, and coal [5–8]. In the atmosphere, PAHs exist in gaseous and particulate forms and can be transported over long distances, thus affecting soil, vegetation, and humans [9–11]. As PAHs are thermally and chemically stable, PAHs transported over long distances can be utilized as a markers of PM origin [7,12]. PAHs are substances that have potential cytotoxic, mutagenic, and carcinogenic effects; they also cause direct and indirect damage to deoxyribonucleic acid (DNA) [13]. The United States Environmental Protection Agency (US-EPA) and IARC have defined seven carcinogenic PAHs compounds (benzo[a]pyrene, chrysene, benzo[b]fluoranthene, benzo[k]fluoranthene, benz[a]anthracene, dibenz[a,h]anthracene, and indeno [1,2,3-cd]pyrene) as possible carcinogens [14–17]. This indicates that PAHs are harmful to humans, and monitoring of PAHs in areas of high population density and around the sources of their emission (mostly industrial sources like asphalt plants) is therefore necessary.

Asphalt mix factories are one of the main emission sources of PAHs because of the heavy oil combustion process they use. At the final stage of manufacturing asphalt, high density smoke with steam and solid particles including PAHs can be emitted even when a control system (which should be directed to $PM_{2.5}$ since the coarse PM is probably captured by dust collectors) is used [18]. In general, the manufacturing temperature of asphalt is known to be 135 °C or higher and requires a high temperature of 260 °C or higher depending on the characteristics of the raw material for manufacturing asphalt [19,20]. It is known that the type and amount of the material to be discharged varies according to the asphalt manufacturing temperature, and generally, the higher the manufacturing temperature, the more various materials are released [21]. As a result of previous studies, it is known that some materials (fluoranthene, benzo[b]fluoranthene, benzo[a]pyrene, etc.) are discharged only at 160 °C or more in relation to the asphalt manufacturing temperature [21]. Exposure to compounds in asphalt emissions is known to reduce lung function and increase lung cancer incidence [22,23]. In addition, PAHs in asphalt emissions are known to be absorbed by the human body through not only the respiratory system but also the skin [24,25]. As these hazards of asphalt emissions have been identified, the IARC has classified emissions from occupational exposure and road pavement as possible human carcinogens (IARC Group 2B) [26].

Asphalt production was about 1.6 trillion tons in 2007 and is currently estimated at about 87 million tons. Since about 85% of the asphalt produced is used as a binder in pavements, human access to asphalt is common [20,21]. Therefore, a method for reducing the amount of various harmful substances emitted from asphalt has been developed. As a representative technique, there is a method based on changing the asphalt manufacturing temperature: (i) cold mix asphalt (CMA) manufactured at a temperature lower than 60 °C; (ii) half-warm mix asphalt (HWMA) manufactured at less than 100 °C, normally at 70–95 °C; (iii) warm mix asphalt (WMA) manufactured at temperatures of 110–140 °C [27]. Another technique is to mix various materials in the production of asphalt. Typical mixtures include styrene butadiene styrene, activated carbon, layered double hydroxides, and various polymers [28]. Despite the fact that these new technologies are more environmentally friendly than conventional asphalt, there are not many examples of field applications to date because the new products are somewhat less effective than conventional asphalt. Most of the current studies related to asphalt have aimed to evaluate human exposure and hazardous emissions during the road paving process. Meanwhile, research on the environmental impact of asphalt manufacturing facilities such as asphalt mix plants is insufficient. Since PAHs deposited on PM can be transported over long distances, it is important to assess the hazards of asphalt mix plants, which emit PAHs in greater amounts than are emitted from road pavement.

The purpose of this study is to investigate the impact of pollutant emissions from an asphalt mix plant in a suburban residential area based on PAH concentrations. PAHs were analyzed using gas chromatography/mass spectrometry (GC/MS). In addition, the point source of PAHs was determined by analyzing the characteristics of black carbon (BC), organic carbon (OC), elemental carbon (EC),

and PAH concentrations. In addition, toxic equivalency factors (TEF) were evaluated based on PAH concentrations.

2. Materials and Methods

2.1. Sampling and Chemical Analysis

The study area is a typical suburban residential area located in the Republic of Korea. The village (35.457° N, 127.464° E) has a population of about 50 people, and there is an asphalt mix plant (35.457° N, 127.469° E, elevation 223 m, area of 35,000 m^2) located about 300 m away from the residential area (Figure 1). Two integrated samplers, a low volume sampler with a flow rate of 16.7 L/min (URG-2000-30EHS/filter pack; URG-2000-30FG, Chapel Hill, NC, USA) and a high volume sampler (1013 L/min: Thermo Fisher Scientific, Waltham, MA, USA), were deployed for sample collection during the measurement period [29,30]. The nearby asphalt mix plant was established in 1995, and after the first lung cancer patient in the area was diagnosed in 1999, the National Center for Disease Control (NCDC) announced that 14 of the 50 residents of the village had been diagnosed with cancer [31,32]. Therefore, the incidence rate of cancer patients in this village is substantially higher than the national average. To identify pollutant transport into the village, a sampling site located in the center of the village, which is east of the asphalt mix plant, was selected. In total, 61 PAH samples (24 h integrated samples, every six days) were collected from December 2014 through to December 2015.

To compare the PAH concentrations in the suburban residential area with those of other locations in the Republic of Korea, samples were simultaneously collected at two control sites (the Korea Institute of Science and Technology (KIST) and Baengnyeong Island (BI)) from April through to July, 2016. KIST is located in Seoul, Republic of Korea, 7 km from the city center (37.603° N, 127.047° E); it is 400 m from the highway and is influenced by traffic but is not influenced by any major industrial sources. The samples were collected from the rooftop of a two-story building. In total, 21 24 h integrated $PM_{2.5}$ samples were collected using a high-volume sampler. At the same times, samples were collected from a measurement station on BI in the Yellow Sea (37.967° N, 124.630° E). The northernmost and westernmost part of South Korea, BI is located 740 km east of Beijing and 211 km west of Seoul. The measurement station was established by the National Institute of Environmental Research (NIER) as a core background site of the National Monitoring Network to track dust and pollution plumes transported from China. In previous studies conducted at this site, increased concentrations of sulfate and organic aerosols were found and attributed to the influence of pollution plumes transported from eastern China and the Korean Peninsula [3,7]. All samples were shipped and stored frozen until analysis.

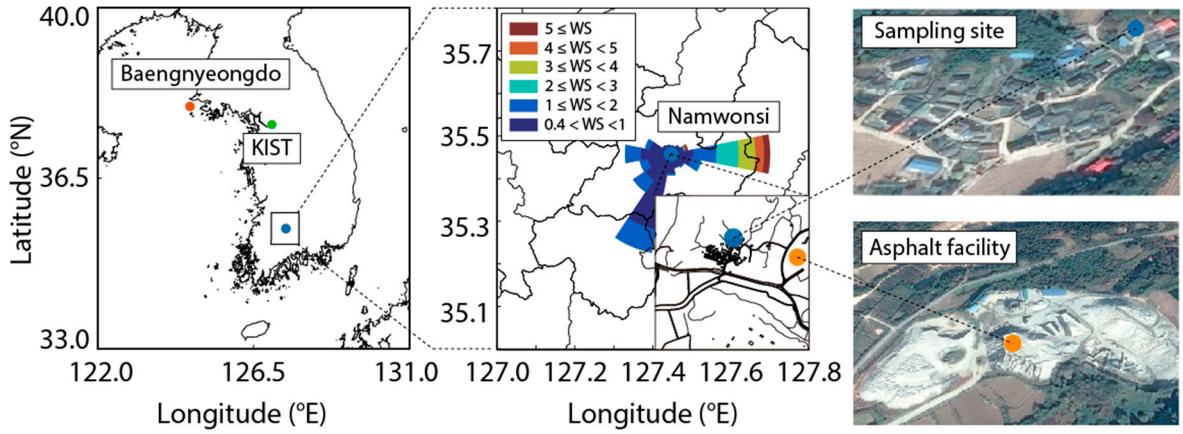


Figure 1. Characteristics of wind direction and wind velocity at the locations and sampling sites used in the study.

2.2. Chemical Analysis

The samples of OC, EC, and PAHs, including filter samples, field blanks, and trip blanks, were analyzed using GC/MS at Mokpo National University (MNU). OC and EC have been identified in previous studies as important indicators of PM sources, as their carbon content accounts for a large fraction of $PM_{2.5}$. The carbon component plays a major role in determining the characteristics of a PM source as well as the primary and secondary sources. The OC and EC analysis in this study used thermal-optical transmittance according to a protocol published by the National Institute of Occupational Safety and Health (NIOSH 5040). Briefly, the sample is first heated to 870 °C with He gas. In the second stage, it is heated to 870 °C in the presence of O_2. In the third and final step, OC and EC are quantified using an internal standard (5% CH_4 in He) for each sample. In the assay process, 2 μg·C/μL sucrose (monosaccharide, $C_{12}H_{22}O_{11}$) was used as an external reference for testing and calibration of the equipment and quantification. The OC and EC classification of the NIOSH 5040 protocol is determined to be the point at which the transmittance of the laser returns to its initial transmittance after the gradual decrease that occurs when it passes through the filter. BC was monitored using a Multi-Angle Absorption Photometer (MAAP) (Model 5012, Thermo Fisher Scientific Inc., Waltham, MA, USA).

For GC/MS analysis, 8×10 inch^2 quartz filters were collected using high-volume samplers. In total, 13 PAH compounds (i.e., phenanthrene(Phen), anthracene(Anth), fluoranthene(Fluo), pyrene(Pyre), benzo[a]anthracane(BaA), chrysene(Chry), benzo[b]fluoranthene(BbF), benzo[k]fluoranthene(BkF), benzo[e]pyrene(BeP), benzo[a]pyrene(BaP), indeno123cdpyrene(Indeno), dibenz[a,h]anthracane(DBA), and benzo[g,h,i]perylene(BghiP)) were speciated. Each filter was extracted individually by four rounds of 30 min sonication in dichloromethane (DCM). Samples were then spiked with 500 μL of 5 ppm internal standard (pyrene-d10 and benz(a)anthracene-d12) and were analyzed in batches, which included laboratory blanks spiked with matrix standards [33,34]. The final volume for each sample was adjusted to 500 μL. Each extracted aliquot was analyzed using gas chromatography electron impact mass spectrometry (GC-EI-MS). The analytical recovery was 100 ± 5%. Field blank tests were performed without collected aerosols to determine noise and contamination, and duplication analysis was performed using at least 10% of total samples for quality assurance and control.

3. Results & Discussion

3.1. PAHs in $PM_{2.5}$

The one-second prevailing meteorological conditions, including wind speed, wind direction, temperature, and pressure, were determined using a professional weather station (PCE Instruments Ltd., Southampton, UK) to understand the source directions. Wind direction analysis showed that the sampling site had wind blowing from the east, indicating that the village was affected by emissions from the asphalt mix plant (Figure 1). The wind speed from December 2004 to December 2005 ranged from 0.0 m/sec to 8.0 m/s, with an annual average wind speed of 0.61 ± 0.95 m/s. Wind direction histograms (wind rose) for the observation period were prepared, which were overlaid in the study area. The main wind directions were identified as easterly winds. This indicates that the wind blew predominantly from the source location.

Table 1 shows the concentrations of various PAHs measured in the study area, capital city (KIST), and a Korean background location (BI) during the study period. We analyzed 13 species of PAHs to confirm the effects from the sources [35]. The concentration of ∑PAHs in the study area was 11.65 ng/m^3, which was about eight times higher than that at the background location and about five times higher than that in the capital city, which has the major emission sources of vehicles and heating. This suggests that there are facilities in the research area that emit high concentrations of PAHs. The concentration of each of the measured PAHs were, in decreasing order, Chry, BbF, Fluo, BghiP, Phen, etc.; it was confirmed that these five substances with the highest concentrations accounted for 60% of the total PAHs.

Table 1. PAH concentrations in the study area and major cities in Korea.

Unit: ng/m^3	Suburban Residential Area			BI (Background)	Seoul (Capital)
	Overall Average	Standard Deviation	Maximum	Overall Mean	Overall Mean
Phenanthrene(Phen)	0.67	1.05	5.64	0.02	0.02
Anthracene(Anth)	0.06	0.08	0.50	0.00	0.03
Fluoranthene(Fluo)	1.33	1.91	10.59	0.11	0.18
Pyrene(Pyre)	1.09	1.68	10.13	0.03	0.10
Benzo[a]anthracane(BaA)	0.60	0.98	4.60	0.04	0.09
Chrysene(Chry)	1.85	2.02	8.16	0.27	0.43
Benzo[b]fluoranthene(BbF)	1.84	1.77	6.39	0.21	0.33
Benzo[k]fluoranthene(BkF)	0.54	0.51	2.31	0.14	0.20
Benzo[e]pyrene(BeP)	0.79	0.73	2.63	0.14	0.22
Benzo[a]pyrene(BaP)	0.37	0.64	3.11	0.08	0.13
Indeno123cdpyrene(Indeno)	1.02	0.95	3.67	0.16	0.31
Dibenz[a,h]anthracane(DBA)	0.19	0.18	0.87	0.01	0.09
Benzo[g,h,i]perylene(BghiP)	1.30	1.26	6.42	0.21	0.39
∑	11.65			1.42	2.52

The PAHs contained in the $PM_{2.5}$ were analyzed and are represented as time series concentrations in Figure 2. The results show that the ∑PAHs contained in $PM_{2.5}$ ranged from a minimum of 0.51 ng/m^3 to a maximum of 60.73 ng/m^3, with an average of 11.54 ng/m^3. Seasonal ∑PAHs were highest in winter (December–January), followed in order by spring (March–May), autumn (September–November), and summer (June–August). The higher concentrations of ∑PAHs in winter, autumn, and spring compared to summer may be due to meteorological conditions in the point source area.

To identify emission sources of PAHs, diagnostic ratios for source analysis were performed. The diagnostic ratio method is widely used in the determination of PAH pollution sources, of which Anth/(Anth+Phen), Fluo/(Fluo+Pyre), BaA/(BaA+Chry), and Indeno/(Indeno+BghiP) are the most commonly used [36–38]. According to the summary analyses of previous studies; a BaA/(BaA+Chry) ratio of <0.2 indicates a petrogenic source, >0.35 indicates a vehicular emission, and a ratio between the two represents coal combustion [39]. An Anth/(Anth+Phen) ratio of <0.1 usually indicates a petrogenic source, whereas >0.1 indicates a source of combustion [40]. A Fluo/(Fluo+Pyre) ratio of <0.4 indicates a petrogenic source, >0.5 indicates a grass, wood, coal combustion, and a ratio between the two represents fossil fuel combustion [41]. Figure 3 shows the results of diagnostic ratios for source analysis for Anth/(Anth+Phen) vs. BaA/(BaA+Chry) and Anth/(Anth+Phen) vs. Fluo/(Fluo+Pyre). (BaA)/(BaA+Chr) ranged less than 0.2, and Anth/(Anth+Phen) ranged from 0.0 to 0.4. This indicates that the emission of PAHs in the study area is the condensation of complete and incomplete combustion of petrogenic sources [42]. (Fluo)/(Fluo+Pyre) was between 0.01 and 0.62, but most ratios were less than 0.4 during the study period. This indicates that the source of PAHs was fossil fuels from coal and petroleum [43]. These results show that the asphalt plant, the only petroleum raw material processing plant in the study area, dominates the PAHs concentration.

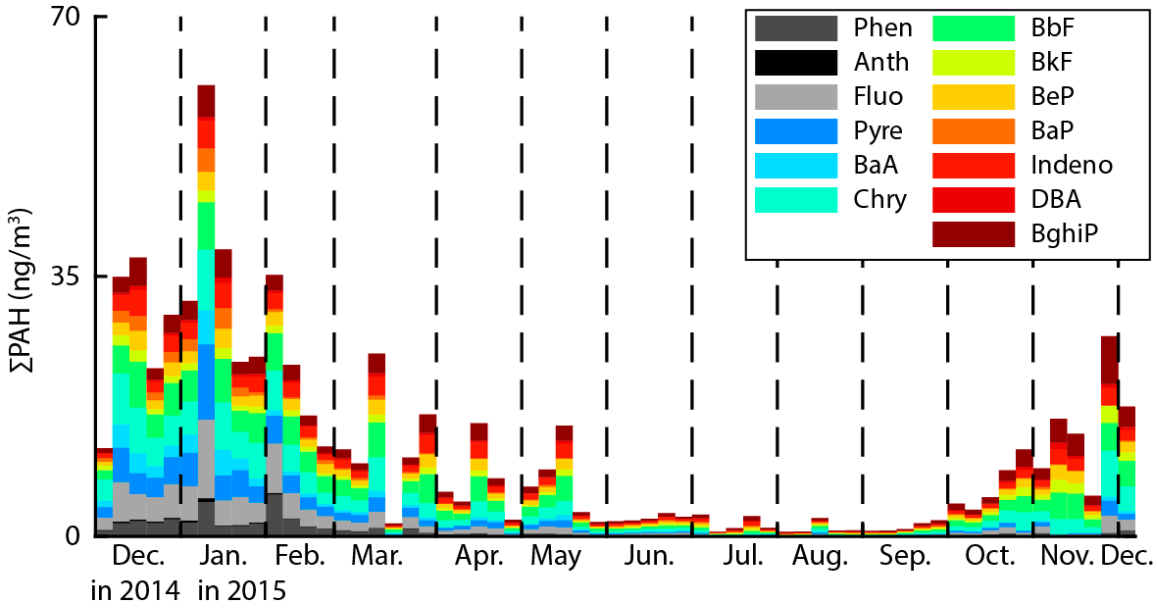


Figure 2. Time series concentrations of PAHs in $PM_{2.5}$ at the sampling site.

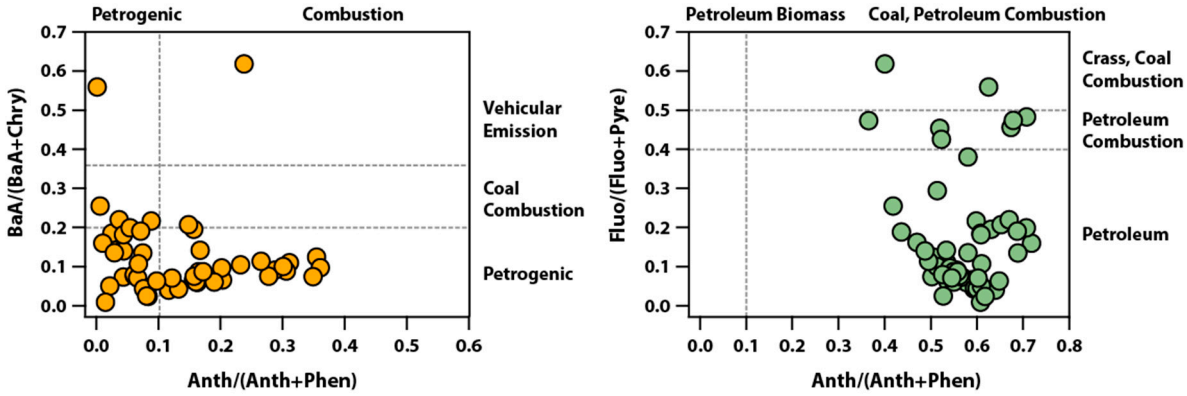


Figure 3. PAH cross-plots for the ratio of Anth/(Anth/Phen) vs. BaA/(BaA+Chry) and Anth/(Anth+Phen) vs. Fluo/(Fluo+Pyre).

The ratio of PAHs emitted from asphalt in this study was compared with the results of previous studies. In previous studies, the ratio of Fluo/Pyre discharged from asphalt was about 1.17 and the ratio of Fluo/BeF was about 0.52 [44,45]. In contrast, in this study, the ratio of Fluo/pyre was 1.22 and the ratio of Fluo/BeF was 0.72. These ratios are similar to those found in previous studies. The characteristics of PAHs generated by the raw materials used to make asphalt and the manufacturing process are different [46,47]. However, comparing the results of this study with the results of previous studies indicates that the PAHs measured in this study were generated by asphalt. An itemized correlation analysis of the analyzed PAHs is shown in Figure 4. The correlations (r^2) for BaA vs. BaP; BbF vs. BeP, Indeno, BeP, and BghiP; and BeP vs. Indeno, DbA, and BghiP were greater than 0.88 in all cases. This indicates that the emission source of the PAHs contained in $PM_{2.5}$ is the same source. In addition, changes in the $PM_{2.5}$ concentration did not have a significant effect on the ratio of PAH components, indicating that the concentrations of $PM_{2.5}$ and PAHs were proportional to each other. Based on the OC, EC, and BC measurement results, we confirmed that the emission source for $PM_{2.5}$ was the asphalt mix plant and that the concentrations of $PM_{2.5}$ emitted and PAHs were proportional to each other. In conclusion, PAHs in the study area are attributable to emissions from the asphalt mix plant.

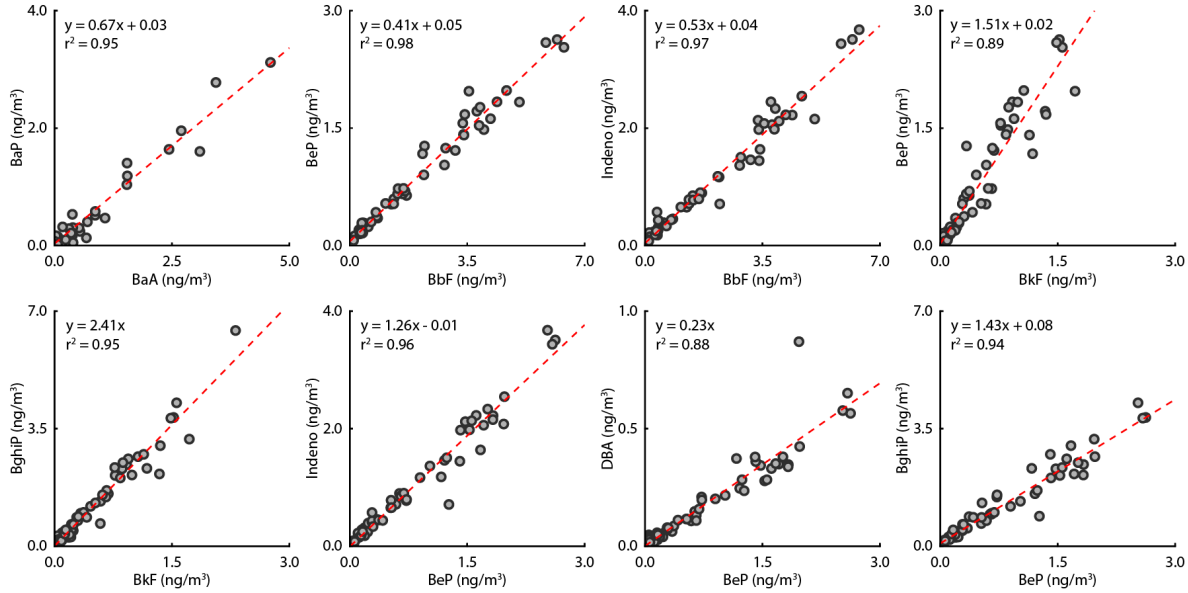


Figure 4. Scatter plots between PAHs.

3.2. Intensive Sampling

The temporal concentrations using 24 h integrated PAH samples every six days, BC (one-minute resolution), EC (72 h integrated), and OC (72 h integrated) were analyzed to characterize the $PM_{2.5}$ collected from the study area. BC is emitted from a variety of combustion processes, mainly incomplete combustion [48–50]. On the other hand, OC is classified as primary organic carbon (POC) or secondary organic carbon (SOC) formed by photochemical reactions, depending on the formation process [51,52]. Estimations of primary and secondary particles based on the proportions of OC, EC, and BC contained in $PM_{2.5}$ have been conducted in various studies [26,53]. The overall averaged BC in the intensive periods was 0.84 μg/m^3. It is interesting that the maximum BC concentration reached 14.17 μg/m^3 on 11 August when the asphalt mix plant was running.

The correlation between OC and EC was evaluated based on the BC concentration (Figure 5). OC showed a correlation of at least 0.82 with BC concentration. These results indicate that $PM_{2.5}$ in the study area is composed of the primary particles generated by combustion. The overall linear regression between the EC and BC concentrations in the study area showed a slope of 3.56 and an r^2 of 0.83. Previous studies reported that the relationship between EC and BC depends on the emission source and atmospheric conditions [54]. In addition, the relationship between EC and BC can depend on the presence of atmospheric compounds related to time-related source differences [55]. Therefore, the relationship between EC and BC is sensitive to the source of carbonaceous aerosols. Thus, the study area appears to be affected by emissions from the asphalt mix plant. Time series concentrations of OC, EC, and BC were measured to confirm the effect of the asphalt mix plant on $PM_{2.5}$, and the time series concentrations were compared based on the operational period of the asphalt mix plant (Figure 6). As shown in Figure 6, OC, EC, and BC increased when the asphalt mix plant was operational. The BC-based OC and EC correlations, along with the increases in BC, OC, and EC during the operational period, prove that the primary particles produced by the asphalt mix plant account for $PM_{2.5}$ in the study area.

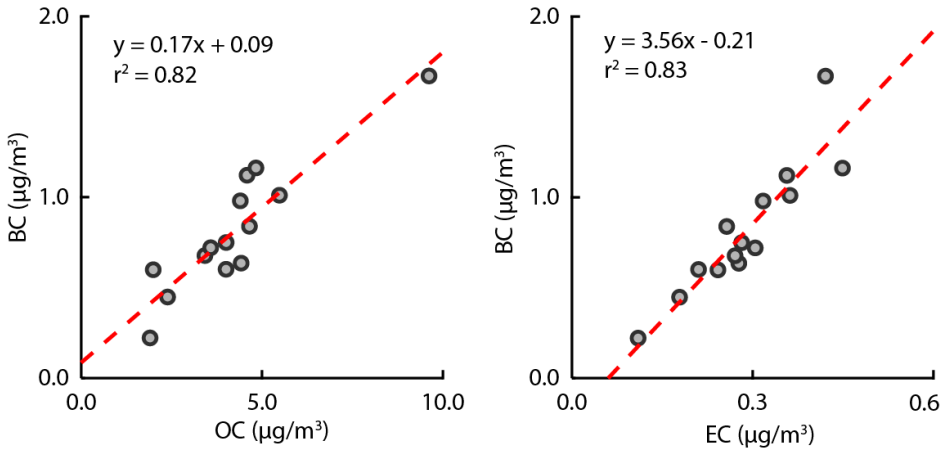


Figure 5. Ratios of BC, EC, and OC according to the analysis of $PM_{2.5}$.

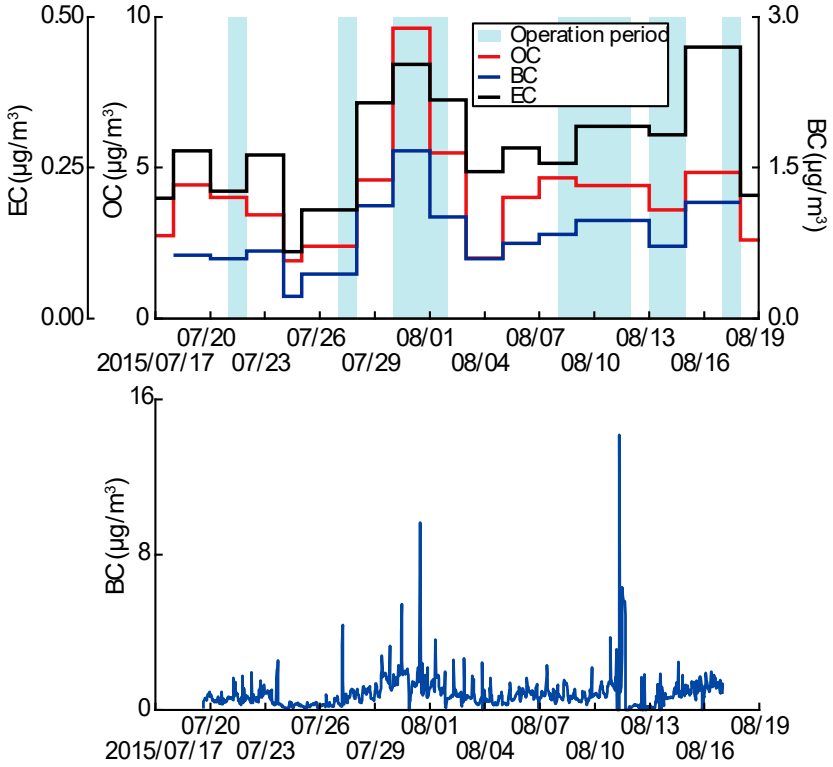


Figure 6. Time series concentrations of OC, EC, and BC and the operational period of the asphalt mix plant.

3.3. Toxic Equivalence Factor (TEF)

TEF was calculated to assess the risk presented by PAHs during the entire sampling periods in the study area. Toxic compounds with the same mechanisms of action can generally be expressed in relation to members of the most toxic group; this is known as the toxic equivalence factor (TEF) [4]. The TEF of PAHs was proposed by Nisbet and LaGoy in 1992 and is calculated based on the most toxic of the PAHs, BaP [56]. In this study, following the methods of previous studies, biological PAH levels were corrected for biological activity by multiplying the concentration of each PAH in the air by the TEF (the value expressed as BaP_{TEF}) [57]. The TEFs used in this study are as follows: 1 for BaP and DBA; 0.1 for BaA, BbF, and BkF; and 0.01 for Chry.

The results of this and previous studies calculated using the TEF are shown in Table 2 [58–61]. The average $\sum BaP_{TEF}$ concentration was 0.8765 ng/m^3, which was similar to or lower than the target

values of the European Commission Air Quality Standard (1 ng/m^3) and the French Atmospheric Quality Standards and Criteria (0.9 ng/m^3). However, the maximum concentration of $\sum BaP_{TEF}$ was 5.0280 ng/m^3 during the study period, and about 28% of the time, the values exceeded 1 ng/m^3. Seasonal $\sum BaP_{TEF}$ concentrations were as follows: winter (2.284 ng/m^3), spring (0.575 ng/ m^3), autumn (0.550 ng/m^3), and summer (0.176 ng/m^3).

The $\sum BaP_{TEF}$ concentrations in the study area were compared with those in the Korean capital and the background location. As shown in Table 2, $\sum BaP_{TEF}$ in the study area was about 6.5 times higher than the background concentration of 0.1317 ng/m^3 and more than three times higher than that in the capital city (0.2863 ng/m^3). This clearly shows that there are sources of pollutants that emit PAHs in the study area.

Table 2. Comparison of BaP_{TEF} toxicity in the study area and in previous studies.

Sampling Site		BaA	Chry	BbF	BkF	BaP	DBA	∑
This study	Suburban Residential Area	0.060	0.0185	0.184	0.054	0.37	0.19	0.8765
	BI (background)	0.004	0.0027	0.021	0.014	0.08	0.01	0.1317
	Seoul (Capital)	0.009	0.0043	0.033	0.020	0.13	0.09	0.2863
Previous study	China, Wuhan	0.149	0.0308	0.486	0.140	1.91	0.22	2.9358
	Saudi Arabia, Riyadh	0.005	0.0005	0.097	0.068	3.19	0.00	3.3605
	USA, Minnesota	0.011	0.0019	0.016	0.007	0.08	0.20	0.3159
	Taiwan, Taichung	0.014	0.0020	0.005	0.026	0.24	0.066	0.353

The $\sum BaP_{TEF}$ concentrations found in the study area were compared to those of major cities (Table 2). $\sum BaP_{TEF}$ concentrations in the study area were lower than those in Riyadh, Saudi Arabia and Wuhan, China, but higher than those in Minnesota, USA and Taichung, Taiwan. Riyadh, Saudi Arabia is known for its high PAHs due to the presence of heavy traffic as well as refineries and power plants near the city [59]. Wuhan, China is the largest city in central China and is known to produce a large number of airborne pollutants, such as a high concentration of fine dust [58]. $\sum BaP_{TEF}$ in Minnesota, USA, shown in Table 2, is concentrated around roadsides in urban areas, and $\sum BaP_{TEF}$ in Taichung consists of PAHs concentrated in areas around coal-fired power plants [60,61].

4. Conclusions

The purpose of this study is to measure the harmfulness of an asphalt mix plant based on PAH concentration. The study area is a village near an asphalt mix plant where inhabitants showed about a 25% cancer rate after the asphalt mix plant was established. PAHs in $PM_{2.5}$ ranged from 0.51 to 60.73 ng/m^3, with an average of 11.54 ng/m^3. The diagnostic ratios between PAHs indicate that the major source of PAHs could be incomplete combustion of petrogenic origin. Seasonal $\sum BaP_{TEF}$ in winter is 2.284 ng/m^3 followed by lower spring and autumn values. The TEF value is about 6.5 times higher than the concentration in the BI background area and more than three times higher than in the capital city, Seoul, in the Republic of Korea. In conclusion, the primary emissions source for the rural village could well be the asphalt mix plant. It is necessary to investigate methodologies of reducing the PAHs emitted from asphalt mix plants. Continuing research on asphalt mix plants is necessary.

Author Contributions: M.S. contributed experimental measurements, data analysis and manuscript preparation. K.L. and S.-H.O. contributed meteorological data analyses and manuscript preparation. M.-S.B. contributed to experimental planning and data analysis. All authors have read and agreed to the published version of the manuscript.

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Reconstructing Pollutant Dispersion Information by Defining Exhaust Source Parameters with Inverse Model

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2. Detex, Seattle, WA, USA

The pollutant dispersion from industrial sources is often unknown. It is also under reported. Evaluation and reporting of all pollutant dispersion patterns are desired thus avoiding dependencies on business and government that own the sources of pollutant emissions. This is very important.

In order to find such information using dispersion model, it should be known what the parameters are in different weather patterns paired with the pollutant's emission rate. Then solve the other related questions. What is the height of the pollutant's source? What is the gas exhaust velocity when overlaid with the known wind values and direction? The emission's rate and gas exhaust velocity identification requires continuous monitoring data that for the most cases is not available. That restriction is changing with improved collection methods and modeling.

The approaches to resolve this problem reveal that building inverse models that allows re-engineer pollutant dispersion is possible. The linear inverse model was created to identify emissions rates from multiple sources (Seiber et al, 1997), (Lushi and Stockie, 2010)). Authors concluded that model of approach should be extended in order to improve accuracy. The accuracy of the inverse model depends on direct model parameters estimation. The estimated parameters that our subject of the concern are:

a. Standard deviations of concentration in the y and z directions. The empirical expressions covered in dispersion models publications (Awastithi, 2006), (Macdonald, 2003) requires some assumption that per invalid selection can result a big error.
b. Effective height of the point emissions source stack. The effective height depends on pollutant release from the stack velocity that can be defined by continuous monitoring. Such monitoring is not in common practice.

The proposed model reveals to solving Least Square Operator for experimental and analytical expression pollutant concentrations, defining emission rate, effective source height and standard deviation of the concertation as unknown parameters. It allows to find effective height of the source that depends on unknown emissions release velocity from the point source stack.

The new model definition requires to solve complex non-linear system of the equations. The solution such system is defined with theory of Hypernumber (Burgin, 2010), (Burgin and Dantzler, 1995, 2014, 2015).

The particulate data acquisition uses PM 2.5 sensors and interfacing Raspberry 4 B mini - computer to implement inverse models

1. Awastthi, S., Khare, M. and Gargawa, P. (2006) General Plume Dispersion Model (GPDM) for Point Source Emissions. Environmental Modeling and Assessment. Vol. 11, pp. 267-276
2. Burgin, M. (2010) Nonlinear partial differential equations in extrafunctions, *Integration*: *Mathematical Theory and Applications*, v. 2, pp. 17-50
3. Burgin, M., Dantsker, A.M. (2014) Lithium Battery Temperature Prediction. *Integration*: *Mathematical Theory and Applications*, v. 3(4).
4. Burgin, M., Dantsker, A. (2015) Real-Time Inverse Modeling of Control Systems in Hypernumbers, Nova Science Publishers, New York.
5. Burgin, M. and Dantsker, A.M. (1995) A Method of Solving of Operator Equations of Mechanics by means of the Theory of Hypernumbers, Notices of the Academy of Sciences of Ukraine, 1995, 8, pp. 27-30.
6. Lushi, E., and Stockie, J. (2010) An inverse Gaussian Plume Approach for Estimating Atmospheric Pollutant Emissions from Multiple Point Sources. Atmospheric Environment
7. Macdonald, R. (2003) Theory and Objectives of Air Dispersion Modelling.
8. Seibert, P., (1997), Inverse dispersion modelling based on trajectory-derived source-receptor relationships, in: Air Pollution Modeling and its Application XII, S.E. Gryning, N. Chaumerliac, eds., Plenum, New York.

Thank you for your reading and consideration of this paper.

COMPLAINT CONCERNING ODOR AND TOXIC EMISSIONS

ADDRESSED TO THE

PUGET SOUND CLEAN AIR AGENCY

Re: Kenmore Asphalt Plant 6431 N.E. 175th Kenmore, Washington 98028

From: _____

Date: _____,

I am a resident of the City of Kenmore and a neighbor of the Kenmore Asphalt Plant. I live at _____.

Or I work and pass through Kenmore Yes or No

I write to issue a complaint about the Kenmore Asphalt Plant activity which creates the following air quality problems:

1. The plant operates at all times of the day and night on a regular basis.

2. When in operation, I am subjected to a distinct caustic odor which I am visibly able to view coming from the exhaust emitted into the atmosphere by the plant.

3. I am aware that this odor has also been observed and written up by the Puget Sound Clean Air Agency.

4. In addition to the odor, there is evidence that the Asphalt Plant is actually spewing toxic, carcinogenic chemicals into the air at the time of operation. Examples of the evidence for this claim is being submitted independently through other complaint(s) from citizens of Kenmore

5. The odor and, I believe, the chemicals being released in the air have caused me to:

6. Check all that apply and add additional items

a) _____ I wake up with a headache in the morning

b) _____ My throat feels irritated

c) _____ My nose feels irritated

d) _____ I have trouble breathing

e) _____ My chest hurts

f) _____ _____

g.) _____

In addition to the above, the following additional harmful conditions and violations have occurred or continue to occur:

1. The Asphalt plant owners and operators have violated the terms of their Grandfathered Operations Permit.

a.) ZERO Independent Samples of Fuels used to heat the tar and waxes. No reporting with no regular signed affidavit by the Company manager on record affirming compliance.
b.) Apparent lack of recorded testing of harmful chemicals (carcinogenic) at the stack blowing into my home.
c.) They have not updated the list of masking chemicals they use. Nor have they reported on the ratio/ concentration, chemical mix and effects of the new compounds they form when heated to the stack exit temperature.
d.) They deliver these chemicals by truck late at night which would raise the question as to whether they are trying to avoid inspections / sampling of the products they are using in their manufacturing process.
e.) There is an indication that the Asphalt Plant ownership may have engaged in multiple non-approved change outs of equipment and updates over a number of years without ever obtaining permit authority, which would require a reapplication subject to the latest Washington State environmental standards.

I hereby demand that Puget Sound Clean Air Agency investigate and where appropriate cite the Kenmore Asphalt Plant and force them into compliance.

_____
Signature

_____
Print name Date

Your email:

Copy Written by Patrick E. OBrien No alterations without writer approval.

Please Sign Scan and email to both organizers: patrickobrien859@gmail.com

Stacey Valenz: svalenz229@gmail.com Need more info? Call 1-650-580-1564

March 31, 2022

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The City of Kenmore must pursue only one outcome and that is the removal of that Asphalt plant! This Asphalt Plant is in a prime riparian zone. They pollute streams, Lake Washington water and Air.

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Puget Sound clean air is to regain any confidence with the public P.S.C.A. must take action NOW! The past slack standards for enforcement and low penalty for breaking the law must change immediately. As proof of the industry disregard during the total burn ban of last year they continued operation with no regard for public health.

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We find this impossible to reconcile. This asphalt plant is on notice that if there is a fire they will not only be held responsible for their employees and property but on notice that any destruction of the neighboring property with the use of these illegal cut back asphalt ingredients will be punishable not only in civil court but we will do everything in our power to bring criminal charges against the operators.

That’s a promise

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surrounding properties will never be developed successfully with an asphalt and concrete plant on the shores of Kenmore. We are going to spend millions of dollars to fix our parks only to not be able to use them to their full extent because of toxic asphalt and concrete air and water pollution. To repeatedly lie on environmental checklists and to falsify information with many aspects of this asphalt plant operation warrants people going to jail. In each of the Kenmore Asphalt Plant applications the applicant has lied repeatedly to obtain an illegal operating permit. The agency did not question them or ask for additional information that we have been able to find out. Therefore I move that the operations permit be immediately terminated for the Kenmore Asphalt Plant for cause. The city must now issue a cease and desist order in the interest of public health. The Asphalt Plant did illegally expand their footprint by storing their gravel feed stock on the Lake Pointe Property. That is an expansion of footprint. Lastly: This land is all on a MTCA site. Thank you Patrick E. O'Brien



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The use of band chemicals hiding these activities to the public, Health departments, government officials including but not limited to P.S.C.A. is a CRIME. Where is the justice concerning the use of Toxins / Poison contamination in the Asphalt Plant ownership in their "knowing and ongoing basis"? Washington State who is chopping down our Cherry Tree? The Green State officials or the Crime State cover up scoundrels?

The environment and public health has been damaged. Criminal prosecution is warranted and publicly demanded!

Thank you from the bottom of my heart.

Patrick E. O'Brien
Kenmore, Washington 98028

From:	Patrick O"Brien
To:	Bryan Hampson; Brian Renninger; John Dawson; Public Comment; Cynthia Wang; Steve Van Slyke; Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall
Subject:	My Public Comment on why to not grant any new Asphalt permits in Kenmore
Date:	Saturday, April 16, 2022 10:44:16 AM
Attachments:	PAH_risk.docx 03312022 V4Kenmore Asphalt Plant Letter Word Document.docx

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From:	Pon, Yolanda
To:	Public Comment
Cc:	Kellogg, Ryan; Ayalew, Eyasu
Subject:	Notice of Public Comment and Public Hearing - Cadman Materials, Inc. (Cadman)
Date:	Monday, May 2, 2022 11:03:32 AM
Attachments:	2022 PH comments for Cadman Kenmore Asphalt Plant PSCAA permit.pdf

Mr. Renninger,

Please see the attached letter of comments from the Environmental Health Services Division at Public Health - Seattle & King County with regards to the above notice. Thank you.

Yolanda Pon
Solid Waste Program Supervisor
Solid Waste, Rodent and Zoonotics Program
Environmental Health Services Division
Public Health – Seattle King County
401 5th Avenue, Suite 1100
Seattle, WA 98104
Phone: (206) 263-8459
Office hours: Tuesday - Friday

Environmental Health Services Division
401 Fifth Avenue, Suite 1100
Seattle, WA 98104-1818
206-263-9566 Fax 206-296-0189
TTY Relay: 711
www.kingcounty.gov/health

Public Health
Seattle & King County

May 2, 2022

Brian Renninger, Engineer
Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, Washington 98101

RE: Public Health – Seattle & King County's comments on air permit for the Cadman Materials, Inc. asphalt recycling facility located at 6341 NE 175th St., Kenmore, WA 98028

Dear Mr. Renninger,

Thank you for the opportunity to provide public comment on the air permit for the Cadman Materials, Inc. - Kenmore asphalt recycling facility. Please see the following comments from the Environmental Health Services Division with Public Health – Seattle & King County.

Maintenance records of operation malfunctions

- We recommend PSCAA is notified within 24 hours whenever there is a malfunction of air pollution control equipment or failure of a monitoring device.
- If the malfunction leads to high emissions of particulate matter, the facility and PSCAA may need to notify residents and businesses in within a certain radium of the facility to shut windows, filter air, and stay indoors.
- The facility should notify PSCAA once corrective actions are taken, and air pollution control devices are fully operational.

Emission limits

It is unclear if emissions identified in items 7-13 in this section are tracked and reported to PSCAA. Public Health recommends these requirements are made more explicit to ensure that the facility is meeting regulatory standards.

Facility-wide emission limit

Threshold exceedances should be reported when discovered and not wait at the end of a 12-month period.

Production limit

The methodology is unclear as to how the agency initiates and completes odor investigations by the control officer.

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206-263-9566 Fax 206-296-0189
TTY Relay: 711
www.kingcounty.gov/health

Public Health
Seattle & King County

We suggest a clear time period for odor complaint response, rather than "immediately," which can be subjective

Public Health recommends the facility consider exploring different sensors/odor monitoring devices that can provide data 24/7 and eliminate some of the limitations of personnel trained in odor investigation. In addition, there should be multiple people used as sensors for odor and not just facility employees.

Complaints

It is unclear if there is a mechanism for the facility to notify the agency periodically when the facility receives odor complaints. This draft approval requires documentation of complaints received and actions taken to address the complaint. Public Health recommends the agency be made aware of any odor complaints received immediately and provide the agency a status update on the efforts to address the complaint. Public Health also recommends the agency consider prioritizing sites with higher public health risks when scheduling routine investigations.

Please feel free to contact Public Health at my direct phone number (206) 263-8459 or email me at yolanda.pon@kingcounty.gov if you have any questions to our comments. Thank you.

Sincerely,

Yolanda Pon

Yolanda Pon, Program Supervisor
Solid Waste, Community Health and Zoonotics
Environmental Health Division, Public Health

From: vgrayland@earthlink.net
To: Public Comment
Subject: Order of Approval 118661.
Date: Monday, April 18, 2022 3:31:49 PM
Attachments: PSCAA HEaring.docx
Updated SEPA Checklist 2019-1204.pdf

These are my comments on Order of Approval 118661

Vicki Grayland
206.650.1003
vgrayland@earthlink.net

My name is Vicki Grayland and I live in Kenmore. For the last 18 months or so, a small group of us has been speaking at PSCAA Board of Directors meetings, month after month after month, bringing up all the issues of how PSCAA does its job.

I am so pleased that all our work has paid off and PSCAA has decided to do the job it was created to do and enforce the environmental laws that exist. I agree with most of the requirements listed in the documents on the PSCAA website. I don't agree with the way the stack testing was performed. Cadman Asphalt was told when the testing would take place, and theoretically could manipulate the emissions to create test results that may seem within health standards. My first comment is that we need more testing and testing that is unannounced. And we need health studies of the current Kenmore populace. We have anecdotal evidence of Kenmore residents going through cancer treatment, but it needs to be more scientific.

What also needs to be more scientific is the SEPA checklist. The asphalt plant is within a mile of a heron rookery at 73rd Avenue. The heron is the symbol of Kenmore, probably because of the rookery and because the wetlands are so numerous in Kenmore, the natural habitat of herons. The heron is not listed on the checklist. It appears to me that the last SEPA checklist was merely copied into the most recent checklist. I remember that the herons were omitted from that last checklist as well.

And because the agency has a role in declaring hazardous air days which in the last few years has been because of forest fires, I would like to ask that the Cadman Asphalt plant not be allowed to operate on such days. If a homeowner can't run a woodstove on such a day, an asphalt plant should not be operating. That is part of my list of comments, and the last one for today. Thank you very much. I will be submitting a written comment because in the months I've made comments to the Board I've noticed that in the summary of my comments in the meeting minutes, in my opinion, my comments have been misinterpreted and softened. To avoid any misunderstandings, I will submit my comments in writing.

From:	Patrick O"Brien
To:	Kenmore City Council; Amy Fowler; Bothell Kenmore Chamber of Commerce; Rob Karlinsey; Puget Sound Clean Air Tom H
Cc:	David Morton; Janet Hays; Stacey valenzuel; Rep. Pollet; Elizabeth; Stan Isenhath; Abby London; Frockt, Sen. David; Nigel Herbig; Jon Culver; Carl Michelman; Vicki Grayland; Joe Marshall
Subject:	Please add my nuisance letterers to the official record in demanding the rejecting all Kenmore Asphalt plant permits
Date:	Thursday, April 14, 2022 3:17:43 PM
Attachments:	03312022 V4Kenmore Asphalt Plant Letter Word Document.docx

Please add my nuisance letters to the official record in demanding the rejection of all Kenmore Asphalt plant permits. Criminal charges must be filed.

Regards

Patrick E. O'Brien

6330 N.E. 181st Street

Kenmore, Wa. 98028

March 31, 2022

Our New T-shirts

1.) Collusion is our solution to pollution.

2.) Kenmore it's Asphalt Wealth versus residence health

3.) They conceal we appeal

4.) Asphalt on the water villains in disguise.

You must never consider a new permit when obstruction is involved. The asphalt plant clearly engaged in obstruction when they covered up their continuous upgrading with no permit. That's a criminal offense and you don't issue new permits to criminals.

The continuous use of the term hot mix is false; it is medium temperature mix and requires the addition of cutback asphalt.

The asphalt plant continues to run during dangerous air conditions such as forest fires and all burn ban events. There are also inversions of air masses over the north end of Lake Washington and they have not stopped or diminished their output for that reason which means they are callous to the health effects they cause all life within 3 miles of their stack.

Actual stack testing not modeling is what's required here because of the use of unpermitted reagents in the making of asphalt!

The City of Kenmore must pursue only one outcome and that is the removal of that Asphalt plant! This Asphalt Plant is in a prime riparian zone. They pollute streams, Lake Washington water and Air.

As stated the grandfather clause was applied when it had no validity. FAKE!

The false permit and land-use has long ago elapsed.

Now a criminal investigation needs to proceed into Puget Sound Clean Air and throughout the entire Washington State Asphalt Association along with City and Washington State employees. Judges making fale rulings must be punished.

Clearly modeling only works when you know the total sum of the conditions. The age and configuration of the plant, the exact measurements of all reagents, the tank monitoring of all chemical ingredients, all weather and environmental factors and of all bills of lading from the

producers. What asphalt binding mixtures are delivered including the lab reports from each batch.

Cascade Law group was hired as a shield to protect the Kenmore City manager and the Kenmore City staff from their lack of availability, training, due care and caution of this Asphalt Plant is the number one health risk in Kenmore! Any defense of this "new" asphalt plant application is being promoted by Cascade Law group and is not in opposition of it being granted! Those actions are 180 degrees against the complaints and demands of Kenmore Citizens!

Nobody has brought up the fact that this asphalt plant and its potential for fire is adjacent to the largest seaplane base in the world and explains our irreplaceability! And yet Kenmore air is the most decorated and acclaimed business we have in the city of Kenmore. Kenmore air in the last 10 years was given permission to have above ground aviation fuel tanks without octane well above automotive gasoline. One fire could mean the end of Kenmore air and the tourism dollars that they bring to Kenmore!

The local fire district has not performed on site practice drills of the asphalt plant. Further there is a question whether or not this fire district has the equipment necessary to fight a chemical fire exactly one the first alarm rings, not sometime later pulling needed equipment and personnel from other fire districts.

Obstruction, criminal collusion, racketeering, false reporting, illegal hours of operation including the barges that bring the substrate, intimidation all have been used prior to this latest asphalt plant permit application. If corporations have the same status as people then one must say they’re treated entirely differently when they misrepresent material facts in an official application.

With great apprehension that these proceedings are in fact fixed.

Patrick E. O'Brien

07/22/2021

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Asphalt Plant. This occurred because of changes to the physical asphalt plant not permitted or sanctioned in advance as required. Their ability to operate is invalid and they must reapply to operate under 2021 standards and rules.

These changes from the original batch plant created a Frankenstein plant that was not erected from one engineering standpoint but in fact made from bits and pieces being taken away from other old and antiquated plants and added or subtracted as they were found.

This actions voids their ability to claim a “grandfathered status.”

Retroactive clemency is not in order. As such the public demands that you immediately red tagged on multiple counts. Either that occurs or one could reasonably argue the Puget Sound clean air is complacent in their illegal behavior and any reasonable person would conclude a conspiracy to defraud the public of their right to public health. This Puget Sound clean air laissez-faire policy and oversight has been in play for a very long time.

False rules of Thumb in this Application equals False Modeling of the Asphalt fumes impacts.

Instead this asphalt plant is operated as a medium temperature asphalt plant not as a hot mix asphalt plant. This squarely puts it outside the EPA's EPA AP 42 emissions calculations. Which cannot be used if the variables for the use of that calculation are not in place.

First the calculation is for Hot Batch asphalt plants this plant is not operating as a HOT batch asphalt plant! By their own admission they use temperatures of a medium temperature batch plant which are 300° to 350°F. This calculation is for use when performance grade asphalt is used. If performance grade asphalt is not used the calculation is again nullified in its accuracy. When Medium cure asphalt is used also known as cut back asphalt with added components of kerosene and diesel that again violates the parameters of this calculation. As noted in three different Puget Sound clean air citations the presence of cutback asphalt was found at the plant although the operators claim otherwise. The evidence observed does not agree with the asphalt plants operators. Therefore there is a need to test not only the asphalt chemical components as they are delivered but also an immediate testing at the stack for volatile compounds and other compounds formed with unknown reagents being used in this process.

We have over a thousand Kenmore citizen nuisance complaints stemming from the operation of this plant and we can see the chemical trail of this nuisance. We the public note the wind direction which is predominantly to the north northeast which takes it directly into Kenmore's downtown area and the houses along the hill immediately to the north of the asphalt plant. This very day I took pictures of the asphalt flume and had to close all my windows. We cannot escape the homes we live in. This nuisance is damaging to our use of our property and our health.

Puget Sound clean air is to regain any confidence with the public P.S.C.A. must take action NOW! The past slack standards for enforcement and low penalty for breaking the law must change immediately. As proof of the industry disregard during the total burn ban of last year they continued operation with no regard for public health.

Another interesting point is that this asphalt plant sits next to Kenmore air which has approximately half $1 billion worth of seaplanes. They also have an extensive amount of aviation fuel in above ground tanks.

The use of cutback asphalt greatly increases the fire risk to not only the Kenmore asphalt plant and its workers but also to this neighboring business (Kenmore Air) which is a major asset for the City of Kenmore and its citizens. Kenmore Air is a main driver of tourism and recreation to the state of Washington.

Because of Kenmore Air many other areas of Washington and Canada are accessed on a regular commercial service as well as private charters. Please note that Google may own as much as 49% of Kenmore Air! They probably don't want to see their valuable assets diminished, destroyed or compromised.

Since the asphalt plant is not openly admitting use of cut back the necessary fire equipment is not within easy reach or planning Kenmore North Shore Fire District 16 fight the fire such Chemical Fire such as the asphalt plant on the waterfront of Tacoma last year.

We find this impossible to reconcile. This asphalt plant is on notice that if there is a fire they will not only be held responsible for their employees and property but on notice that any destruction of the neighboring property with the use of these illegal cut back asphalt ingredients will be punishable not only in civil court but we will do everything in our power to bring criminal charges against the operators.

That's a promise

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That’s a promise

Patrick E. O’Brien

6330 N.E. 181st Street

Kenmore, Wa. 98028

Hello friends : I think we must STOP allowing the City of Kenmore and Puget Sound Clean Air from using their misleading nomenclature in naming this Hazardous Pollution situation. We as a group must call this a catastrophe. That is what it is. Murder with a permit! Harsh terms no, accurate yes. That is exactly what the City of Kenmore and Puget Sound Clean Air are both engaged in. The "Grandfathered" Permit "Runaround". This is a health crisis for both our wildlife and citizens. So, please nobody use their term "odor". It is a verbal distraction for legal reasons. What is this permit? Tantamount to issuing a permit to poison people in their homes and environment. It is illegal. The history and evidence point to this as a huge criminal conspiracy. 1.) Perjury, Failure to report changes to the facility, falsing documents, obstruction of justice, and assault on the public's health. All of which are felonies and in each criminal offense and both the applicant and Puget Sound clean air are guilty. The administrative body is on the hook for all these lack of oversight and colluded with the applicant when given governmental powers of oversight. 2.) The City of Kenmore is guilty of not enforcing its own city codes namely hours of operation and noise ordinances that were called in many times to 911. The officers were told not to act on any complaint that came from me Patrick E O'Brien as a citizen with regards to Lake Pointe or any of the activities there in. I had pointed out by Brian Hampson that if the city found a violation they could investigate and add violations to a complaint. If that is so that should've started the investigation of the concrete and asphalt plant for other violations but that does not seem to have happened. So far there has been no official response by the City of Kenmore on any of my citizens complaints. The City of Kenmore did have several people asking for relief . I signed many a Puget Sound Clean Air complaint but I explained to them that I was complaining to the city of Kenmore for relief. Several of us along with representative Jerry Pollet had already been to Olympia and watch Puget Sound Clean Air testify for the Kenmore asphalt plant! How's that for impartial? I encourage each Kenmore citizen to fill out a Kenmore citizen's complaint and lodge it with the City so that they will know that they are indeed expected to act in this matter. To do otherwise would mean they have vacated their responsibility on the health and safety of Kenmore citizens and the environment. Our citizens crusade is NOT being adversarial to the city's interests at all. It is an easy out for them because this initiative is spawned by the public and the public's demand for the health and safety standards to be upheld. Log Boom Park and all of the

surrounding properties will never be developed successfully with an asphalt and concrete plant on the shores of Kenmore. We are going to spend millions of dollars to fix our parks only to not be able to use them to their full extent because of toxic asphalt and concrete air and water pollution. To repeatedly lie on environmental checklists and to falsify information with many aspects of this asphalt plant operation warrants people going to jail. In each of the Kenmore Asphalt Plant applications the applicant has lied repeatedly to obtain an illegal operating permit. The agency did not question them or ask for additional information that we have been able to find out. Therefore I move that the operations permit be immediately terminated for the Kenmore Asphalt Plant for cause. The city must now issue a cease and desist order in the interest of public health. The Asphalt Plant did illegally expand their footprint by storing their gravel feed stock on the Lake Pointe Property. That is an expansion of footprint. Lastly: This land is all on a MTCA site. Thank you Patrick E. O'Brien



From:	Stacey Valenz
To:	Public Comment
Cc:	John Dawson
Subject:	Public comment Cadman draft permit #11861 open comment ap42-enforcementalert.pdf
Date:	Saturday, April 30, 2022 9:45:17 PM
Attachments:	ap42-enforcementalert.pdf

Please see the attached notice from EPA. This AP42 model was exactly what used in the calculations? Please use true calculation for cutback Asphalt as that is likely, per inspection paperwork of last WSDOT test list! The calculations cannot be satisfactory unless untrue conditions are used to calculate the possible emissions.
Also please reevaluate the determinations of the emission path, and PM determined then advise of valid calculations.
The area used in calculations of emission dispersing calculation,Payne field is so flat and different in terrain than Kenmore. Also those that ran these calculations, failed to consider the type of structures in that area of Kenmore's downtown corridor.
Like the Malarkey Asphalt plant, that was closed, on the Duwamish River, Cadman Asphalt is on the Shoreline and located at sea level. The emissions flow upward and out based on the winds conversion zone in this area... We know the emission fumes hit strongly on higher ground on NE 181st between 62 Ave NE and 64th Ave NE, next dispersing further out to 68th Ave NE, and up as far as 202ndAve NE. There is also flow on the south side of the Sammamish River. There are several blocks that have neighbors with cancer. There are 3 schools in this area as well.

To some of us, it looks like the owner, operators, or consultants are providing the calculations and testing based on the lowest possible hypothese models, and invalid dispensing, that fails to be factual or true representation of the emissions and high level of particulate matter, VOC, PAH, or dioxin in the air that our residents breath in Kenmore.
Again, please reevaluate factual calculations based on true data, stack height, binder product, and area terrain, then advise if these figures are over the allowed limits!
Please approve the Cadman Draft Permit #11861 , with the 30 stipulations, and amendments to limit storage or use of cutback Asphalt, added surprise testing, and enforce penalties for all violations.

Kenmore residents value being strong environmental stewards and support your #1 goal to protect public health and our environment from pollution.

Please help protect the residents, and environment of Kenmore with cleaner ambient air.

Thank you for consideration,
Stacey Valenzuela
Kenmore Advocate

Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

EPA United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance

Enforcement Alert

Publication no. EPA 325-N-20-001 November 2020

EPA Reminder About Inappropriate Use of AP-42 Emission Factors

Purpose

This purpose of this Enforcement Alert is to remind permitting agencies, consultants, and regulated entities that improperly using AP-42 emission factors can be costly to their businesses, inefficient, and in some circumstances, can subject regulated entities to enforcement and penalties. The Environmental Protection Agency (EPA) is concerned that some permitting agencies, consultants, and regulated entities may incorrectly be using AP-42 emission factors in place of more representative source-specific emission values for Clean Air Act permitting and compliance demonstration purposes.

Consequences of Using AP-42 Factors

Permitting agencies, consultants, and regulated entities should be aware that even emission factors with more highly rated AP-42 grades of "A" or "B" are only based on averages of data from multiple, albeit similar, sources (*See* the Attachment for an overview of the history of AP-42 emission factors and the AP-42 emission factor rating system). Accordingly, these factors are not likely to be accurate predictors of emissions from any one specific source, except in very limited scenarios. While emission factors are helpful in making emission estimates for area-wide inventories for specific source types, AP-42 provides the following warning:

> "Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."[1]

With the advent of 1-hour and short-term National Ambient Air Quality Standards (NAAQS), permit limits must be able to account for short term fluctuations. AP-42 emission factors also do not account for short term variation in emissions as the emission factors are intended for use in developing area-wide annual or triannual inventories. In developing emission factors, test data are typically taken from normal operating conditions and generally avoid conditions that can cause short-term fluctuations in emissions. These short-term fluctuations in emissions can stem from variations in process conditions, control device conditions, raw materials, ambient conditions, or other similar factors. This means that if facilities use AP-42 emission factors as permit limits, facilities increase their chances of violating their short-term permit limits. It also increases the likelihood of a geographic area's non-compliance with the NAAQS.

DISCLAIMER: This document aims to explain the application of certain EPA regulatory provisions using plain language. Nothing in this Alert revises or replaces any regulatory provisions, any other part of the Code of Federal Regulations, the Federal Register, or the Clean Air Act. Following the approaches for determining a single storage vessel's potential for VOC emissions and attempting to comply with the closed vent system requirements as discussed in this Alert do not equate to or guarantee compliance with the Clean Air Act, its implementing regulations, and associated state/local requirements. For more information, visit: www.epa.gov/compliance.

[1] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 2 (emphasis added).

It is also important to understand that there is a great deal of variability in the emissions data that are used to generate the emission factors. This variability is not necessarily reflected in the emission factor. AP-42 describes this as follows:

> "The extent of between-source variability that exists, even among similar individual sources, can be large depending on process, control system, and pollutant. Although the causes of this variability are considered in emission factor development, this type of information is seldom included in emission test reports used to develop AP-42 factors. As a result, some emission factors are derived from tests that may vary by an order of magnitude or more. Even when the major process variables are accounted for, the emission factors developed may be the result of averaging source tests that differ by factors of five or more."[2]

In addition to potential permit noncompliance, or increased risk of area noncompliance with the NAAQS, using an emission factor as an emission limit could have monetary implications for an individual source or permitting agency. For example, many permitting agencies collect permitting fees based on the amount of pollution emitted. If a facility uses an emission factor to estimate and report emissions, but the actual emission rate is lower than the emission factor, then the facility will report more emissions and consequently pay more in fees. On the other hand, if a facility emits at a rate above the emission factor, not only is the source violating its permit limit and the Clean Air Act, it is also not paying the appropriate amount in fees.

Another potential monetary implication for facilities is an enforcement action assessing penalties for violating the Clean Air Act. As described in a 2006 report issued by the EPA Inspector General:

> "…according to EPA enforcement records, three industries – petroleum refineries, wood products, and ethanol production – operated with insufficient control equipment primarily because emission limits were significantly underestimated due to the emission factors used. EPA, through separate enforcement actions, required companies in these industries to install additional emission controls, resulting in the combined reduction of over 1,000,000 tons of pollutants."[3]

For example, the EPA Inspector General's 2006 report documented an EPA investigation in the Wood Products industry that found a nationwide pattern of Clean Air Act violations by one company. EPA found that the company had used an AP-42 emission factor designated as "poor" for volatile organic compound (VOC) emissions that resulted in the company underestimating such emissions and claiming that its facilities were not subject to permitting requirements. To resolve the violations, the company entered into a consent decree with the United States, which required the company to pay a civil penalty of $1.1 million and to install air pollution control equipment at a cost of $70 million.[4]

One example of a present-day concern is the use of a default vapor pressure value for estimating VOC emissions from heated tanks that store heavy refinery liquids such as No. 6 fuel oil. The true vapor pressure (TVP) of a stored liquid is important when calculating the emissions from tanks using the equations in AP-42, Chapter 7, Liquid Storage Tanks. The default vapor pressure is only an estimate and may not be correct for every blend of No. 6 fuel oil. Direct emissions testing of No. 6 fuel oil tanks and TVP testing in 2012 and 2013, suggested that in those cases the use of the default vapor pressure in AP-42 had resulted in emissions estimates that were understated by a factor of 100 for permitting and reporting purposes. Reliance on the default vapor pressure in AP-42 and the resulting emission factors, instead of directly measuring VOC emissions and vapor pressure, can be very costly for businesses as shown by two recently concluded cases, summarized in the following two boxes.

[2] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 3 (emphasis added).

[3] U.S. EPA Office of Inspector General, *EPA Can Improve Emissions Factors Development and Management*, Report No. 2006-P-00017, March 22, 2006.

[4] Id.

Sprague Resources LP operates heated asphalt and No. 6 fuel oil storage tanks at seven facilities across New England. Applying VOC testing results rather than AP-42 estimates, EPA found that Sprague had unpermitted facilities that required permits, and also had facilities with permits that failed to fully account for VOC emissions. Sprague entered into a settlement with the United States and the Commonwealth of Massachusetts that required the company to pay $350,000 civil penalties, obtain revised state air pollution control permits, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at six facilities, and provide odor controls on tanks at two facilities.

Global Partners LP operates heated asphalt and No. 6 fuel oil storage tanks at a facility in South Portland, Maine. Applying VOC testing results rather than AP-42 estimates, EPA found that Global's permit failed to fully account for VOC emissions. Global entered into a settlement with the United States that required the company to obtain a revised state air pollution control permit, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at the facility, install odor controls on tanks, pay a $40,000 penalty, and invest $150,000 in a local wood-stove replacement project.

Regulated entities of any size who voluntarily discover, promptly disclose, expeditiously correct, and take steps to prevent recurrence of potential violations may be eligible for a reduction or elimination of any civil penalties that otherwise might apply. Most violations can be disclosed and processed via EPA's automated online "eDisclosure" system (seehttps://www.epa.gov/compliance/epas-edisclosure). To learn more about the EPA's violation disclosure policies, including conditions for eligibility, please review EPA's Audit Policy website at https://www.epa.gov/compliance/epas-audit-policy. Many states also offer incentives for self-policing; please check with the appropriate state agency for more information.

What Can Be Done?

Consultants and facility owners/operators should obtain and use the most representative emissions data, which in many cases may be source-specific emissions data, when determining applicability, applying for a permit, or demonstrating compliance with permit limits.

Various EPA publications (e.g., https://www.epa.gov/emc) describe the benefits and limitations of different ways to quantify source-specific emissions. These techniques in order of accuracy are:

- **Continuous Emissions Monitoring System (CEMS)** – CEMs offers a highly accurate source-specific method that continuously monitors the emissions coming out of a particular stack; however, although the accuracy of this method is high, the cost is also the highest at $20,000-$50,000 per year.
- **Stack Testing** – Like a CEMS, source-specific data are generated at a particular stack but emissions are only measured for a specific time, typically for a few hours during normal operations. Costs for stack testing typically run $20,000, but testing may only be necessary every 2 to 5 years.
- **Vendor Guarantees and Stack Test Data from Similar Facilities** – If representative source-specific data cannot be obtained, emissions information from equipment vendors, particularly emission performance guarantees or actual test data from similar equipment, is a better source of information for permitting decisions than an AP-42 emission factor.
- **Material Balance Calculations** – While the material balance calculations are not generally considered as accurate as direct measurements, they may provide more reliable average emission estimates for certain sources where a high percentage of material is lost to the atmosphere (e.g., solvent VOC emissions). The costs for recordkeeping are approximately $2,000-$10,000 per year. This method works well for materials and processes that are well understood.
- **Optical Remote Sensing** – Measurement techniques involving differential absorption light detection and ranging (known as DIAL) and solar occultation flux or SOF can be used to measure emissions from sources such as coke ovens, storage tanks, wastewater treatment plants, and process units that are otherwise difficult to measure by other means. Measurement bias on the order of ±30 percent is expected but the data can be more accurate than engineering estimates or emission factors.
- **Emission Factors** – When source-specific emissions or other more reliable approaches are unavailable, AP-42 emission factors may be the only way to estimate emissions. Again, the limitations of the factor in accurately representing the facility's emissions and the environmental/financial risk of using the emission factor for a particular situation should be carefully considered. **Remember, AP-42 emission factors should only be used as a last resort. Even then the facility assumes all risk associated with their use!**

Attachment – History of AP-42

Before the EPA existed, the U.S. Public Health Service (PHS) published "A Compilation of Air Pollutant Emission Factors" in 1968.* The purpose of the report was to assist the various agencies responsible for compiling air pollution emission inventories for communities across the nation by providing them with relevant data. PHS recognized that measuring each individual source of air pollution in a particular airshed was impractical, and so, to simplify the airshed emission inventory process, while still maintaining a reasonably accurate inventory, PHS developed emission factors based on the technical literature and a limited number of source-specific tests. The resulting emission factors were simple averages of the rate at which pollutants were emitted from the burning or processing of a given quantity of material. In some cases, emission factors were based on only one or two data points.

* The PHS assigned the number 999-AP-42 to this publication. 999 was the series number, AP was an abbreviation for air pollution, and 42 was the document number. Thus, the origin of today's AP-42!

With the creation of the EPA, publication of the emission factors was continued with "Compilation of Air Pollutant Emission Factors, Second Edition," by the EPA Office of Air Quality Planning and Standards in 1973. The 3rd and 4th editions of AP-42 were released in 1977 and 1985. EPA published the most recent AP-42, the 5th edition in 1995[5], and has published multiple supplements and updates since. Currently, AP-42 contains more than 21,500 emission factors for over 200 air pollutants. Within AP-42, each emission factor is given a rating between "A" (excellent) and "E" (poor) (see Table 1 below). It is important to note that half of the emission factors are rated "D" or "E" and one-fifth are unrated. This means that less than one-third of the emission factors are rated between "Excellent" and "Average."

As we work to improve our ability to estimate emissions nationally, the grading in AP-42 helps us better understand the quality of the data. But even factors that are rated "A" or "B" are not designed to be used by a single source where other, more reliable, site-specific, data are available.

Table 1: Explanation of AP-42 Emission Factor Quality Ratings

Rating	Explanation
"A" – Excellent	Emission factor is developed from tests conducted with sound, or generally sound, methodology. Test data are from many randomly chosen facilities and the source category population is sufficiently specific to minimize variability. Data may, or may not, be reported in enough detail for adequate validation.
"B" – Above Average	Same as "A," but test data are from a "reasonable number" of facilities. Although no specific bias is evident, it's not clear if the facilities represent a random sample of the industry. The source category population is sufficiently specific to minimize variability.
"C" – Average	Same as "B," but the factor can be developed from an unproven or new methodology. Test data may be lacking a significant amount of background information. Although no specific bias is evident, it's not clear if the facilities tested represent a random sample of the industry. The source category population is specific enough to minimize variability.
"D" – Below Average	Same as "C," but test data are from a small number of facilities, and there may be reason to suspect the facilities do not represent a random sample of the industry. There may also be evidence of variability within the source population.
"E" – Poor	Factor is developed from: (1) tests based on an unproven or new methodology, or tests that may be lacking a significant amount of background information, or (2) tests based on a generally unacceptable method, but the method may provide an "order of magnitude" value for the source. Facilities tested may not represent a random sample of the industry and there is evidence of variability within the source category population.

[5] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, pp. 9-10.

From:	ELIZABETH MOONEY
To:	Public Comment
Cc:	kelly Kearns; Orlay Johnson; ELIZABETH MOONEY; Tracy Banaszynski; jim halliday
Subject:	Public Comment for Permit Application No. 11861 for the Cadman Asphalt Facility in Kenmore
Date:	Monday, May 2, 2022 2:50:23 PM
Attachments:	Draft compiled cadmen comment.pdf

Please find the attached comment.
Please respond to acknowledge receipt,

Thank you

Elizabeth Mooney



People for an **E**nvironmentally **R**esponsible **K**enmore
5934 NE 201st St., Kenmore, WA, 98028

Brian Renninger - Engineer
Puget Sound Clean Air agency
1904 Third Avenue Suite 105
Seattle, Washington 98101

Dear Mr. Renninger,

People for an Environmentally Responsible Kenmore (PERK) would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington. For those of us who reside, work, and recreate in the cities of north Lake Washington, we value a healthy environment both for ourselves and future generations. This draft permit and the permitting process needs to ensure the environmental non-significance of Cadman operations in a clear and transparent manner. Where our health is concerned precaution should prevail. We appreciate you taking the time to review our comments.

Overall, we appreciate that the draft permit proposes significant steps forward in bringing this facility into compliance. We have a few suggestions for additions to the draft permit. However, upon analysis, we also find both the SEPA Environmental Checklist and modeling done by Cadman to estimate emissions to be woefully inadequate. We urge PSCAA to require Cadman to go back and provide proper analysis and modeling, to ensure the full-spectrum of potential impacts from this facility is understood.

Permit Suggestions

Items 7 – 13. Emissions Limits

While these requirements are a great step forward to require testing, it is not clear if the emissions criteria are suitably strict to protect public health. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

Items 22 and 23. Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is advisable. In addition, during these tests the production output should be included. One of Cadman's representatives noted that requiring more frequent testing would result in wasted asphalt. This is absurd, testing can and should take place during run-of-the-mill production.

Cutback Asphalt

The Draft Permit prohibits the **storage** of what amounts to "cutback asphalt." Please prohibit **use** of this material as well.

Enable Increased Public Reporting
Please also consider requiring signs to be posted along the burke-Gilman trail and highway 522 that simply and visibly tell the public how they may report concerns to PSCAA. Prioritize these reported concerns, as it is through these means that we have even reached this point.

SEPA Environmental Checklist

The SEPA checklist completed for this project reads as a cursory exercise in filling out a form, not an environmental analysis. Listed below are specified concerns. Cadman should be required to go back and do this analysis again, taking greater time and care to make sure this project does not present a harm to the critical ecological area in which their facility sits.

3. Water(a)(2)
Cadman responded that their project will not require "any work" within 200 feet of Lake Washington. The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner do indeed appear to be within 200 feet of the Lake Washington shore. Added measures may need to be taken to reduce any runoff to Lake Washington, especially given that this work may fall within the 200-foot buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the watershed.

3. Water(c)(1)
No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, this issue should not be ignored.

5. Animals (a)
Herons and other waterfowl are not mentioned anywhere in this SEPA checklist. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore. These species fly over this facility virtually every day. To ignore herons in particular is to forget that the very emblem of the City of Kenmore has a heron on it. Not acknowledging these species on this SEPA checklist suggests that this was an inexcusably cursory exercise in filling out a form, not even a surface level environmental analysis.

Additionally, Otters are not acknowledged in this checklist. Kenmore citizens have witnessed otters feeding off the dock of Log Boom Park. This is also true of amphibian species.

5. Animals (b)
Chinook salmon and steelhead are ESA listed as "Threatened" by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues. It is further puzzling that Salmonids are listed here, but not checked off in the box in Animals(a). This may be a nit-pick, but begets the questions how much effort actually went into preparing this document.

7. Environmental Health (a)
Hydrocarbons stored on site also present a significant risk of fire or explosion, not just spill. This is relevant to the entirety of subsection (a), including potential emergency services.

7. Environmental Health (a)(2)
Past uses of this facility have been in violation of their NPDES permits. This should be acknowledged and explained, even if non-numerical in nature, as they represent possible contamination.

8. Land and Shoreline Use (a)
It is important to consider the public use of the Burke Gilman Trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, walkers, etc., all of whom would be in the direct emissions from the facility. (see also Environmental Checklist Section 12(a)).

In summary, Cadman should be required to complete a more thorough environmental analysis. If necessary, there should be consultation with relevant other agencies (Washington Department of Ecology) in order to gain sufficient understanding of this critical environmental area.

Modeling Concerns

The Citizens of Kenmore have long suspected this facility to be a bad neighbor. Now, with this modeling report, we see that Cadman is continuing to be less than forthcoming; we are concerned that they have curated just the right conditions to put into their model so that it has spit out a result that will let this facility slide back into quietly polluting Kenmore. Looking at table 4-4 in the Modeling report, specifically the results for PM_{10}, $PM_{2.5}$, and NO_2, this facility claims to be just barely in compliance with NAAQS standards. The concerns below highlight how this could be false. Therefore, PSCAA should require Cadman produce more accurate and comprehensive emission estimates before it obtains a new operating permit.

Meteorological Data
We are concerned that the meteorological data fed into the modeling done for this project is not appropriate.

According to page 2-1of the Modeling Report, surface meteorological data for this facility was gathered at "Paine Filed Airport." Assuming this means Paine Field, that station is at least 10 miles from the facility. That station is also nothing like the Kenmore harbor. Airports are meticulously manufactured artificial zones, incredibly flat and controlled, by definition. Meanwhile, this facility is located right off of a Lake Washington which provides a 25-mile funnel for winds. Thermal conditions at the lakeside also often produce temperature inversions in the winter that trap air against the surrounding hills to the north of the Cadman site. On all other sides, the facility is surrounded by high intensity urban uses, nothing like a level runway.

Averaging five years of meteorological data does not overcome these vast differences in distance and terrain complexities. One would imagine that sites within the Lake Washington watershed likely offer more relevant data, like the municipal airfield in Renton, the University of

Washington, or the NOAA facility at Sand Point. The Trinity modelling report notes (Section 2.2) the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the port of Everett, not this one.

This permit process has been developing for multiple years, why has Cadman not taken any of the amply opportunity to gain on-site meteorological information? Cadman should be required to obtain this data, and use it to obtain more accurate modeling results before obtaining an operating permit.

Emissions

For years the citizens of Kenmore have been distressed by what they have smelled and tasted coming from this facility. They know this facility has the potential to produce extremely toxic pollutants, like lead, arsenic, and hexavalent chromium. Therefore, it is extremely distressing to see such minimal effort go into testing what is coming out of this facility. We feel that this minimal data, chiefly relying on old, inaccurate estimations, renders Cadman's overall modeling insufficient.

Overreliance on AP-42

First, there is an overreliance on unreliable emissions estimations from AP-42. Over and Over again, tables within Appendix D of Cadman's Modeling Report display that emission factors are "[s]peculated" and "obtained from U.S. EPA, Hot Mix Asphalt Plants, AP-42 Section 11.1." Even the EPA itself (under the Trump Administration no less) has acknowledged that agencies should not be overly reliant on this data.

Additionally, while drawing numbers from AP-42, there is no mention of the associated Emission Factor Quality Ratings. These ratings within AP-42 are crucial to understanding the reliability of the data being used. Going through the modeling report, many of the pollutants present in Cadman's tables are rated "D" or "E" (see, e.g., Hexavalent Chromium). This rating indicates that the EPA itself has little or no confidence in the emissions factors in AP-42. This means that there should be independent testing done, if possible, to gain an accurate understanding of what pollutants are entering the air. In 2020, the EPA even issued an Enforcement Alert to remind permitting agencies that they should not be over-reliant on AP-42, even for pollutants with Emission Factor Ratings of "B." See https://www.epa.gov/sites/default/files/2021-01/documents/ap42-enforcementalert.pdf

It just so happens that independent testing was done at this facility. So, we are left wondering why was that testing not conducted for the numerous pollutants that have "D" or "E" Emission Factor Quality Ratings? There should be comprehensive testing for all toxins of concern at this site.

Unrepresentative sample data

Looking past the concerning overreliance on AP-42, we wonder if the emissions testing done truly gives an accurate sample. First, even reading through sections 1.2-.3 of the modeling report, there is no information readily apparent that describes flow or production information. Next, we are concerned that running just a handful of tests over three hours on a single day did not capture

the full variability of emissions. It also appears that, during testing, the facility was not operating anywhere near the capacity it is asking to be permitted for. Looking at the data provided, it appears that the facility was producing an average of 143, 141, and 139 TPH for runs 1, 2, and 3, respectively. This is not even 75% of the 200 TPH this facility is asking to produce.

Reviewing these emissions estimations, we are incredibly concerned that this facility is doing everything it can to appear to comply with the law while continuing to pollute Kenmore and its citizens. Please require Cadman to go back and obtain accurate, representative data.

Modeling Options

Finally, we are concerned that Cadman has been careful to select just the right background conditions and modeling options to allow their poorly calculated emissions to slip under the NAAQS standard.

Urban/Rural Determination

It is entirely inappropriate to not select AERMOD's urban option. Kenmore alone is a developed town that is only growing. The towns around it, Bothell, Lake Forest Park, and Canyon Creek, are all similarly urban if not more so. Visiting any of these locations it becomes immediately apparent that this area is not rural, at all. We urge PSCAA to scrutinize why Cadman has been able to say that this facility, which sits at the center of a city, is not in an urban setting.

Background Concentrations

We are also concerned that Cadman has selected just the right background concentrations to allow it to slip into compliance. Looking at the data, the facility appears to have taken an average data point from NW Airquest. However, looking at this data source closely, it appears that there is a data source much closer to the facility, located in Lake Forest Park. This data is not only much more representative of the area in which the facility is located, it reports slightly higher background numbers.

Conclusion

For too long this facility has operated with a blank check. They have been allowed to operate with minimal oversight, and therefore, in opposition to the best interests of the environment and the people of Kenmore. We are only here, at this moment, because the citizens of Kenmore were able to highlight that this facility had violated the law by not providing a Notice of Construction.

Reading through Cadman's modeling report and SEPA Environmental Checklist, it appears that this facility wishes to continue to avoid scrutiny. By selecting just, the right background conditions, meteorological data sets, and conducting minimal testing, they are trying to slip just under the bar of compliance. At the same time by ignoring obvious aspects of the environment around it, Cadman demonstrates that it has given minimal thought to its surrounding ecosystem. As citizens who have to live with this facility as a neighbor, we urge PSCAA to require Cadman to do better. Do not let this facility avoid the trouble it has caused itself, and scurry away back into obscurity to pollute our air and damage our health.

Respectfully,



Elizabeth Mooney
President, People for an Environmentally Responsible Kenmore
5934 NE 201st ST
Kenmore, Washington 98028

Elizabeth.mooney@comcast.net

From: James Myers
To: Public Comment
Subject: Public Comment on Cadman Asphalt Facility Draft Permit (11861)
Date: Monday, May 2, 2022 3:02:32 PM
Attachments: Comments to Permit 11861 PSCAA.pdf

Dear Mr. Renninger

I have attached my comments on the Cadman Draft Permit for your consideration.

Thank you

Jim Myers

Monday, May 2, 2022

Brian Renninger
Engineer
Puget Sound Clean Air Agency
1904 Third Avenue Suite 105
Seattle, Washington 98101

Email: PublicComment@pscleanair.gov

Dear Mr. Renninger,

I would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit. For those of us who reside, work, and recreate in the cities of north Lake Washington we value a healthy environment both for ourselves and the natural ecosystems that we share this wonderful region with. This draft permit and the permitting process needs to ensure the environmental nonsignificance of the Cadman operation in a clear and transparent manner. Where our health is concerned precaution should prevail. I appreciate you taking the time to review my comments.

SEPA Environmental Checklist

3. Water (a2) - The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner appear by my Google Earth measurements to be within 200' of the Lake Washington shore. Added measures may need to be taken to reduce any runoff to Lake Washington, especially given that this work may fall within the 200' buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the watershed.

3. Water (c1.) – No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, has the proper agency should be consulted.

5. Animals (a) – Herons and other waterfowl are conspicuously missing. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore.

5. Animals (b) – Chinook salmon and steelhead are ESA listed as Threatened by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues.

7. Environmental Health (a) – I would think that hydrocarbons stored on site also present a significant risk of fire or explosion, not just spill.

8. Land and Shoreline Use (a) I think it is important to consider the public use of the Burke Gilman trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, walkers, etc all of who would be in the direct emissions from the facility. (see also Environmental Checklist Section12a).

Draft Construction Permit

7 – 13. Emissions Limits

While it is a great step forward to require testing on items 7-13, it is not clear if the emissions criteria are suitably strict to protect public health. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

22 and 23. Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is advisable. In addition, during these tests the production output should be included. It is noteworthy that in stack tests provided by Cadman (and used in subsequent modeling), production was only at 140 to 150 tons/hour, 75% of the permitted output. If 200 tons/hour is the capacity (see A. Description), then one would presume that that should the emissions test levels also.

This would also be a relevant time to point out several issues with the air quality modelling that accompanied the application.

> Firstly, the model utilized meteorological data from Paine Field in Everett. Paine Field lies on the crest of a ridge line near the ocean, while the Cadman site is at the north end of Lake Washington, which offers a 25-mile funnel for winds, bounded on the East, North, and West sides by ridge lines. Thermal conditions at the Lakeside often produce temperature inversions in the winter that trap air against the hills to the north of the Cadman site. Sites within the Lake Washington watershed likely offer more relevant data, one would imagine that the municipal airfield in Renton, the University of Washington, or the NOAA facility at Sand Point would all provide more reliable data. The Trinity modelling report notes (Section 2.2) the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the port of Everett. Similarly, background levels for PMs were calculated using an area average, while a PSCAA monitor located in Lake Forest Park would have provided more relevant data. Furthermore, for air modeling Trinity consultants determined that Kenmore was not urban, a determination that does not comport with the reality on the ground around downtown Kenmore.
>
> Secondly, where emissions testing was lacking the model utilized AP-42 to estimate emissions levels. For a variety of reasons (described best by the EPA in their precautionary notice Publication no. EPA 325-N-20-001-attached) this does not provide the necessary assurance of public safety. This provides further support for actual testing of multiple emissions elements rather than relying on AP-42 estimates.

Monitoring and Complaints

The odor detection and reporting protocol provides a necessary effort to provide a response to public concerns. Residents, businesses, and visitors to Kenmore (including those who use the Burke Gillman) will have some recourse to odors. I encourage you to maintain these items in the final draft.

Thank you,

Jim Myers
5934 NE 201st St
Kenmore, WA 98028

oda1959@comcast.net

From:	Stacey Valenz
To:	Public Comment; John Dawson
Subject:	Public comment PSCAA draft permit #11861. Asplat emission 2020 DOH report Sumner wa
Date:	Sunday, May 1, 2022 8:45:32 PM
Attachments:	FINAL-Asphalt-HealthImpAssess-1-30-20.pdf

Hi John and PSCAA,

Attached I am sharing the DOH 2020 report from Sumner, Washington, that states all the WAC , as well as supports the negative effects of Asphalt emissions on public health.

It has been over 15 years that Kenmore residents have been reporting to their city leaders, State Representatives, PSCAA, and EPA, the stench odor and particulate matter in the air they breath!!
They brought forward the violations and changes they saw with equipment updates with failure of permit notice, as well as inspections showing cutback Asphalt, determined illegal due to harmful effects on health, as of 1973, was being stored and used, at this facility.
We have concerns with our neighbors cancer illnesses.
We have concerns of what additional respiratory conditions and at what level are these higher than other cities in King County?
We have added concerns as to what chemicals have been in the air the community breathes?
We have concerns as to what damage has been done to area trees, wildlife, fish soil and waterways?
We hope that the approval of PSCAA Cadman Draft permit #11861 with 30 stipulations and amendments will improve the quality of our communities ambient air that we breathe.

Thank you,

Stacey Valenzuela
Kenmore Advocate

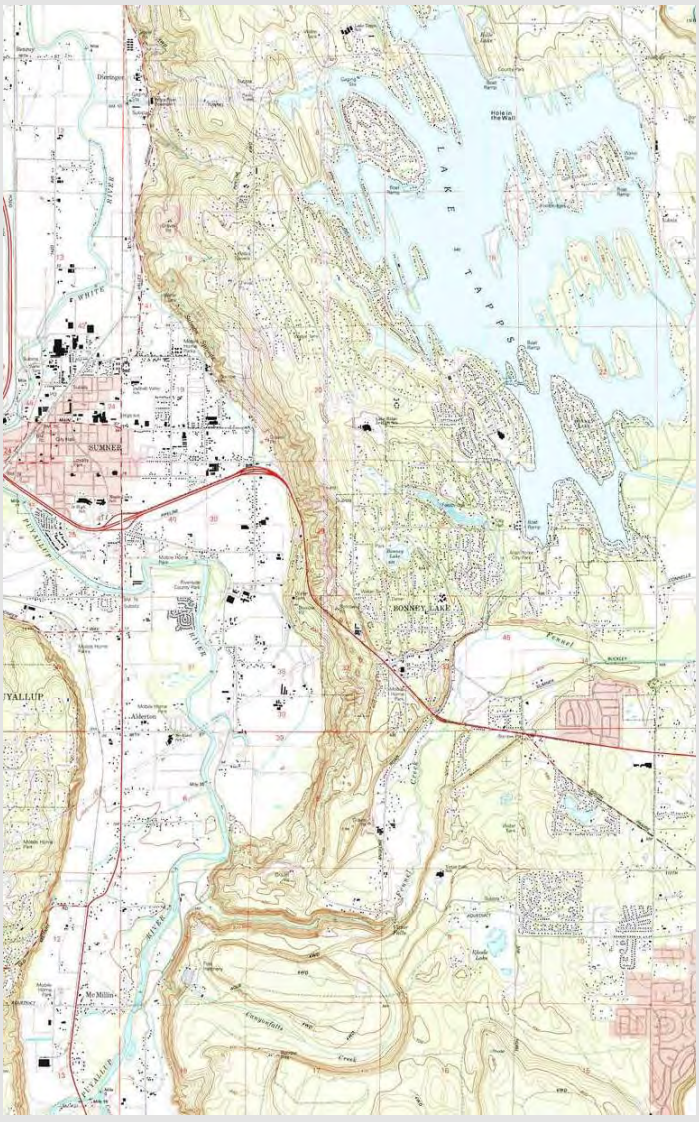
---------- Forwarded message ---------
From: **Stacey valenzuel** <svalenz229@yahoo.com>
Date: Fri, May 7, 2021, 11:05 AM
Subject: Asplat emission doh report Sumner wa
To: svalenz229@gmail.com <svalenz229@gmail.com>

https://sumnerwa.gov/wp-content/uploads/2020/03/FINAL-Asphalt-HealthImpAssess-1-30-20.pdf

Sent from my iPad
Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

Asphalt Production Policy Health Impact Assessment

Tacoma–Pierce County Health Department & City of Sumner



Washington State Department of Health

January 2020

For persons with disabilities, this document is available in other formats.
Please call 800-525-0127 (TTY 711) or email civil.rights@doh.wa.gov.

Asphalt Production Policy - Health Impact Assessment

Publication Number 334-456

A project of Tacoma-Pierce County Health Department and the City of Sumner in collaboration with the Washington State Department of Health.

Contact: Amy Pow, Tacoma-Pierce County Health Department

Contributing Agencies/Organizations:

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Executive Summary

What is a Health Impact Assessment?

A ***Health Impact Assessment (HIA)*** is a process that helps support the required review and analysis of potential health effects of a plan, project, or policy before it is built or implemented. An HIA can provide recommendations for increasing positive health outcomes and minimizing adverse health outcomes. [1]

Both the State and National Environmental Policy Acts (40 C.F.R. 1508) call for the review and analysis of the direct, indirect, or cumulative impacts of a proposed action on public health and safety as well as other factors. A primary stated purpose of the State Environmental Policy Act (RCW 43.21C.010) is to stimulate the health and welfare of human beings. Additionally, Local Health Jurisdictions in Washington have the ability to call for special studies or other actions necessary to maintain public health and safety under state law (RCW 70.05).

The HIA prepared for Tacoma-Pierce County Health Department and City of Sumner focused on a proposed policy change to revise zoning in certain areas allowing for asphalt production.

A Local Government, Tribal Nation, Washington State Department of Ecology, or other local or regional municipality may request assistance from Washington State Department of Health's Environmental Public Health Division. Types of HIA are listed in Figure 1. HIA's can be standalone documents or integrated into environmental impact statements. Each of these types of Health Impact Assessments follow established processes. This Asphalt Production Policy HIA is considered a ***Rapid Health Impact Review***.

Figure 1. *Health Impact Assessment Types [2]*

What type of Health Impact Assessment is right for your community?

- **Comprehensive HIA –** A comprehensive HIA examines as much evidence as possible, using:
  - An extensive search of the literature and other existing information
  - In-depth interviews
  - Community surveys
  - Some original research if appropriate
  - Input from experts and agencies

  This type of HIA can take six months or more, and can require a team to conduct it.

- **Intermediate HIA –** An intermediate HIA may combine a workshop with key stakeholders followed by desk-based work to build up a more detailed picture of the potential health impacts than would typically be identified during a rapid or "mini" HIA. It may involve a limited literature search, usually non-systematic, and relies mainly on surveillance or routine, readily available data.

- **Rapid HIA –**
  A rapid HIA uses both existing research and rapid assessment techniques. Although it could be carried out by one or two researchers, it may also involve more and can take up to three months.

- **Desktop HIA** - As the name implies, this HIA focuses mainly on existing research and remote contact with a few stakeholders. It would probably be carried out by one or two people, and may take between two to six weeks.

What were key findings of this Health Impact Assessment?

A panel of health experts from State Department of Health considered the health and safety implications related to the potential expansion of asphalt production plants in specific locations identified by the City of Sumner. The general conclusions of this HIA (See Section V. Conclusions and Recommendations, Page 36) are designed to be transferable to other parts of Pierce County. This project proposes changes to policy and regulations pertaining to asphalt plants within the areas designated Mineral Resource Lands in Low Density Residential and General Commercial zones, and Heavy Manufacturing (M-2) zones within the City of Sumner.

The health panel conducted original analysis, and identified and considered scientific articles, professional reports, and government data. It should be noted that research evidence in some areas is very limited, therefore making meaningful conclusions difficult. Based on its review, the panel offers the following summary of findings:

1. ***What are the potential health impacts of chemical agents on workers at the asphalt facilities or residents?***

   Minor symptoms of irritation and lower respiratory symptoms have been reported in workers in the asphalt industry. Evidence of cancer and non-cancer health impacts among asphalt workers is mixed and inconclusive. Residential risk is addressed as nearby populations below. **See Section II. Air Quality, Page 16**.

2. ***Are there any populations at risk of exposure to air pollution due to proximity, prevailing winds, or other environmental factors?***

   Off-site air pollution exposure levels are expected to be highest in areas closest to an asphalt plant. In modeling performed by the Department of Ecology based on several assumptions, the highest levels were found to be 37 meters (122 feet) from the source. Sources of emission on hot mix asphalt plants are typically at least 150 feet from the property boundary, so while workers at the plant would be within this area, it is not expected that residents would be within this area. **See Section II. Air Quality, Page 14**.

   Depending on the time of year, prevailing winds in the area of the proposed asphalt plants are from the west, southwest and south pushing more of the air emissions to the east, northeast, and north. However, prevailing winds, in this case, are not the only indicator of exposure because the wind direction is variable and there are frequent calm, low-wind periods indicating that the emissions could be present in other directions as well. **See Section II. Air Quality, Page 15**.

3. ***How will asphalt plants potentially affect the health of nearby populations and are there any vulnerable populations more likely to be impacted? Are health impacts distributed evenly across different population groups?***

   Health impacts are generally more likely where there are higher exposures affecting vulnerable populations. Populations that are more vulnerable to air pollution in general include people with lung diseases or respiratory infections, people with heart or blood vessel problems, people who have had a heart attack or stroke, older adults, infants, children, pregnant women and people who smoke, as well as people who are socially vulnerable due to social, economic, and environmental

conditions, For more detail on sensitive populations in the Sumner area, see Section III. Population Health, Page 28.

Increased incidence of health impacts in residents living near asphalt plants have not been identified. Emissions indicate that there is potential concern. Nuisance odors have been noted by residents living near asphalt plants.

People with pre-existing conditions such as heart and lung disease, respiratory infections, diabetes as well as infants, children and pregnant women are more likely to experience negative health effects from changes in air quality. **See Section II. Air Quality, Page 16**.

4. Are there any additional impacts to populations within the affected areas that have existing health disparities?

We do not know if there would be additional impacts in the areas proposed to have asphalt plants. Some health disparities do exist in the surrounding areas, where some populations experience higher than average rates of some poor health outcomes. In general, the Sumner / Bonney Lake region has fewer residents experiencing social vulnerabilities than Pierce County and Washington State. It is important to note that there are still families living below the poverty line, individuals with disabilities, adults without health insurance, and individuals facing unemployment in the Sumner region. These populations are at an increased risk for poor health outcomes. Health disparities are discussed in detail in the 2019 Pierce County Community Health Assessment.

Pierce County, Sumner, and Bonney Lake had higher hospitalization rates for health outcomes related to noise exposure and air pollution than Washington State. **See Section III. Population Health, Page 28.**

5. Are there any potential health effects related to lighting, noise or vibration?

Noise, light pollution and vibration originating from asphalt plants are not well researched. In general, elevated noise exposure can trigger the body's stress response, cause sleep disturbance, and increase blood pressure. There is some evidence that it can lead to adverse cardiovascular heart problems. Light pollution is not as well researched, but there is indication that light exposure in the evening can have short-term impacts on circadian rhythm. Occupational exposures to vibration have demonstrated impacts including hearing loss and musculoskeletal pain, but impacts in the general public with more typical exposures are not well-researched. **See Section II. Noise, Light and Vibration, Pages 20.**

6. Are there any potential traffic related health impacts caused by expanding operations?

Traffic impacts would result from the hauling of materials both to and from the asphalt plant facility. This traffic would primarily consist of heavy trucks, which could impact the condition of local streets as well as result in air and noise impacts as described in this document. The traffic study conducted by the City of Sumner may assess the magnitude of these impacts from increased traffic. **See Section II. Traffic, Page 21.**

7. Are there any potential impacts to water quality?

While not well researched, a limited number of studies and investigations indicate that asphalt production facilities may increase some pollutants, including polycyclic aromatic hydrocarbons (PAHs), in soils at and near the production site, although there was little association between

asphalt production and contamination of groundwater. Of the few studies identified (<5), none linked PAHs contamination of soil or water to community health effects.

More significant contamination of local soil and water environments has occurred at sites where accidents, poor management practices, weak regulatory enforcement, or neglect have led to leaks and spills of fuels, solvents or contaminated waste.

Critical aquifer recharge areas as defined by Pierce County (shown in Figure 3), wells and creeks are located within the vicinity of properties being considered for re-zone. Water quality has the potential to be impacted by contaminants from various sources at industrial sites if they are not appropriately managed. **See Section II. Water and Fisheries, Page 21**.

8. ***Are there any potential impacts to agriculture, residential gardens or food forage including fish, shellfish, or other wildlife?***

   While PAHs have been monitored in fish tissue samples across the state, measured concentrations have been low. Currently no fish advisories have been issued. **See Section II. Water and Fisheries, Page 23.**

9. ***Are the current state and federal standards related to the infrastructure and operation of asphalt batch plants sufficient to address any potential health concerns? If not, what additional measures are needed?***

   Most state and federal standards, especially those related to air quality emissions, are designed to protect public health. While the regulations are established through an extensive administrative and legal process, there is sometimes a lag in incorporating current health evidence that is continually evolving. **See Section II. Air Quality, Page 18**.

   Regulations with emissions standards are only one way to control emissions, and are perhaps the least responsive. In Washington State the Notice of Construction (NOC) permit application process, also referred to as Minor New Source Review, relies on a determination of Best Available Control Technology (BACT) that considers technology advances. The NOC review considers BACT and impact analysis for toxic air pollutants. The NOC process can lead to conditional permitting approvals that reflect the review standards provided by regulation.

   In general, ensuring that exposures to pollutants are kept low is good public health practice. Among several options, placing requirements on zoning, plant design, operating practices, and monitoring with enforcement of compliance can help achieve this. **See Section IV. Regulating Asphalt Plants, Page 34.**

10. ***Are there any foreseeable community health benefits?***

    Manufacturers, including asphalt production operations, pay Business and Occupation (B&O) taxes in Washington that generate revenues for the state general fund. A portion of these taxes goes to municipalities. Currently, Sumner does not collect a local B&O tax. Development and operation of additional asphalt plants in Sumner or other locations in Pierce County would generate additional B&O tax revenue for the state general fund. Social determinants of health, such as jobs, education, income, and housing, could benefit from by tax revenue. **See Section II. Taxes and Municipal Budgets, Page 25.**

Asphalt plants on average generate between 20-25 permanent jobs, if production is consistent with averages. The Asphalt Manufacturing industry's national as well as state level performance closely follows developments in construction and road infrastructure building and has fluctuated over the past decade. However, the market is expected to support industry growth through 2024. **See Section II. Economic Impacts, Page 26.**

11. ***What are the potential health impacts associated with locating an asphalt plant on Sumner's Mineral Resource designated lands and Heavy Manufacturing (M-2) zone?***

    This Health Impact Assessment is somewhat limited in its ability to determine specific impacts to the proposed area for asphalt plants, mainly because there is no specific proposal on the scale and operations of a new facility. We expect that review of such a proposal under SEPA and as part of air permitting would provide more details on the environmental and public health impacts. Consider the use of TPCHD's Guide to Integrating Health into SEPA Reviews which can be found at: https://www.tpchd.org/home/showdocument?id=586.

    Though air modelling results typically provided as part of a notice of construction (NOC) application were not available, Washington State Department of Ecology's *Technical Support Document for the Asphalt Plan (Portable and Stationary) General Order* provides limited relevant data for this purpose. This resource modeled emissions estimates based on several assumptions of production (less than 300,000 tons of hot mix asphalt per year) and specific options for Best Available Control Technology. The reported data relies on a generalized scenario and it uses a screening model to estimate ambient impacts at given distances from the facility. While emissions from a given asphalt plant are highly dependent on the assumptions, the report provides some indication of the toxic air pollutants that are likely to be present in the levels of highest concern for health. It should be noted that the results in Department of Ecology's report do not reflect recently approved standards set as threshold levels or current modeling approaches. In addition, modelling in Ecology's report does not take into account significant evaluation of several contributing environmental factors, such as meteorology, which is often included in ambient analyses conducted as part of an NOC application and an Environmental Impact Statement (EIS). **See Section I. Introduction, Page 11 and Section II. Air Quality, Pages 14-20.**

I. Introduction

What are Asphalt Plants?

Asphalt plants or hot-mix asphalt plants are facilities where asphalt concrete is manufactured. Hot mix asphalt paving materials are a mixture of well-graded, high-quality aggregate and liquid asphalt cement, heated and mixed in measured quantities. Recycled Asphalt Product (RAP) may also be accepted by an asphalt plant, where it is mixed with other materials and reprocessed into usable asphalt. [3]

There are three main classes of asphalt plants: **batch heater, semi-continuous, and continuous** (or drum mix). Continuous plants have the highest throughput capacity (usually around 500 tons per hour) while batch heater plants have the lowest capacity and are used where short production runs are common. [3]

Summary of Current Regulatory Requirements

The regulating and permitting of asphalt plants is a shared responsibility between local, regional and state agencies. Local governments, under the state's Growth Management Act, have the authority to regulate siting of asphalt plants through zoning codes, as well as site design and operation through development regulations which control hours of operation, lighting, traffic movement, and building orientation.

EPA and state air quality standards (incorporated in **WAC 173-400**) set limits on allowable emissions and requirements for control technology to maintain those levels. For Pierce County and the Puget Sound Region, the Puget Sound Clean Air Agency (PSCAA) regulates air emissions and issues permits including an Order of Approval or Notice of Construction for portable asphalt production. PSCAA requires a new asphalt plant operator to comply with emissions standards, incorporate best available control technology to mitigate air emissions and demonstrate that their ambient impacts do not violate ambient air quality standards or exceed Acceptable Source Impact Levels. Facilities must also report methods they will employ for dust control. State law and regulation require compliance with the State Environmental Policy Act (SEPA) through a final SEPA determination from the lead SEPA agency prior to the Notice of Construction or Order of Approval. [4]

The Washington State Department of Ecology serves as the lead agency for a number of counties in the state regulating air quality, water quality and water resources by requiring a Sand and Gravel General Permit of asphalt plant owners/operators. This limits the discharge of pollutants to surface waters under the authority of the Federal Water Pollution Control Act. [5]

State rule (**WAC 173.60.040**) establishes maximum permissible environmental noise levels between noise sources and receiving sites, and asphalt plants are required to meet these requirements. Noise impacts are directly related to the amount of activity, as well as the time of day when this activity takes place. Accordingly, additional noise level limits are applied between the hours of 10:00 p.m. and 7:00 a.m.

See also Section II. Health Evaluation for additional information on regulatory requirements related to air and water quality.

Project Background

The Tacoma-Pierce County Health Department (TPCHD) and the City of Sumner are partnering with the Washington State Department of Health (DOH) to conduct a Health Impact Assessment (HIA), consistent with Society for Practitioners of HIA (SOPHIA) guidelines, that addresses policy and regulations pertaining to asphalt plants within the areas designated Mineral Resource Lands in Low Density Residential, General Commercial, and Heavy Manufacturing (M-2) zones within the City of Sumner. This HIA addresses a series of questions related to: toxicology, air quality, health disparities, drinking water, agriculture and aquaculture, noise, traffic related health impacts.

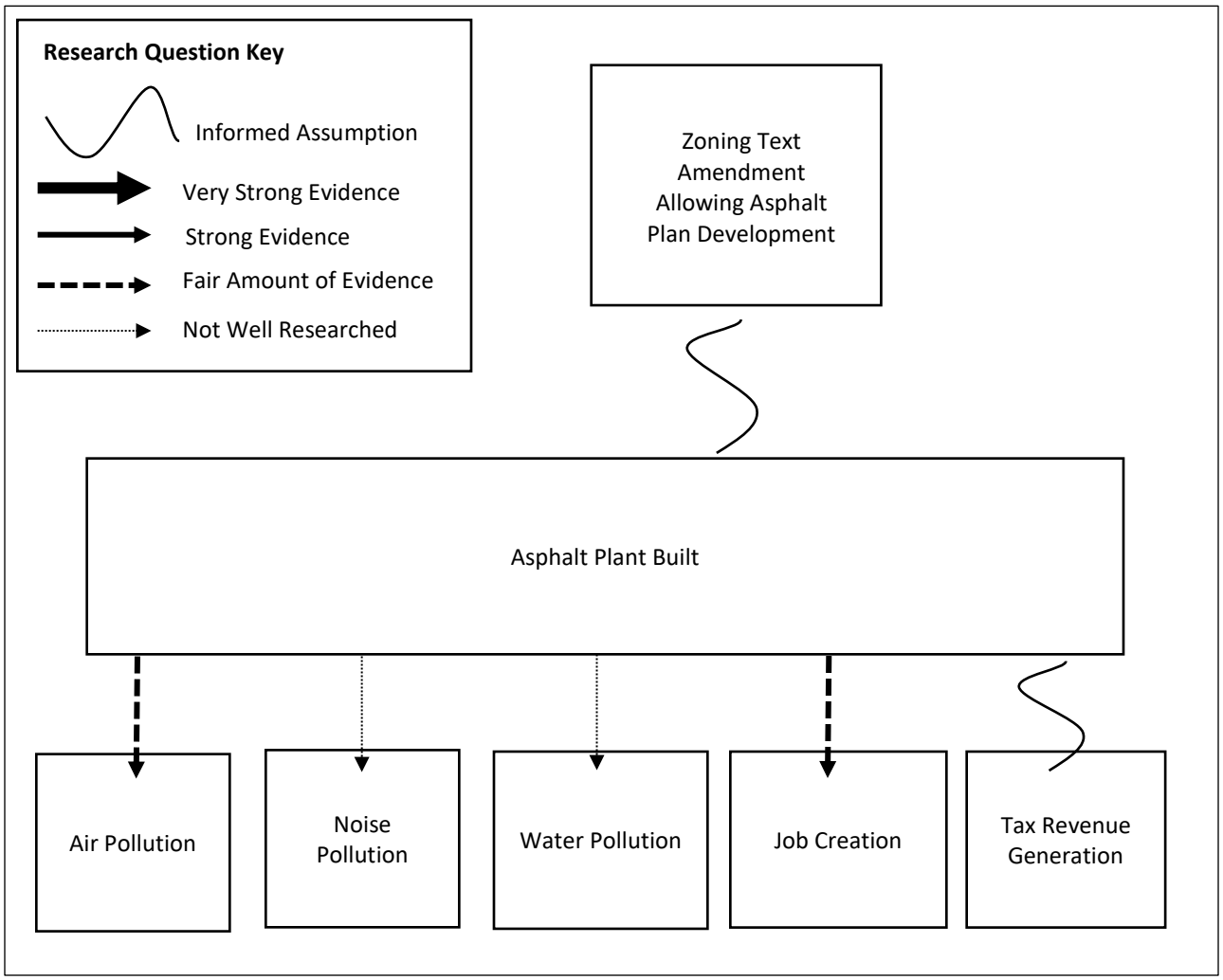
The Department of Health (DOH) has conducted a Rapid Health Impact Assessment (HIA) to provide a prompt yet thorough assessment of potential health impacts related to asphalt plants. A Rapid HIA is an analysis of how a proposed policy or budgetary change will likely impact health and health disparities. For the purpose of this review 'health disparities' have been defined consistent with state law as the differences in disease, death, and other adverse health conditions that exist between populations.

In this Rapid HIA, DOH provides summaries of the evidence analyzed in a logic model depicting possible pathways leading from policy change, zoning code changes, to health outcomes shown in Figure 2. The research evidence discussed in this HIA is categorized using the Washington State Board of Health, Health Impact Review criteria shown in Table 1. This process is designed to rely on the best available science, limit researcher bias, reduce literature review time, and communicate the results in an accessible way. For example, when eleven or more studies are available, the criteria shown in Table 1 is applied. However, if there are fewer studies, a stricter set of evaluation criteria is applied. Further, this method ensures that the science is generalizable to Washington State and the study design is most appropriate for this HIA.

Table 1. *Washington State Board of Health, Sample Health Impact Review Strength of Research Evidence Criteria*

90-100% of the studies support the association
Strength-of-evidence: Very strong (Note: "Very strong" implies that the premise is well accepted by the scientific community—if inaccurate, consider downgrading to "strong." Also consider downgrading if you find strong studies that do not support this).
70-89% of the studies support the association
Strength-of-evidence: Strong
60-69% of the studies support the association
Strength-of-evidence: A fair amount
<60% of the studies support the association
Not well researched

***Figure 2**. Strength of Evidence Logic Model*



*Note: Impacts of each relationship depicted in Figure 2 on public health are discussed in detail in Section II. Health Evaluation.

II. Health Evaluation

Air Quality

What air pollutants are typically emitted from asphalt plants?

Asphalt fume is an airborne mixture of several different compounds. Emissions tests by the EPA have found that asphalt plants emit a wide range of pollutants including particulate matter, sulfur dioxide (SO_2), carbon monoxide (CO), oxides of nitrogen (NO_x), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) and some metals. [3]

Several factors impact the amount emissions from a plant. Typical drum mixers in hot mix asphalt (HMA) plants are estimated to emit more particulate matter, VOCs, PAHs and metals than typical batch mixers, though batch mix HMA's emit more CO and SO_2. However, typical batch mix plants also have a lower production rate. [3] The fuel used in the production process contributes to the type of emissions. For example, in typical drum mix dryers that use natural gas generally have lower estimated annual emissions for various pollutants than those that use oil. [3] The primary emission sources of particulates and gases are the dryers, hot bins and mixers. [3] Fugitive emissions also typically occur from storage silos, truck load-out operations, liquid asphalt storage tanks, hot oil heaters, yard emissions, and vehicular traffic on-site.

Almost all of the air pollutants would be released through the stack, with a much smaller quantity being emitted from other sources associated with plant operations such as truck loading or conveyor belts [6]. For example, a typical asphalt processing plant that makes 500 tons of hot mix asphalt per day would emit approximately 20 pounds per day of particulate matter through the stack and 0.05 pounds per day from other plant operations. Likewise, for a plant of this capacity, approximately 10 pounds per day of VOCs would be emitted through the stack with 0.5 pounds per day being released as the result of other plant operations. [6] Levels of air pollutants would be expected to be higher at the asphalt plant, lower in the immediate vicinity of the plant, and to return to background levels farther out.

The Washington Department of Ecology modelled off-site emissions as the basis of a determination that asphalt plants are candidates for General Orders of Approval in 2011 ("Ecology's Asphalt Plant Report"). [7] In Ecology's Asphalt Plant Report, emissions were determined based on assumed production rates (annual hot mix asphalt production limited to 300,000 tons, as well as hourly and daily limits) and emissions factors from the EPA's AP-42 for asphalt plants with applied Best Available Control Technology were applied to a screening dispersion model. With these inputs and assumptions, among others, the maximum impact of emissions was found to occur at 37 meters (122 feet) from the source. The Report further indicates that there are typically 150 feet from the property boundary and any emitting unit including the drum mix dryer, storage silo, baghouse exhaust, storage tanks and load-out operations. [7]

According to the assumptions applied in Ecology's Asphalt Plant Report, the modeled results of selected criteria air pollutants at 121 feet from the point of emission are all found to be below the National Ambient Air Quality Standards (NAAQS). Selected criteria air pollutants included nitrogen

dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter smaller than 10 µm (PM_{10}) and fine particulate matter ($PM_{2.5}$). [7]

Evaluation of toxic air pollutants in Ecology's Asphalt Plant Report is more complicated because Acceptable Source Impact Levels (ASILs) and Small Quantity Emission Rates (SQERs) that are used to screen for ASILs have been updated since the publication of the report, and the new levels went into effect on December 23, 2019. [7, 8] Based on the screening applied using the previous SQERs as shown in the report, 10 toxic air pollutants were found to exceed the SQERs, which triggered further modeling. These 10 toxic air pollutants that exceeded the previous SQERs are: volatile organic compounds (acetaldehyde, benzene, and formaldehyde), a polycyclic aromatic hydrocarbon (naphthalene), a gas (sulfur dioxide), and metals (arsenic, cadmium, hexavalent chromium, manganese and mercury). [7] For evaluated toxic air pollutants in the report, ethylbenzene would also now exceed its updated SQER, and it is also possible that other pollutants would be added for initial modelling that would be further evaluated. The emissions from each asphalt plant are dependent on a number of variables, so levels of emissions identified in Ecology's Asphalt Plant Report would not necessarily apply to a specific proposed asphalt plant, but it is likely that the pollutants indicated as the top pollutants of concern would be similar.

The ASILs are designed to be conservative by offering a margin of safety in protecting public health. Of the 11 pollutants identified with emissions greater than the SQERs in Ecology's Asphalt Plant Report, 8 of them have ASILs based on cancer risk while the ASIL's for the other 3 (sulfur dioxide, manganese and mercury) are for non-cancer impacts. ASIL thresholds for carcinogens in Washington are based on annual average concentrations and are set at the level of risk estimated to cause one case of cancer per one million people over a lifetime of exposure. For the non-cancer ASILs, a hazard quotient is applied with a ratio of one or less than one at a level where it is expected there would be no adverse health effect below a specific exposure threshold for that pollutant.

In alignment with the results from Ecology's Asphalt Plant Report, the Agency for Toxic Substance and Disease Registry (ATSDR) conducted an exposure investigation of communities near 7 asphalt plants throughout the United States. [9-11][1] Measured levels of $PM_{2.5}$, PM_{10} and hydrogen sulfide were found to be "slightly elevated" compared to background levels near several of the asphalt sites, and while some VOCs and PAH concentrations were above background concentrations they were found to be "very low". [9]

The area with air pollution levels above background levels around the plant would vary. The distance and direction that air pollution travels from the source depends on the location, the time of day or year, prevailing weather, topography, nearby land use, traffic patterns and the specific pollutant. [12] As an example from a different type of pollution, pollution levels of NO_x have been found to return to background levels within about 2000 feet from a traffic source compared to PM_{10}, which returned to background at about 600 feet. [13] Based on data from a weather station in Puyallup over the last 12 years, the prevailing winds in the Sumner and Bonney Lake area are primarily from the south/southwest October through April, and primarily from the southwest/west May through

[1] Some of the ATSDR Health Consultations are no longer available on-line, but a summary of results from the studies is available in the appendix of the Health Consultation for APAC Carolina.

September. [14] While the wind direction and speed change, this suggests that air emissions would more often be blown to the north, northeast, and east of the plant. Of note, production is often highest in Washington in summer months when conditions are dryer and more conducive to applying asphalt outdoors, as the Washington State Department of Transportation requires that hot mix asphalt not be placed for wearing course on a traveled way on wet surfaces, on cold temperatures or between October 1 and March 31st without written approval. [15] While the prevailing winds indicate dominant trends, there are a large percentage of "calm" wind periods at this location when air pollutants would not disperse as readily and may lead to higher impacts near the facility. Newer dispersion models applied as part of a Notice of Construction application would account for these calm periods.

What health effects are associated with exposure to asphalt fumes?

Fumes created from heating asphalt can be inhaled into the lungs or can condense onto exposed areas of the skin. [6] Little is known about exposure on skin, and most available information is related to inhalation of asphalt fumes. The risk of health effects that can be caused by exposure to asphalt fumes depend on the content of the fumes, the duration of exposure, the amount or concentration of exposure, and individual sensitivity to exposure.

Individuals with the highest exposures to asphalt emissions tend to be workers in the asphalt industry. The National Institute of Occupational Health and Safety (NIOSH) identifies five segments of the asphalt industry: hot mix plants, terminals, roofing, paving and roofing manufacturing. There are different ways to measure exposure to asphalt fume and PAHs. Workers in hot mix plants have lower exposures than the other asphalt industry jobs when measured in terms of exposure to benzene-soluble particulates. [16-18]

NIOSH reports that workers in the asphalt industry have experienced mild temporary symptoms of nasal and throat irritation, headache, and coughing. [16] Asphalt workers have also experienced other symptoms such as skin irritation, nausea, headaches and fatigue, but NIOSH reports that it is unclear if these are related to asphalt fume exposure. [16]

Severe health impacts specific to hot mix asphalt workers are **not well researched**. Studies of lung cancer and non-cancer impacts in the more general group of asphalt workers have conflicting findings**.** [18-25] Some research has indicated evidence of lung cancer related to occupational asphalt fume exposures [19, 20, 24], while other research has found no association with lung cancer. [23, 25] A recent investigation, that pooled together results from eight occupational studies of asphalt workers that addressed the influence of other exposures like smoking and alcohol consumption, did not identify increased risk of lung cancer, but results of other cancers were less clear. [26] There is some evidence of lower respiratory tract symptoms and bronchitis among asphalt paving workers. [16]

Evidence of elevated health impacts from air pollutants in communities living near asphalt plants is **not well researched**. In ATSDR's investigation of areas surrounding asphalt sites, they concluded that there "do not appear to be any chemicals or compounds at levels that would pose a public health hazard" off-site. [9] ATSDR also reviewed the estimated asphalt emissions from the EPA and applied toxicities for 159 chemicals that were not directly sampled and determined that "the

compounds most capable of posing a health hazard in communities" were SO_2, NO_x, and that CO, aldehydes, particulates and some metals "might also pose some concern". [9] Updated results from Ecology's technical report using modeled emissions indicate that the metal hexavalent chromium is likely the only air pollutant that would exceed threshold values. [7, 8]

Concerns about odors in the areas surrounding the asphalt sites were part of what initiated the ATSDR investigations. [27] Hydrogen sulfide was the toxic compound emitted in the largest amount from a hot mix asphalt plant in the ATSDR study. High levels of hydrogen sulfide can be immediately lethal, while lower levels can cause minor symptoms. Levels measured in the study were lower than the acutely lethal amount, but above the odor threshold. [9] Accordingly, residents living near an asphalt plant may detect odors from the plant. Odor detection depends on the emissions from the facility and the prevailing wind directions. PSCAA's complaint database has received more than 25,000 complaints about odor since January 1, 2010, of which less than two percent mentioned asphalt odor. [28] Health impacts from odors beyond direct effects related to air pollutants are not well researched though there is some evidence that unpleasant odors can induce stress [29, 30].

What health effects are related to the individual pollutants in asphalt fume?

Beyond considering the impacts of asphalt fume, we further consider the individual pollutants emitted from asphalt plants and evidence of health impacts for those individual pollutants. There is **strong evidence** that some of the air pollutants comprising asphalt fume, especially PM2.5, benzene and PAHs, are associated health impacts [31-41], though it is not clear that they are present at levels that would pose a health concern to the general public or to asphalt plant workers. Common minor symptoms of exposure for both particle and gas air pollution include eye, nose and throat irritation and headaches. Severe impacts vary more by pollutant, summarized briefly here.

Pooled results of a large body of published epidemiologic literature identify that exposure to elevated levels of particulate matter, both as $PM_{2.5}$ and PM_{10}, is associated with increased mortality and hospitalizations, especially for impacts related to cardiovascular disease and respiratory disease (specifically, asthma in children and COPD in people over 65). [42, 43] A study of 60 million Medicare beneficiaries found that risk of death from $PM_{2.5}$ exposures remains even at annual levels below the National Ambient Air Quality Standard level (12 $\mu g/m^3$). [32] Other health impacts are also being explored, with growing evidence indicating that $PM_{2.5}$ and PM_{10} exposures can lead to stroke [44], type 2 diabetes [45], neurological and cognitive impairment [46, 47], and pre-term and low-birth weight babies. [48, 49]

Risk of exposure to individual PAHs are often grouped together by estimating health risk relative to a single PAH, with benzo(a)pyrene (BaP) serving as an index to allow for comparison. [50] Pooled results of several studies of elevated occupational exposures to BaP that are not from asphalt fume have found an increased risk of lung cancer from long term exposures. [50]

Similar to PAHs, individual VOCs have a range of toxicities and severe impacts from exposure include damage to liver, kidney and central nervous system. (See ATSDR toxicological profiles for health effects of individual VOCs.) [51] Some VOCs are also classified as carcinogens, such as benzene that has been associated with certain types of leukemia and is classified as a known carcinogen by the

Department of Health and Human Services, the International Agency for Research on Cancer and the EPA. [52]

Health impacts from exposure to metals vary. Ecology's Asphalt Plant Report indicates that among the metals emitted from asphalt plants, arsenic cadmium, hexavalent chromium, manganese and mercury are likely to be among the metals of greatest concern. Arsenic, cadmium and hexavalent chromium are regulated based on risk of cancer. In contrast, the threshold for manganese is based on development of chronic neurological effects and the threshold for mercury is based on chronic neurological, kidney and developmental effects.

Some individuals are considered more vulnerable to health impacts from air pollution due to physical traits or higher exposures. Some of these more vulnerable groups include people with lung diseases or respiratory infections, people with heart or blood vessel problems, people who have had a heart attack or stroke, older adults, infants, children, pregnant women and people who smoke. Vulnerabilities related to social, economic, and environmental conditions, can also be important in understanding risk. As one example, a large cohort study found that men; black, Asian and Hispanic persons; and people eligible for Medicaid (interpreted as indication of low economic status) were found to have greater risk of death with exposure to $PM_{2.5}$ than the general population. [32]

In the *Baseline Health* section of this report, rates of respiratory disease, cardiovascular disease, and lung cancer are included as health impacts that have been associated with air pollution. These rates of diseases, along with factors of social vulnerability, serve as indicators of more populations in the Sumner and Bonney Lake region that are more likely to have negative health impacts with future air pollution exposure.

How are air quality impacts from asphalt plants regulated?

Local governments generally rely on regional or state agencies, such as the Puget Sound Clean Air Agency (PSCAA) covering Pierce County and the great Puget Sound Area, to ensure air quality compliance. Most local code enforcement programs are not staffed or trained to provide ongoing monitoring of asphalt plants or other point sources.

The Notice of Construction application and equipment registration process managed by PSCAA and the Sand and Gravel General Permit issued by Washington State Department of Ecology address fugitive dust, emissions, and stormwater discharges, respectively, and those agencies have enforcement authority related to these areas.

The federal standards for hot mix asphalt plants (40 CFR 60 Subpart I) include the following requirements:

- A requirement to performance test in accordance with 40 CFR 60.8
- A requirement to not discharge filterable particulate in excess of .04 gr/dscf
- A requirement to not cause or allow emissions in excess of 20 percent opacity
- A requirement to use 40 CFR 60 Appendix A, Method 5 for particulate
- A requirement to use 40 CFR 60 Appendix A, Method 9 for opacity.

Washington State Department of Ecology or the designated regional air pollution control agencies have jurisdiction to issue air permits to stationary sources per the Washington State Clean Air Act (RCW 70.94.152 and WACs 173-400 and 173-460). The general regulations for air pollution sources (WAC 173-400) includes a requirement for a source to obtain Notice of Construction Order of Approval. New Source Review permitting sets case-by-case emission limits and operational requirements for asphalt plants. Such requirements can vary given the circumstances and nature of the specific project/proposal. Table 2 shows recent limits set by PSCAA for new asphalt plants.

Table 2. *Recent limits set by PSCAA for new asphalt plants[2]. [28]*

Recent PSCAA Asphalt Plant Limits	**Limit**
Total Particulate	0.027 gr/dscf corrected to 7 percent oxygen
Filterable Particulate	0.014 gr/dscf corrected to 7 percent oxygen
Stack Opacity	5 percent no more than three minutes in any hour
Non-methane/Non-ethane VOC	0.032 lb/ton asphalt produced
Carbon Monoxide	311.0 ppmvd corrected to 7 percent oxygen
Oxides of Nitrogen	26.0 ppmvd corrected to 7 percent oxygen
Recycled asphalt and shingle handling	No visible emissions
Asphaltic Concrete Storage Silos	Enclosed and ducted to dryer/baghouse (No visible emissions)
Asphalt oil storage tanks	Passive condensers for VOC control (zero percent opacity except for one 15-minute period per 24-hours)
Truck Loading	20 percent opacity no more than three minutes in an hour

Additionally, Washington State Department of Ecology tested twenty asphalt plants in 2011 and determined emission standards based technology present at the time. The federal regulations are currently under review and may revise the requirements discussed in this Health Impact Assessment.

Another state act, in addition to the State Environmental Policy Act, that may apply to asphalt plants and the asphalt production process is the Model Toxics Control Act (MTCA). MTCA establishes rules and regulations for toxic clean-up and provides flexibility for site-specific challenges. MTCA also applies a tax on the wholesale value of hazardous substances that is used for clean-up and contamination prevention. [53] Polycyclic aromatic Hydrocarbons (PAHs), discussed in the ***Air Quality*** section of this document, are considered a hazardous substance under the Act. Testing PAHs and other toxic site contamination on industrial property, may occur under disclosure laws when the property is being sold.

Many of regulations and rules for specific air pollutants and for emissions from asphalt plants are designed to protect health and safety.

[2] These limits are an amalgam of limits imposed by PSCAA NOCs 11812, 11328 and 11175.

In the Notice of Construction (NOC), an applicant would have to demonstrate in a site specific analysis that incorporates the selected parameters of the asphalt plant production and applied BACT that the neither the NAAQS nor ASILs would be exceeded, or else the project may not be approved. If only the ASILs are exceeded, the proponent may pursue approval under Second Tier Review, which would require a site-specific risk assessment, demonstration of acceptable risk criteria, and public involvement through public notice and comment. Most projects in Washington do not undergo Second Tier Review, and this would be unlikely to occur for an asphalt plant NOC [8].

It is worth noting that air pollution regulations and standards are updated, as recently occurred for the revised Washington ASILs and SQERs used for compliance. Establishing regulations is an extensive and often contentious process. Separately, health research continues to contribute to the base of evidence of health effects related to asphalt plant emissions and the specific air pollutants in asphalt fumes, and it is possible that air pollution regulations potentially lag behind the best current evidence. As one example, there is growing evidence that health effects from $PM_{2.5}$ occur in the public even when concentrations are lower than the current NAAQS. [32, 54, 55] For this specific example, the finding in Ecology's Asphalt Plant Report that the expected $PM_{2.5}$ emissions from asphalt plants are more than 10 times less than the annual NAAQS concentration and more than 100 times less than the daily NAAQS concentration offers some reassurance that $PM_{2.5}$ from asphalt plants will not pose a great health concern.

Noise, Light & Vibration

Does noise from asphalt plants lead to health impacts?

Noise impacts result from various components of a typical hot-mix asphalt plant, i.e. ventilators, drum, pneumatic systems, etc. Traffic noise is also generated from on-site loaders and trucks bringing materials to and from the plant. Levels of noise generated at hot mix asphalt plants both onsite (for worker exposure) and off-site (for general public exposure) are **not well researched**, and it is unclear if noise from an asphalt plant could lead to health impacts.

Considering health impacts from noise exposure in general, there is **strong evidence** that noise exposure is linked to increased cardiovascular disease and hypertension. [56-67] Noise can trigger the body's stress response [68] and can cause sleep disturbance. [69, 70] Research suggests that for aircraft noise and traffic noise exposure the risk for heart conditions increases in a meaningful[3] way between 52 decibels and 75 decibels. The World Health Organization uses 50 decibels at nighttime as its threshold for high blood pressure and heart attack impacts. [71] Although the studies looked at different heart health conditions, there was agreement that for each 10 dB increase in noise there is a 6% to 8% increase in population risk for heart health outcomes. Individual risk for these outcomes increases at a much lower rate.

[3] Statistically significant result, $p < 0.05$

Studies have also found that elevated noise exposure among children can lead to poorer performance on standardized tests [72-77], and exposure in adults can lead to obesity and diabetes [78, 79], adverse reproductive outcomes and fertility problems in men and women [80], and brain tumors. [81] However, this research is not currently conclusive on these health effects.

Groups considered particularly susceptible to the effects of noise include smokers, children, the elderly, shift-workers, and individuals with sleep disorders, mental disorders, and physical illnesses. Information about rates of cardiovascular disease and hypertension in the Sumner and Bonney Lake area are provided in Section III. Population Health, as an indicator of populations that might be more vulnerable to negative impacts of noise.

Light

Light pollution is sum of negative impacts of artificial light is a growing area of research. The most studied impacts to human health from light pollution is disruption of circadian rhythm, sleep patterns and alertness [82-84]. There is indication that two-hour exposures to light in the evening can disrupt circadian rhythm, but melatonin levels marking this recover within about 15 minutes, indicating the negative impact has a very short duration [82]. Several questions about light exposure impacts remain, such as how much the wavelength or color changes the impact, like blue light vs. white or red light [82]. We are not aware of data that indicates the levels of light generated from asphalt plants.

Vibration

Health impacts in workers exposed to vibration, mainly through the use of tools, equipment and vehicles, have been studied for decades and have identified hearing loss and musculoskeletal impacts [85]. More recent studies of workers indicate that vibration could also be related to development of peripheral and cardiovascular disorders and gastrointestinal problems among others [86]. Vibrational impacts in workers generally occur after years of high level exposures. We are not aware of evidence of vibration resulting from off-site exposures from asphalt plants with exposure levels that would occur in the general public.

Sumner Municipal Code Chapter 18.16.080 establishes performance standards for commercial districts and states that an operation shall not create noise, light, glare, vibration, or odor that would disturb the peace, quiet, and comfort of neighboring residents, retail uses, lodging and restaurant uses.

Traffic and Mobility

Traffic impacts would result from the hauling of materials both to and from the asphalt plant facility. This traffic would primarily consist of heavy trucks, which could impact the condition of local streets as well as result in air and noise impacts as described in this document. The traffic study conducted by the City of Sumner may assess the magnitude of these impacts from increased traffic.

Water and Fisheries

The manufacture of hot-mix asphalt may involve use of bitumen, aggregate or possibly recycled asphalt, fuels and oil stored and used to operate equipment at the site, and asphalt release agents[4] used to clean plant equipment and truck beds. Classes of pollutants associated with some of the materials in asphalt production may include polycyclic aromatic hydrocarbons (PAHs), aliphatic hydrocarbons (ACHs), volatile organic compounds (VOCs), chlorinated solvents and metals (if recycled asphalt is as an ingredient), and other chemicals which have the potential to contaminate soils, water, and sediment if released into the environment.

Following a database search of health sciences literature, it appears that asphalt production facilities - as a specific source of pollutants in soils, surface water or groundwater - **are not well researched**. A literature search identified only four papers: findings from two government investigations testing for hazardous contaminants at current and former asphalt production and testing sites (Salisbury, NC and Fort Bragg, NC); one study examining the relationship between hot mix asphalt production and soil pollution (Port Harcourt, Nigeria); and one study that used laboratory methods to examine the potential for recycled asphalt to leach contaminants in water.[5]

Both hazardous site investigations studied contaminants at sites that had been used for not only asphalt production but also for asphalt testing, which involved the use of chlorinated solvents.[4] Two of four studies found no evidence of PAHs in groundwater, but did find chlorinated solvents and other contaminants. [87, 88] Three of four studies detected PAHs, ACHs, VOCs and/or total petroleum hydrocarbons in surface soils in the immediate vicinity of asphalt plants. [87-89] One study found evidence of pollutants in surface water, where bitumen had been directly piped into the waterway. [87]

Given the limited number of studies found, the evidence is inconclusive regarding the influence of asphalt production plants on contamination of surface and groundwater. Still, the two site investigations from North Carolina, the field study from Port Harcourt, and the laboratory study are instructive. First, they suggest that many of the materials used in asphalt production and potential contaminants like PAHs have lower water solubility and more readily adsorb in soils. Second, though it would be inappropriate to broadly generalize about the likelihood of asphalt production plants to contaminate either soils or waters based on findings from these papers, these cases do illustrate how site neglect or mismanagement of hazardous materials have the potential to contaminate soils and water at the site.

[4] Historically, it was common practice to use diesel fuel, other petroleum products or chlorinated solvents as an asphalt release agent, but that is no longer an acceptable practice in the industry. More recently asphalt release agents are formulated to be biodegradable.

[5] There is a more robust literature base regarding contamination of soils and waters attributable to asphalt pavement and storm water runoff from roadworks. Those papers were excluded, however, as this HIA focuses on questions pertaining to zoning for an asphalt production facility, rather than materials used in roadworks.

Human health impacts associated with asphalt plants due to contamination of drinking water are likewise **not well researched.** ATSDR provided a consultation regarding the potential health risks and impacts from estimated exposures to contaminants in drinking water identified during the site investigation in Salisbury, North Carolina. That report concluded that human exposures to the concentration of contaminants detected at this particular site were not expected to cause adverse health effects. [90] This study taken on its own does not provide sufficient evidence to draw more generalized conclusions.

Comprehensive reviews of the scientific evidence regarding human health effects of exposure to various PAHs, VOCs, ACHs, and chlorinated solvents provide a broader picture of potential health risks from these agents, but do not specifically examine asphalt production facilities as sources of exposure. A review of the evidence for health effects of PAHs conducted to establish Canadian soil quality guidelines describes adverse effects based on exposure type and dose. [91] In 2009, the EPA published a peer-reviewed report summarizing approaches to understanding health effects of complex mixtures of aliphatic and aromatic hydrocarbons. [92] A comprehensive review of bitumen (asphalt) conducted by a panel of experts under the World Health Organization and published as part of the International Chemical Assessment Series, noted the lack of data or studies of asphalt concentrations in environmental media, including drinking water and foodstuffs. [93]

Asphalt production plants have not been well studied as a specific source of pollutants in fish or shellfish. While PAHs have been monitored in fish tissue samples across the state, measured concentrations have been low and currently no fish advisories have been issued. PAHs are more likely to bioaccumulate in shellfish tissues. Unlike Washington's marine shellfish, freshwater shellfish are considered unsafe. The Department of Fish and Wildlife prohibits harvest of freshwater clams and mussels from all Washington freshwater sources, contaminated freshwater shellfish are therefore an unlikely source of human exposure.

How are water quality impacts from asphalt plants regulated?

In Washington, the Sand and Gravel General Permit regulates discharges to surface waters and groundwater by industrial mining and processing operations, and covers activities related to hot mix asphalt plants production (NAICS 324121) and asphalt recycling (ECY001). [5]

Facilities operating under the permit must manage and monitor pH, turbidity (NTU), total suspended solids (TSS), total dissolved solids (TDS) and oil sheen in any process water, mine dewatering water, and stormwater discharges. Discharges of process water from asphalt production (NAICS 324121) to surface waters is not allowed and discharge from wet scrubbers to groundwater is not allowed (see Sand & Gravel General Permit, Table 2). Monitoring of groundwater discharges of process water from asphalt production facilities for pH is required quarterly with allowable pH between 6.5 and 8.5. Permittees must manage the site to prevent unauthorized activities (e.g., illegal dumping or spills) that could discharge pollutants to waters of the state.

Facilities must submit and follow a Site Management Plan that includes four main components: an Erosion & Sediment Control Plan (ESCP), a Monitoring Plan, a Stormwater Pollution Prevention Plan (SWPPP), and a Spill Control Plan. The permit requires facilities to implement Best Management Practices (BMPs) to provide all known, available, and reasonable methods of prevention, control and treatment (AKART).

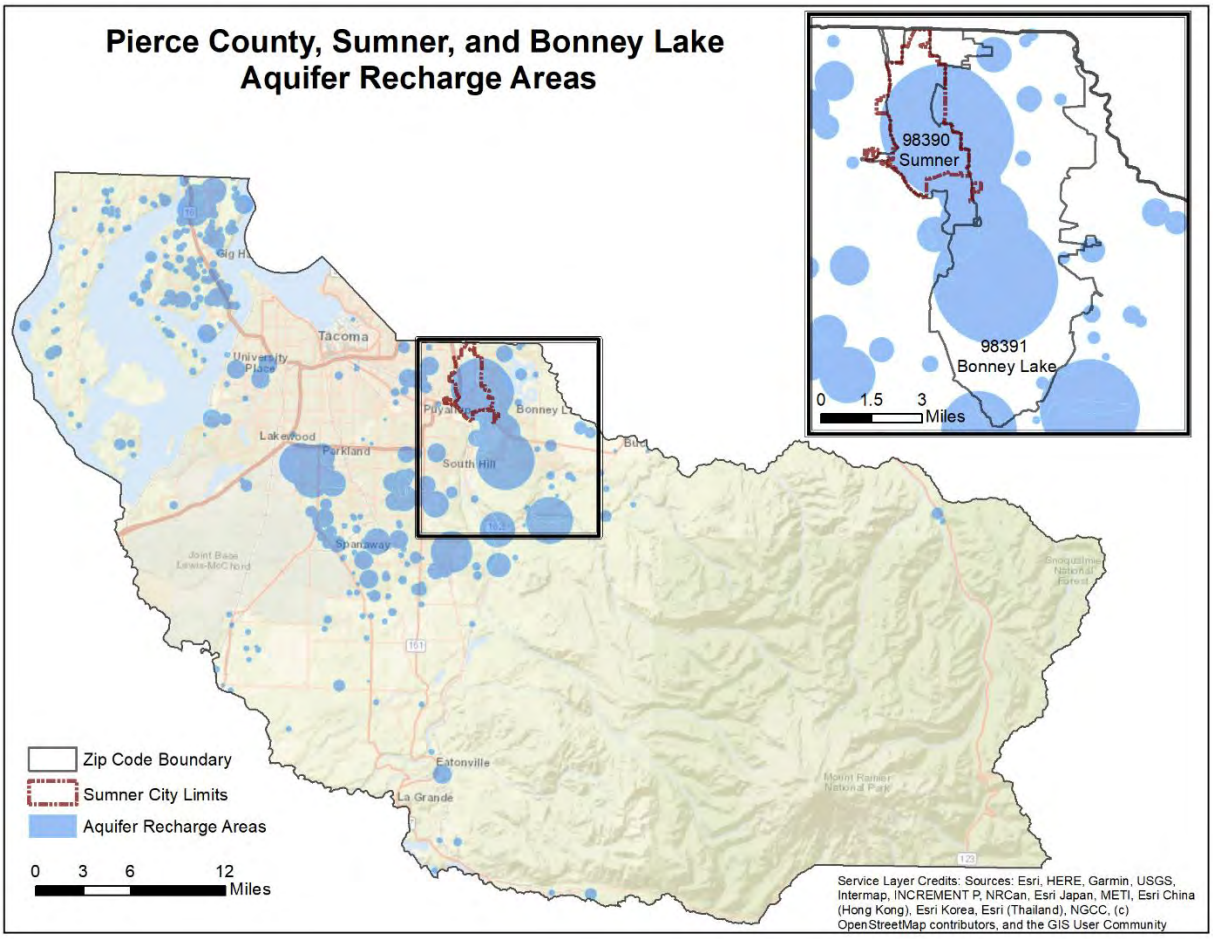
A facility's Stormwater Pollution Prevention Plan must inventory any materials exposed to precipitation or run-off at the site, including toxic materials or chemicals, fuels, and other petroleum products, and identify BMPs that will be used to comply with stormwater discharge limits. The updated 2019 Stormwater Management Manual for Western Washington describes approved prevention, treatment and flow control BMPs as well as additional protective measures (APMs).

The City of Sumner has adopted the 2012 Ecology Stormwater Manual, which requires capture and treatment of all surface runoff from onsite activities, and establishes regulations with the aim of protecting downstream waters. The City also maintains an emergency spill response team to address accidental spills. The Sand & Gravel General Permit also requires spill kits on site at all stationary fueling stations, fuel transfer stations, mobile fueling units, and used oil storage/transfer stations.[5] Lack of spill kits may result in a permit violation.

Sumner Municipal Code (SMC) Chapter 13.48 describes the City of Sumner's Stormwater Management Regulations, the purpose of which is to protect public health, safety and general welfare by establishing requirements for control of adverse impacts associated with increased stormwater runoff and water quality degradation for all sites receiving a city permit for land altering development.

The City of Sumner has also adopted Chapter 16.56 Wildlife Habitat Areas as part of the Sumner Municipal Code. The purpose of this chapter is to regulate development and the use of land in order to preserve and protect areas of critical and endangered fish and wildlife habitat; and to conform to the Washington State Growth Management Act.

Figure 3. *Critical Aquifer Recharge Areas as Defined by Pierce County (buffer distance 100 feet)*



Taxes and Municipal Budgets

There is **limited research** on the complex relationship between taxes, municipal budgets and health outcomes. Most of the research focuses on health care spending. However, there is a growing body of evidence on social determinants of health (the conditions in which people are born, grow, live, work and age), and how they are influenced by taxes through municipal budgets. [94, 95] So, in this way tax revenue generation does positively impact public health.

Tax Base and the Social Determinants of Health

More directly, there is a **fair amount of evidence** showing that stronger tax base and higher property values are related to more public services and infrastructure investments. [96] The research suggests that people with higher incomes are more likely to experience place-based health benefits, meaning that their health and longevity is positively influenced by the conditions and assets in their living environment. [94, 97, 98] Even after adjusting for income and other attributes of individuals and households, health benefits appear to be associated with where people reside.

There is also **strong evidence** showing the inverse relationship. People with low incomes are more likely to live in poorer neighborhoods with weaker tax bases, thus reducing local resources that

support public schools and other social services. [99] Entrenched patterns reflecting long-standing disadvantage often perpetuate cycles of socioeconomic failure and an inability for low-income neighborhoods to recover. Public policies have historically led to disinvestment in these neighborhoods, causing persistent segregation, fewer economic opportunities, increasing crime, and negative health impacts. [100] For example, one study found that "healthy adults residing in socioeconomically deprived neighborhoods died at a higher rate than did people in relatively less deprived areas, even after accounting for individual-level socioeconomic status, lifestyle practices, and medical history." Smoking, diabetes, and other conditions are more common for people living in poor neighborhoods, independent of their income. [101]

Local jurisdictions can address health disparities through direct investment of resources in low-income or historically underserved areas.

Does tax generation from new development improve public health?

Manufacturers, including asphalt production operations, pay Business and Occupation (B&O) taxes in Washington. These B&O taxes generate revenues for the state general fund, a portion of which goes to municipalities. Currently, Sumner does not collect a local B&O tax.

Development and operation of additional asphalt plants in Sumner or other locations in Pierce County would generate additional B&O tax revenue for the state general fund. However, it is important to note that Washington's counties appropriate budgets differently, according to their particular needs and goals. [102] Identifying how or if increased tax revenue distributed to Pierce County would be spent on programs, policies or investments directly linked with health indicators is speculative and difficult to forecast. The Pierce County 2019 Budget shows approximately twelve percent of the total County budget going to support health and social services with 60 percent of those resources coming from local sources. Local tax revenues do directly support a substantial amount of the public health services across Pierce County.

Another important consideration is the relationship between tax revenue and economic development strategies and policies. While many public officials and economic development professionals promote real-estate development as a strategy to expand tax base, this does not always occur. New developments, including manufacturing, can also have negative impacts on tax base, vacancy rates, property values, business investment, infrastructure costs, as well as the social determinants of health, if not planned and executed strategically. [103]

Recent research finds, based on International City/County Management Association Survey of over 11,000 municipalities and all counties across the US, those municipalities actively considering environmental sustainability and health equity have more successful economic development strategies and require lower levels of financial business incentives. These places are also more likely to have economic development plans that have involved the community in the planning process. [104-106]

Economic Impacts

Do Asphalt Plants Create Jobs?

In general, manufacturing remains a vital part of the American economy employing 12.75 million workers and generating broader spillover effects throughout the economy. At the same time, the nature of manufacturing is shifting with the introduction of advanced technologies and the growth of the "made locally" movement. The viability of this evolving manufacturing sector depends on the availability of industrial sites and conditions that allow manufacturers to operate efficiently and profitably. It also depends on the availability of adequate labor. In recent years a growing number of manufacturing jobs throughout the country have gone unfilled, representing a lost opportunity for businesses that cannot take advantage of economic growth and for longtime city residents who might access these jobs. [107]

The relationship between asphalt production and job creation **is not well researched**. Therefore, this discussion relies heavily on actual data from the US Census and state databases as well as market research reports.

The nation has around 3,500 asphalt plants, at least one in every congressional district with a total of 14,923 employees in asphalt mix production and 67,367 employees in production of liquid asphalt. On average, an asphalt plant in may employ 20-25 people. Each year, these plants produce a total of about 400 million tons of asphalt pavement material worth in excess of $30 billion. The asphalt manufacturing industry supports employment for more than 400,000 Americans in the asphalt production, aggregate production, and road construction sectors. Asphalt pavement material is a product composed of about 95 percent stone, sand, and gravel by weight, and about 5 percent asphalt cement, a petroleum product. [108]

According to the Washington State Department of Ecology database (PARIS), there are 163 active asphalt plants in the state with an estimated workforce of over 2000 employees engaged in production.

The Asphalt Manufacturing industry's national as well as state level performance closely follows developments in construction and road infrastructure building. The industry experienced revenue declines from 2010 to 2015. However, construction has recovered from 2015 to 2019. [109] There has been a strengthening demand from markets including a rebound in crude oil prices and an industry acceptance of new technologies and organic and chemical additives that have increased stability and sustainability of the industry. The market is expected to support industry growth through 2024. [110]

Do these jobs in asphalt manufacturing improve public health?

In general, there is **a fair amount of research** on the relationship between employment and health, with some studies showing a positive effect of work on health and others showing no relationship or isolated effects. [95]

There is **strong evidence** of an association between unemployment and poorer health outcomes, but research is limited on the inverse relationship, work causing improved health. While

unemployment is almost universally a negative experience and the strength of evidence is strong in the research linking unemployment to poor outcomes, especially poor mental health outcomes, employment may be positive or negative, depending on the nature of the job (e.g., stability, stress, hours, pay, etc.). [111]

Further, most studies note major limitations in our ability to draw broad conclusions on health and work, including job availability and quality. These are important considerations in how work affects health. Making a transition from unemployment to poor quality or unstable employment options can be detrimental to health. Limited job availability or poor job quality may moderate or reverse any positive effects of work. [112]

Generally, community health improves and morbidity declines as the economy has shifted from industrial jobs (which are often inherently more dangerous) to services jobs (where risk of injury is lower). However, job transitions on the individual level are highly variable, and depend largely on social support networks and resources such as retraining. [113]

III. Population Health

This section of the HIA describes population characteristics, including social determinants of health and baseline health conditions in Sumner with comparisons to Pierce County and Washington State.

Health Determinants

The range of personal, social, economic, and environmental factors that influence health status are known as social determinants of health. Social vulnerability is a term that describes people or populations that are at risk for poor health because of their particular social, economic, and environmental conditions. The social determinants of health presented here are basic indicators of health that are not directly related to the proposed project. The social determinants of health data are from the American Community Survey (ACS), which is an annual survey by the United States Census Bureau that collects information from a subset of the population.

This HIA includes 10 measures related to social determinants of health. These data are at the census tract level and roll up information from 2013 to 2017. Seven census tracts were combined defining the Sumner / Bonney Lake region, which is shown in Figure 4. In addition to the percentage of the population, the 90% confidence intervals are also displayed for each measure and region. Confidence intervals allow for statistical comparison between Washington State, Pierce County and the Sumner / Bonney Lake region. When the confidence intervals overlap, the values are considered statistically similar, which means there is not a meaningful difference between the two. Smaller populations typically have wider confidence intervals, which means that even values that appear to be very different may not be statistically significant.

Comparisons of 10 social determinants of health between Washington State, Pierce County, and the Sumner / Bonney Lake area are shown in Figure 5. Some notable differences include:

- A higher percentage of adults over 18 years old in Sumner / Bonney Lake have health insurance than in Pierce County and Washington State.
- There are fewer people living with a disability in Sumner / Bonney Lake compared to Pierce County and Washington State.
- There are fewer adults and children living in poverty in Sumner / Bonney Lake than Pierce County and Washington State.
- A higher percentage of the Sumner / Bonney Lake population has high school degrees than Pierce County and Washington State.
- Sumner / Bonney Lake has a smaller fraction of overcrowded and unaffordable housing than Pierce County.
- The percentage of people in Sumner / Bonney Lake that report speaking English less than “very well” is lower than in Pierce County and Washington State.
- Sumner / Bonney Lake has a higher percentage of single parent households than Washington State.

In general, the Sumner / Bonney Lake region has a smaller proportion of residents experiencing social vulnerabilities than Pierce County and Washington State. It is important to note that there are still families living below the poverty line, individuals with disabilities, adults without health insurance, and individuals facing unemployment in the Sumner / Bonney Lake region. These populations are at an increased risk for

poor health outcomes. Health disparities are discussed in more detail in the 2019 Pierce County Community Health Assessment. [114]

***Figure 4**. Map of Sumner city limits and census tracts labeled with census tract numbers that define the Sumner / Bonney Lake region for the social determinants of health assessment*

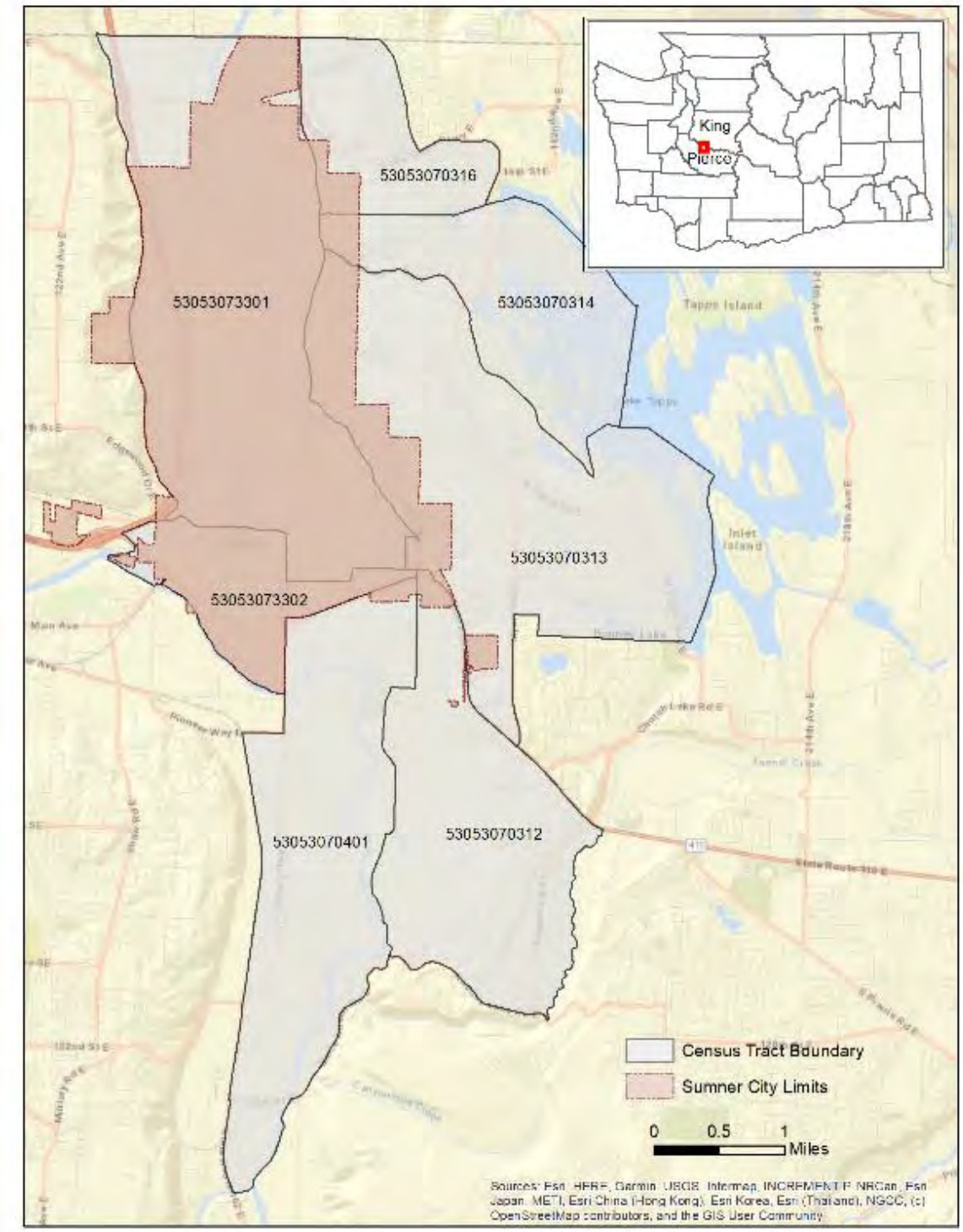
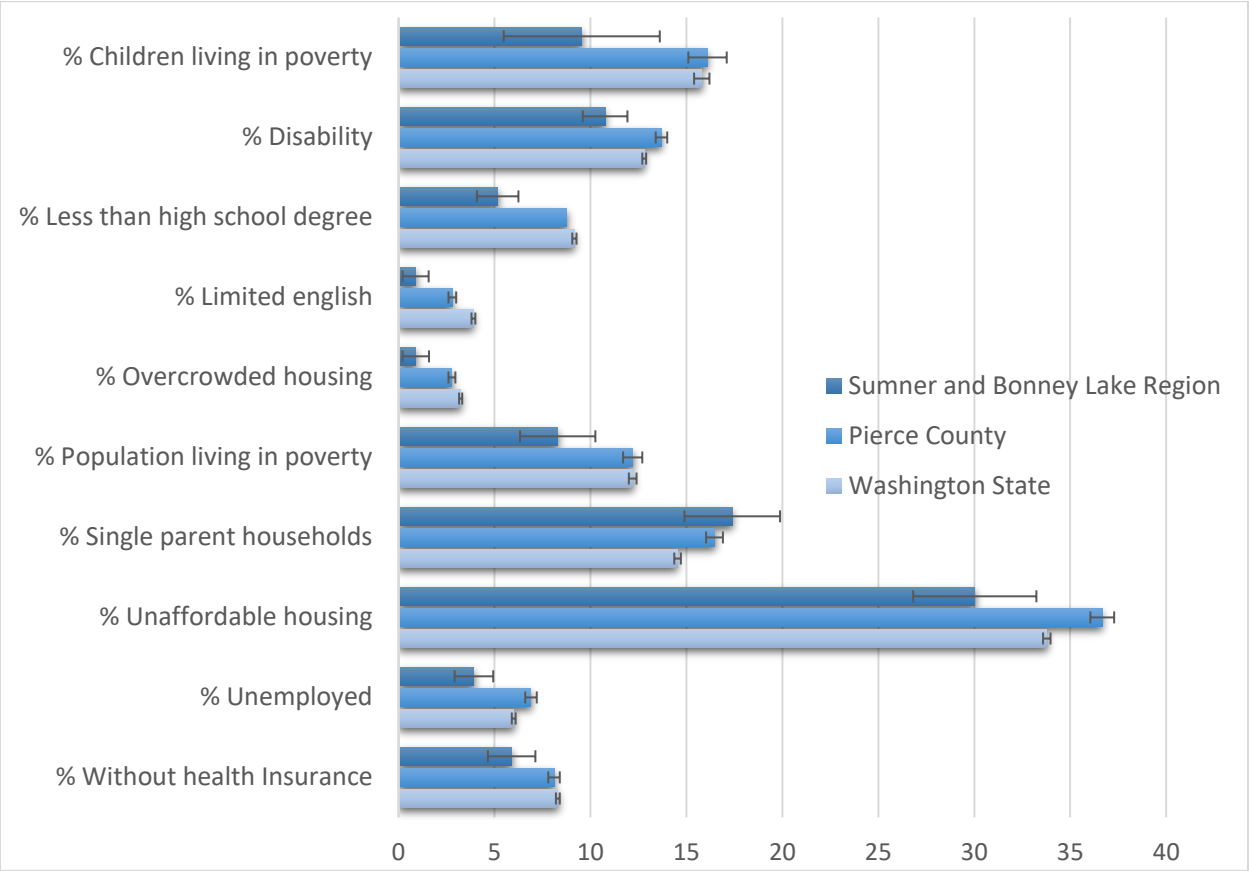


Figure 5. *Summary of social determinants of health in Sumner / Bonney Lake region, Pierce county, and Washington State with 90% confidence intervals. [115-121]*



Baseline Health

Washington State Department of Health reviewed health conditions and diseases related to exposure to noise and air pollution. Figure 7 shows hospitalization rates that were age-adjusted for Washington State, Pierce County, Sumner, and Bonney Lake. Sumner and Bonney Lake were defined using zip codes shown in Figure 6, which is the finest geography available for hospitalization data. Age-adjustment is a standard approach to allow for comparison of different populations (state vs. county vs. neighborhood) that might have different age structures, like elderly or younger people, that would change the expected rate of outcomes. This analysis combines 3 years of data (2016 to 2018) to provide higher numbers that would allow for better comparisons in smaller populations. The 95% confidence intervals allow for statistical comparison between these regions. When the confidence intervals overlap, the rates are considered statistically similar, which means there is not a clear difference between the two. Smaller populations typically have wider confidence intervals, which means that even rates that appear to be very different may not be statistically significant. Findings include:

- Hospitalization for acute myocardial infarction and diseases of the respiratory system are more prevalent in Bonney Lake than Pierce County and Washington State.

- Hospitalization for cardiac dysrhythmias is more common in Bonney Lake than Sumner, Pierce County, and Washington State.
- There is not a statistically significant difference in hospitalization rates between Sumner, Bonney Lake and Pierce County for the majority of health measures evaluated.
- In general, Pierce County, Sumner, and Bonney Lake had higher hospitalization rates for health outcomes related to noise exposure and air pollution than Washington State.

Figure 6. *Map of Sumner city limits and zip codes used in the baseline health assessment*

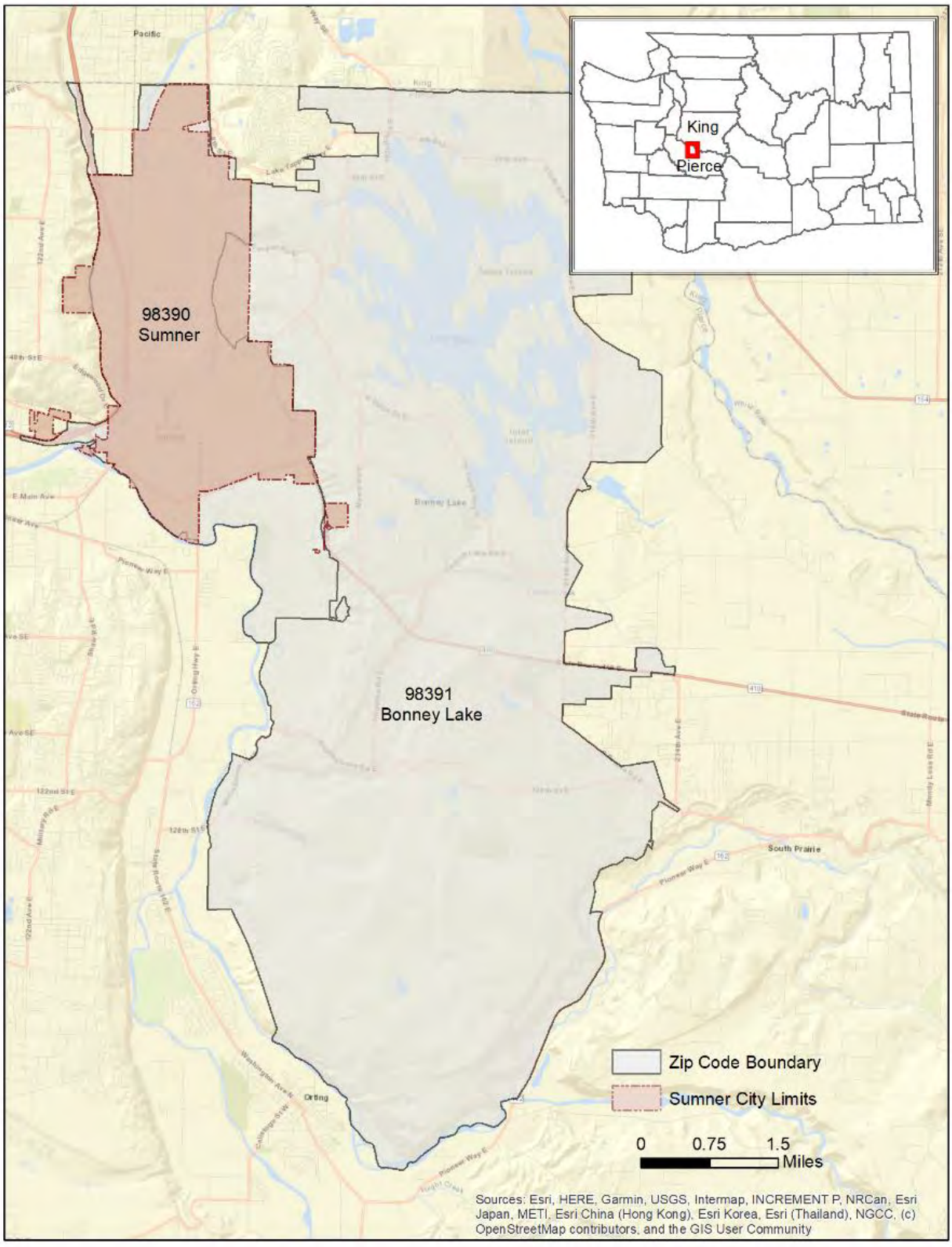
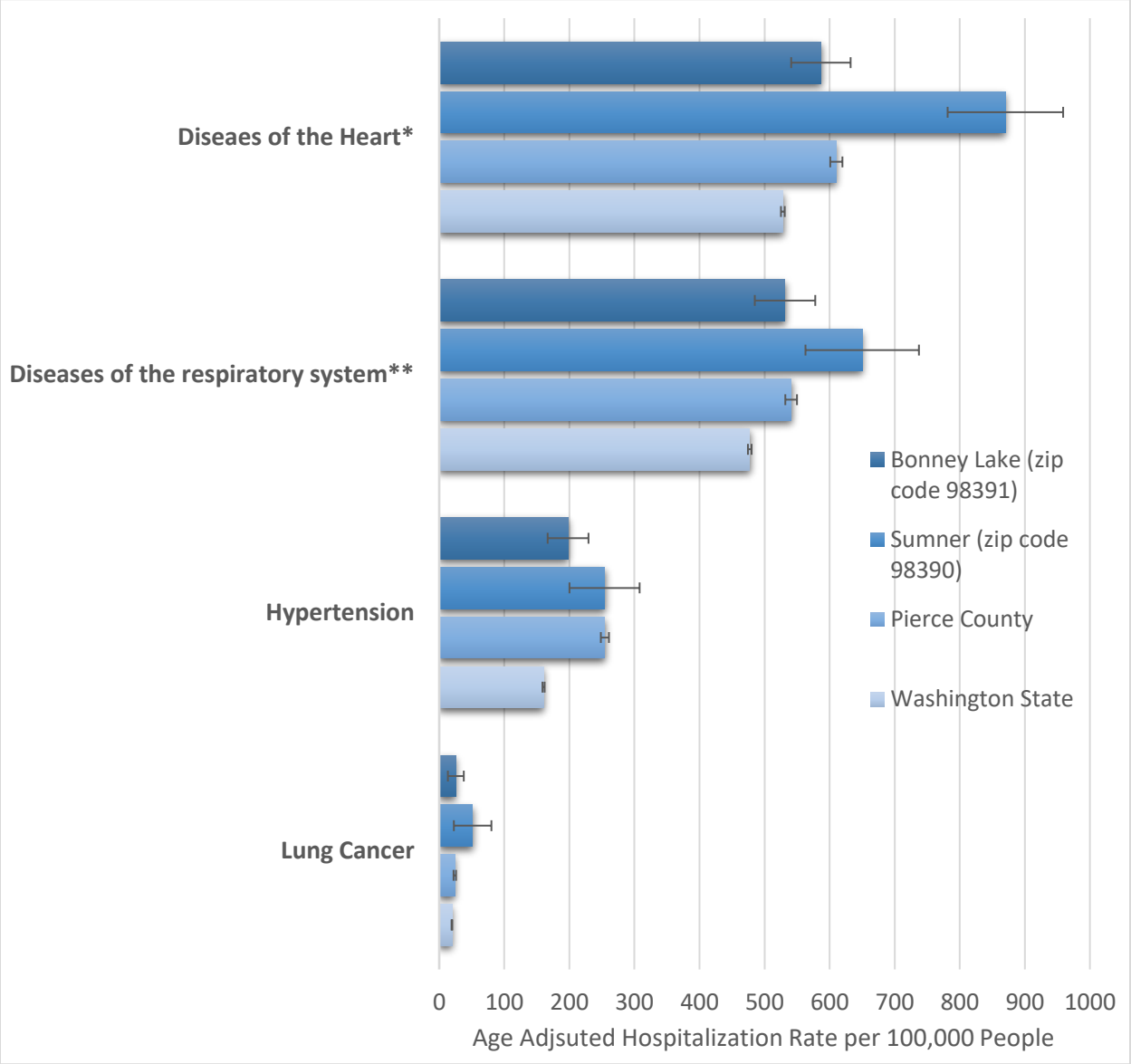


Figure 7. *Hospitalization rates for health conditions related in noise and air pollution exposure in Sumner, Bonney Lake, Pierce County and Washington State with 95% confidence intervals [122]*



*Diseases of the hearth includes ischemic heart diseases and myocardial infarction, among several other heart diseases

**Diseases of the respiratory system includes respiratory infections, chronic obstructive pulmonary disease and bronchiectasis, asthma, among several other respiratory diseases

IV. Regulating Asphalt Plants

The regulating and permitting of asphalt plants is a shared responsibility between local, regional and state agencies. Local governments, under the state's Growth Management Act, regulate siting of asphalt plants through zoning codes, and control site design and operation through development regulations including hours of operation, lighting, noise, traffic movement, and building orientation.

Ongoing Monitoring

Local governments generally rely on regional or state agencies, such as the Puget Sound Clean Air Agency (PSCAA) covering Pierce County and the great Puget Sound Area, to ensure air quality compliance. Most local code enforcement programs are not staffed or trained to provide ongoing monitoring of asphalt plants or other point sources.

The Notice of Construction Order of Approval managed by PSCAA and the Sand and Gravel General Permit issued by Washington State Department of Ecology address fugitive dust, emissions, odors and stormwater discharges, respectively, and those agencies have enforcement authority related to these areas.

Washington Administrative Code (WAC 173.60.040), establishes maximum permissible environmental noise levels between noise sources and receiving sites. While this state code provides a standard, local governments have the responsibility of noise abatement consistent with this code. It is generally enforced on the basis of complaints through a local code enforcement program.

Sumner's Development Regulations

Sumner development regulations that would be applicable to an asphalt plants include limits on outdoor storage of materials (not to exceed 40% of the building footprint or 15% of the lot area) and requiring materials to be wrapped or enclosed to prevent windblown debris. Other performance standards address lighting, odor (no use shall be permitted which creates annoying odor in such quantities as to be readily detectable beyond the boundaries of the site), vibration, and visual quality of fencing (if chain link, then black or green coated only). [123]

Specifically, Sumner Municipal Code Chapter 8.14 addresses noise control. This chapter sets decibel (dBA) limits at the property line. In Chapter 8.14.050 there is a table showing dBA limits per environmental designation for noise abatement classification. Chapter 8.14.080 establishes a 10 dBA reduction between 10:00pm and 7:00am.

Sumner Municipal Code Chapter 18.16.080 establishes performance standards for commercial districts and states that an operation shall not create noise, light, glare, vibration, or odor that would disturb the peace, quiet, and comfort of neighboring residents, retail uses, lodging and restaurant uses.

Asphalt plants within Sumner are currently permitted in the M-1 and M-2 industrial districts, however they may be prohibited, or may be limited in size, scope or location to minimize incompatibilities or health and safety concerns where a Planned Mixed-use Development occurs within M-1 or M-2 industrial district. [123]

Buildings within an M-1 or M-2 zone are required to be setback 50 feet from any common boundary with a residentially zoned property, and a required landscaped setback of 25 foot and 35 foot, respectively. Accessory outdoor storage of materials within the M-1 district are screened from adjacent properties by a 12-foot landscaped buffer consisting of at least 50% evergreen species. [123]

V. Conclusions and Recommendations

This section is intended to provide a summary of health related recommendations that are generalizable and transferable to asphalt plants and the asphalt production process as regulated in Washington State and Pierce County.

In spite of a robust regulatory and permitting process with shared responsibility at the local, regional and state levels, asphalt production may still have the potential for impacts, particularly due to equipment failure, human error, and lack of ongoing monitoring.

Recommendations to Prevent Health Related Impacts:

The following options are within local jurisdiction and intended as recommendations to expand existing regulations beyond current federal, state regulations, and local requirements including but not limited to City of Sumner Noise Code (SMC 8.14), zoning code regarding lighting and vibration, and federal, state, and local stormwater and water quality requirements.

- Require submittal of regular, on-going air or noise monitoring, or monitoring well reports documenting compliance to be submitted to the Code Compliance Officer.
- Require that stockpiled materials be handled in specific ways that reduce particulate, fugitive dust, and odors (i.e, fully enclosed in a structure, covered). [91].
- Require capture or minimization of emissions in place, such as requiring refrigerated control on condensers used to limit emissions and enclosure of the truck load-out process to reduce fugitive emissions. These would be evaluated during Best Available Control Technology review.
- Require capture or minimization of emissions from asphalt or materials on vehicles transporting these to and from the asphalt production plant.
- Limit hours of operation based on further study could minimize noise impacts and exposure to air pollution. (Environmental review at the time of permitting could provide additional information about noise and other factors).
- Limit the amount of hot mix asphalt produced or produced in specific areas based on further study.
- Comply with the 2019 Stormwater Management Manual by requiring prevention, treatment and flow control BMPs as well as additional protective measures (APMs).
- Prevent water quality impacts in the area by properly maintaining the well structures and coverings and keeping contaminants at least 100 feet away from well openings.
- Asphalt plants should not be sited in FEMA Flood Zones.
- Require the use of best practices in use of sustainable materials and production practices as well as management practices to minimize spills and leaks in asphalt manufacturing.

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From: Bryan Hampson
To: Public Comment; Brian Renninger
Cc: Bridgit Baker
Subject: RE: City of Kenmore"s Comments on Cadman DNOC
Date: Monday, May 2, 2022 4:16:29 PM
Attachments: CadmanAsphaltPlan98028_AL.xlsx

Hi Brian,
Here is the complete KC Health Department document, rather than just the one page attached to the comment letter. I didn't realize it had multiple tabs in the spreadsheet.
Thanks again.
Bryan

From: Bryan Hampson
Sent: Monday, May 2, 2022 3:30 PM
To: PublicComment@pscleanair.gov; Brian Renninger <BrianR@pscleanair.gov>
Cc: Bridgit Baker <bbaker@kenmorewa.gov>
Subject: City of Kenmore's Comments on Cadman DNOC
Hi Brian,
Thank you for the opportunity to comment. Attached are our comments as well as the ILA and an attachment from KC Health (included in the PDF with our comments). Looking forward to seeing the final NOC permit.
Regards,
Bryan

Bryan Hampson
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bhampson@kenmorewa.gov | www.kenmorewa.gov

Hospitalization: Age Adjusted Rate

Diagnosis Group	Year	Geography	Age-Adjust	Age-Adjust	Age-Adjusted Upper CI
ICD9:	Asthma (493)				
##Asthma (493)	2010-2015	State Total	60.79	60.03	61.56
##Asthma (493)	2010-2015	King	62.85	61.37	64.35
##Asthma (493)	2010-2015	98028_Kenmore_King	61.83	48.52	77.87
ICD10cm:	Asthma (J45)				
###Asthma (J45)	2016-2019	State Total	29.57	28.93	30.21
###Asthma (J45)	2016-2019	King	34.35	33.06	35.68
###Asthma (J45)	2016-2019	98028_Kenmore_King	22.07	13.38	34.74

Geography:
98028_Kenmore_King
Age: All(Combined)
Gender: All(Combined)

Statistics:
Primary Statistic:
Age Adjusted Rate
Standard Population:
2000 Standard Population
Suppression:
No Suppression
Population Multiplier:
Per 100,000
Run Date: 4/20/2022

WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2019. Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021.
OR State Hospital Discharge Data 1987-1999. Office for Oregon Health Policy and Research.
Oregon State Inpatient Database (SID) 2000-2018. Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality. Community Health Assessment Tool (CHAT), March 2020.

Hospitalization: Age Adjusted Rate

Diagnosis Group	Year	Geography	Age-Adjust	Age-Adjust	Age-Adjusted Upper CI
ICD10cm:	Lung diseases due to external agents (J60-J709), Other diseases of the respiratory system (J96-J99)				
#Lung diseases due to external age	2016-2019	State Total	33.28	32.65	33.92
#Lung diseases due to external age	2016-2019	King	40.15	38.78	41.57
#Lung diseases due to external age	2016-2019	98028_Kenmore_King	77.55	60.11	98.84
#Other diseases of the respiratory	2016-2019	State Total	120.39	119.2	121.59
#Other diseases of the respiratory	2016-2019	King	104.75	102.56	106.98
#Other diseases of the respiratory	2016-2019	98028_Kenmore_King	65.93	50.11	85.56
ICD9:	Chronic obstructive pulmonary disease and allied conditions (490-496), Pneumoconioses and other lung diseases due to external agents (500-508), Other diseases of respiratory system (510-519)				
#Chronic obstructive pulmonary di	2010-2015	State Total	152.19	151.01	153.37
#Chronic obstructive pulmonary di	2010-2015	King	132.13	130.01	134.28
#Chronic obstructive pulmonary di	2010-2015	98028_Kenmore_King	125.14	106.12	146.82
#Pneumoconioses and other lung d	2010-2015	State Total	40.51	39.9	41.12
#Pneumoconioses and other lung d	2010-2015	King	43.26	42.05	44.49
#Pneumoconioses and other lung d	2010-2015	98028_Kenmore_King	56.2	43.89	71.17
#Other diseases of respiratory syst	2010-2015	State Total	146.01	144.87	147.16
#Other diseases of respiratory syst	2010-2015	King	120.7	118.71	122.72
#Other diseases of respiratory syst	2010-2015	98028_Kenmore_King	106.66	89.36	126.59

Geography:
98028_Kenmore_King
Age: All(Combined)
Gender: All(Combined)

Statistics:
Primary Statistic:
Age Adjusted Rate
Standard Population:
2000 Standard Population
Suppression:
No Suppression
Population Multiplier:
Per 100,000
Run Date: 4/20/2022

WA Hospital Discharge Data, Comprehensive Hospitalization Abstract Reporting System (CHARS) 1987-2019. Washington State Department of Health, Center for Health Statistics, Community Health Assessment Tool (CHAT), Aug 2021.
OR State Hospital Discharge Data 1987-1999. Office for Oregon Health Policy and Research.
Oregon State Inpatient Database (SID) 2000-2018. Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality. Community Health Assessment Tool (CHAT), March 2020.

Mortality: Age Adjusted Rate

Cause Of Death	Year	Geography	Age-Adjust	Age-Adjust	Age-Adjusted Upper CI
###Asthma (J45)	2010-2019	State Total	0.98	0.91	1.06
###Asthma (J45)	2010-2019	County: King	0.82	0.7	0.96
###Asthma (J45)	2010-2019	Zip Code: 98028 (Kenmore_K	0.3	0.01	2.58
###Asthma (J45)	2010-2019	Census tract: 53033021500	0	0	0
###Asthma (J45)	2010-2019	Census tract: 53033021600	0	0	0
###Asthma (J45)	2010-2019	Census tract: 53033021700	0	0	0
###Asthma (J45)	2010-2019	Census tract: 53033022101	1.18	0.03	12.15
###Asthma (J45)	2010-2019	Census tract: 53033022102	1.58	0.04	13.04
###Asthma (J45)	2010-2019	Census tract: 53033022300	3.04	0.08	26.9

ICD10(1999-Present)
ICD9(1990-1998)
Asthma
Year:
2012-2019
Geography:
53033021500, 53033021600, 53033021700, 53033021802, 53033021803, 53033021804, 53033022101, 53033022102, 53033022300
Age: All(Combined)
Gender: All(Combined)
Race: All(Combined)
Ethnicity: All(Combined)

Statistics:
Primary Statistic:
Age Adjusted Rate
Standard Population:
2000 Standard Population
Suppression:
No Suppression
Population Multiplier:
Per 100,000
Run Date: 4/20/2022

Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990â€“2020, Community Health Assessment Tool (CHAT), December 2021.

Mortality: Age Adjusted Rate

Cause Of Death	Year	Geography	Age-Adjust	Age-Adjust	Age-Adjusted Upper CI	
ICD10(1999-Present)	Chronic lower respiratory diseases (J40-J47), Lung diseases due to external agents (J60-J70), Other diseases of the respiratory system (J95-J99)					
ZIPcode						
#Chronic lower respiratory diseas	2010-2019	State Total	38.38	37.94	38.82	
#Chronic lower respiratory diseas	2010-2019	King	27.27	26.53	28.03	
#Chronic lower respiratory diseas	2010-2019	98028_Kenmore_King	23.92	17.84	31.58	
#Lung diseases due to external ag	2010-2019	State Total	7.49	7.29	7.68	
#Lung diseases due to external ag	2010-2019	King	8.47	8.06	8.89	
#Lung diseases due to external ag	2010-2019	98028_Kenmore_King	10.39	6.48	15.95	
#Other diseases of the respiratory	2010-2019	State Total	1.63	1.54	1.72	
#Other diseases of the respiratory	2010-2019	King	1.42	1.25	1.6	
#Other diseases of the respiratory	2010-2019	98028_Kenmore_King	1.41	0.29	4.43	
##Malignant neoplasms of digesti	2010-2019	State Total	39.5	39.05	39.94	
##Malignant neoplasms of digesti	2010-2019	King	38.74	37.88	39.62	
##Malignant neoplasms of digesti	2010-2019	98028_Kenmore_King	38.09	30.49	47.21	
Census Tracts						
#Chronic lower respiratory diseas	2010-2019	State Total	38.38	37.94	38.82	
#Chronic lower respiratory diseas	2010-2019	53033021500	16.7	8.21	39.5	
#Chronic lower respiratory diseas	2010-2019	53033021600	21.79	11.13	40.08	
#Chronic lower respiratory diseas	2010-2019	53033021700	21.79	12.2	36.96	
#Chronic lower respiratory diseas	2010-2019	53033022101	39.44	24.89	61.23	
#Chronic lower respiratory diseas	2010-2019	53033022102	24.19	11.44	45.69	
#Chronic lower respiratory diseas	2010-2019	53033022300	6.08	0.74	30.93	
#Lung diseases due to external ag	2010-2019	State Total	7.49	7.29	7.68	
#Lung diseases due to external ag	2010-2019	53033021500	14.41	6.17	37.46	
#Lung diseases due to external ag	2010-2019	53033021600	1.84	0.05	13.22	
#Lung diseases due to external ag	2010-2019	53033021700	8.77	3.05	20.67	
#Lung diseases due to external ag	2010-2019	53033022101	10.5	3.84	25.36	
#Lung diseases due to external ag	2010-2019	53033022102	23.1	10.52	44.6	0.0436
#Lung diseases due to external ag	2010-2019	53033022300	9.62	1.97	35.9	
#Other diseases of the respiratory	2010-2019	State Total	1.63	1.54	1.72	
#Other diseases of the respiratory	2010-2019	53033021500	1.96	0.05	22.86	
#Other diseases of the respiratory	2010-2019	53033021600	1.84	0.05	13.22	
#Other diseases of the respiratory	2010-2019	53033021700	0	0	0	
#Other diseases of the respiratory	2010-2019	53033022101	0	0	0	
#Other diseases of the respiratory	2010-2019	53033022102	2.07	0.05	14.12	
#Other diseases of the respiratory	2010-2019	53033022300	0	0	0	
##Malignant neoplasms of digesti	2010-2019	State Total	39.5	39.05	39.94	
##Malignant neoplasms of digesti	2010-2019	53033021500	40.12	25.95	66.85	
##Malignant neoplasms of digesti	2010-2019	53033021600	29.18	16.57	49.25	
##Malignant neoplasms of digesti	2010-2019	53033021700	57.7	40.87	79.91	
##Malignant neoplasms of digesti	2010-2019	53033022101	35.82	22.25	56.62	
##Malignant neoplasms of digesti	2010-2019	53033022102	25.95	13.53	46.47	
##Malignant neoplasms of digesti	2010-2019	53033022300	16.68	6.48	43.58	

Year:
2010-2019
Geography:
53033021500, 53033021600, 53033021700, 53033022101, 53033022102, 53033022300

Statistics:
Primary Statistic:
Age Adjusted Rate
Standard Population:
2000 Standard Population
Suppression:
No Suppression
Population Multiplier:
Per 100,000
Run Date: 4/20/2022

Washington State Department of Health, Center for Health Statistics, Death Certificate Data, 1990â€“2020, Community Health Assessment Tool (CHAT), December 2021.

From: James Myers
To: Public Comment
Subject: Re: Public Comment on Cadman Asphalt Facility Draft Permit (11861)
Date: Monday, May 2, 2022 3:08:01 PM
Attachments: ap42-enforcementalert.pdf

I forgot to add a reference article to my previous comment (from Jim Myers), I have attached EPA 325-N-20-001 for your consideration (although I suspect you already have one).

Cheers,

Jim Myers

> On 05/02/2022 3:02 PM James Myers <oda1959@comcast.net> wrote:
>
> Dear Mr. Renninger
>
> I have attached my comments on the Cadman Draft Permit for your consideration.
>
> Thank you
>
> Jim Myers

EPA United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance

Enforcement Alert

Publication no. EPA 325-N-20-001 November 2020

EPA Reminder About Inappropriate Use of AP-42 Emission Factors

Purpose

This purpose of this Enforcement Alert is to remind permitting agencies, consultants, and regulated entities that improperly using AP-42 emission factors can be costly to their businesses, inefficient, and in some circumstances, can subject regulated entities to enforcement and penalties. The Environmental Protection Agency (EPA) is concerned that some permitting agencies, consultants, and regulated entities may incorrectly be using AP-42 emission factors in place of more representative source-specific emission values for Clean Air Act permitting and compliance demonstration purposes.

Consequences of Using AP-42 Factors

Permitting agencies, consultants, and regulated entities should be aware that even emission factors with more highly rated AP-42 grades of "A" or "B" are only based on averages of data from multiple, albeit similar, sources (*See* the Attachment for an overview of the history of AP-42 emission factors and the AP-42 emission factor rating system). Accordingly, these factors are not likely to be accurate predictors of emissions from any one specific source, except in very limited scenarios. While emission factors are helpful in making emission estimates for area-wide inventories for specific source types, AP-42 provides the following warning:

> "Use of these factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance."[1]

With the advent of 1-hour and short-term National Ambient Air Quality Standards (NAAQS), permit limits must be able to account for short term fluctuations. AP-42 emission factors also do not account for short term variation in emissions as the emission factors are intended for use in developing area-wide annual or triannual inventories. In developing emission factors, test data are typically taken from normal operating conditions and generally avoid conditions that can cause short-term fluctuations in emissions. These short-term fluctuations in emissions can stem from variations in process conditions, control device conditions, raw materials, ambient conditions, or other similar factors. This means that if facilities use AP-42 emission factors as permit limits, facilities increase their chances of violating their short-term permit limits. It also increases the likelihood of a geographic area's non-compliance with the NAAQS.

DISCLAIMER: This document aims to explain the application of certain EPA regulatory provisions using plain language. Nothing in this Alert revises or replaces any regulatory provisions, any other part of the Code of Federal Regulations, the Federal Register, or the Clean Air Act. Following the approaches for determining a single storage vessel's potential for VOC emissions and attempting to comply with the closed vent system requirements as discussed in this Alert do not equate to or guarantee compliance with the Clean Air Act, its implementing regulations, and associated state/local requirements. For more information, visit: www.epa.gov/compliance.

[1] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 2 (emphasis added).

It is also important to understand that there is a great deal of variability in the emissions data that are used to generate the emission factors. This variability is not necessarily reflected in the emission factor. AP-42 describes this as follows:

> "The extent of between-source variability that exists, even among similar individual sources, can be large depending on process, control system, and pollutant. Although the causes of this variability are considered in emission factor development, this type of information is seldom included in emission test reports used to develop AP-42 factors. As a result, some emission factors are derived from tests that may vary by an order of magnitude or more. Even when the major process variables are accounted for, the emission factors developed may be the result of averaging source tests that differ by factors of five or more."[2]

In addition to potential permit noncompliance, or increased risk of area noncompliance with the NAAQS, using an emission factor as an emission limit could have monetary implications for an individual source or permitting agency. For example, many permitting agencies collect permitting fees based on the amount of pollution emitted. If a facility uses an emission factor to estimate and report emissions, but the actual emission rate is lower than the emission factor, then the facility will report more emissions and consequently pay more in fees. On the other hand, if a facility emits at a rate above the emission factor, not only is the source violating its permit limit and the Clean Air Act, it is also not paying the appropriate amount in fees.

Another potential monetary implication for facilities is an enforcement action assessing penalties for violating the Clean Air Act. As described in a 2006 report issued by the EPA Inspector General:

> "…according to EPA enforcement records, three industries – petroleum refineries, wood products, and ethanol production – operated with insufficient control equipment primarily because emission limits were significantly underestimated due to the emission factors used. EPA, through separate enforcement actions, required companies in these industries to install additional emission controls, resulting in the combined reduction of over 1,000,000 tons of pollutants."[3]

For example, the EPA Inspector General's 2006 report documented an EPA investigation in the Wood Products industry that found a nationwide pattern of Clean Air Act violations by one company. EPA found that the company had used an AP-42 emission factor designated as "poor" for volatile organic compound (VOC) emissions that resulted in the company underestimating such emissions and claiming that its facilities were not subject to permitting requirements. To resolve the violations, the company entered into a consent decree with the United States, which required the company to pay a civil penalty of $1.1 million and to install air pollution control equipment at a cost of $70 million.[4]

One example of a present-day concern is the use of a default vapor pressure value for estimating VOC emissions from heated tanks that store heavy refinery liquids such as No. 6 fuel oil. The true vapor pressure (TVP) of a stored liquid is important when calculating the emissions from tanks using the equations in AP-42, Chapter 7, Liquid Storage Tanks. The default vapor pressure is only an estimate and may not be correct for every blend of No. 6 fuel oil. Direct emissions testing of No. 6 fuel oil tanks and TVP testing in 2012 and 2013, suggested that in those cases the use of the default vapor pressure in AP-42 had resulted in emissions estimates that were understated by a factor of 100 for permitting and reporting purposes. Reliance on the default vapor pressure in AP-42 and the resulting emission factors, instead of directly measuring VOC emissions and vapor pressure, can be very costly for businesses as shown by two recently concluded cases, summarized in the following two boxes.

[2] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, p. 3 (emphasis added).

[3] U.S. EPA Office of Inspector General, *EPA Can Improve Emissions Factors Development and Management*, Report No. 2006-P-00017, March 22, 2006.

[4] Id.

Sprague Resources LP operates heated asphalt and No. 6 fuel oil storage tanks at seven facilities across New England. Applying VOC testing results rather than AP-42 estimates, EPA found that Sprague had unpermitted facilities that required permits, and also had facilities with permits that failed to fully account for VOC emissions. Sprague entered into a settlement with the United States and the Commonwealth of Massachusetts that required the company to pay $350,000 civil penalties, obtain revised state air pollution control permits, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at six facilities, and provide odor controls on tanks at two facilities.

Global Partners LP operates heated asphalt and No. 6 fuel oil storage tanks at a facility in South Portland, Maine. Applying VOC testing results rather than AP-42 estimates, EPA found that Global's permit failed to fully account for VOC emissions. Global entered into a settlement with the United States that required the company to obtain a revised state air pollution control permit, limit the amount of asphalt and No. 6 fuel oil stored in and passed through the tanks at the facility, install odor controls on tanks, pay a $40,000 penalty, and invest $150,000 in a local wood-stove replacement project.

Regulated entities of any size who voluntarily discover, promptly disclose, expeditiously correct, and take steps to prevent recurrence of potential violations may be eligible for a reduction or elimination of any civil penalties that otherwise might apply. Most violations can be disclosed and processed via EPA's automated online "eDisclosure" system (seehttps://www.epa.gov/compliance/epas-edisclosure). To learn more about the EPA's violation disclosure policies, including conditions for eligibility, please review EPA's Audit Policy website at https://www.epa.gov/compliance/epas-audit-policy. Many states also offer incentives for self-policing; please check with the appropriate state agency for more information.

What Can Be Done?

Consultants and facility owners/operators should obtain and use the most representative emissions data, which in many cases may be source-specific emissions data, when determining applicability, applying for a permit, or demonstrating compliance with permit limits.

Various EPA publications (e.g., https://www.epa.gov/emc) describe the benefits and limitations of different ways to quantify source-specific emissions. These techniques in order of accuracy are:

- **Continuous Emissions Monitoring System (CEMS)** – CEMs offers a highly accurate source-specific method that continuously monitors the emissions coming out of a particular stack; however, although the accuracy of this method is high, the cost is also the highest at $20,000-$50,000 per year.
- **Stack Testing** – Like a CEMS, source-specific data are generated at a particular stack but emissions are only measured for a specific time, typically for a few hours during normal operations. Costs for stack testing typically run $20,000, but testing may only be necessary every 2 to 5 years.
- **Vendor Guarantees and Stack Test Data from Similar Facilities** – If representative source-specific data cannot be obtained, emissions information from equipment vendors, particularly emission performance guarantees or actual test data from similar equipment, is a better source of information for permitting decisions than an AP-42 emission factor.
- **Material Balance Calculations** – While the material balance calculations are not generally considered as accurate as direct measurements, they may provide more reliable average emission estimates for certain sources where a high percentage of material is lost to the atmosphere (e.g., solvent VOC emissions). The costs for recordkeeping are approximately $2,000-$10,000 per year. This method works well for materials and processes that are well understood.
- **Optical Remote Sensing** – Measurement techniques involving differential absorption light detection and ranging (known as DIAL) and solar occultation flux or SOF can be used to measure emissions from sources such as coke ovens, storage tanks, wastewater treatment plants, and process units that are otherwise difficult to measure by other means. Measurement bias on the order of ±30 percent is expected but the data can be more accurate than engineering estimates or emission factors.
- **Emission Factors** – When source-specific emissions or other more reliable approaches are unavailable, AP-42 emission factors may be the only way to estimate emissions. Again, the limitations of the factor in accurately representing the facility's emissions and the environmental/financial risk of using the emission factor for a particular situation should be carefully considered. **Remember, AP-42 emission factors should only be used as a last resort. Even then the facility assumes all risk associated with their use!**

Attachment – History of AP-42

Before the EPA existed, the U.S. Public Health Service (PHS) published "A Compilation of Air Pollutant Emission Factors" in 1968.* The purpose of the report was to assist the various agencies responsible for compiling air pollution emission inventories for communities across the nation by providing them with relevant data. PHS recognized that measuring each individual source of air pollution in a particular airshed was impractical, and so, to simplify the airshed emission inventory process, while still maintaining a reasonably accurate inventory, PHS developed emission factors based on the technical literature and a limited number of source-specific tests. The resulting emission factors were simple averages of the rate at which pollutants were emitted from the burning or processing of a given quantity of material. In some cases, emission factors were based on only one or two data points.

* The PHS assigned the number 999-AP-42 to this publication. 999 was the series number, AP was an abbreviation for air pollution, and 42 was the document number. Thus, the origin of today's AP-42!

With the creation of the EPA, publication of the emission factors was continued with "Compilation of Air Pollutant Emission Factors, Second Edition," by the EPA Office of Air Quality Planning and Standards in 1973. The 3rd and 4th editions of AP-42 were released in 1977 and 1985. EPA published the most recent AP-42, the 5th edition in 1995[5], and has published multiple supplements and updates since. Currently, AP-42 contains more than 21,500 emission factors for over 200 air pollutants. Within AP-42, each emission factor is given a rating between "A" (excellent) and "E" (poor) (see Table 1 below). It is important to note that half of the emission factors are rated "D" or "E" and one-fifth are unrated. This means that less than one-third of the emission factors are rated between "Excellent" and "Average."

As we work to improve our ability to estimate emissions nationally, the grading in AP-42 helps us better understand the quality of the data. But even factors that are rated "A" or "B" are not designed to be used by a single source where other, more reliable, site-specific, data are available.

Table 1: Explanation of AP-42 Emission Factor Quality Ratings

Rating	Explanation
"A" – Excellent	Emission factor is developed from tests conducted with sound, or generally sound, methodology. Test data are from many randomly chosen facilities and the source category population is sufficiently specific to minimize variability. Data may, or may not, be reported in enough detail for adequate validation.
"B" – Above Average	Same as "A," but test data are from a "reasonable number" of facilities. Although no specific bias is evident, it's not clear if the facilities represent a random sample of the industry. The source category population is sufficiently specific to minimize variability.
"C" – Average	Same as "B," but the factor can be developed from an unproven or new methodology. Test data may be lacking a significant amount of background information. Although no specific bias is evident, it's not clear if the facilities tested represent a random sample of the industry. The source category population is specific enough to minimize variability.
"D" – Below Average	Same as "C," but test data are from a small number of facilities, and there may be reason to suspect the facilities do not represent a random sample of the industry. There may also be evidence of variability within the source population.
"E" – Poor	Factor is developed from: (1) tests based on an unproven or new methodology, or tests that may be lacking a significant amount of background information, or (2) tests based on a generally unacceptable method, but the method may provide an "order of magnitude" value for the source. Facilities tested may not represent a random sample of the industry and there is evidence of variability within the source category population.

[5] AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources. Introduction, pp. 9-10.

From: dave.gent@asphaltwa.com
To: Public Comment
Subject: Written Public Comments - Proposed Order of Approval No. 11861 - Cadman Materials
Date: Thursday, April 28, 2022 2:11:41 PM
Attachments: Kenmore Plant PSCAA DRAFT Order of Approval - NOC 11861 - WAPA Public Comments - 4.28.2022.pdf

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ATTN: Brian Renninger, Engineer

As directed in the PUBLIC NOTICE for the subject Proposed Order of Approval No. 11861, please find attached our written public comments.

This same letter has been sent via USPS.

Best regards,

Dave Gent

Dave Gent, P.E.
Executive Director / Technical Director
Washington Asphalt Pavement Assoc. (WAPA)
(253) 261-4486
Dave.Gent@AsphaltWA.com

WAPA
Washington Asphalt Pavement Association

April 28, 2022

TO: Puget Sound Clean Air Agency
ATTN: Brian Renninger, Engineer
1904 Third Ave., Suite 105
Seattle WA 98101

DELIVERED VIA EMAIL TO: PublicComment@pscleanair.gov and via USPS first class mail

RE: Public response/ comments by the Washington Asphalt Pavement Association (WAPA) relating to the Cadman Materials Kenmore Asphalt Plant DRAFT Order of Approval (PSCAA NOC No. 11861)

Mr. Renninger,

Thank you for the opportunity to review and comment on the DRAFT Order of Approval for NOC No. 11861, generally identified as the Cadman Materials (Cadman) Kenmore asphalt plant.

WAPA is the industry association that represents the private companies that produce 98% of the hot mix/ warm mix asphalt in Washington state. These companies own and operate 60+ hot mix asphalt production facilities throughout the state. As such, WAPA is invested in supporting the Cadman Materials asphalt plant operation in Kenmore. We are also tasked with ensuring fair and equitable application of state regulations for all of our Association members across the state.

Our comments (below) are intended to review and means tests the DRAFT Order of Approval, taking into account PSCAA's standard procedures for permitting other asphalt plants within its jurisdiction. This is to make certain that the Kenmore plant operations are subject to well established norms. PSCAA's permitting framework should be predictable and equitably applied in every situation. PSCAA should issue the final Order of Approval for the Kenmore plant, as it would any other plant, to warrant that it is operating efficiently and within industry norms. The final permit should be crafted to meet PSCAA's standard criteria for said operations.

Please review and consider our specific comments for sections of the DRAFT Order of Approval that we believe require review and revision. WAPA has attempted to be a partner in the Kenmore plant operations review/ legislative processes for multiple years and we continue to stand ready to help with constructive revisions to the DRAFT Order of Approval document that we believe are well warranted, as outlined below:

DRAFT Notice of Construction No. 11861 – First Paragraph - Please note that considering the replacement of old condensers with like kind new condensers should not be included in the basis for an NOC review based on PSCAA Regulation I, Article 6, Section 6.03 (b) and (b) (131). There are no fundamental process changes involved and the plant needs to be maintained without triggering an NOC when like kind replacements, or fundamentally equal to/ better, than passive upgrades are made.

EMISSIONS LIMITS:

Condition 7 – There are two fundamental issues/ errors related to this restriction/ condition.

1. The plant exhaust stack emission limit for total particulate was taken from the air dispersion report and based on actual O_2 emission concentrations measured during a source test (0.0052 gr/dscf measured with 14.67% O_2 in the stack exhaust).

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The limit was then misprinted and conditioned for correction to 7% O_2 (i.e., 0.0052 gr/dscf corrected to 7% O_2). If the actual tested particulate emissions were corrected to 7% O_2, the resultant emissions would equate to 0.0116 gr/dscf corrected to 7% O_2. This error is further demonstrated when comparing emission limits, cited in the NOC worksheet (see table from page 11 below), to other plant permit limits. The total particulate emissions from the stack should be 0.027 gr/dscf (total) corrected to 7% O_2, in line with the BACT limit recommended on page 12 of the NOC worksheet. The 0.0052 emission limit listed the DRAFT permit is not attainable and is clearly derived from erroneous application of emission factor correction.

Particulate Matter

Similar Permits or Other Regulatory Agencies BACT for PM:

Source	Description	PM BACT
PSCAA Order No. 10462 (December 2012)	New hot mix asphalt plant including: Astec Counter Flow, Double Barrel Dryer (400 TPH)	0.02 gr/dscf (total)
PSCAA Order No. 10852 (April 2015)	New hot mix asphalt (HMA) plant (325 TPH)	0.02 gr/dscf (total)
PSCAA Order No. 11175 (November 2016)	New hot mix asphalt (HMA) plant (300 TPH)	0.02 gr/dscf (total)
PSCAA Order No. 11274 (May 2017)	Replacement of an existing pug mill with a rotary mixer (350 TPH)	0.02 gr/dscf (total)
PSCAA Order No. 11328 (January 2018)	Replacement of the drum dryer at an existing continuous/batch Asphalt Plant.	0.027 gr/dscf (total), corrected to 7% O_2 0.014 gr/dscf (filterable), corrected to 7% O_2
PSCAA Order No. 11613 (September 2018)	Replacement of an existing pug mill with a rotary mixer (300 TPH)	0.027 gr/dscf (total), corrected to 7% O_2 0.014 gr/dscf (filterable), corrected to 7% O_2
PSCAA Order No. 11812 (December 2019)	Replacement of new 400 TPH drum mixer	0.027 gr/dscf (total), corrected to 7% O_2 0.014 gr/dscf (filterable), corrected to 7% O_2
Southwest Clean Air Agency 16-3199ADP	Replacement of parallel flow dryer/mixer with counterflow dryer/mixer (400 TPH)	0.010 gr/dscf (filterable), corrected to 15% O_2
Southwest Clean Air Agency 19-3335ADP	Replacement of existing batch tower (300 TPH) with a miniDrum asphalt mixer (500 TPH)	0.015 gr/dscf (filterable), corrected to 15% O_2

2. We would like to point out that both the SWCAA and the ORCAA recognizes that the use of a 7% O_2 correction factor is not appropriate for emissions corrections at asphalt plants and use of an appropriate O_2 correction factor would help mitigate this confusion. Both SWCAA and ORCAA use correction factors at 15% O_2. This is the more appropriate correction as asphalt plants burners do not operate as "closed systems" as boiler systems do (the 7% O_2 may originally derive from boiler system analysis). PSCAA should follow SWCAA and ORCAA in documenting that corrections for particulate should be at 15% O_2.

For ease of reference, relevant citations from SWCAA and ORCAA permit documents are provided below:

SWCAA historically required correction of Particulate and Gaseous emissions to 7% O_2.

However, SWCAA realized well over a decade ago that the correction factor for particulate and gaseous emission should not be 7% for asphalt plant emissions measured from the exhaust stack. A 2019 Technical Support Document, prepared by the agency in support of a revised asphalt plant permit, included the following description of appropriate particulate emission correction factors under the BACT Determination section:

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8.b BACT Determination - Asphalt Plant – Particulate Matter Emissions (SWCAA 97-1981). The use of a baghouse to limit filterable particulate matter emissions to 0.015 gr/dscf @ 15% O_2 meets the requirements of BACT for this facility at the original time of permitting. The original BACT determination for this facility identified 0.015 gr/dscf as meeting the requirements of BACT, however a 7% O_2 correction was established in the permit emission test requirements. Based on a review of emission test results from this and other asphalt plants within SWCAA's jurisdiction, SWCAA has determined that that this limitation should be more appropriately corrected to 15% O_2.

In addition, in 2019, ORCAA issued another asphalt plant permit with the following particulate limits, which closely fairly aligned with SWCAA:

9. **Particulate Limit:** Filterable particulate emissions from the baghouse exhaust stack shall not exceed 0.02 grains per dry standard cubic foot of exhaust corrected to 15% oxygen (gr/dscf @ 15% O_2). When required, compliance shall be demonstrated in accordance with EPA Method 5 and the procedures in §60.93(b)(1).
[WAC 173-400-113(2)(b); ORCAA 6.1.4(a)(2)]

Condition 8 – The same issue as discussed in Condition 7. The BACT limit recommended for filterable particulate on Page 12 of the NOC Worksheet No. 11861 is 0.014 gr/dscf corrected to 7% O_2. Condition 8., as printed, shows 0.0026 gr/dscf in the DRAFT Order of Approval. This again appears to be a misprint. The 0.014 gr/dcsf corrected to 7% O_2 is appropriate and well supported by the standards set for other previous permits limits for PM BACT, as shown in the PSCAA NOC Worksheet table on page 11 (above).

PRODUCTION LIMIT

Condition 18 – The owner/ operator has agreed to the 200,000 ton/ 12 consecutive month limit in the DRAFT Order of Approval for NC No. 11861 so this will not be a disputed condition. However, we will note for the record that other previous permits use an hours-of-operation multiplied by the plant's rated production capacity calculation to establish the 12 consecutive month production limit.

This calculation should remain the PSCAA standard for establishing permit production limits, as a general rule. It is the standard the industry uses for evaluation of operations within PSCAA permits parameters. For the record, WAPA is pointing out that this standard should be maintained for future PSCAA asphalt plant permits.

For example, if the historic standard was used in this instance, with operational hours capped at 2,720 (modeled on 170 production days x 16 hours/day – equal to NC No. 11870 annual production hour limits) multiplied by the plant's permitted rating at 200 TPH, the production limit would be 544,000 tons in a consecutive 12-month period.

By agreeing to the 200,000 TPH production limitation, Cadman has already provided a substantial concession with respect to the plant's operations.

Condition 20 – This permit restriction (no on-site storage of asphalt blended with more that 7% petroleum distillates – i.e., cutback asphalt) is another concession by Cadman to address *wholly uninformed* activist group concerns. The industry, via WAPA, would like to have it on record that cutback asphalt is used very sparingly across the industry, almost exclusively to make bulk cold-mix asphalt, which is predominantly a product requested by local governments for seasonal pot-hole repair. Having this product readily available and in bulk quantity is largely a public service. Cold mix generally accounts for less than one day of low tonnage production/year at hot mix asphalt plants that choose to supply the product (often at the request of local agencies). We would encourage PSCAA to inform the public of this fact so that this issue does not continue to be a point of contention in future Orders of Approval.

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We note that cutback asphalt is ***already well regulated*** in Regulation II, Section 3.01. This existing regulation/ restriction should be the standard for permitting asphalt plants. For consistency and clarity, we believe that Condition 20 should be removed from NC 11861 as cutback asphalt storage is not under review in this application and its storage is therefore beyond PSCAA's jurisdiction. If Condition 20 is ultimately included within this specific permit as a political concession to the local misinformation campaign, it should ***not be considered*** standard procedure for comparison for future permitting standards.

SOURCE TESTING

Condition 22 – The standard for every similar recent PSCCA permit for emissions testing is every five (5) years. This owner/ operator should not be singled out for additional testing frequency. Additionally, testing for opacity should be conducted on the same frequency the other emission tests are performed. Increasing testing frequency for opacity from once every 5 years to "at least once every 12 months", in addition to the requirement to submit a compliance test plan with the test notification at least 30 days prior to each compliance test (*we note that "30 days" is in conflict with Regulation 1, Section 3.07(b) which codifies a 21-day notice*), puts an undue regulatory and economic burden with no scientific justification on the owner/ operator. Furthermore, the owner/ operator, in accordance with Condition 24, is already required to monitor and record "one daily inspection for visible emissions for particulate fallout for the baghouse". Visible inspection does not require source test plan preparation or testing by a certified tester, yet detection of visible emissions of particulate fallout indisputably indicates potential violation of opacity standards which require corrective action. Again, Cadman should not be singled out for additional testing frequency when compared to similarly permitted plants.

MONITORING

Conditions 25, 26 & 27 – These conditions move far beyond the conditions of any similar asphalt plant permits issued by PSCAA or other Washington state clean air regional agencies. Conditions 25 and 26 contain overly complex rules, and the rules border on being punitive in nature.

While permit conditions 25 & 26 are more stringent than any other similar PSCAA plant permits, they are, at least in theory, a planned response to a ***reported*** event. Still, the conditions are overly harsh and need to be studied and negotiated with the owner/ operator, not simply "imposed" by fiat.

Condition 27 however goes far beyond the reasonable operational parameters of a typical asphalt plant permit. Condition 27 appears to have been developed arbitrarily (without discourse with Cadman and without an example from established industry rulemaking). From our reading, it attempts to go far beyond a reasonable/ justifiable investigation and mandates an unprecedented action with no objective criteria or "triggering" event.

This arbitrary and capricious monitoring scheme goes well beyond PSCAA's historic permitting parameters for asphalt plants and seems to be a blatant attempt to impress the small minority of activists and the City of Kenmore that PSCAA will "be tough" on the operator, even when there is no identified cause for concern.

For the record, and for the sake of maintaining objective and predictive conditions for an asphalt plant permit, we are in firm opposition to Condition 27 in particular and the co-mingling of conditions within Conditions 25, 26 and 27. PSCAA should not be attempting to create new boundaries of its authority and should never impose unreasonable conditions in response to targeted pressure campaigns from groups (or governments), with ulterior motives based on past conflict, misinformation, miscommunication, misunderstanding and an underlaying agenda to change the character of the neighborhood.

Washington Asphalt Pavement Association
451 SW 10th Street, Suite 110A
Renton WA 98057
(425) 207-8814 * Fax (425) 970-3178

We believe that Condition 27 (and its tie to Conditions 25 & 26) goes beyond the statutory boundaries of PSCAA's authority. PSCAA tries to rationalize this overreach in its NOC Worksheet document, but it is, in fact, attempting to "carve out" an extension of its mandate, and it attempts to impose a jumble of imprecise and ad hoc monitoring conditions on the Kenmore plant simply because of its location.

We are strongly opposed to Conditions 25, 26 & 27 in the current DRAFT form. Without doing the work of categorizing the many and varied "odors" in the neighborhood surrounding the asphalt plant, PSCAA is proposing a cobbled together, completely novel "sniffing test" program and assigning an arbitrary schedule for said monitoring.

A wholly unprecedented program should not be proposed/ imposed without extensive partnering with the specific owner/ operator and without site specific analysis of all of the "odor generators" resident around the site. There *may* be a reasonable approach for establishing a definable "triggering event" (e.g., a persistent weather inversion) that *may* justify spot audits for the Kenmore asphalt plant's aroma signature, but Condition 27, as drafted, is overly broad and completely indiscriminate. The draft condition also lists multiple sites that are likely operationally redundant for monitoring, as the extensive air dispersion analysis documents.

A monitoring plan for the "critical few" locations, under identifiable criteria, linked to site specifics dynamics, could be negotiated with the owner/ operator based on the air dispersion analysis, further odor investigational studies that identify all of the other odors generated in the neighborhood (e.g., other industries, highway 522 traffic etc.), and on likely weather patterns/ predictable events that may affect dispersion of the asphalt plant emissions.

We suggest that Conditions 25, 26 & 27 be much more thoroughly discussed with the owner/ operator and then structured to address "fence line" monitoring if/ when added scrutiny can be reasonably tied to a predictive event or a set of defined circumstances. In the interim, until PSCAA can do a site vicinity cataloging study of existing environmental smells, the agency needs to highly modify Conditions 25 & 26 and strike Condition 27 altogether.

Once a neighborhood fragrance characterization study is complete (if PSCAA chooses to perform the study), then it could partner with Cadman and enter into an agreement to incorporate reasonable scent-based monitoring criteria within its complaint response plan, as part of the O & M plan. With this revision, the Order of Approval can be issued (following past established permitting norms) and the specifics of a complaint response plan can be logically incorporated into the specific asphalt plant O & M plan, once solid data is available.

Summary

WAPA is the "gate-keeper" for the industry for ensuring that the operational landscape for each asphalt plant is consistent with state law, statutes, and regulations and that each owner/ operator is treated consistently with the standard rules and procedures that have been established by the agencies tasked with implementation of said laws, statutes, and regulations.

In our observations with respect to the public animus directed toward the Kenmore asphalt plant over the last several years, it appears that some of the hostility to the plant location and operation has prompted PSCAA to alter its standard procedures for Orders of Approval and, in the DRAFT order for NOC 11861, propose novel and unprecedented operational conditions, as partially summarized above.

Both WAPA and Cadman Materials are willing to discuss positive and productive operational plans and procedures with PSCAA, based on established standards, but it is not just nor acceptable to impose restrictions and conditions that have not been well researched and/or have little to do with the operational realities of this specific asphalt plant, absent political pressures, and misinformation campaigns.

Washington Asphalt Pavement Association
451 SW 10th Street, Suite 110A
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(425) 207-8814 * Fax (425) 970-3178

We urge PSCAA to issue Cadman's Order of Approval, in a refined form, correcting existing errors, and eliminating the novel and onerous conditions discussed above and to then work with Cadman to develop a practical/ workable and well thought out O & M plan. WAPA is willing and available to help with this process at the invitation of Cadman and PSCAA.

Respectfully submitted,

David Gent, P.E.
Executive Director / Technical Director
Washington Asphalt Pavement Association
Dave.Gent@AsphaltWA.com

Washington Asphalt Pavement Association
451 SW 10th Street, Suite 110A
Renton WA 98057
(425) 207-8814 * Fax (425) 970-3178

From: Carla Blackner
To: Public Comment
Subject: Attn Brian Renner Cadman Asphalt Facility Permit
Date: Monday, April 25, 2022 9:52:39 AM

Brian,

My name is Carla Blackner and I am a 22 year resident of Kenmore residing 1.2 mi north of the Cadman Asphalt Facility. I would like to comment re the permit to require emissions testing and oversight.

I moved from Canada to “Kenmore by the Lake”, as I looked at Lake Washington, the boats and the Burke Gilman the asphalt plant seemed otherworldly, surely the waterfront would be rehabilitated. The quick answer is no, and over the years the unpleasant smells and views have made my community a toxic place to shop and recreate, an area that I have never recommended to visitors. The plant makes me feel embarrassed about where I live and it is a polluting eyesore. As an older adult I am contemplating the likely negative health effects of living in close proximity to the plant and am concerned that there has never been any data available about emissions to support how I feel my health is affected such as dry throat and eyes, lingering smells and fatigue.

It is time to gather more information.

Better more frequent testing, at random, is needed to ensure that the plant is compliant with emission standards.

Asphalt ingredients need to be tested.

In addition, a process for local citizens to complain about odors and a protocol for Cadman to respond is urgently needed.

The permit also needs to include specific outcomes if Cadman is out of compliance with defined parameters.

Thank you,

Carla Blackner

From:	Elizabeth Mooney
To:	Public Comment
Cc:	Orlay Johnson; Jim Myers; Elizabeth Mooney; Richard Honour; Kate Donaldson; Tracy Banaszynski; Jari Kristensen; kelly Kearns; Janet Hays; Peter Lance; Patrick O"Brien; Dakota Rash; BZ@ostroms.com
Subject:	Cadman asphalt No.11861
Date:	Monday, May 2, 2022 9:51:41 AM

Please when/if you approve the permit, increase the number and types of components to be tested from the stack at 90 days to include all potentially toxic compounds that come out of an asphalt stack. Make it comprehensive. Presently the way the draft permit is worded it is my opinion that those 90 day tests would not be sufficient to ensure - 100%- that we are safe breathing those emissions and we want to know that we are safe breathing those emissions from places like:
Kate Donaldson's, Janet Hays', Patrick OBrien's, Richard Honour's houses (all are in your Records as concerns for health and violations); Ostroms Pharmacy; Burke Gilman Trail; kayakers and fishers in Lake Washington; homeowners on shorelines of Lake Washington in Kenmore and Lake Forest Park; Kenmore Square; areas impacted by inversions that trap air pollution, etc. We want to know this facility is not causing far and wide pollution. Only via testing comprehensively will we know. Since this facility is so old and has never been tested according to modern health standards, I want this plant tested in such a way that its company's director would feel safe having their family living in its emissions. I want to know its emissions are not poisoning us or our environment. We deserve that and your agency is supposed to help us have that right. Now you have a window of opportunity to make that happen.

Can you provide that to us in the draft permit, so we know we have air that is safe even if it's stinky? We want our agency to do what ensures safety from poisons coming from large corporations' antiquated facilities.

Thank you for holding the corporations' feet to the fire in the interests of public safety.

Elizabeth Mooney
Kenmore citizen

Sent from my iPhone

From: catherine.mooneymyers@gmail.com
To: Public Comment
Subject: Cadman Draft permit #11861
Date: Monday, May 2, 2022 8:30:55 PM

Dear Mr. Renninger,

I would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit. I grew up in Kenmore WA and frequently run and bike on the Burke Gilman. I personally wish the area of Kenmore was not used to produce toxic fumes and emissions that affect not only the environment negatively but also the community of kenmore and visitors that use the popular trail of the Burke Gilman.

For those of us who reside, work, and recreate in the cities of north Lake Washington we value a healthy environment both for ourselves and the natural ecosystems that we share this wonderful region with. This draft permit and the permitting process needs to ensure the environmental nonsignificance of the Cadman operation in a clear and transparent manner. Where our health is concerned precaution should prevail. I appreciate you taking the time to review my comments.

SEPA Environmental Checklist

The Environmental Checklist does not reflect the diversity of wildlife in the north Lake Washington area. In addition to leaving out specific birds, fish, mammals, and others, it neglects to identify the area as an import ecological area – the junction of Lake Washington with the Sammamish River. This area attracts both wildlife and people, and put them in close contact with emissions from the plant.

Draft Construction Permit

The draft construction permit relies mostly on modelling, with some actual measurements at the Cadman Facility. Like all models, the one used by the Cadman consultants can only produce quality output if it is provided with the appropriate inputs. Please review the model inputs to ensure that they capture the environmental and emissions conditions that need to apply to our situation.

Thank you,

Catherine Mooney-Myers

From:	ELIZABETH MOONEY
To:	Public Comment
Cc:	ELIZABETH MOONEY; Myers, Jim; Orlay Johnson; Tracy Banaszynski; Robin Agnew; Hays, Janet and Bob; kelly Kearns; Joan Hardy; GregRuggerone; Kate; patrickobrien859@gmail.com; Honour, Richard; macy ratliff; jari kristensen; Chris Abbey; cleve.steward@gmail.com; Mooney Rorick, Sarah Jane; kim josund; Mamie Bolender; jim halliday; Mark Phillips; Dakota Rash; nancy@glenwood-gardens.com; cyndi.kershner@gmail.com
Subject:	Cadman Draft permit #11861 comment--request for health survey based on model being based on inaccurate assumptions
Date:	Monday, May 2, 2022 6:31:20 PM

Dear Mr. Renninger,

In earlier comment to you, we believe we pointed out flaws in the report that Cadman submitted via Trinity for its modeling of emissions. It's likely that if a new model were employed with a new analysis of the emissions, based on more appropriate inputs, that it would reveal exceedances of standards. In that case, we would be concerned about long term toxic exposures which we believe would justify a health or symptom or cancer cluster survey. Would you please consider such a survey as a possibility to be required in the permit?

We believe a symptom survey would be helpful to rule out the risk of there being any danger due to exposures to the emissions.

Thank you.

Elizabeth Mooney
President PERK
People for an Environmentally Responsible Kenmore
perkinkenmore.org

From: Stacey Valenz
To: Cynthia Wang
Subject: Cadman draft permit 11861
Date: Thursday, March 31, 2022 9:34:33 AM

Hi Cynthia,
Any chance we can now schedule a stakeholder information zoom meeting to understand the draft prior to the public hearing.
Please advise.

Thank you so much,
Stacey Valenzuela
Kenmore Advocate
6505801564
Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

From: Pon, Yolanda
To: Brian Renninger
Subject: Cadman Kenmore asphalt plant inquiry
Date: Thursday, April 14, 2022 6:34:30 PM

Brian, I am conducting a review from the Public Health perspective to PSCAA's NOA permit for the Cadman Kenmore asphalt plant during the public comment review period. I would like to know the following:

1. If petroleum solvents are used to rinse their equipment, flush asphalt lines, or thin the asphalt mix at the plant in Kenmore?
2. Is Cadman using the exact processes and materials used by the strictly controlled HMA facilities described from EPA document AP-42, Section 11.1?
3. What is the nature of the binder that is used at the plant?

Please respond or contact me at your earliest convenience. Thank you.

Yolanda Pon
Solid Waste Program Supervisor
Solid Waste, Rodent and Zoonotics Program
Environmental Health Services Division
Public Health – Seattle King County
401 5th Avenue, Suite 1100
Seattle, WA 98104
Phone: (206) 263-8459
Office hours: Tuesday - Friday

From: Celia Milota
To: Public Comment
Subject: Cadman Materials Hearing
Date: Thursday, April 21, 2022 11:21:46 PM

To Whom it May Concern:

I am writing in regards to the Cadman Materials hearing. I strongly support further investigation into this matter. The quality of our air is crucial to the health of our community and environment.

Thank you for your time,

Célia Milota
Kenmore Resident

Sent via iPhone

From: Peter Lance
To: Public Comment
Subject: Cadman Materials Public Comment
Date: Saturday, April 30, 2022 8:11:13 PM
Attachments: PSCAA non determination letter version A.docx

Cadman Preliminary Determination of Non-Significance Application No. 11861

April 30, 2022

Dear Mr. Renninger,

The determination of non-significance is premature. The workmanship of the report is modest and not robust enough to warrant a conclusion of non-significance, at this time. I would like to draw your attention to several items in the Trinity report that deserve further attention and detailed investigation.

First of all, the Trinity Report often relies on AP-42 to model certain contaminants that for public safety reasons should be measured. The EPA does not recommend the use of AP-42 factors "as emission regulation compliance determinations." I would like to direct the reader to EPA Publication 325-N-20-001. To summarize the EPA has little confidence in AP-42 grades of A or B. The reported emission model indicates grades of D and E for most all emissions. I would invite PSCAA to reexamine the methodology of the modeling and consider direct measurements.

The meteorological modeling and wind field analysis have some problems. The model is a hodgepodge of data collected around the region and most specifically Paine Field which topographically does not resemble the area around the Cadman facility. Paine Field is flat while the Cadman facility sits in topographic bowl on the edge of Lake Washington. Paine Field is near Puget Sound, a source of wind and weather phenomenon not strongly present at the Cadman site. Onsite meteorological measurements can be easily made though this will take some time to develop the data. Perhaps it would be better to do the meteorological analysis accurately with direct measurement at the Cadman facility rather than using convenient and likely inaccurately modeled results?

The decision to not use the land AERMOD's "urban" modeling option is suspect on the face of it. The Cadman plant is immediately surrounded by Developed High Intensity property and a lake. A great many complaints about the emissions from the plant have come from neighbors within a half mile of the Cadman plant, which is Medium or High Intensity, Developed per Figure 2-1. It is not surprising that the lake immediately to the south produced no complaints of foul air. The selection of "rural" for AERMOD should be reviewed by PSCAA. Is the "rural" option going to produce a different result than the "urban" modeling option? The area is highly developed except for the lakes and swamps. Reaching out 3 kilometers and applying lake and swamp lands to the calculations and concluding that "rural" is the most appropriate modeling classification needs to be visited. There is no farming or logging in the area. If the lake and swamps were filled in those areas would be highly developed as well. Should the topography and the actual level of development on the land that can be developed be considered for the model designation of "urban" vs "rural". Most all land that can be developed is developed at medium or high intensity.

The background levels of contaminants in section 3.2 NAAQS Modeling uses dated NW Airquest numbers. The data was collected across a large area between 2014 and 2017 see footnote 3. The information was modeled across the NW to produce the background contaminant levels for the Cadman site. Contemporary numbers should be used. This is 5-year-old data. The community has grown significantly in the intervening years. It is my understanding that an air quality monitoring station in nearby Lake Forest Park might have data that could be helpful in evaluating or modeling

background levels of contamination. Does the contemporary data from the Lake Forest Park station indicates higher background numbers than NW Airquest? This deserves more investigation.

In summary the Trinity report should not give PSCAA or the city of Kenmore any significant confidence that the Cadman plant as currently operated is clean and safe.

Any claims that the application for this permit should be back dated to the date of installation instead of the date the application was actually complete and submitted should be denied.

Thank you,

Peter Lance

206-948-8922

From: Melanie Trowbridge
To: Public Comment
Subject: Cadman Materials, Inc.
Date: Thursday, April 21, 2022 5:43:58 PM

Re: Cadman Materials, Inc. and the Asphalt plant in Kenmore, Wa.

Hello! I am a Bothell Resident and Medical professional with an interest in Public Health. My main concern at this time is air quality and respiratory health, as we have ample data to suggest individuals with optimal respiratory health and those breathing cleaner air fair better in cases of Covid, other respiratory illnesses, and a multitude of other Health Conditions or Concerns. As individuals are returning to their lives, struggling to find their new normal, we now fully understand the importance of fresh air with minimal particulate matter.

These times when our respiratory health are already inundated with air pollution, wildfire smoke, and questions of indoor air quality, we must ensure that we can provide the cleanest solutions to Kenmore residents in the fresh outdoor air that they breathe. My understanding is that Cadman Materials, Inc. is not providing the "optimal solutions" to "ensure the public's best health". My understanding is also that many resident complaints have been filed over the years surrounding this facility. This is a problem that must be investigated and resolved to the residents' satisfaction.

Residents of Kenmore and the surrounding areas have a right to fresh air, fully and comprehensively cleaned of particulate matter and free from solvents. We should ensure that starting materials are clean vs. solvent laden. I understand costs of goods may change depending on solutions needed. Kenmore Residents are worth the optimal solution regardless of the higher costs.

Thank you for your attention to this issue, as I understand it is a huge and ongoing area of concern for those living near the Asphalt plant, and the surrounding areas.

Kind Regards,
Melanie

From: Shannon Kershner
To: Public Comment
Subject: Cadman plant in Kenmore
Date: Monday, May 2, 2022 3:58:57 PM

Re: Proposed Order of Approval No. 11861
Cadman Materials
6431 NE 175th St., Kenmore WA 98115

I am writing to express my thoughts about Cadman's draft permit process. I have been informing myself about the issues for the past several months.

I am glad this plant is getting oversight now as with what I have learned about their past practices which were in violation of their permit, I was very disturbed. When I moved to Kenmore I assumed that the plant was operating within their permit and had appropriate monitoring and accountability. I don't believe this is the case now.

I have many concerns, but they all boil down to this- I want to know for certain that this plant is operating safely because they are now located within a densely populated urban center, which was not the case when they received their initial permit in 1972. Being that this plant has not undergone much updating or meaningful stack testing to ensure compliance with current health and safety standards during that entire decades-long period, I want the permit expanded to include stack testing- not just modeling- every 18 months instead of every 3 years.

I want to know that the endangered species near the plant are being monitored for how they are being affected.

I want to know what would happen to the plant- in the event of a major earthquake. I want the plant to undergo earthquake retrofitting.

I also want to know how much pollution and particulate matter is actually coming out of the stacks- so not just whats in it, but the volume. I would like the stacks to be tested during an unannounced visit. If the Health department tests restaurants for food safety issues during unannounced visits, why then should Cadman know when inspections are going to happen? The notion of Cadman being allowed to know when they will be tested makes no sense. I think the proposed emissions testing per the new draft should be unannounced.

I also don't see how the modeled stack testing that Cadman submitted is trustworthy, being that they hired the contractor who did that modeling. I would like the actual stack testing to be done by an independent third party not hired by Cadman.

I want the community I live in to be safe for humans and animals, And I dont just want Cadman's word for it. I want proof.

Thank you,
Shannon Kershner

From:	Patrick O"Brien
To:	Rep. Pollet; Rob Karlinsey; Nigel Herbig; Melanie OCain; Debra Srebnik; David Morton; Joe Marshall; Frockt, Sen. David; Corina Pfeil Councilmember; javier.valdez@leg.wa.gov; Bridgit Baker; Elizabeth; Janet Hays; jwhend@hotmail.com; Stacey Valenz; Stan Isenhath; Arkadiy Dantsker
Subject:	City of Kenmore & the citizens dysphoria with the Kenmore Asphalt Plant
Date:	Friday, April 1, 2022 10:14:13 AM

March 31, 2022

Our New T-shirts

1.) Collusion is our solution to pollution.

2.) Kenmore it's Asphalt Wealth versus residence health

3.) They conceal we appeal

4.) Asphalt on the water villains in disguise.

You must never consider a new permit when obstruction is involved. The asphalt plant clearly engaged in obstruction when they covered up their continuous upgrading with no permit. That's a criminal offense and you don't issue new permits to criminals.

The continuous use of the term hot mix is false; it is medium temperature mix and requires the addition of cutback asphalt.

The asphalt plant continues to run during dangerous air conditions such as forest fires and all burn ban events. There are also inversions of air masses over the north end of Lake Washington and they have not stopped or diminished their output for that reason which means they are callous to the health effects they cause all life within 3 miles of their stack.

Actual stack testing not modeling is what's required here because of the use of unpermitted reagents in the making of asphalt!

The City of Kenmore must pursue only one outcome and that is the removal of that Asphalt plant! This Asphalt Plant is in a prime riparian zone. They pollute streams, Lake Washington water and Air.

As stated the grandfather clause was applied when it had no validity. FAKE!

The false permit and land-use has long ago elapsed.

Now a criminal investigation needs to proceed into Puget Sound Clean Air and throughout the entire Washington State Asphalt Association along with City and Washington State employees. Judges making fale rulings must be punished.

Clearly modeling only works when you know the total sum of the conditions. The age and configuration of the plant, the exact measurements of all reagents, the tank monitoring of all chemical ingredients, all weather and environmental factors and of all bills of lading from the producers. What asphalt binding mixtures are delivered including the lab reports from each batch.

Cascade Law group was hired as a shield to protect the Kenmore City manager and the Kenmore City staff from their lack of availability, training, due care and caution of this Asphalt Plant is the number one health risk in Kenmore! Any defense of this "new" asphalt plant application is being promoted by Cascade Law group and is not in opposition of it being granted! Those actions are 180 degrees against the complaints and demands of Kenmore Citizens!

Nobody has brought up the fact that this asphalt plant and its potential for fire is adjacent to the largest seaplane base in the world and explains our irreplaceability! And yet Kenmore air is the most decorated and acclaimed business we have in the city of Kenmore. Kenmore air in the last 10 years was given permission to have above ground aviation fuel tanks without octane well above automotive gasoline. One fire could mean the end of Kenmore air and the tourism dollars that they bring to Kenmore!

The local fire district has not performed on site practice drills of the asphalt plant. Further there is a question whether or not this fire district has the equipment necessary to fight a chemical fire exactly one the first alarm rings, not sometime later pulling needed equipment and personnel from other

fire districts.

Obstruction, criminal collusion, racketeering, false reporting, illegal hours of operation including the barges that bring the substrate, intimidation all have been used prior to this latest asphalt plant permit application. If corporations have the same status as people then one must say they're treated entirely differently when they misrepresent material facts in an official application.

With great apprehension that these proceedings are in fact fixed.

Patrick E. O'Brien

07/22/2021

Good morning fellow citizens and administrators of Puget Sound Clean Air .

We are here to debate the difference between this agency's Collaboration and Regulation.

In the case of collaboration we can see that there is an invalid grandfather status being granted to the Kenmore

Asphalt Plant. This occurred because of changes to the physical asphalt plant not permitted or sanctioned in advance as required. Their ability to operate is invalid and they must reapply to operate under 2021 standards and rules.

These changes from the original batch plant created a Frankenstein plant that was not erected from one engineering standpoint but in fact made from bits and pieces being taken away from other old and antiquated plants and added or subtracted as they were found.

This actions voids their ability to claim a "grandfathered status."

Retroactive clemency is not in order. As such the public demands that you immediately red tagged on multiple counts. Either that occurs or one could reasonably argue the Puget Sound clean air is complacent in their illegal behavior and any reasonable person would conclude a conspiracy to defraud the public of their right to public health. This Puget Sound clean air laissez-faire policy and oversight has been in play for a very long time.

False rules of Thumb in this Application equals False Modeling of the Asphalt fumes impacts.

Instead this asphalt plant is operated as a medium temperature asphalt plant not as a hot mix asphalt plant. This squarely puts it outside the EPA's EPA AP 42 emissions calculations. Which cannot be used if the variables for the use of that calculation are not in place.

First the calculation is for Hot Batch asphalt plants this plant is not operating as a HOT batch asphalt plant! By their own admission they use temperatures of a medium temperature batch plant which are 300° to 350°F. This calculation is for use when performance grade asphalt is used. If performance grade asphalt is not used the calculation is again nullified in its accuracy. When Medium cure asphalt is used also known as cut back asphalt with added components of kerosene and diesel that again violates the parameters of this calculation. As noted in three different Puget Sound clean air citations the presence of cutback asphalt was found at the plant although the operators claim otherwise. The evidence observed does not agree with the asphalt plants operators. Therefore there is a need to test not only the asphalt chemical components as they are delivered but also an immediate testing at the stack for volatile compounds and other compounds formed with unknown reagents being used in this process.

We have over a thousand Kenmore citizen nuisance complaints stemming from the operation of this plant and we can see the chemical trail of this nuisance. We the public note the wind direction which is predominantly to the north northeast which takes it directly into Kenmore's downtown area and the houses along the hill immediately to the north of the asphalt plant. This very day I took pictures of the asphalt flume and had to close all my windows. We cannot escape the homes we live in. This nuisance is damaging to our use of our property and our health.

Puget Sound clean air is to regain any confidence with the public P.S.C.A. must take action NOW! The past slack standards for enforcement and low penalty for breaking the law must change immediately. As proof of the industry disregard during the total burn ban of last year they continued operation with no regard for public health.

Another interesting point is that this asphalt plant sits next to Kenmore air which has approximately half $1 billion worth of seaplanes. They also have an extensive amount of aviation fuel in above ground tanks.

The use of cutback asphalt greatly increases the fire risk to not only the Kenmore asphalt plant and its workers but also to this neighboring business (Kenmore Air) which is a major asset for the City of Kenmore and its citizens. Kenmore Air is a main driver of tourism and recreation to the state of Washington.

Because of Kenmore Air many other areas of Washington and Canada are accessed on a regular commercial service as well as private charters. Please note that Google may own as much as 49% of Kenmore Air! They probably don't want to see their valuable assets diminished, destroyed or compromised.

Since the asphalt plant is not openly admitting use of cut back the necessary fire equipment is not within easy reach or planning Kenmore North Shore Fire District 16 fight the fire such Chemical Fire such as the asphalt plant on the waterfront of Tacoma last year.

We find this impossible to reconcile. This asphalt plant is on notice that if there is a fire they will not only be held responsible for their employees and property but on notice that any destruction of the neighboring property with the use of these illegal cut back asphalt ingredients will be punishable not only in civil court but we will do everything in our power to bring criminal charges against the operators.

That's a promise

Patrick E. O'Brien

6330 N.E. 181st Street

Kenmore, Wa. 98028

From: Tracy Banaszynski
To: Public Comment
Subject: Comment on Application No. 11861 Cadman Asphalt Facility
Date: Monday, May 2, 2022 10:32:29 AM

Brian Renninger
Engineer, Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, Washington 98101

Dear Mr. Renninger,

My name is Tracy Banaszynski. I live 1.3 miles north--just very slightly Northwest—of the Cadman Asphalt Plant in Kenmore, Washington.

The main point I would like to convey today is that while the current draft permit constitutes a VAST IMPROVEMENT over the conditions under which the asphalt plant has been allowed to operate for decades, there is still room for changes that would even better safeguard the health of both human and non-human species who live in close proximity to the plant. I am so grateful that PCAA is finally holding the asphalt plant to modern standards—thank you for the work that has brought us to this point—and at the same time, we can and should ask more of a plant that has been operating under minimal, grandfathered standards for decades, has multiple violations under its belt, and is in such close proximity to people and sensitive ecological areas.

A close read of the SEPA associated with the draft permit reveals to me that we need to take a closer look at how the operation of the plant impacts the ecological area it occupies, not least the habitat of threatened Chinook salmon and other aquatic species. Although Cadman neglected to check the boxes indicating that salmon and other fish are present in Lake Washington, they do indicate such in the open response box for FISH. It is not clear to me, however, that there has been any consultation with WDFW or the Tribes regarding what additional SEPA requirements might exist for their permit. Chinook are federally listed as threatened, iconic to the Pacific Northwest, and an important food source for the endangered Southern Resident Killer Whales. Please hold Cadman to the highest SEPA standards given the presence of this important salmon species.

A related concern: Cadman indicates that none of the improved areas of their plant are within 200 feet of a body of water (that is, Lake Washington). Based on a map reading, it seems this could only possibly be technically true of maybe one part of the plant. The entire property, except perhaps the very northernmost part, appears to be within 200 feet of Lake Washington. What additional SEPA requirements would be triggered if Cadman were honest about their proximity to Lake Washington? Please reassess Cadman's response to this question and hold them to account for any additional SEPA requirements that exist for work within 200 feet of a body of water.

Finally, Cadman neglected to exhaustively list the wildlife that live or or near the property. There is a well known, much beloved heron rookery .6 miles from the plant, and those heron routinely use the Sammamish River and Lake Washington as important habitat. Just the other night, I leapt from my seat in excitement at seeing a heron flying over downtown Kenmore decidedly in the direction of the asphalt plant. To be clear, I wasn't excited that the heron was

flying near the plant, I was simply in awe of getting to live with such beautiful birds. We should not take them for granted nor neglect their habitat needs for the sake of heavy industry. Other animals and fish we know to live in Lake Washington, like otters, crayfish, and many others were not accounted for in the SEPA. And they should be.

In sum, there are several areas of SEPA that need to be addressed more seriously and the permit could be even more improved by holding Cadman rigorously to all appropriate environmental concerns. It seems disingenuous to me to suggest that there is there is no significant environmental impact to having an asphalt plant—even if the SEPA applies only to the CHANGES made to the plant—on the shore of Lake Washington at the mouth of the Sammamish River. The least we can do is hold Cadman to the highest SEPA standards we can.

Thank you for the opportunity to comment and for your consideration.

Sincerely,
Tracy Banaszynski

5863 NE 197th St
Kenmore, WA 98028

From: Elizabeth Mooney
To: Public Comment
Cc: Elizabeth Mooney
Subject: Comments for Cadman
Date: Monday, May 2, 2022 4:46:26 PM

Mr. Renninger -

The nonprofit PERK People for an Environmentally Responsible Kenmore 501(c)(3) has a website with our mission and some history.
It is perkinkenmore.org

Please add

Elizabeth Mooney

Sent from my iPhone

From: Nancy Hansen
To: Public Comment
Cc: ard@dnr.wa.gov; epa-seattle@epa.gov
Subject: Comments on Application #11861, Cadman Asphalt Facility, Kenmore, WA
Date: Monday, May 2, 2022 4:13:02 PM

To Brian Renninger, Engineer
PSCAA

Dear Mr. Renninger,

We have many reservations on accuracy of the testing of emissions, mainly are the tests measuring what they're supposed to measure? There are a few issues that I see, as a layman, that I would personally question.

The placement of monitors during the testing on the fence around the Cadman plant seemed odd to start. I know from experience the terrain in Kenmore has factors that should require monitors to be placed at different spots and various heights. Fumes of this type go up, not down. The stacks are several meters high. Starting from there, that would make emissions travel the direction of normal wind flow, from the southwest towards the northeast. The fumes I've experience, somewhat uphill and northeast of the plant while in operation are very similar to being in the vicinity of an oil refinery, such as Anacortes, WA. I also know that pockets exist in Kenmore where cell phone access is cut off completely, there is that much variation in the land height from approximately sea level where the plant is sited. It would be assumed these differences would affect any measures and should be taken into account.

Why was information on testing at the stack been denied for so long? The lack of accountability by Cadman has helped to develop a high level of mistrust in this community. To remedy, information is needed on the specific chemicals that make up the mix. All mixed together, it's easy for dangerous chemicals to be watered down. Hexavalent chromium, arsenic, and others on the list are nothing to fool around with as far as public and environmental safety.

Other places besides just the stack need to be tested as well, e.g., the dryer which has been the source of ongoing questions due to the fact the running capacity of the dryer determines emissions from the stack. A stack test can be set up to control emissions by adjusting the variables. None of these settings variables were provided in the report. Using AP-42 emission factors in place of more representative source specific emission values for climate air permits and compliance demonstration purposes may be problematic, as research has shown.

Your agency is well aware of this danger, I'm sure. It does appear this has been going on in the past at Cadman, particularly when results of stack test don't result in readings that would be expected if variables were exactly as reported.
It is clear that specific substances coming from the stack need to be individually named, with amounts used.

Algae blooms in Lake Washington are a problem, increasingly so in recent years. It is a known fact that cement operations can cause toxic algae in waterways. If there is any possibility Cadman's operations add cement particles and/or dust getting to Lake Washington via air, this needs to be checked thoroughly. Federal now protects orcas. The salmon they depend upon cannot survive the waters at the northeast corner of Lake Washington due to the vast amounts of pollution that exists today and has accumulated since the early 1900's. We don't have a choice to continue on the business as usual path.

Today, Kenmore is an urban community, not through any specific person's fault, and not the fault of Cadman. But, laws and attitudes have had to change due to climate change threats to the earth. We have to change, as well. I cannot be a judge on this, but those in the seats of where these decisions are made need to take the responsibility of making decent decisions. We would like to trust our state agencies, but due to the Growth Management Act run by business, construction and industry in this state, we have made far too many compromises that hurt the environment. At this time, we are not able to compromise away more, like clean air, that is of great value in our lives.

Citizens in Kenmore are not going to accept a decision that does not work. The updates on regulatory measures are great, but I believe there are still significant flaws in this process.

Thank you for allowing us to comment,

Nancy Hansen
7219 NE 158th Street
Kenmore, WA 98028

From:	Brent Anderson
To:	Public Comment
Subject:	Comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington
Date:	Monday, May 2, 2022 9:47:01 AM

Brian Renninger
Engineer
Puget Sound Clean Air agency
1904 Third Avenue Suite 105
Seattle, Washington 98101

Email: PublicComment@pscleanair.gov

Dear Mr. Renninger,

I would like to provide comments on Application No. 11861 for the Cadman Asphalt Facility in Kenmore, Washington, specifically to the SEPA checklist and Draft Construction Permit. For those of us who reside, work, and recreate in the cities of north Lake Washington we value a healthy environment both for ourselves and the natural ecosystems that we share this wonderful region with. This draft permit and the permitting process needs to ensure the environmental nonsignificance of the Cadman operation in a clear and transparent manner. Where our health is concerned, precaution should prevail. I appreciate you taking the time to review my comments.

SEPA Environmental Checklist

3. Water (a2) - The elements of the facility baghouse, asphalt tank condensers, and aggregate dryer burner appear by my Google Earth measurements to be within 200' of the Lake Washington shore. Added measures may need to be taken to reduce any runoff to Lake Washington, especially given that this work may fall within the 200' buffer for ESA listed Chinook salmon, steelhead, and Bull Trout in the watershed.

3. Water (c1.) – No details are given regarding the adequacy of a surface flow treatment systems. Although this may be outside of PSCAA's authority, the proper agency should be consulted.

5. Animals (a) – Herons and other waterfowl are conspicuously missing. Until recently the property carried a p-suffix identifying it as habitat near the large Heron rookery in Kenmore.

5. Animals (b) – Chinook salmon and steelhead are ESA listed as Threatened by NOAA, Bull Trout are listed as Threatened by US FWS. None of the other species listed are threatened or endangered, although WDFW or the Tribes should have been consulted for management and Treaty issues.

7. Environmental Health (a) – I would think that hydrocarbons stored on site also present a significant risk of fire or explosion, not just spill.

8. Land and Shoreline Use (a) I think it is important to consider the public use of the Burke Gilman trail, which is literally at the fence line by the Cadman stack. The trail serves thousands of pedestrians, cyclists, walkers, etc all of who would be in the direct emissions

from the facility.

(see also Environmental Checklist Section 12a).

Draft Construction Permit

7 – 13. Emissions Limits

While it is a great step forward to require testing on items 7-13, it is not clear if the emissions criteria are suitably strict to protect public health. Specifically, item 10 sets limits on total Non-Methane/Non-Ethane VOCs, rather than specifically identifying limits for the most harmful VOCs.

22 and 23. Source Testing

Given the proximity of residences to the facility and the age of the facility (some components date back to the 1960s), testing more frequently than every 36 months is advisable. In addition, during these tests the production output should be included. It is noteworthy that in stack tests provided by Cadman (and used in subsequent modeling), production was only at 140 to 150 tons/hour, 75% of the permitted output. If 200 tons/hour is the capacity (see A. Description), then one would presume that they should test the emissions levels also.

This would also be a relevant time to point out several issues with the air quality modelling that accompanied the application.

Firstly, the model utilized meteorological data from Paine Field in Everett. Paine Field lies on the crest of a ridge line near the ocean, while the Cadman site is at the north end of Lake Washington, which offers a 25-mile funnel for winds, bounded on the East, North, and West sides by ridge lines. Thermal conditions at the Lakeside often produce temperature inversions in the winter that trap air against the hills to the north of the Cadman site. Sites within the Lake Washington watershed likely offer more relevant data, one would imagine that the municipal airfield in Renton, the University of Washington, or the NOAA facility at Sand Point would all provide more reliable data. The Trinity modelling report notes (Section 2.2) the Department of Ecology concurred with the use of the data (noted in Appendix A), but the emails referred to the use of Everett Data in regards to a 2019 project at the port of Everett. Similarly, background levels for PMs were calculated using an area average, while a PSCAA monitor located in Lake Forest Park would have provided more relevant data. Furthermore, for air modeling Trinity consultants determined that Kenmore was not urban, a determination that does not comport with the reality on the ground around downtown Kenmore. Secondly, where emissions testing was lacking the model utilized AP-42 to estimate emissions levels. For a variety of reasons (described best by the EPA in their precautionary notice Publication no. EPA 325-N-20-001-attached) this does not provide the necessary assurance of public safety. This provides further support for
actual testing of multiple emissions elements rather than relying on AP-42 estimates.

Monitoring and Complaints

The odor detection and reporting protocol provides a necessary effort to provide a response to public concerns. Residents, businesses, and visitors to Kenmore (including those who use the Burke Gillman) will have some recourse to odors. I encourage you to maintain these items in

the final draft.

Thank you,

Brent and Anne Anderson
16304 81st Pl NE
Kenmore, WA 98028

BrentAnderson@Next-Technologies.com
anntsy0999@gmail.com

From:	Maris Abelson
To:	Public Comment
Cc:	nherbig@kenmorewa.gov
Subject:	Comments on the asphalt facility in Kenmore
Date:	Thursday, April 21, 2022 3:56:59 PM

To the Engineering Manager:

I am a local, on the north shore of Lake Washington, and it seems clear that more testing, not just modeling, is needed to ensure that the asphalt facility in Kenmore is fully compliant with emission standards. The testing should also be randomly done, not scheduled.

The asphalt ingredients should also be tested, to avoid VOCs and other toxic elements.

A health survey of those in the area would help collect data about the emissions' effect on the health of residents. Feedback opportunities should be more readily available to the public.

We need stringent enforcement of testing and emissions rules, in order to ensure compliance of the plant.

Sincerely,
Maris Abelson

From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; tomh@pscleanair.gov; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; John Dawson; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Jessica Finn Coven; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Chris Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 3/14/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Dept. regarding the draft Order of Approval of NOC #11861)
Date:	Monday, March 14, 2022 12:50:18 PM
Attachments:	Forty Seventh Talk to Kenmore City Council.docx

Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Dept.,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

PSCAA's currently proposed **draft Order of Approval** of Cadman's Notice of Construction at their asphalt plant in Kenmore **should be approved**. The **Order of Approval tells Cadman not to use cutback asphalt to make their hot mix asphalt paving mixes**.

The Notice of Construction is required because of the replacement of and changes to equipment done from 2006 to 2017. This work required permitting review.

Because condensers were replaced on the 25,000-gallon and the 10,000-gallon asphaltic cement (or asphalt binder) storage tanks, the **contents of the storage tanks come into review**. In other words, **PSCAA wants to know what these tanks are filled with**.

The Order of Approval comes with 30 Restrictions and Conditions. It helps to know that the phrases "**hot oil**," "**asphaltic cement**," and "**asphalt**" are just different names used for the black binding material (or binder) that glues the aggregate together to make asphalt paving mix.

Condition #20 says,

"**The two HOT OIL (or ASPHALTIC CEMENT) tanks shall not be used to store ASPHALT that has been blended with more than 7% petroleum distillates by weight.** Records shall be kept of the dates any materials are loaded in the tanks, the amount loaded, and the type of material loaded."

"An asphalt that has been blended with **more than 7% petroleum distillates by weight**" is how PSCAA defines **CUTBACK ASPHALT**.

(Typical petroleum distillates used to make cutback asphalt are gasoline, kerosene, jet fuel, and diesel fuel.)

In other words, **Condition #20** says: "**Don't store CUTBACK ASPHALT in your asphalt cement (or binder) storage tanks**."

Petroleum refineries and suppliers that truck petroleum products to the Cadman Asphalt plant in Kenmore will be on notice that it's a violation of PSCAA restrictions and conditions to load cutback asphalt into Cadman's asphalt cement tanks in Kenmore.

If the plant has been using **cutback asphalt containing 35% kerosene**, then requiring a **maximum of 7% kerosene in the binder** will **reduce Cadman's VOC and PAH emissions by 80%**.

This is a big step in the right direction. **People** who are **downwind** of Cadman's Kenmore asphalt plant will be **subjected to only ⅕ of the asphalt fumes** that were emitted by the plant before the Order of Approval takes effect.

Sincerely,

Dr. David Morton
206-909-5680

From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; tomh@pscleanair.gov; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; John Dawson; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Jessica Finn Coven; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; MayorCouncil; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrel@seattle.gov; Dinah Wilson
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 3/21/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Division regarding the draft Order of Approval of NOC #11861)
Date:	Monday, March 21, 2022 2:21:23 PM
Attachments:	Forty Eighth Talk to Kenmore City Council.docx

Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Division,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

If you've been downwind of the Cadman asphalt plant in Kenmore and **breathed the fumes** when they **mix cutback asphalt with aggregate to make asphalt paving mix**, you might ask, "Doesn't this place have to comply with any restrictions?" Since its original construction in the 1960's, the plant has had very few restrictions and conditions regarding its operation. The plant got its first Permission to Construct a baghouse in April 1973, prior to the promulgation date in June 1973 of a rule called **New Source Performance Standards**. As a result, the rule has not applied to the facility. **The Kenmore asphalt plant has never been subject to this rule and has been grandfathered to April 1973's absence of standards, until now.**

PSCAA's current draft Order of Approval does 5 important things:

<!--[if !supportLists]-->1. <!--[endif]-->It "**ungrandfathers**" the asphalt plant, meaning the plant ***will be*** **subject to the New Source Performance Standards for Asphalt Concrete Plants upon issuance of the Order**. Over the years numerous changes and replacements were made to the facility which triggered the reconstruction provisions of the New Source Performance Standards. On October 30, 2020, Cadman, "…decided to accept applicability of New Source Performance Standards requirements to the Kenmore plant." With the issuance of the proposed Order of Approval, the plant **must comply with the performance standards that new plants must comply with**, and will **no longer be grandfathered** to **April 1973's absence of standards**.

2. It requires testing for **VOCs**, as well as particulate matter, opacity, carbon monoxide, and nitrogen oxides. **I suggest** that **VOC testing be done more frequently and be done while the**

asphalt binder is being added to the mixer.

<!--[if !supportLists]-->3. <!--[endif]-->It **prohibits the use of cutback asphalt to make hot mix asphalt**. This alone can reduce the plant's emissions of asphalt fumes by about 80%. **I suggest** an **occasional surprise testing of the binder stored in the asphalt cement tanks to keep them honest**.

<!--[if !supportLists]-->4. <!--[endif]-->It requires **odor response and monitoring**.

<!--[if !supportLists]-->5. <!--[endif]-->It **supersedes and cancels all previous Orders of Approval**.

The proposed Order of Approval will benefit the City of Kenmore and anyone downwind of the asphalt plant. Send in your comments to PSCAA and attend the Zoom public hearing on April 18. Please support the Order so it can be issued as soon as possible.

Sincerely,

Dr. David Morton
206-909-5680

From:	David Morton
To:	Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall; Public Comment; Brian Renninger; John Dawson
Cc:	caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Brombaugh; Bryan Hampson; rob.treece@usor.com; tomh@pscleanair.gov; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; Eric Baker; Betty Capestany; S. Chao; Megan Dunn; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; mschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Jenny Lybeck; MayorCouncil; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Subject:	David Morton"s "Public Comment" for Kenmore City Council"s regular meeting tonight, 3/28/22 at 7PM (also intended as a Public Comment to PSCAA Engineering Division regarding the draft Order of Approval of NOC #11861)
Date:	Monday, March 28, 2022 2:35:46 PM
Attachments:	Forty Ninth Talk to Kenmore City Council.docx

Dear Kenmore City Council, City Manager, and Clerk, as well as PSCAA Engineering Division,

I plan to verbally participate in Kenmore's city council regular meeting via Zoom this evening at 7PM.

I will "Raise Hand" and, if called on, will read my 3-minute comment intended for Kenmore City Council and PSCAA engineers, and which is attached as a Word document and appears in the body of this email below:

The proposed Order of Approval that PSCAA has drafted for Cadman's Notice of Construction Number 11861 is a huge step forward in getting cleaner air for people downwind of the asphalt plant in Kenmore.

Condition #3 of the Order says, "This asphalt facility is subject to the federal Standards of Performance for Asphalt Concrete Plants…" This means that upon issuance of the Order, the Cadman asphalt plant in Kenmore will no longer be grandfathered to the absence of standards that existed before June 1973. The plant will have to comply with the standards that apply to modern asphalt plants!

I'm in favor of the issuance of this Order. Still, it appears to have some loopholes.

Condition #20 of the Order prohibits Cadman's asphalt plant in Kenmore from storing cutback asphalt in its asphalt cement storage tanks. This is supposed to stop the facility from using cutback asphalt to make hot mix asphalt. Halting the plant's use of cutback asphalt would reduce VOC emissions from the plant by at least 80%. However, the plant may have other ways to introduce cutback asphalt into its pugmill mixer, such as from another storage tank. If the plant manages to make hot mix asphalt without using its stores of asphalt cement, that should raise a flag of concern.

When the plant adds cutback asphalt to the hot aggregate in the pugmill mixer, large amounts of kerosene vapors are evaporated into the air, causing the stench and ill health effects experienced by many people. The Order requires testing of air pollutants, including VOCs.

But as written, the Order does not say whether the plant's emissions are to be tested for VOCs while asphalt cement is added to the hot running pugmill mixer. Measurement of VOC emissions should be done under the normal operating conditions of the plant while asphalt cement is added to the hot pugmill mixer.

VOC emissions from hot mix asphalt plants are known to contain **hazardous air pollutants** (or **HAPs**) such as:

Benzene
Ethyl benzene
Naphthalene
Toluene
Xylenes
Plus a broad class of compounds called Polycyclic Organic Matter that includes **Polycyclic Aromatic Hydrocarbons (or PAHs).**

The VOC testing is intended to ensure that unsafe levels of VOCs are not emitted.

Please support the issuance of this Order.

Sincerely,

Dr. David Morton
206-909-5680

From:	David Morton
To:	Eric Baker; Megan Dunn; Brombaugh; Betty Capestany; Jessica Finn Coven; Public Comment; Brian Renninger; caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Bryan Hampson; rob.treece@usor.com; tomh@pscleanair.gov; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; John Dawson; Amy Fowler; Karen Houser; Erik Saganić; Sara Nichols; Andy Tudhope; S. Chao; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson
Cc:	mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; Jenny Lybeck; MayorCouncil; City Hall; Corina Pfeil Councilmember; Joe Marshall; Nigel Herbig; Rob Karlinsey; Debra Srebnik; Melanie OCain; David Baker; Milton Curtis; Anastasiya Warhol; Angela Kugler
Subject:	David Morton"s 3-minute comment during "Petitions from the Public" at the March 23, 2022 PSCAA Board of Directors meeting
Date:	Wednesday, March 23, 2022 11:31:50 PM
Attachments:	Thirteenth Talk to PSCAA.docx

Hello PSCAA Board Members, Executive Director, Management, and Engineering Division,

I intend to virtually attend tomorrow morning's PSCAA Board of Directors meeting. I will "Raise Hand" to speak during "Petitions from the Public," and if called on, will read my 3-minute comment, which is intended for the Board and PSCAA engineers, and which is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

I wish to thank Puget Sound Clean Air Agency and its Engineering Division for completing their review of Cadman's **Notice of Construction No. 11861**.

People who are downwind of Cadman's hot mix asphalt facility in Kenmore have breathed its fumes and awful stench for a long time. The facility has never been subject to **the New Source Performance Standards for Asphalt Concrete Plants**, which was promulgated in June 1973. The plant was originally constructed in the 1960's. Its first Order of Approval from PSCAA was on April 4, 1973, only 68 days before the New Source Performance Standards were proposed. Kenmore's asphalt plant has been **grandfathered to** the April 1973 **absence of standards**, **until now**. Issuance of **PSCAA's proposed Order of Approval will subject the plant to the New Source Performance Standards.**

I have a few suggestions.

Conditions 10, 11, and 12 require that emissions of VOC, CO, and NO_X be tested. If it is intended that the **plant exhaust stack** emissions be tested for these parameters, it would be helpful to mention that, as it's specified in Conditions 7,8, and 9.

Condition 10 requires VOC testing. This test measures unburned hydrocarbons from natural gas, and it should also measure organic chemicals that evaporate from the asphalt binder when it's introduced into the hot pugmill mixer. I suggest that Condition 10 contain clear wording specifying the location of the sample probe and that VOC testing be performed while binder is added to hot aggregate in the running pugmill mixer. Condition 22 requires VOC testing at least every 36 months. I suggest more frequently—maybe 18 months.

Condition 20 prohibits storage of cutback asphalt in the two asphalt cement tanks. Although records are to be kept, **paper bills of lading can be faked**. I suggest an occasional surprise testing of the stored binders. A **flashpoint test can easily distinguish between cutback asphalt** (flashpoint about 150°F) **and Performance Graded asphalt cements** (flashpoint about 450 - 550°F). Also, a **storage tank filled with cutback asphalt should be kept cool**, while the grades of **asphalt cement** that Cadman ought to use **must be stored at 300 - 305°F**. A **thermal camera** can easily spot a cool tank.

Please issue the proposed Order of Approval, and please consider my suggestions.

Sincerely,

Dr. David Morton
206-909-5680

From:	Anne Ayre
To:	Public Comment
Subject:	draft NOC 11861
Date:	Monday, May 2, 2022 9:17:37 PM
Attachments:	image001.png

CalPortland appreciates the opportunity to provide feedback on the Draft NOC 11861. CalPortland is submitting the following comments:

Condition 25

Condition 25 imposes requirements inconsistent with PSCAA Regulation I, Section 9.11 (b). Specifically, the condition appears to decrease the threshold for enforcement action. Language such as "partially attributable" is especially problematic because it is beyond the scope of Regulation I, Section 9.11 (b), and gives the agency authority for enforcement action based on a conglomerate odor which Cadman is not in control of or wholly responsible for.

Additionally, the odor scale in Regulation I, Section 9.11 (b) is subjective. CalPortland is unaware of a scientifically vetted method for assessing odor levels. Two authorized individuals could monitor simultaneously and arrive at different assessments with no means to verify the result. In the absence of scientifically determined method for assessing odor levels, the control level for odor should be determined by BACT policies.

Accordingly, CalPortland encourages PSCAA to revise or eliminate this condition.

Condition 26/Condition 28

Condition 26 and Condition 28 are largely redundant.

Condition 27

The odor scale in Regulation I, Section 9.11 (b) is subjective. It is not possible to meet Condition 27 without a scientifically vetted method for detecting and assigning odor levels. Hence any determination is arbitrary.

Thank you,

Annie Ayre
Environmental Manager
CalPortland – Washington Region
p. 206-764-3026
c. 206-620-4169



From: Carol Atkinson
To: Public Comment
Subject: Environmental Conern
Date: Wednesday, April 20, 2022 10:07:42 AM

To Whom It May Concern:

Please require Cadman Asphalt to follow current environmental laws and stop emitting toxic chemicals into the air that the people of Kenmore are then forced to breathe. As we live particularly close to the plant, the health of the environment in Kenmore is of particular concern to us.

Please do not delay!

Carol F. Atkinson
16925 Inglewood Rd NE, Kenmore, WA 98028

From:	Stacey Valenz
To:	Public Comment; John Dawson
Subject:	Fwd: Public hearing comment Re: PSCAA Draft Order 11861 of Approval and Determination of Nonsignificance for public comment
Date:	Saturday, April 30, 2022 7:59:08 PM

---------- Forwarded message ---------
From: **Stacey Valenz** <svalenz229@gmail.com>
Date: Mon, Apr 18,

Thank you for listening to Kenmore residents who have been pleading for action and filing odor complaints for over 15 years, with concerns of the VOCs, PAH and Dioxon levels our air. These likely causing the sickness, odor, petrolium soot, effecting our residents, visitors to the Burke Gilmon trail, parks, salmon, fish, trees, wildlife, land and waterways.
During the cement strike, production stopped at both stationary facilities, Kenmore residents were reporting less ash, and better air quality.
We are hopeful that the air quality and public health will be improved drastically, with the approval, adoption and enforcement, of the PSCAA draft permit #11861 for Cadman asphalt, with stipulations and added amendments, that limit the petrolium content percentage in the binder used in processing and frequent testing.

We appreciate the agency for responding with the 30 stipulations on the permit and hope this requires current plant standards .. Please consider including the Climate Committment Act, WAC 146-455, and WAC 146-446A change of guidelines to insure better air quality for public health.

We would like to suggest a few amendments to the permit.

1st item #20 (addresses storage of petrolium binder) please add the statement to include," no storage or use" of binder with more than 7% petrolium product -to close this loophole on the front end.
2nd #22 we request testing for VOC every 18 months performed by PSCAA and they continue to handle complaints to ensure air quality.

3rd item #27 Extend the area for nose test based on the emission wind maps...from 62nd to 68th Ave NE and up to NE 202nd St , as residents report odor, ash, and health issues up to these areas that the emission is likely to flow.

4th item #25 request PSCAA monitor or independent non smoker paid inspector to perform Nose odor testing as well as surprise on on site testing. These should be done by non-employee or non- owner for fair testing. If their noses are accustomed to the strong stench or ash of the Asphalt, they work in it daily, they will likely fail to recognize the fumes in areas noted. * With past record of non compliance or disclosure of construction (the violation)..

We need the companies that may pose a risk to our residents, wildlife, and environment to follow regulations and be held accountable for any violation.

It is important that the allowable levels are based on Ecology Asphalt plant reports acceptable source impact levels that went into effect in December 2019 and tested for variables. *Hydrogen sulfide, KNOWN Carcinogenic, carbon dioxide, and particulate matter (pm10 main) are some of related toxics inhaled from the Asphalt fumes, which at high levels are lethal, and are associated with increased mortality and hospitalization, especially impacts related to cardiovascular and respiratory disease, as well as cause early term babies.At lower levels cause the symptoms that many of our residents have complained of eye irritation, sore throat, coughing, cognitive decline, stroke, bronchitis, grit, headaches, nausea. Several residents in the emissions path have reported neighbors with cancer. The metals emitted, arsenic, chromium, mercury are known to be of even greater concern.

The risk of health depends on the content of the fumes, the duration of exposure, and the individual sensitivity to the exposure.

*PSCAA database received more than 25,000 odor complaints about emissions odor since jan 2010. How many additional were submitted to the city of Kenmore. Impacting health with further deterioration, is that unpleasant odors can induce stress.

Please follow through with an approval on the permit with stipulations, as it aligns with The agency's #1 goal to protect public health, and our environment from air pollution.

Please consider...adding Industrial stationary plants that cause emissions to the list of no activity on burn ban days- we need to stop all contributors to contamination when our ambient air is drastically limited.
We ask for a current census health evaluation of the last 5-7 years and then another in 5-7 years to verify the impact of these changes on health.

Thank you for consideration,

Stacey Valenzuela
650-580-1565
Kenmore Advocate

Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

* per a health evaluation dated 2020

Begin forwarded message:

From: David Morton <davidwardmorton@yahoo.com>
Subject: Fw: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment
Date: March 3, 2022 at 12:30:08 PM PST

To: David Morton <davidwardmorton@yahoo.com>

Hello, all those interested in **PSCAA's Order of Approval for Cadman Materials - Kenmore**,

(See the email below from John Dawson of PSCAA.)

The permitting action is **open for comment** beginning today, **3/3/22 through 5/2/22**.

Public hearing is on **4/18/22**.

Notice that, "**The replacement of the condensers makes the contents of the asphaltic cement storage tanks into review.**"

These storage tanks are "the 2 asphalt tanks" mentioned in the **attached "Evaluation Narrative Report," 16101-52 Evaluation Narrative.pdf**. The report refers to the 25,000-gallon tank as the "**medium cure (cutback) asphalt tank**," and the 10,000-gallon tank is called the (PG)"70-22 asphalt" (cement tank).

Mr. Dawson's email says that "emissions due to the project are...volatile organic compounds of 2.1 T(ons) P(er) Y(ear)..." This assessment is based on the assumption that the plant uses solvent-free binders such as PG70-22 asphalt cement. However, if the plant uses cutback asphalt as binder, VOC emissions are likely to be thousands of times higher than PSCAA's assessment. PSCAA's predictions of VOC emissions from asphalt plants is a result of simply applying the AP-42 emission factor for VOCs. **AP-42 cautions that** "Care should be taken to (en)sure that the ... raw material input (is that) of the source(s) analyzed to produce the emission factor." In this case, this means that, **before simply applying AP-42 emission factors**," PSCAA should ensure that hot mix asphalt plants use solvent-free asphalt cement as binder, not cutback asphalt which typically consists of about 35% kerosene.

David Morton
206-909-5680

----- Forwarded Message -----
From: John Dawson <johnd@pscleanair.gov>
To: John Dawson <johnd@pscleanair.gov>
Sent: Thursday, March 3, 2022, 05:33:13 AM PST
Subject: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment

You have expressed interest in updates regarding permitting by Puget Sound Clean Air Agency for Cadman Materials – Kenmore. Information regarding a permitting action that is open for comment beginning on

3/3/2022 is available below, and on the PSCAA website at https://www.pscleanair.gov/175/Permits-Open-for-Comment. This public notice will be published in the Seattle Times and the Daily Journal of Commerce on 3/3/2022.

A public hearing on this action will be held by Zoom on April 18, 2022, and comments are being accepted through May 2, 2022. More information is given in the full public notice below.

From: fluglhc@aol.com
To: Public Comment
Subject: Kenmore asphalt plant att Brian Renninger
Date: Monday, April 25, 2022 5:42:33 PM

Brian I live in Kenmore on the north in of Lake Washington. I also own 3 moorage slips and a Condo I rent out at Harborvillage close to the cement and Asphalt plant.

As a public comment I am concerned about the smell coming off the plant and what toxins may be washed into the lake. If they are given a permit, I`m assuming the city will assure the public there are no health risks

lots of people live and play in this area

Sincerely,

Paul Flugstad, MD

15515 61st Ave NE
Kenmore Washington 98028

From: ELIZABETH ONEILL
To: Public Comment
Subject: permitting and testing for asphalt plant in Kenmore
Date: Thursday, April 21, 2022 3:36:12 PM

We have been walking the Burke-Gilman trail in Kenmore for 25 years, and were not aware that there was a way to complain about the terrible odors emanating from the asphalt facility. More importantly, we were not aware that there is little to no testing for health hazards in the emissions or on the ground surrounding the site.

The proposed permitting is not nearly rigorous enough! There needs to be immediate testing for VOCs and other toxins in the air and on the ground at the site, and after that regular (several times a year) testing at unscheduled/unannounced times.

Our family walks past this plant with grandbabies in strollers, with children on bikes, and with people whose health is vulnerable. Getting exercise walking outdoors is recommended for health, happiness and wellbeing, but breathing the stench and potentially breathing toxins is terrible.

Thank you for ensuring that it is safe and enjoyable to live and exercise in this area.

Elizabeth Simmons-O'Neill

From: Carol Atkinson
To: Public Comment
Subject: Pollution Concerns
Date: Wednesday, April 20, 2022 9:59:55 AM

To whom it may concern:

Please require Cadman Cement to clean up their emissions. With other entities, including sellers of gas for cars, cleaning up their product for the good of the environment, Cadman needs to follow suit and stop pouring toxic chemicals into the air that its neighbors, such as we, have to breathe.

Please do everything you can to protect the people of Kenmore in this way!

Thank you.

Carol F. Atkinson
16925 Inglewood Rd NE, Kenmore, WA 98028

From: Mark Phillips
To: Public Comment
Subject: Proposed Order of Appeal No. 11861, Cadman Materials, 6431 NE 175th St., Kenmore, WA 98115
Date: Monday, May 2, 2022 8:38:40 PM

To Whom It May Concern:

I live in Lake Forest Park, and have been concerned for years about the emissions produced almost daily by the Cadman plant in neighboring Kenmore. As a former city councilmember, I know that LFP residents living in proximity of the plant have complained about the odors and particulates associated with the emissions, and have worried about health threats of long-term exposure.

It seems that in this matter, the Clean Air Agency is limited to responding to complaints about odor, and is not able to investigate potential problems of air quality. It is incredible to me that Cadman has been able to operate in the middle of a growing urban area for decades without any regular testing of the levels of harmful and carcinogenic substances that are certainly released as part of plant emissions. For decades, better emissions scrubbing technology has been available, but Cadman has not been required to use it.

For almost the last 50 years, Cadman has been able to operate without using the best available emissions cleaning technology. It is very reasonable that Cadman now be required to incorporate better emissions cleaning methods. At the very least, part of the conditions for future operation of the Cadman facility should be regular air quality monitoring.

Sincerely,

Mark Phillips
18533 26th Ave. NE
Lake Forest Park, WA 98155

From: Mike Bushmaker
To: Public Comment
Subject: Proposed Order of Approval No. 11861 Cadman Materials Public Comment
Date: Wednesday, April 13, 2022 6:58:55 AM

To whom it may concern:

I just want to comment that I highly recommend that you grant the request that Cadman materials has for the upgrades to their plant facilities. We use the location on a weekly basis and with the continued growth in the Puget Sound this location needs to keep operating.

Keeping this plant open will allow us to drive less miles, burn less fuel and therefore it is good for the environment. Thank you.

Best regards,

Michael Bushmaker
Account Manager
Rainier Asphalt & Concrete
Office: (800) 592-0311
Cell: (425) 652-6874
Fax: (425) 484-6140
www.rainierasphalt.com

WE'RE GROWING. WE'RE HIRING.



From:	Stacey Valenz
To:	Public Comment; John Dawson
Subject:	Public comment Cadman draft permit 11861 King County, Washington | County Health Rankings & Roadmaps
Date:	Monday, May 2, 2022 1:32:27 PM

Please add to the overwhelming reasons to approve the PSCAA draft permit #11861, with 30 stipulations and public amendments to bring Cadman Asphalt plant, in Kenmore, Washington, up to current new plant standards, and limit use of cutback Asphalt, as well as provide testing and enforcement.

Attached is just released King County health stats showing a 7% pre-mature birth rate and high particulate matter.

https://www.countyhealthrankings.org/app/washington/2022/rankings/king/county/outcomes/overall/snapshot

Improving air quality can improve overall community health and our environment

Thank you so much,

Stacey Valenzuela
Kenmore Advocate
Kenmore People for Climate Action

Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not! dr Suess

From:	Stacey Valenz
To:	Public Comment
Cc:	John Dawson
Subject:	Public hearing comment Re: PSCAA Draft Order 11861 of Approval and Determination of Nonsignificance for public comment
Date:	Monday, April 18, 2022 4:25:57 PM

Thank you for listening to Kenmore residents who have been pleading for action and filing odor complaints for over 15 years, with concerns of the VOCs, PAH and Dioxon levels our air. These likely causing the sickness, odor, petrolium soot, effecting our residents, visitors to the bg trail parks, salmon, fish, trees, wildlife, land and waterways.
During the cement strike, production stopped at both stationary facilities, Kenmore residents were reporting less ash, and better air quality.
We are hopeful that the air quality and public health will be improved drastically, with the approval, adoption and enforcement, of the PSCAA draft permit #11861 for Cadman asphalt, with stipulations that limits the petrolium content percentage in the binder used in processing and testing.

We appreciate the agency for responding with the 30 stipulations on the permit and hope this requires current plant standards .. Please consider including the Climate Committment Act, WAC 146-455, and WAC 146-446A change of guidelines to insure better air quality for public health.
We would like to suggest a few amendments to the permit.

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3rd item #27 Extend the area for nose test based on the emission wind maps...from 62nd to 68th Ave NE and up to NE 202nd St , as residents report odor, ash, and health issues up to these areas that the emission is likely to flow.

4th item #25 request PSCAA monitor or independent non smoker paid inspector to perform Nose odor testing as well as surprise on on site testing. These should be done by non-employee or non- owner for fair testing. If their noses are accustomed to the strong stench or ash of the Asphalt, they work in it daily, they will likely fail to recognize the fumes in areas noted. * With past record of non compliance or disclosure of construction (the violation)..

We need the companies that may pose a risk to our residents, wildlife, and environment to follow regulations and be held accountable for any violation.

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*Hydrogen sulfide, KNOWN Carcinogenic, carbon dioxide, and particulate matter (pm10 main) are some of related toxics inhaled from the Asphalt fumes, which at high levels are lethal, and are associated with increased mortality and hospitalization, especially impacts related to cardiovascular and respiratory disease, as well as ore term babies.At lower levels

cause the symptoms that many of our residents have complained of eye irritation, sore throat, coughing, cognitive decline, stroke, bronchitis, grit, headaches, nausea. Several residents in the emissions path have reported neighbors with cancer. The metals emitted, arsenic, chromium, mercury are known to be of even greater concern.
The risk of health depends on the content of the fumes, the duration of exposure, and the individual sensitivity to the exposure.

*PSCAA database received more than 25,000 odor complaints about emissions odor since jan 2010. How many additional were submitted to the city of Kenmore. Impacting health with further deterioration, is that unpleasant odors can induce stress.

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Thank you for consideration,

Stacey Valenzuela
650-580-1565
Kenmore Advocate

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dr Suess

* per a health evaluation dated 2020

> Begin forwarded message:
>
> **From:** David Morton <davidwardmorton@yahoo.com>
> **Subject: Fw: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment**
> **Date:** March 3, 2022 at 12:30:08 PM PST
> **To:** David Morton <davidwardmorton@yahoo.com>
>
> Hello, all those interested in **PSCAA's Order of Approval for Cadman Materials - Kenmore**,
>
> (See the email below from John Dawson of PSCAA.)

The permitting action is **open for comment** beginning today, **3/3/22 through 5/2/22**.

Public hearing is on **4/18/22**.

Notice that, "**The replacement of the condensers makes the contents of the asphaltic cement storage tanks into review.**"

These storage tanks are "the 2 asphalt tanks" mentioned in the **attached "Evaluation Narrative Report," 16101-52 Evaluation Narrative.pdf**. The report refers to the 25,000-gallon tank as the "**medium cure (cutback) asphalt tank**," and the 10,000-gallon tank is called the (PG)"70-22 asphalt" (cement tank).

Mr. Dawson's email says that "emissions due to the project are...volatile organic compounds of 2.1 T(ons) P(er) Y(ear)..." This assessment is based on the assumption that the plant uses solvent-free binders such as PG70-22 asphalt cement. However, if the plant uses cutback asphalt as binder, VOC emissions are likely to be thousands of times higher than PSCAA's assessment. PSCAA's predictions of VOC emissions from asphalt plants is a result of simply applying the AP-42 emission factor for VOCs. **AP-42 cautions that** "Care should be taken to (en)sure that the ... raw material input (is that) of the source(s) analyzed to produce the emission factor." In this case, this means that, **before simply applying AP-42 emission factors**," PSCAA should ensure that hot mix asphalt plants use solvent-free asphalt cement as binder, not cutback asphalt which typically consists of about 35% kerosene.

David Morton
206-909-5680

----- Forwarded Message -----
From: John Dawson <johnd@pscleanair.gov>
To: John Dawson <johnd@pscleanair.gov>
Sent: Thursday, March 3, 2022, 05:33:13 AM PST
Subject: PSCAA Draft Order of Approval and Determination of Nonsignificance for public comment

You have expressed interest in updates regarding permitting by Puget Sound Clean Air Agency for Cadman Materials – Kenmore. Information regarding a permitting action that is open for comment beginning on 3/3/2022 is available below, and on the PSCAA website at https://www.pscleanair.gov/175/Permits-Open-for-Comment. This public notice will be published in the Seattle Times and the Daily Journal of Commerce on 3/3/2022.

A public hearing on this action will be held by Zoom on April 18, 2022, and comments are being accepted through May 2, 2022. More information is given in the full public notice below.

From:	David Morton
To:	John Dawson; Brian Renninger; Public Comment
Cc:	Eric Baker; Megan Dunn; Brombaugh; caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Bryan Hampson; Puget Sound Clean Air Tom H.; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Erik Saganić; Karen Houser; Sara Nichols; Andy Tudhope; S. Chao; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson; sframe@king5.com; mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; Jenny Lybeck; MayorCouncil; City Hall; Corina Pfeil Councilmember; Joe Marshall; Nigel Herbig; Rob Karlinsey; Debra Srebnik; Melanie OCain; David Baker; Milton Curtis; Anastasiya Warhol; Angela Kugler
Subject:	Public hearing on Order of Approval 11861, at 4PM 4/18/22. David Morton"s intention to speak.
Date:	Monday, April 18, 2022 11:23:47 AM
Attachments:	David Morton"s oral comment at PSCAA Public Hearing re Order of Approval 11861 (5 minute version).docx

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Hello PSCAA Engineering Division,

I intend to virtually attend today's Public Hearing on Order of Approval 11861. At the hearing, I'll indicate that I'd like to speak, and if called on, I'll read my attached 5-minute comment. If necessary, I'll cut out the first 2 large paragraphs to make it a 3-minute comment. The 5-minute version is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

I support the issuance of Order of Approval 11861.
<!--[endif]-->

It's important that plants and factories that emit pollutants use the **correct equipment** to properly produce their products and control their pollution. It's also important that these plants and factories use the **correct raw material input, or ingredients**. If you run a gasoline engine on diesel fuel, it won't run properly, will blow black smoke out the tailpipe, or may not run at all. Likewise, a hot mix asphalt facility is supposed to use solvent-free Performance-Graded asphalt cement as the binder for making hot mix asphalt. If the proper air pollution control equipment is installed and solvent-free asphalt cement is used, an asphalt plant should produce air emissions in the quantities predicted by AP-42. The same facility using cutback asphalt instead of solvent-free asphalt cement will emit much more VOCs than is predicted by AP-42.

For some years, the asphalt plant in Kenmore has purportedly been using the warm mix asphalt process which involves the use of differently formulated asphalt cements that contain various additives. Medium-curing cutback asphalt is probably an attractive formulation because it's cheap and doesn't have to be stored or transported in heated containers. A skilled plant operator can avoid causing a fire when adding the cutback asphalt to the hot aggregate in the mixer. But because the facility has no equipment to control the emissions of VOCs from the pugmill mixer, most of the kerosene that evaporates when the cutback asphalt is mixed with hot aggregate simply escapes into the atmosphere.

All new Orders of Approval for hot mix asphalt facilities should have a condition requiring that "the hot oil (asphaltic cement) tanks shall not be used to store asphalt that has been blended with more than 7% petroleum distillates by weight. This means **the tanks cannot be used to store cutback asphalt**. Records shall be kept of the dates any materials are loaded in

the tanks, the amount loaded, and the type of material loaded."

1) **Condition #20** prohibits the **storage** of cutback asphalt in the 2 asphalt cement tanks. Does this Condition also prevent the **use** of cutback asphalt to make hot mix asphalt?

2) There's a 4,500-gallon storage tank at the facility that's intended for storage of emulsified asphalt (aka tack). Is this **tack storage tank** able to **feed its contents** (possibly cutback asphalt) **into the pugmill mixer**?

3) A **flashpoint test can easily distinguish between cutback asphalt** (flashpoint about 150°F) **and Performance Graded asphalt cements** (flashpoint about 450 - 550°F). Would it be possible to arrange for an occasional **surprise testing** of the contents **of the 3 storage tanks** mentioned above?

4) A **storage tank filled with cutback asphalt should be kept cool**, while common grades of **asphalt cement must be stored at 300 - 305°F**. Would it be possible for PSCAA inspectors to use a **thermal camera** to easily spot a cool tank?

5) **Condition 20** says that records shall be kept regarding the loading of the asphalt cement tanks. Since **paper bills of lading can be faked**, why not require that **read-only electronic records** of the delivery and loading of asphalt cement be kept?

6) **Condition 10** requires **VOC testing**. Since asphalt cement is introduced into the pugmill mixer, will **emissions from the pugmill mixer** be tested?

7) Will VOC testing be performed **while asphalt cement is added to the hot running pugmill mixer** under normal operating conditions?

8) Should **Conditions 10, 11, and 12** specify exactly **where** the **probes** of the various testing devices **will be sampling emissions**?

9) **Condition 22** requires **VOC testing at least every 36 months**. Could VOC testing be done more frequently—maybe **every 18 months**?
10) Since **AP-42 does not list emission factors for the warm mix asphalt process**, **should the plant be using the warm mix asphalt process?**

Sincerely,

Dr. David Morton
206-909-5680

From:	raina.lv36@gmail.com
To:	Public Comment
Subject:	Puget Sound Clean Air Agency Draft Order of Approval and Determination of Nonsignificance for Cadman Materials
Date:	Sunday, April 24, 2022 9:00:21 AM

I agree that the permit for Cadman should be approved.

Laraine Volpe
15108 64th CT NE
Kenmore, WA

From:	David Morton
To:	Bridgit Baker; Bryan Hampson; Elizabeth Mooney
Cc:	Public Comment; John Dawson; Brian Renninger
Subject:	Questions / comments for Cascadia Law and PSCAA regarding Order of Approval #11861
Date:	Monday, March 28, 2022 2:01:43 PM

Hi, Ms. Baker, Mr. Hampson, and Elizabeth,

I have some questions and comments for Cascadia Law Group and PSCAA regarding PSCAA's proposed Order of Approval #11861. Please pass these on to Cascadia Law Group.

1) **Condition #20** prohibits the **storage** of cutback asphalt in the 2 asphalt cement tanks. Does this Condition also prevent the **use** of cutback asphalt to make hot mix asphalt?

2) In connection with Question #1, there is a 4,500-gallon storage tank at the facility that is intended for storage of emulsified asphalt (aka tack). Is this **tack storage tank** able to **feed its contents** (possibly cutback asphalt) **into the pugmill mixer**?

3) A **flashpoint test can easily distinguish between cutback asphalt** (flashpoint about 150°F) **and Performance Graded asphalt cements** (flashpoint about 450 - 550°F). Would it be possible to arrange for an occasional **surprise testing** of the contents **of the 3 storage tanks** mentioned above?

4) A **storage tank filled with cutback asphalt should be kept cool**, while the grades of **asphalt cement** that Cadman ought to use **must be stored at 300 - 305°F**. Would it be possible for PSCAA inspectors to use a **thermal camera** to easily spot a cool tank?

5) **Condition 20** says that records shall be kept regarding the loading of the asphalt cement tanks. Since **paper bills of lading can be faked**, could it be required that **read-only electronic records** of the delivery and loading of asphalt cement be kept electronically?

6) **Condition 10** requires **VOC testing**. Since asphalt cement is introduced into the pugmill mixer, will the **probe** of the testing equipment be sampling **emissions from the pugmill mixer**?

7) Will VOC testing be performed **while asphalt cement is added to the hot running pugmill mixer**?

8) **Conditions 10, 11, and 12** require emissions testing. Is it known exactly **where** the **probes** of the various testing devices **will be sampling emissions**? It doesn't seem to be specified.

9) **Condition 22** requires **VOC testing at least every 36 months**. Could VOC testing be done more frequently—maybe **every 18 months**?

Sincerely,

Dr. David Morton
206-909-5680

From:	Stacey valenzuel
To:	David Morton
Cc:	Bridgit Baker; Bryan Hampson; Brian Renninger; John Dawson; Public Comment; Cynthia Wang; Steve Van Slyke; Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall
Subject:	Re: Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore
Date:	Friday, April 15, 2022 11:10:14 AM

Thank you so much David for clarification of the degree of testing.
Your expertise is so appreciated.
Stacey Valenzuela
Kenmore Advocate

Sent from my iPad

On Apr 13, 2022, at 6:50 PM, David Morton <davidwardmorton@yahoo.com> wrote:

> Hi Ms. Baker and Mr. Hampson,
>
> I'm hoping you can forward this to Cascadia Law Group (Dennis McLerran) and TRC (Gale Hoffnagle).
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> I'm confused by an apparent contradiction. Has a VOC stack test been done already at the asphalt plant in Kenmore? Maybe Mr. McLerran and/or Mr. Hoffnagle can explain.
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Oxides and Carbon Monoxide. There was **no VOC testing** at the Cadman asphalt plant in Kenmore on that day or any other day.

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There are several other examples in the Engineering Worksheet and the NAAQS Modeling Report showing that PSCAA has yet to require any VOC testing at the asphalt plant in Kenmore and that there are no results of actual VOC tests performed at that plant.

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<Email to Cascadia Law and TRC.docx>

From:	ELIZABETH MOONEY
To:	David Morton; Bridgit Baker; Bryan Hampson
Cc:	Brian Renninger; John Dawson; Public Comment; Cynthia Wang; Steve Van Slyke; Anastasiya Warhol; David Baker; Milton Curtis; Angela Kugler; Nigel Herbig; Joe Marshall; Melanie OCain; Corina Pfeil Councilmember; Rob Karlinsey; Debra Srebnik; City Hall
Subject:	Re: Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore
Date:	Friday, April 15, 2022 1:40:22 PM
Attachments:	image001.png image002.png image003.png

Thank you, David. This is a huge help, but how do we now undo the potential damage done on Monday as a result of the misunderstanding and councilmember inaccurate comment. (*I'm glad that the testing that was done was the kind that folks asked for and that it did show that levels of toxic emissions were well below the accepted levels."?*)

I fear: Nobody will think they need to voice their opinions at the public hearing because if they listened to the councilmember's comment at the end, they think we got what we asked for via Cadman doing VOC testing.

Let's be clear-- there is still a potential unknown health hazard at our shoreline. I just breathed it in from 11:30-12noon and I can't even make a valid complaint.

I believe this issue has been VERY complicated and all we need to do is get voices to testify. It's a no brainer that nobody wants heavy industry at the shoreline in Kenmore. It's bad for citizens, it's bad for our visitors and bikers. Folks who bike our part of the Burke Gilman want to get away from the area on our shoreline where the heavy industry exists. It's not just asphalt emissions and diesel trucks. It's also dust from the concrete plant that owns the Cadman plant and ALL OF THAT IS SOMETHING PEOPLE CAN VOICE THEIR OBJECTIONS TO IN THE PUBLIC HEARING...even if PSCAA doesn't solve the problem for our city.

BUT we need OUR CITY TO POST THE HEARING CLEARLY AND BOLDLY VIA ANY MEANS POSSIBLE.

We need the City to post BOLDLY that all should comment at the public hearing, please. Front page?

Elizabeth

> On 04/15/2022 12:09 PM David Morton <davidwardmorton@yahoo.com> wrote:
>
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Hi David,

Please find attached the response to your questions.

Have a nice weekend.

Thank you,

Bridgit

From: David Morton <davidwardmorton@yahoo.com>
Sent: Wednesday, April 13, 2022 6:51 PM

To: Bridgit Baker <bbaker@kenmorewa.gov>; Bryan Hampson <bhampson@kenmorewa.gov>
Cc: Brian Renninger <brianr@pscleanair.gov>; John Dawson <johnd@pscleanair.gov>; Public Comment <publiccomment@pscleanair.gov>; cynthiaw@pscleanair.gov; Steve Van Slyke <stevev@pscleanair.gov>; Anastasiya Warhol <awarhol@kenmorewa.gov>; David Baker <dbaker@kenmorewa.gov>; Milton Curtis <mcurtis@kenmorewa.gov>; Angela Kugler <akugler@kenmorewa.gov>; Nigel Herbig <nherbig@kenmorewa.gov>; Joe Marshall <jmarshall@kenmorewa.gov>; Melanie OCain <mocain@kenmorewa.gov>; Corina Pfeil <cpfeil@kenmorewa.gov>; Rob Karlinsey <rKarlinsey@kenmorewa.gov>; Debra Srebnik <dsrebnik@kenmorewa.gov>; City Hall <CityHall@kenmorewa.gov>
Subject: Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore

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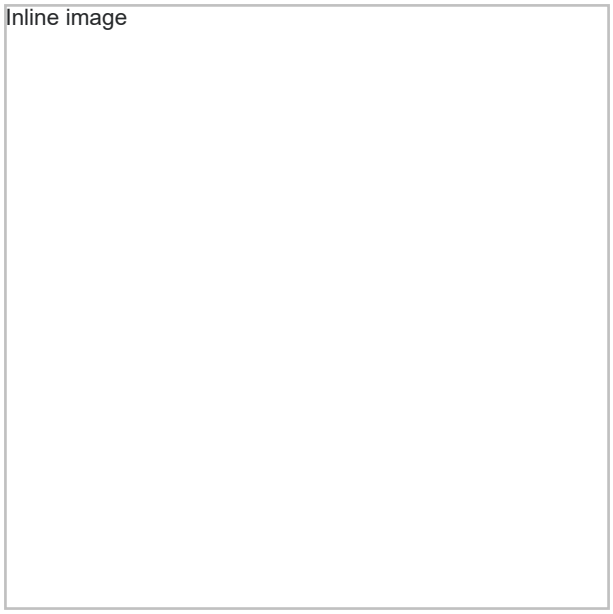
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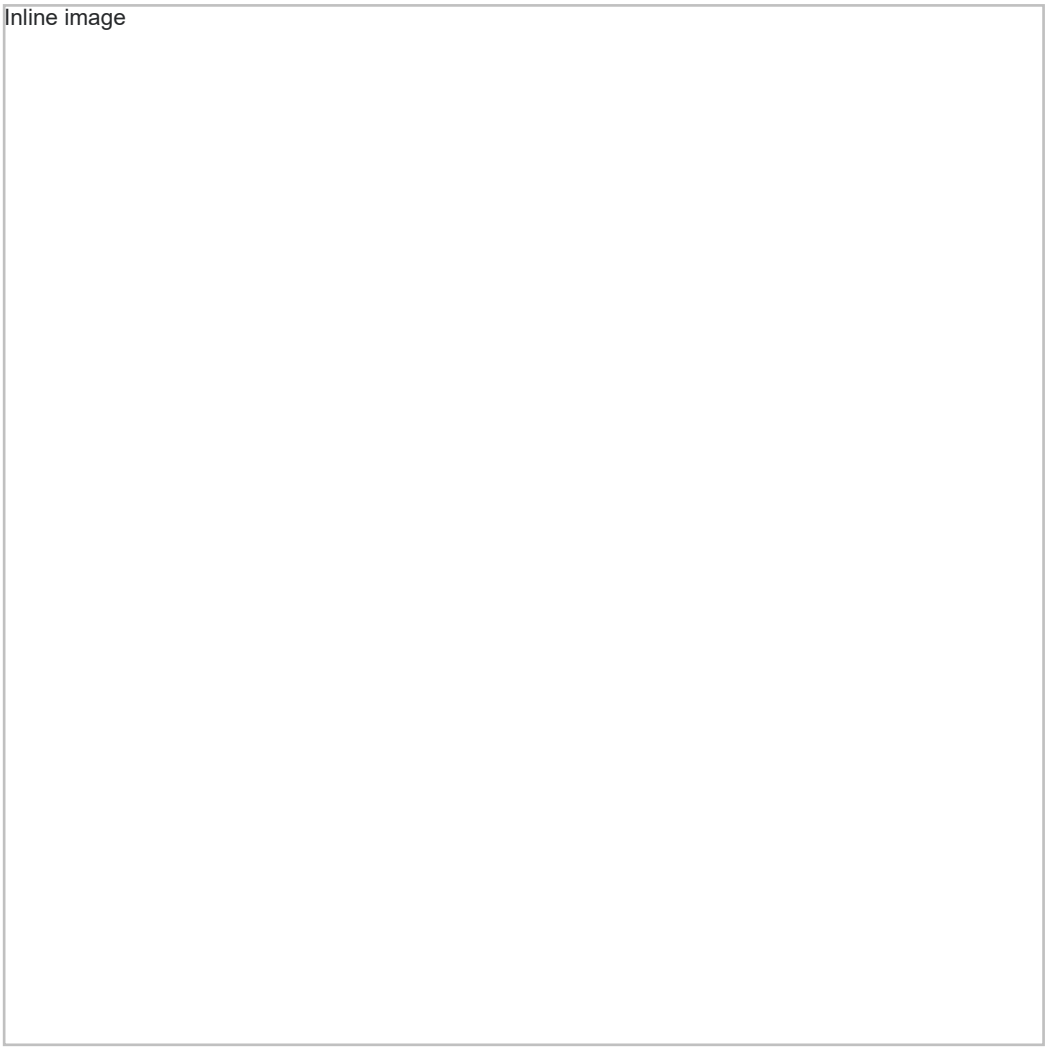


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Subject:	Re: Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore
Date:	Friday, April 15, 2022 12:10:17 PM
Attachments:	VOC Testing Dr. Morton Response.pdf image001.png image002.png image003.png

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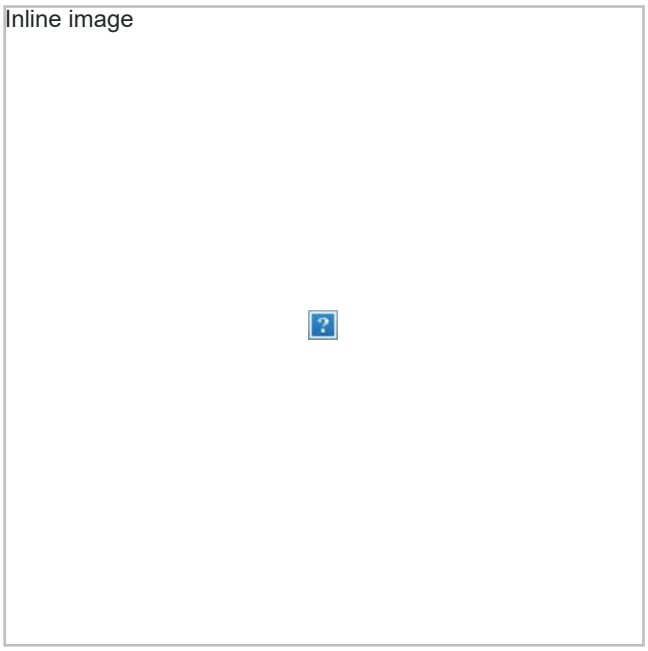
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To:	David Morton; Bridgit Baker; Bryan Hampson
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Subject:	Re: Asking for Clarification from Cascadia Law on VOC testing at Cadman asphalt plant in Kenmore
Date:	Thursday, April 14, 2022 1:18:50 PM

Comcast has damaged my main computer's ability to get into my online email (they admit it), so am forced to use a laptop for now until they fix it. They have admitted that whatever they did it affected a lot of people's computers. That's what happens when twenty-somethings are running everything now. Born with cell phones attached to their heads, many don't even know how to really use computers anymore - just cellphones. This is not progress in my opinion.

Not very good with laptop keyboards either - weird to me, so I will not be doing a lot of email for now.

Great work!!! Hold their feet to the heat and make them answer! Get the name(s) and credentials (type of degrees etc) of the CAA staff who did the review/permitting to find out what criteria they used and the areas of expertise they have. The focus is supposed to be on the health of the people, and the lake FIRST, not in pushing through actions that could cause harm to the surrounding populace and a Salmon bearing lake solely based on a profit margin and a rush to build a bridge.

That's what a clean air agency's role is - clean air!!! *Nothing more!*

Also, it's not just the chemical elements of the particulates - it's the particulates themselves, chemical or not, that can lodge in people's lungs. It would be of special interest to learn if they considered the air patterns rising from the lake and flowing up over the land above too. How far will those particulates carry? And, as the lake is already in poor condition, far more care and attention needs to be taken in that arena too. Do they have a list of particulates that will fall into the lake that they also considered?

Keep up the great work. That there is this desperate rush to get cement for the new bridge work is not the responsibility of the people of Kenmore! Not saying they should not do the work, and not saying the cement plant shouldn't provide the cement, as long as it is done safely and legally, with the health of the people as the highest and first priority.

Cindy

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1. On **page 9 of the Engineering Worksheet**, there is the following statement and table:

"The facility carried out **a stack test** of the dryer baghouse stack on **October 1, 2020**, for **particulate matter, carbon monoxide, and nitrogen oxides**. The test results are shown below:"


<61f54ce2-e1f6-fd9b-8a36-23b317c6110b@yahoo.com>" data-inlineimagemanipulating="true" style="max-width: 400px; width: 50%;" class="ydp6bd0af4dyahoo-inline-image" src="/ajax/image/mail/compose/mailstorage/image?id=b3528a7df8124da3a2db6e79894d0ad8&uid=fe833fccacec4f51830b49336c7f4b95" alt="Inline image" data-mce-src="https://connect.xfinity.com/ajax/image/mail/compose/mailstorage/image?id=b3528a7df8124da3a2db6e79894d0ad8&uid=fe833fccacec4f51830b49336c7f4b95" data-mce-style="max-width: 400px; width: 50%;">

2. On **page 25 of the NAAQS Modeling Report for Cadman Materials, Inc / Kenmore, WA dated March 2022**, there is the front page of a Stack Test Report. The test date was **October 1, 2020**:


<377ba0ca-0cd6-8cd5-cf52-86eac2ed20ef@yahoo.com>" style="max-width: 347px; width: 50%;" class="ydp6bd0af4dyahoo-inline-image" src="/ajax/image/mail/compose/mailstorage/image?

id=b3528a7df8124da3a2db6e79894d0ad8&uid=26a75d02242a4a0f90ca479277a94332" alt="Inline image" data-mce-src="https://connect.xfinity.com/ajax/image/mail/compose/mailstorage/image?id=b3528a7df8124da3a2db6e79894d0ad8&uid=26a75d02242a4a0f90ca479277a94332" data-mce-style="max-width: 347px; width: 50%;">

The title of the report says "**Tests for Particulate Matter, Opacity, Nitrogen Oxides and Carbon Monoxide**. There was **no VOC testing** at the Cadman asphalt plant in Kenmore on that day or any other day.

3. On **page 70 of the NAAQS Modeling Report for Cadman Materials, Inc / Kenmore, WA dated March 2022**, Table 3. shows annual emissions for VOC, but the footnote gives an AP-42 emission factor, meaning that the VOC emission value was calculated. It was not obtained by actual stack testing.

4. **On page 18 of the Engineering Worksheet**, the following table appears:

<4fb19e86-d00b-f0e5-c6bb-c71ee7b1ed29@yahoo.com>" style="max-width: 400px; width: 50%;" class="ydp6bd0af4dyahoo-inline-image" src="/ajax/image/mail/compose/mailstorage/image?id=b3528a7df8124da3a2db6e79894d0ad8&uid=37ff965e449f4b03a77c152cc83f7c88" alt="Inline image" data-mce-src="https://connect.xfinity.com/ajax/image/mail/compose/mailstorage/image?id=b3528a7df8124da3a2db6e79894d0ad8&uid=37ff965e449f4b03a77c152cc83f7c88" data-mce-style="max-width: 400px; width: 50%;">

We know that there was no actual stack testing for SO_2, VOC, combined HAPs, or individual HAPs. Yet they appear in the table. Their annual emissions were **calculated using AP-42 emission factors**.

There are several other examples in the Engineering Worksheet and the NAAQS Modeling Report showing that PSCAA has yet to require any VOC testing at the asphalt plant in Kenmore and that there are no results of actual VOC tests performed at that plant.

On April 11, 2022, Mr. McLerran and Mr. Hoffnagle gave an "Update on the Draft Permit."

Mr. McLerran said the following:

1. "There was quite a bit of back and forth between the clean air agency and Cadman about what would be required for a complete application, things like modeling requirements by the clean air agency, stack testing requirements for volatile organic compounds, the VOCs that people have mentioned." … "And as part of the permit application, the clean air agency did require Cadman to do stack testing of the dryer for VOCs, the volatile organic compounds."

2. "…and they've also determined through air modeling that the facility meets all federal ambient air quality standards. And **it has undergone the stack testing that I mentioned**."

Councilmember Srebnik made a comment that sounded like maybe she believed that VOC stack testing was done in October 2020. She said, "I'm glad that the testing that was done was the kind that folks asked for and that it did show that levels of toxic emissions were well below the accepted levels." Folks were asking for VOC testing at that time, and when the test results were publicly released, folks were disappointed that VOC testing had not been done.

I'd be grateful if Mr. McLerran could comment on this apparent contradiction. Has VOC testing already been done at the Kenmore asphalt plant? If so, please direct me to such test results.

Sincerely,

David Morton
206-909-5680

From: Stacey Valenz
To: Cynthia Wang
Cc: Steve Van Slyke
Subject: Re: Cadman draft permit 11861
Date: Thursday, March 31, 2022 12:31:57 PM
Attachments: image001.png
image001.png

Thank you for the information Cynthia.
Appreciate it!
Stacey Valenzuela

Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

On Thu, Mar 31, 2022, 9:55 AM Cynthia Wang <CynthiaW@pscleanair.gov> wrote:

> Hi Ms. Valenzuela,
>
> I don't believe the current permitting process has an additional step like a stakeholder information meeting as you described.
>
> We have prepared a lot of the pertinent information and organized them into a web page (see attached URL) for everyone to access. https://www.pscleanair.gov/CivicAlerts.aspx?AID=111
>
> From that page, you can see a link that takes you to the draft: https://www.pscleanair.gov/DocumentCenter/View/4629/11861-draft-order
>
> Thank you.
>
> **Cynthia Wang (she/her)**
>
> **Interim Executive Director**
>
> 1904 3rd Ave #105, Seattle, WA 98101
>
> DIRECT 206-689-4004
> FAX 206-343-7522
>
> WEBSITE pscleanair.gov
>
> ---
>
> **From:** Stacey Valenz <svalenz229@gmail.com>
> **Sent:** Thursday, March 31, 2022 9:34 AM
> **To:** Cynthia Wang <CynthiaW@pscleanair.gov>
> **Subject:** Cadman draft permit 11861
>
> Hi Cynthia,
>
> Any chance we can now schedule a stakeholder information zoom meeting to understand the draft prior to the public hearing.
> Please advise.
>
> Thank you so much,

Stacey Valenzuela

Kenmore Advocate

6505801564

Unless Someone like You, Cares a Whole awful Lot, Nothing is going to get Better. It's Not!
dr Suess

From:	Patrick O"Brien
To:	Public Comment; Bothell Kenmore Chamber of Commerce
Cc:	Kenmore City Council; Vicki Grayland; Rep. Pollet; Janet Hays; Elizabeth; Jon Culver
Subject:	Re: Kenmore Asphalt plant has a long list breaking the law. That and knowledge of this topic of reasons is why NOT to grant any new permits.
Date:	Saturday, April 23, 2022 8:53:53 AM

To: The City of Kenmore Rob Karlinsey City Manager and P.S.C.A.

This is your notice that the Kenmore Asphalt Plant grandfathered status and permit from 1990 1991 has been vacated.

Attached is a copy of paperwork they submitted with the (my work) appropriate responses in red lettering.

The applicant was under obligations to report to continue with the grandfathered status of the Kenmore asphalt plant.

There is no evidence that the applicant ever continued the delivery of accurate information therefore they have indeed terminated their grandfathered status. It cannot be reclaimed.

They are now operating outside of the law and the city must at this time issue a cease-and-desist order to the Kenmore Asphalt Plant from further production "work" until such time as a new application it is submitted along with a new operational permit has being granted by all of the agencies with an interest in both the public health, the Clean Water Act, and the clean air act.

The other agencies could also include the Army Corps of Engineers and other governmental agencies.

The future standards at the asphalt company must adhere to the 2020 state of the Art in processing these carcinogenic byproducts of the oil and gas industry. All federal, Washington State, King County and City of Kenmore rules for both air and water are to be applied.

This facility must also be removed from the present location in Kenmore because it is sitting on a MTCA site.

These are positive steps for the City of Kenmore and its citizens to move on.

To not issue an immediate cease and desist order is illegal and negligent.

Your action is warranted and necessary.

Thank you

Patrick E. O'Brien

6330 N.E. 181st Street

Kenmore, Washington 98028

On Fri, Apr 22, 2022 at 6:13 PM Patrick O'Brien <patrickobrien859@gmail.com> wrote:

> 1.) Cadman lied on their SPEA Checklist.
> 2.) This Applied Science study does provide a comparison and link to serious health hazards for the varied methods of producing asphalt. Asphalt production is a health hazard, safety nuisance and water hazard.
> 3.) Pollution Dispersion model.
> 4.) Thousands of Kenmore Citizens urge the closing of this location for asphalt production in their nuisance filings.
> 5.) Recent Letters and topics concerning this Asphalt plant
> 6.) Criminal charges must be filed against the Asphalt plant ownership and managers for obstruction, collusion, racketeering, assault with known poisonous chemicals. There are more charges above and beyond these.
>
> Prove you are here doing what is right, not expedient.
>
> Patrick E. O'Brien
> 6330 N.E. 181st Street
> Kenmore, Wa. 98028

From: Carol Atkinson
To: Public Comment
Subject: Re: Pollution Concerns
Date: Wednesday, April 20, 2022 10:01:07 AM

On Wed, Apr 20, 2022 at 9:59 AM Carol Atkinson <carolfatkinson@gmail.com> wrote:

> To whom it may concern:
>
> Please require Cadman Asphalt to clean up their emissions. With other entities, including sellers of gas for cars, cleaning up their product for the good of the environment, Cadman needs to follow suit and stop pouring toxic chemicals into the air that its neighbors, such as we, have to breathe.
>
> Please do everything you can to protect the people of Kenmore in this way!
>
> Thank you.
>
> Carol F. Atkinson
> 16925 Inglewood Rd NE, Kenmore, WA 98028

From:	David Morton
To:	Public Comment; Brian Renninger; John Dawson
Subject:	Re: Public hearing on Order of Approval 11861 at 4 pm on April 18, 2022. Time limit for oral comments?
Date:	Monday, April 11, 2022 11:57:11 AM

Hello PSCAA Engineers,

What is the expected time limit for public comments at the public hearing on Order of Approval No. 11861?

This is the public hearing occurring at 4 pm on April 18, 2022.

Thank you,

David Morton
206-909-5680

From:	ELIZABETH MOONEY
To:	David Morton; John Dawson; Brian Renninger; Public Comment
Cc:	Eric Baker; Megan Dunn; Brombaugh; caroline.mellor@ecy.wa.gov; claire.boyte-white@ecy.wa.gov; bob@nshorenews.com; rod.dembowski@kingcounty.gov; Bryan Hampson; Puget Sound Clean Air Tom H.; Rep. Pollet; kelly.marquardt@mail.house.gov; Chris Kitchen; Kim Wells; Randy Mawdsley; Bridgit Baker; Matthew Tejada; Sheryl Stohs; Kevin Burns; Judith White-Crow; Jennifer Dold; Kathy Strange; Steve Van Slyke; Heather Beckford; Amy Fowler; Erik Saganić; Karen Houser; Sara Nichols; Andy Tudhope; S. Chao; Katie Ketterer; paul@probertsllc.com; Christie True; ryan.mello@piercecountywa.gov; Melissa McAfee; Rodgers Darrell (EHS Director); Barton Tim T (Everett) USA; madison.coates@trinityconsultants.com; Aaron Day; Michelle Caulfield; jeanie.boawn@seattle.gov; greg.wheeler@ci.bremerton.wa.us; Dow Constantine; kitsapcommissioners@co.kitsap.wa.us; bruce.dammeier@piercecountywa.gov; Kristina Walker; Joanna Gangi; Cynthia Wang; Benedikt Zinn; McDonough Christy M (Redmond) USA; Bauer Justin D (Kenmore) USA; Christopher Kincaid; Bruce Harrell; cfranklin@everettwa.gov; ryan.countryman@snoco.org; jbushnell2@cityoftacoma.org; jessyn.farrell@seattle.gov; Dinah Wilson; sframe@king5.com; mschroeder@watsonasphalt.com; pschroeder@watsonasphalt.com; rschroeder@watsonasphalt.com; Jenny Lybeck; MayorCouncil; City Hall; Corina Pfeil Councilmember; Joe Marshall; Nigel Herbig; Rob Karlinsey; Debra Srebnik; Melanie OCain; David Baker; Milton Curtis; Anastasiya Warhol; Angela Kugler
Subject:	Re: Public hearing on Order of Approval 11861, at 4PM 4/18/22. David Morton"s intention to speak.
Date:	Sunday, April 24, 2022 8:51:58 PM

Dear All,
Couid you please supply a copy of the recording? Where can we access the public hearing recording ? With video?
Elizabeth Mooney

On 04/18/2022 11:23 AM David Morton <davidwardmorton@yahoo.com> wrote:

Hello PSCAA Engineering Division,

I intend to virtually attend today's Public Hearing on Order of Approval 11861. At the hearing, I'll indicate that I'd like to speak, and if called on, I'll read my attached 5-minute comment. If necessary, I'll cut out the first 2 large paragraphs to make it a 3-minute comment. The 5-minute version is attached as a Word document (containing blue and underlined hyperlinks) and appears in the body of this email below:

I support the issuance of Order of Approval 11861.

It's important that plants and factories that emit pollutants use the **correct equipment** to properly produce their products and control their pollution. It's also important that these plants and factories use the **correct raw material input, or ingredients**. If you run a gasoline engine on diesel fuel, it won't run properly, will blow black smoke out the tailpipe, or may not run at all. Likewise, a hot mix asphalt facility is supposed to use solvent-free Performance-Graded asphalt cement as the binder for making hot mix asphalt. If the proper air pollution control equipment is installed and solvent-free asphalt cement is used, an asphalt plant should produce air emissions in the quantities predicted by AP-42. The same facility using cutback asphalt instead of solvent-free asphalt cement will emit much more VOCs than is predicted by AP-42.

For some years, the asphalt plant in Kenmore has purportedly been using the warm mix asphalt process which involves the use of differently formulated

asphalt cements that contain various additives. Medium-curing cutback asphalt is probably an attractive formulation because it's cheap and doesn't have to be stored or transported in heated containers. A skilled plant operator can avoid causing a fire when adding the cutback asphalt to the hot aggregate in the mixer. But because the facility has no equipment to control the emissions of VOCs from the pugmill mixer, most of the kerosene that evaporates when the cutback asphalt is mixed with hot aggregate simply escapes into the atmosphere.

All new Orders of Approval for hot mix asphalt facilities should have a condition requiring that "the hot oil (asphaltic cement) tanks shall not be used to store asphalt that has been blended with more than 7% petroleum distillates by weight. This means **the tanks cannot be used to store cutback asphalt**. Records shall be kept of the dates any materials are loaded in the tanks, the amount loaded, and the type of material loaded."

1) **Condition #20** prohibits the **storage** of cutback asphalt in the 2 asphalt cement tanks. Does this Condition also prevent the **use** of cutback asphalt to make hot mix asphalt?

2) There's a 4,500-gallon storage tank at the facility that's intended for storage of emulsified asphalt (aka tack). Is this **tack storage tank** able to **feed its contents** (possibly cutback asphalt) **into the pugmill mixer**?

3) A **flashpoint test can easily distinguish between cutback asphalt** (flashpoint about 150°F) **and Performance Graded asphalt cements** (flashpoint about 450 - 550°F). Would it be possible to arrange for an occasional **surprise testing** of the contents **of the 3 storage tanks** mentioned above?

4) A **storage tank filled with cutback asphalt should be kept cool**, while common grades of **asphalt cement must be stored at 300 - 305°F**. Would it be possible for PSCAA inspectors to use a **thermal camera** to easily spot a cool tank?

5) **Condition 20** says that records shall be kept regarding the loading of the asphalt cement tanks. Since **paper bills of lading can be faked**, why not require that **read-only electronic records** of the delivery and loading of asphalt cement be kept?

6) **Condition 10** requires **VOC testing**. Since asphalt cement is introduced into the pugmill mixer, will **emissions from the pugmill mixer** be tested?

7) Will VOC testing be performed **while asphalt cement is added to the hot running pugmill mixer** under normal operating conditions?

8) Should **Conditions 10, 11, and 12** specify exactly **where** the **probes** of the various testing devices **will be sampling emissions**?

9) **Condition 22** requires **VOC testing at least every 36 months**. Could VOC testing be done more frequently—maybe **every 18 months**?

10) Since **AP-42 does not list emission factors for the warm mix asphalt**

process, **should the plant be using the warm mix asphalt process?**

Sincerely,

Dr. David Morton
206-909-5680

Betsy Wheelock: There we go, that I was looking for. Welcome to the hearing on Cadman. This hearing is being recorded. I just started that. Welcome to the Puget Sound Clean Air Agency public hearing for Cadman Materials, Inc. This hearing is being recorded. We will begin taking comments soon, but first a few details about this hearing. Right now all attendees are muted to limit the background noise. [00:00:30] Please only use the chat function for logistical questions and staff will answer them as soon as we are able. When the hearing begins, please raise your hand if you intend to speak, we will call on you in the general order that you raise your hands. When we call on you, the host will unmute you, but you may need to also unmute your device depending on your settings.

Each participant can speak for up to five minutes. If we have more speakers than that time would allow, we may reduce the time to three minutes. I have a [00:01:00] bit of a low tech solution here today. I will display colorful reminders when a speaker's time is coming to an end, it's going to be yellow for one minute blue for 30 seconds left and then finally pink means that, that particular speaker would be out of time. Also, please note that written comments may be submitted until May 2nd of 2022. More information is on our website, www. [00:01:30] pscleaner.gov, Under Permits Open for Comment. And at this point I will hand it over to John Dawson, Engineering Manager.

John Dawson: Thank you very much, Betsy. And it looks like there's a couple of folks in the waiting room who you can let in as well. As Betsy said, this is the hearing for the proposed order of approval number 11861 from Puget Sound Clean Air Agency for Cadman Materials [00:02:00] Kenmore Asphalt Plant. The project under review here is for Cadman Materials to replace a drum dryer and burner, substantially alter an existing baghouse and replace passive condensers on two asphaltic cement storage tanks. The comment period began on March 3rd. The draft permit and materials are made available on our website for review on March 2nd. And, as Betsy said, we're accepting comments through May 2nd. [00:02:30] Written comments can be submitted by email to publiccomment@pscleanair.gov or the other methods that are listed in the public notice as well.

We thank you all for being here. This is an opportunity for the agency to hear your thoughts and suggestions on this draft permit. It's important to remember that only this permitting project is under review. This includes [00:03:00] much of the facilities overall operations, but not the plant as a whole. And as I mentioned, those details for what is under review here are all available in the materials that we posted on our website at the beginning of March. The draft permit includes new limits and testing requirements on a variety of pollutants, weekly odor monitoring, a complaint response program, an overall production limit for the facility [00:03:30] and a prohibition on storage of asphalt with more than 7% petroleum distillates in the two hot oil tanks. Also remember going into this, that we will respond in writing to all the questions and comments that we received today, that response will be in our technical evaluation that we issue with our issuance or denial of the permit. So we will be responding in writing to all the comments we receive today.

[00:04:00] All right. And with that, that is all of my introductory comments. We are planning on allowing most likely five minutes per speaker. This would be a good time for anybody who is interested to raise their hands, and the raise your hand function in Zoom so we can know who's interested in speaking to us today. And as I mentioned before, if you speak or if [00:04:30] you have additional thoughts that come to you later or something strikes you that we are still receiving written comments through May 2nd as well. And Betsy, I think we are going to get started with the comments. It looks like we currently have 1, 2, 3, 4, 5, 6, 7 people, eight people currently with their hands raise. So I think that yes still is. We can most likely still allow five minutes for commenter, I [00:05:00] think.

Betsy Wheelock: I think so. So I saw, I believe, I saw Victoria Graylands hand go up first. And so we will start with her. Oh, actually I think Zoom may be giving me an order. We can start with Victoria and then go to Stacy and then Nigel.

John Dawson: Ms. Grayland, if you can... Looks like you unmuted yourself. So I think we're ready for you when you are.

Vicky Grayland: Thank you. Good afternoon. [00:05:30] Puget Sound Clean Air Agency and staff, fellow Kenmores residents, and cabinet employees. My name is Vicky Grayland and I live in Kenmore. I'm also the chair of the Kenmore chapter of People for Climate Action. For the last 18 months or so, a small group of us has been speaking at PSCAA board of directors meetings month after month after month, bringing up all the issues of how PSCAA [00:06:00] does its job. I support the issuance of order of approval 118661. I'm so pleased that all our work has paid off and PSCAA has decided to do the job it was created to do and enforce the existing environmental laws. I agree with most of the requirements listed in the documents on the PSCAA website concerning this case.

[00:06:30] I don't agree with the way the stack testing was performed. Cadman Asphalt was told when the testing would take place and theoretically could have manipulated the emissions to create test results that may seem within health standards. My first comment is that we need more testing and testing that is unannounced, and we need health studies of the current Kenmore populists. We have anecdotal evidence of Kenmore residents [00:07:00] going through cancer treatment, but it needs to be more scientific. What also needs to be more scientific is the SEPA checklist. The asphalt plant is within a mile of a Heron Rookery at 73rd Avenue, which is also within the emissions plume. The Heron is the symbol of Kenmore, probably because of the Rookery and because the wetlands are so numerous in Kenmore. Wetlands being the natural habitat of [00:07:30] herons. The heron is not listed on the checklist. It appears to me that the last SEPA checklist dated July 1st, 2019, was apparently copied into the most recent checklist.

The herons were emitted from that last checklist as well. And because the agency has the role in declaring hazardous air days, which in the last few years have been because of forest fires. I would like to ask the Cadman [00:08:00]

Asphalt Plant, not be allowed to operate on a hazardous air days. If a homeowner can't run a wood stove on such a day, an asphalt plant should not be operating.

That is part of my list of comments and the last one for today. Thank you very much. I have submitted written comment because in the months I've made comments to the board, I've noticed that in the summary of my comments in the meeting [00:08:30] minutes, the next month, in my opinion, my comments have been misinterpreted and softened. To avoid any misunderstandings, I have submitted my comments in writing as well as a copy of the 2019 SEPA checklist. Thank you very much.

Betsy Wheelock: Thank you. We will move to the next commenter, which is Stacy. And I'm going to ask Ms. Grayland [00:09:00] to take down your hand just to make it a little easier for me. I appreciate that, thanks. Stacy and then Nigel.

Stacy Valenswal...: Thank you. Good afternoon, Stacy Valenswala from Kenmore. Thank you for listening to the Kenmore residents who have been pleading for actions and filing odor complaints for over 15 years with concerns of the VOC's BAH dioxin levels in our air. These likely causing the sickness, odor petroleum suit affecting our residents, [00:09:30] visitors to the Burke-Gilman Trail, parks, salmon, fish, trees, wildlife land and waterways. During the cement strike production stopped at both stationary facilities, Kenmore residents were reporting less ash and better air quality. We are hopeful that the air quality and public health will be improved drastically with the approval adoption and enforcement of the PSCAA draft permit 11861 for Cadman Asphalt, with stipulations that limit the [00:10:00] petroleum content percentage in the binder used in the processing and further testing. We appreciate the agency for responding with the 30 stipulations on the permit and hope this requires current plant standards.

Please consider including the Climate Commitment Act, WAC 146455 and 146446A, Change of Guidelines to Ensure Better Air Quality for Public Health. We would like to suggest a few amendments to the permit. First, item 20, [00:10:30] please add this statement to include no storage or use of binder that is more than 7% petroleum product to close this loophole that might come up in the future. Number 22, we request testing of VOC every 18 months performed by PSCAA and that they continue to handle complaints to ensure air quality. Number 27, extend the area for nose tests based on the emission wind maps. Also, we request that PSCAA [00:11:00] monitor or an independent non-smoker, paid inspector to perform the nose order testing. We need the companies that may pose a risk to our residents, wildlife and environment to follow regulations, and to be held accountable for any violation.

It is important that the allowable levels are based on Ecology Asphalt Plant Reports Acceptable Source Impact Levels that went into effect in December 2019 and tested for variables. Hydrogen sulfide, known [00:11:30] carcinogenic, carbon dioxide and particulate matter are some of the related toxin inhaled from the asphalt fumes, which at high levels are lethal and are associated with

the increased mortality and hospitalization, especially impacting related to cardiovascular and respiratory diseases as well as cause preterm babies. At lower levels, these cause the symptoms that many of our residents have complained, eye irritation, sore throat, coughing, cognitive decline, stroke, [00:12:00] bronchitis, headaches, nausea. Several residents in the emissions path have reported neighbors with cancer. The metals emitted, arsenic, chromium, mercury, are known to be of even greater concern.

PSCAA database received more than 25,000 odor complaints about emissions odors since January 2010, how many additional were submitted to the city of Kenmore impacting health with further deterioration is that unpleasant [00:12:30] odors can also induce stress. Please follow through with approval on the permit with stipulations as it aligns with the agency's number one goal to protect public health and our environment from further pollution. Please consider adding industrial stationary plants that cause emissions to the list of no activity on burn ban days. We need to stop all contributors to contamination when our ambient air is drastically limited. We asked for the current census health calculation [00:13:00] of healthy evaluation for the last five to seven years, and then in another five to seven years, to verify these impact of the changes to our health. Thank you for your consideration and for your time.

Betsy Wheelock: Thank you. Thank you. And Stacy, if you'll help me out and lower your hand, that would be great. Next up, I have mayor Nigel Herbig. And then after that [00:13:30] David Morton and also a disclaimer, I apologize if I mispronounce anyone's name.

Nigel Herbig: Good afternoon. I'm Kenmore, Mayor Nigel Herbig testifying on behalf of the city of Kenmore. We appreciate the public hearing and the opportunity for Kenmore citizens to give their input. And I want to personally thank all of the Kenmoreans that are here, speaking up for a healthier Kenmore. Over the last several years, many Kenmore residents have expressed concerns about odors and emissions from the Cadman facility [00:14:00] to the Kenmore City Council and the city staff. In fact, this draft permit would not have been required if not for the odor complaints from Kenmore residents and the city having been raised with the clean air agency. We appreciate that the draft permit is responsive to the concerns of Kenmore and its citizens regarding the need for ongoing testing of facility emissions. It is apparent from the draft that residents concerns regarding public health impacts have received intensive review by the agency.

In addition to odors, [00:14:30] key concerns have included possible health risk from air toxics, as well as concerns about ambient air quality and sensitive community locations. These include residential and commercial areas of Kenmore and public spaces like our library, parks and the Burke-Gilman trail, all places where odors have been reported. Kenmore and it's residents remain concerned about the odor impacts from the operations of Cadman on the community. We appreciate the odor response requirements [00:15:00] of the draft permit and want to see them retained. We support the ongoing testing requirements in the draft to ensure that the facility is in continuous compliance

with permit limits. We also support and appreciate the restrictions on what materials can be stored in the tanks at the site to prevent future production of cutback asphalt.

However, we request that the permit more specifically identify a cutback asphalt prohibition rather than only contain the petroleum distillate limits in the draft. Thank you for [00:15:30] the opportunity to testify today. We will be submitting our more detailed written comments on or before the May 2nd deadline. Thank you.

Betsy Wheelock: Thank you. Up next, looks like Mr. Morton's ready to go. Thank you. And after that it will be Dakota Rash and then Patrick O'Brien. Thank you.

David Morton: Thank you. Good afternoon PSCAA staff. I'm David Morton, I support [00:16:00] the issuance of order of approval 11861. It's important that plants and factories that emit pollutants use the correct equipment to properly produce their products and control their pollution. It's also important that these plants and factories use the correct raw material input or ingredients.

If you run a gasoline engine on diesel fuel, it won't run properly. Will blow black smoke out the tailpipe or may not run at all. Likewise, a hot [00:16:30] mix asphalt facility is supposed to use solvent free performance graded asphalt cement as the binder for making hot mix asphalt. If the proper air pollution control equipment is installed and solvent free asphalt cement is used, an asphalt plant should produce air emissions in the quantities predicted by AP42. The same facility using cutback asphalt instead of solvent free asphalt cement will emit much more VOCs than is predicted [00:17:00] by AP42.

For some years, the asphalt plant in Kenmore has purportedly been using the warm mix asphalt process, which involves the use of differently formulated asphalt cements that contain various additives. Medium curing cutback asphalt is probably an attractive formulation because it's cheap and doesn't have to be stored or transported in heated containers. A skilled plant operator can avoid causing a fire when adding the cutback [00:17:30] asphalt to the hot aggregate in the mixer, but because the facility has no equipment to control the emissions of VOCs from the pugmill mixer. Most of the kerosene that evaporates when the cutback asphalt is mixed with hot aggregate, simply escapes into the atmosphere.

All new orders of approval for hot mix asphalt facilities should have a condition requiring that, "The hot oil asphaltic cement tanks shall not be used to store [00:18:00] asphalt that has been blended with more than 7% petroleum distillates by weight.This means the tanks cannot be used to store cutback. Asphalt. Records shall be kept of the dates, any materials are loaded in the tanks, the amount loaded and the type of material loaded." Condition number 20 prohibits the storage of cutback asphalt in the two asphalt cement tanks. Does this condition also prevent the use of cutback asphalt [00:18:30] to make hot mix asphalt? There's a 4,500 gallon storage tank at the facility that's

intended for storage of emulsified asphalt, aka TAC. Is this TAC storage tank able to feed its contents, possibly cut back asphalt into the pug mill mixer? A flashpoint test can easily distinguish between cutback asphalt, flashpoint about 150 degrees Fahrenheit and performance graded asphalt cements, [00:19:00] flashpoint about 450 to 550 degrees Fahrenheit.

Would it be possible to arrange for an occasional surprise testing of the contents of the three storage tanks mentioned earlier. A storage tank filled with cutback asphalt should be kept cool while common grades of asphalt cement must be stored at 300 to 305 degrees Fahrenheit. Would it be possible for PSCAA inspectors to use a thermal camera to easily spot a cool tank. [00:19:30] Condition 20 says that records shall be kept regarding the loading of the asphalt cement tanks, since paper bills of lading can be faked. Why not require that read only electronic records of the delivery and loading of asphalt cement be kept?

Condition 10 requires VOC testing. Since asphalt cement is introduced into the pugmill mixer will emissions from the pug mill mixer be tested? Will VOC testing be performed [00:20:00] while asphalt cement is added to the hot running pugmill mixer under normal operating conditions? Should conditions 10, 11, and 12 specify exactly where the probes of the various testing devices will be sampling emissions? Condition 22 requires VOC testing at least every 36 months. Could VOC testing be done more frequently, maybe every 18 months? Since AP42 does not list emission factors for [00:20:30] the warm mix asphalt process, should the plant be using the warm mix asphalt process? Please issue order of approval 11861. Thank you.

Betsy Wheelock: Thank you. Moving on, Dakota Rash is next. And then Patrick O'Brien and then after that Robin Evans.

Dakota Rash: Hello, can you hear me? Great. [00:21:00] Thank you. My name is Dakota Rash. I grew up and currently work in Kenmore. First, I'd like to thank the employees of PSCAA who have worked to help keep this facility up to par. For years, the citizens of Kenmore have tried to alert people to the dangers they believe this facility presents to their community, and finally it seems they got some attention. And now this previously free range facility will be regulated, at least a little bit. I think the proposed permit presents an improvement. In essence, it seems that this facility that didn't used to have any operating conditions is being brought [00:21:30] up to standard.

However, I think there are three factors that warrant further additions and restrictions. First, this facility is incredibly close to the hub of Kenmore. Citizens live in areas where emissions are detected not only by the nose, but on the tongue. One of the county's busiest recreation trails, the Burke-Gilman, which isn't even mentioned by name in the SEPA checklist, runs directly adjacent to this facility. To this effect, I would urge the inclusion of suggestions made by David Morton and include [00:22:00] more transparency and more testing.

Next, this facility is close to a vital and sensitive ecological area. The mouth of the Sammamish River, that empties directly into Lake Washington, not even a few hundred feet away from this facility. Despite this, I found issues with the facilities environmental analysis, the SEPA checklist. First looking at item 3A one and two, is indicated that this project will not require any work within 200 feet of Lake Washington. I'm not familiar [00:22:30] with the technicalities of where the work will occur, but applying a hypothetical 200 foot radius to a map of the site, reveals that this can only be true if the entirety of the project takes place in the Northern most section of the property. Anything else is within 200 feet of Lake Washington, at least as far as I can tell.

Next, sections 5A through B, this is a little bit of a nitpick, but I find it interesting that endangered and threatened fish are identified by name. And yet they're not ticked off on the chart. [00:23:00] I also notice that the presence of herons is not acknowledged. This, I believe, is an oversight. I'll note here that herons are present. Herons are the very emblem of Kenmore. It's also interesting that eagles are acknowledged to be nearby, and yet herons are not. Anyone who walks the Burke-Gilman could tell you that herons come at least as close, if not closer, to the facility than eagles. Otters also aren't acknowledged on this checklist. And I have personally seen them on the dock at Log Boom Park diving for food. Overall, I get the impression [00:23:30] that this was a contextually quick analysis and there needs to be a deeper look.

And on a final environmental note, I also get the impression that this facility tried to avoid discussion of odor and CO2 pollution. The supplemental answer to item 2A reads as a dodge, not an honest analysis. Finally, this facility has a history of being a bad actor. I think it's indicative that the reason we are all here is that this facility failed to provide a notice of construction as required by law. [00:24:00] This facility also has had a history of non-numerical violations on it's NPDES, always a mouthful, permit. I would think it only natural facility that has seemingly sought to avoid the eyes of regulatory regulations like this agency, would be subject to more intense regulations and oversight. Again, I thank the PSCAA employees who have spent time on this, I'll take the opportunity to provide written comments. Please utilize this opportunity to fully protect the environment and [00:24:30] the people of Kenmore. Thank you.

Betsy Wheelock: Thank you. If you'll lower your hand after you're done speaking, that would really help me out. I appreciate it. Next up, we have Patrick O'Brien and then after that Robin Evans. It looks like I... There we go, Mr. O'Brien is ready.

Patrick O'Brien: Yeah. Yeah. Good afternoon, everyone. [00:25:00] Thanks for being here. I would like to say, and the linkage and the submission of the paperwork to you guys seems to be difficult. So I know there was people trying to tune into this meeting on Zoom, and it was much more difficult than getting on a city council meeting. So I'm looking at this in two different ways. I'm looking at this from a scientific [00:25:30] aspect and I'm looking at it from a criminal or legal aspect. It seems like Puget Sound Clean Air is solely looking at this from an applicant and whatever they did in the past situation versus people who are of engaged in

criminal activity. And I believe that the operators of this plant, over the time has been engaged in obstruction of justice [00:26:00] and clearly engaged in obstruction of justice, tried to obscure the facts of their upgrades and changes of the possible health risks.

And so when I was outside on any given day with my pets and we were breathing in things that were above any permitted value, we were damaged and that damage is criminal. [00:26:30] It's not, oh gee, our modeling shows that you're okay. No, the modeling was even incorrect because they're using medium grade asphalt with lots of other ingredients. Not to mention all the chemicals that aren't being tested for in real time, that are also very dangerous that come out of all the byproducts of the asphalt ingredients. So, that's [00:27:00] a criminal aspect of this that is not being discussed and should be, collusion, obstruction, a lot of different things that people could go to jail for and should, absolutely should.

The asphalt plant has created a dangerous environment and they don't care if there's forest fires, air inversions are what they keep chugging along. And they have been the worst neighbor in Kenmore for the residents and people are sick all the time [00:27:30] from their activities. And they do not care, absolutely not. Modeling will not suffice in this condition because they have changed their recipe, their hours of operations. They do a lot of things outside of any observation of a normal person. And so we need live 24/7 testing for the chemicals that are on the EPAs toxin list. And there shouldn't be any messing around, [00:28:00] if we want to really know what impact they're having on the environment around them.

The absolute ridiculous idea that they had a operational grandfather clause for over 30 years, 20 years, 10 years, 5 years is ridiculous. And all such applications under a grandfather clause have been long [00:28:30] extinguished and lied about continuously. So that plant has effectively done everything possible to shut them down immediately, immediately. They had no valid legs to stand on when it came to the grandfather clause.

So one of my other conditions or thoughts is, we just heard from the good doctor, David Morton about the point of [00:29:00] ignition and similar to the docs in Tacoma, they had an asphalt fire and they had to evacuate the Tacoma Fire Department and bring other firefighters in with chem hazmat suits. And this is sitting next to Kenmore Air, the vaunted big time float plane operation for the whole North America, with over a half a billion dollars worth of airplanes. And you're telling me, you have a [00:29:30] flashpoint of 150 degrees on these ingredients, and you've got over 10,000 gallons of aviation fuel sitting next door to the biggest draw Kenmore has for any kind of tourism. I mean, this plant does not belong here for a lot of reasons, and there should be people in jail right now. Thank you.

Betsy Wheelock: Thank you. Next, it [00:30:00] looks like Robin Evans is ready to go. Thank you.

Robin Evans-Agn...: Hi there. Yeah. I'm Robin Evans-Agnew, I'm a population health nurse. I work in many places but I'm actually a resident of Tacoma, but I've worked pretty closely with people for Environmentally Responsible Kenmore over the last 10 years, watching them struggle to get something done around reporting on and assessing and measuring the emissions [00:30:30] of this asphalt plant. It's high time that better monitoring comes into being for this plant. But one of the things that I wanted to add to this conversation is that if the Puget Sound Clean Air Agency is really engaged in protecting the public's health, I would urge that some better more comprehensive assessment be completed [00:31:00] in all of the parts of Puget Sound that are subject to these small asphalt plant operations that are resident inside communities with grave environmental justice problems with them.

And especially in the translation of public health risk relating to odor and exposure to volatile organic compounds, polyaromatic hydrocarbons are also mentioned as well. These [00:31:30] compounds are still not completely well understood inside the science and the literature. And we risk more damage to human health if we're not employing the precautionary principle to be very careful about continuing to allow plants to emit these gases. And just like Mr. O'Brien was saying, it's quite obvious to people who walk through Kenmore and pass through on the Burke-Gilman Trail, [00:32:00] that it's more than just an odor. It is something that is affecting their respiratory health. Thank you.

Betsy Wheelock: Thank you. Next up, is Finley. And after that, Nancy Rogers.

Phyllis Finley: Hello, I'm Phyllis Finley, I live in Kenmore. Although I support the approval of the permit, [00:32:30] I have serious concerns. My comments are divided into four categories. My intuition, the SEPA checklist, the NOC worksheet, and finally requests. Number one, my intuition. The charts and scientific data presented in the Cadman documents have their place, but so does common sense. This facility is in an urban area. Doesn't common sense tell us that its emissions impact people and their health? The facility is in an [00:33:00] environmentally sensitive area and near one of the most significant biodiversity corridors in our region. Doesn't common sense tell us that its emissions impact all living things as far as those emissions reach?

It's been written that past behavior is the best predictor of future behavior. Based on that, there are some observations about Cadmans's past behavior. They have not been community, environmental stewards. They have broken the law. [00:33:30] They seem to respect neither the letter nor the spirit of environmental and other laws, my intuition and my common sense, tell me that left to their own devices they will continue their past pattern of behavior. It's the responsibility of the agency to have the strictest measures in place to ensure that this is not possible.

Number two, SEPA checklist. This is misleading, incomplete and insufficient. [00:34:00] Is this a pattern of the type of compliance that we can expect in the future? Agency has apparently not verified the information submitted. Here's

some examples, page six air, are there any sources of emissions or odor that may affect your proposal, answer no. Are you kidding? If this is truly an honest answer, it's obvious that neither Cadman nor the agency have been paying attention. [00:34:30] Page six, water, will the project require work within 200 feet of the described waters answer, no. This would be a pretty easy thing for the agency to verify, on such an important waterway.

Page nine animals, birds, herons isn't checked, although there's an active heron rookery in Kenmore, ducks and other waterfowl are not included. Mammals, none are checked. There are [00:35:00] mammals near the site. You simply need to spend a short time on the Burke-Gilman Trail to know that. Fish, salmon isn't checked, trout isn't checked, shellfish isn't checked. There are crayfish and freshwater clams in the lake.

Number three, the NOC worksheet. This worksheet is of urgent concern. Are the statistics in the worksheet based on actual testing or on modeling? Is that so hard to answer? Is cutback asphalt [00:35:30] used or not used? Is that so hard to answer? It shouldn't be allowed at all. Page 17, "The facility has no record of reporting emissions. So actual emissions estimates are not known." Well that's pretty concerning. Pages 26 through 31, all of these statements start with the owner, the owner shall maintain records, [00:36:00] shall calculate, shall notify, must report, shall record and limit, shall test emissions for compliance, shall monitor and record, shall establish a complaint response program, shall maintain records required by this order of approval. Are you kidding? The agency is taking Cadman's word for all of this, the same company who failed to check heron and ducks on a SEPA checklist? [00:36:30] Based on Cadman's past performance, my intuition tells me that this is just not common sense.

Finally, I have 11 requests. The agency should require Cadman to complete the SEPA checklist with care and detail, require that all statistics be made based on actual testing and not modeling, not allow Cadman to have total control over its own record keeping, perform inspections at the Cadman facility [00:37:00] without prior notice, require documentation that Cadman has conferred with the appropriate agencies regarding threatened or endangered fish. I have five more. Require that measures be taken to enhance wildlife, require verifiable measures to reduce or control environmental health hazards, be present for all testing. Sorry. My timer. Require verifiable proof [00:37:30] that Cadman is not using cutback asphalt and verify all future records submitted by Cadman. Thank you.

Betsy Wheelock: Thank you. Thank you for having a timer going. I appreciate that. Next, we have Nancy Rogers and then after that, Anna Henolson.

Nancy Rogers: All right, [00:38:00] good afternoon. My name is Nancy Rogers. I am a lawyer with Cairncross & Hempelmann representing Cadman Materials. I'm going to provide some brief introductory comments and then we'll turn it over to Ms. Henolson for additional technical comments.

Cadman acquired this plant from CMAX in the summer of 2017. So we've been involved only since then. I also want people to recall that asphalt is, of course, a necessary product and that it needs to be manufactured close to its place of use. This plant provides asphalt for [00:38:30] necessary infrastructure, roads, school playgrounds, etcetera, in all the local cities in the area. The [inaudible 00:38:37] process has provided volumes of public information and all of the tests, and there have been some tests as well as modeling, confirm that the asphalt plant emissions are below, as a matter of fact well below, all applicable air quality standards. And that's important because the air quality standards themselves are set at conservative levels. So as to [00:39:00] assure protection of human health in the environment.

And I also want to note that it's not just Cadmans experts who are saying this, there are three sets of experts who have confirmed this. It's Cadman's experts, it's the agency at Puget Sound Clear Clean Air Agency. And it's the city's independent experts that they hired. So we have three different sets of experts who have confirmed that the Cadman Kenmore Asphalt Plant emissions are in fact below all applicable standards. And that means that we actually do know [00:39:30] that the public health is protected.

We have heard the repeated concerns... I'm sorry. People are interrupting me, can we mute others, please? Thank you. We hear the repeated concerns regarding the use of cutback asphalt and the risk of emissions from that. And as Cadman has stated multiple times before, this facility does not use cutback asphalt, the draft permit conditions prevent future use of cutback asphalt by assuring that it cannot be stored and therefore [00:40:00] used on the site. Turning then to the draft permit, we will, of course be providing detailed written comments. And I first want to thank the agency for issuing a draft approval.

Then I want to focus today just on three areas of disagreement that we actually think can be easily resolved. The first is the three year period on emission testing, that three year period [00:40:30] does not match the normal five year period in effect for all other asphalt plants in this area. And I want to note that there's actually a downside to more frequent testing, and that is that each test requires Cadman to operate the planet peak capacity manufacturing asphalt that isn't needed and creating additional emissions that clearly this community does not want to see. Five years to test has been sufficient for all other asphalt plants in the area, we believe it's [00:41:00] appropriate here as well. And we would ask that permanent condition be revised. Second point is that we have found a technical error in the draft permit that Ms. Henolson from Trinity Consultants will address after me.

And the third point goes to odor. Odor is plainly a large concern for the community in Kenmore, it is also a concern for Cadman. The scope of these odor monitoring and complaint conditions, however, go far beyond anything that we have seen in other permits. [00:41:30] These conditions. Also, quite frankly, we believe go beyond the agency's legal authority. And these odor conditions also fail to recognize that there are many sources of odor at the north end of Lake

Washington. Kenmore Air was mentioned earlier in this meeting, they use diesel fuel that smells et cetera, et cetera. Despite the fact that there are multiple sources of odor, the odor conditions [00:42:00] in the draft permit, essentially obligate Cadman, and Cadman alone, to conduct a community wide odor routinely week by week after week.

Cadman instead asks that the agency take a step back and work collaboratively with us and, frankly, with the city's highly qualified experts to create odor controls and conditions that will be legal, [00:42:30] that will be feasible and that will provide the community the assurance that they are so desperately seeking. With that general overview, I want to, as I believe, the agency will introduce next Anna Henolson with Trinity Consultants, who is Cadmans Air Quality Expert.

Betsy Wheelock: Okay. Thank you. If you don't mind taking your hand down when you get a chance, [00:43:00] thank you. And next up is Anna Henolson.

Anna Henolson: Hello, thanks again for holding the hearing and issuing the draft permit, we appreciate everyone's time. So yeah, I'll go through three things that Nancy mentioned first, just to summarize the information we included in the air permit application, and then kind of talk about how odor relates to what we included in the application for the emission calculations and the model. And then also talk [00:43:30] about the detailed kind of technical particulate matter correction that Nancy mentioned. So first as we do for all air permit NOC applications, we include a detailed emission calculations. And then in this case, if any of those calculation emission rates are above thresholds used for determining whether dispersion modeling is needed, then we conduct an air dispersion modeling analysis, so that's what we did in this case. We conducted the [00:44:00] emission calculations in detail, including all the pollutants that previous commenters named, including metals and aromatic compounds. And so all of the toxic air pollutants that Washington has, there's a very detailed list developed by the Washington Department of Ecology. And we used all the best available information for those calculations, including EPA references and available stack test information.

[00:44:30] And so what we take all those calculations and we compare the emission rates for our worst case future emission estimates against the modeling thresholds. And so if we're below that threshold, that means that according to the regulations and the detailed analysis and protective human health analysis that go into that, if you're below the threshold, no need to model, because you expect the concentrations in the ambient air to not have a [00:45:00] risk of impacting human health. And then for any emission rates that are above the threshold, then we move on to do the dispersion modeling. And so for the toxic air pollutant program that Washington has a very detailed program, much more detailed and stringent than other states.

Only one toxic air pollutant was above the modeling threshold, that was chromium. And so when we put the emission rate for chromium in the model

and used the weather data and other information, we saw that the resulting [00:45:30] model outcome was well below the threshold. I think it was 40% and that was for toxic air pollutants, just the one pollutant was exceeding. And we also modeled emissions of criteria pollutants against the National Ambient Air Quality Standards. And for this, we use the post-project emission rates at the maximum potential level that it could be at any point in the future based on actual stack testing for any that we had and best available [00:46:00] information from EPA for everything else. And we also included nearby facility in this case, Cal Portland and the actual weather data over a full five year period, as well as elevation data.

So those are all the inputs that go into the model and the model, what it does is it uses worse case emission estimates combined with actual weather data. And it assumes that those occur all over the same periods. And so [00:46:30] there's a conservatism built in there where it assumes that our worst case emission rate corresponds to the worst case weather conditions over that full five year period. Which it's established you use five years to make sure to capture the worst case conditions. So, doing all that, and then also adding in the background concentrations, which were actual measurements added into those results, those results were below the National Ambient Air Quality Standards. So again, protective those levels are set [00:47:00] to be protective of human health in the environment and all of our conservative estimates predicted below those levels.

So that was kind of the overview of what was put into the application to kind of provide that assurance of the protection of public health and the environment. And then this relates also to odor, I know there's concern about odor. And one of the things to understand about odor that I talk about [00:47:30] frequently is that smelling something doesn't equate to a human health impact. So those human health impact level, those concentrations in the ambient air, those are sometimes much higher or lower than what the detection levels are for what you can smell. And so, for example, I heard hydrogen sulfide mentioned earlier, hydrogen sulfide, you can smell at very low levels. You can detect it at a level of down to less than [00:48:00] one microgram per meter cubed. That's a very, very small concentration in the air. You can smell it. However, the levels used to protect human health are actually considerably higher. The level established by the... It's blurring out. Is it zero? I'm so sorry.

Betsy Wheelock: I apologize. I missed your 30 seconds warning, but please, if you could wrap it up, that would be great. Thank you.

Anna Henolson: Yeah, I will. I'm so sorry. So the levels to protect human health are orders [00:48:30] of magnitude above that. They've established the human health level at over a thousand micrograms per meter cubed. So that's over a thousand times higher and I'll wrap that part up there. And just mention that the particulate matter limit update, is a kind of a technical update, to correct to 7% O2 if that's what's used as the emission limit level or to use 15% O2, which is closer to stack test conditions.

Betsy Wheelock: [00:49:00] Thank you.

Anna Henolson: Sorry about that. Thanks.

Betsy Wheelock: Thank you. If you could lower your hand, that would help me. Next up. We have Shannon Kershner and then Janet, and then Jim Myers. Thank you. Shannon I think you are still muted. So if you could unmute yourself if you need.

Shannon Kershne...: Okay. Is that [00:49:30] better?

Betsy Wheelock: Much better. Thank you.

Shannon Kershne...: Okay. My name is Shannon Kershner. I appreciate the opportunity to be heard by the committee on this issue. I support the draft permit and the improvements currently being proposed, but I have additional concerns I would like to address in this draft permit. So many more people live here now than in 1973, when the plant was initially permitted, the plant is located in a now densely [00:50:00] populated area, as opposed to 1973, and has many safety concerns that have not been addressed considering the major population growth in Kenmore and surrounding areas. So, as I was reading through the draft permit, which was pretty challenging because these things are not worded to be easily understood. But a couple of things that popped out. So according to the permit, there's a seismic [00:50:30] hazard at this plant. In a densely populated area, wouldn't it need significant remediation to be safe?

This would be a major negative health impact in the event of an earthquake with many toxic chemicals stored here, as well as hydrocarbons. I want seismic safety, I want to know that if there's an earthquake, this is going to be a safe place to live. What about retrofiting? Isn't that a thing? Okay toxics, [00:51:00] according to the drought permit, it says groundwater is treated and released into Lake Washington. In draft permit, it also says there's a spill prevention control countermeasure plan and spill kits. I'd like to hear more about the treatment system that deals with the storm runoff. Has it been evaluated to be in good working order? This is going into Lake Washington, being that Cadman has had many violations in the past and does not have a reliable track record as far as their record keeping, I want an [00:51:30] inspection of this treatment process to make sure it's in good working order.

Hexavalent chromium is indicated as elevated in the Toxics Assessment. The scientist who spoke before me spoke to that, but I still have questions. I don't know if this is modeling or actual testing. Modeling does not seem sufficient in this case, particularly since Cadman has so frequently been out of compliance in their record keeping. How is the chromium hexavalent treated to make it safe for disposal into Lake Washington [00:52:00] when it gets into the groundwater? As the chemical doesn't break down in the environment at all. And if you're old enough to remember the movie Erin Brockovich, chromium hexavalent was the chemical that was carcinogenic that made a whole lot of

people sick. I would like more information in writing as to how this process is completed. I would like to know what levels of chromium hexavalent are in Lake Washington from the dispersal process.

And as far as recreation goes, [00:52:30] odors from the plant, as we've heard a lot, affect recreational uses in the area, and they also affect people living within a radius of the site. I haven't really heard any significant mitigation strategies. Although the folks who spoke before me mentioned them, I'm actually not aware of them. So I would certainly like to learn more about that because so many people are complaining in this community. This is a densely populated area. This isn't away from a population center.

So this plant needs [00:53:00] to be safe. We need to feel like we're living in this community and being that they've been bad actors in the past, I don't find that I trust Cadman or their representatives. I want to see the actual testing done, not just the modeling. I want to feel like this is a safe place to live. Also, people mentioned animals, a couple that folks didn't mention, beavers, ducks, cormorants, minks, and osprey. [00:53:30] How do they affect all the animals living in our watersheds? They all live within a mile of the plant. These animals are not located far away. So I want to know how the plant is actually affecting the wildlife in our area versus that there... Okay. That's all I'll say. Thank you so much.

Betsy Wheelock: Thank you. Thank you for your comment, and if you'll [inaudible 00:54:00] [00:54:00] when you get a chance, it just helps me. Thank you. Up next, we have Janet and then Jim Myers and then John Paul, after that. Thank you.

Janet Hayes: My name is Janet Hayes and I'm a resident of Kenmore, Washington, and the asphalt plant. The public has been exposed to the asphalt plant and cement plant for 48 years. [00:54:30] And when it was put here, it was not built here. The equipment was brought from a facility in Everett called Metro Paving. It was old equipment to begin with. That's part of my questioning. Another part I'd like clarified is if they do upgrading on any of this ancient [00:55:00] obsolete equipment, will they have to answer these same questions again? Or is this permit going to suffice for everything? That's a concern of mine. I also am in agreement with everyone that stated that they would like to have testing more frequently than once every three years. And I also wanted to [00:55:30] know if, when we make a complaint, if it's still going to take as long as it did? Up to three days for me, a few times when I was complaining and was mistakenly thinking that I was complaining for the cement plant, not the asphalt plant. I was misguided by people that were with City of Kenmore then, [00:56:00] and that was starting in 2004.

Even after the violation, no one tested until we started speaking that in... The violation, I believe was in 2017 or 2019, someone else will be clearer on that. I also want to ask about the stack. I realize that they have changed the stacks. [00:56:30] The old one had cracks and things were coming out of it then. The stack height is only 20 feet high and being it's down on 175th, the emissions

come at us, their lung level to anyone walking on 522, on our sidewalks that are fairly new. They come [00:57:00] right across the street to Ostroms Pharmacy. They hit the hill up to 181st, where I live, and they're locked in there. Anyway, it just continues. And no complaint, nothing has gotten us to where we are right now, except for the people that come forward and speak.

I've been doing it since 2008, [00:57:30] and I'm sick and sick of it. I would like a new wind [inaudible 00:57:36] so, so when we're walking or riding the Burke-Gilman Trail we know where to run, the different direction. So one other thing, diesel is not used in airplanes. They use an aviation fuel [00:58:00] and JPAY-A... Something fuel and kerosene. I was just called and told that. Also the modeling for the testing, are we using modeling that's done on a hot mix plant. Do we have modeling that's done on a warm mix plant like this is? Sorry, I'm scattered. My [00:58:30] notes are all scattered now. I didn't think I'd get to speak. So thank you very much.

Betsy Wheelock: Thank you for your comment. Are you all done Janet or do you.. You have a few more seconds? I just don't want to cut you off if you're not done.

Janet Hayes: Nope, I'm good. It will come in my comment. Thank you.

Betsy Wheelock: Thank you. Next up, we have Jim Myers and then John Paul after that, [00:59:00] and at this moment, I don't see any more hands raised beyond that, but anybody is welcome to raise their hand.

John Dawson: I know Elizabeth Mooney had her hand up earlier. It's not up right now, so we can check with her as well. [inaudible 00:59:13].

Betsy Wheelock: We will give her a chance. I know that one participant left and came back and that may have changed, but we'll address that when we're done. Up next is Jim Myers. Thank you.

Jim Myers: Yeah, hi, can you hear me?

Betsy Wheelock: Yes.

Jim Myers: Perfect. Okay. Well, I have [00:59:30] perhaps longer comments, but I will be submitting them by email. But I think it's probably been said enough times that there's a lot of uncertainty and a lot of concern about testing, not only of the emissions from the stack, but also from the ingredients that go into the asphalt mix. And it really comes down to an issue of trust and transparency. And I think that where [01:00:00] PSCAA can provide the people of Kenmore with that trust and transparency on this testing. I think that will go a long way to providing people with the sense that their health is being protected.

I think it's been talked a lot about [01:00:30] the plant. I think it's sort of interesting in most cases with asphalt plants or with some industrial sites where

you have a town that builds up around the site, it's common for the neighbors to complain. But here Kenmore was here long before the asphalt site was. And I think it bears some consideration that it is an unusual circumstance to have this in the middle of our [01:01:00] residential area. And certainly the sort of downtown Kenmore being downwind, I think that's important. And I think it's really important to sort of segue to the checklist. The checklist is a real hash. And I think one of the things that needs to be done is to look at the Burke-Gilman Trail, really have [01:01:30] an effort to assess how many thousands of people are at that fence line.

It is literally at the fence line. I mean, I have stood on the Burke-Gilman and, probably not very smart, but there with the hand air quality monitor standing in a plum of steam and whatever coming out of the stack trying to get a reading, trying to get some sort of [01:02:00] emissions monitoring. And it's like, well, this is what people bike through and walk through and talk through every single day. I think that the impact of all the people that use that site right at the fence line needs to be taken into account. And I do like many aspects of this permit. I go so far from what we once had with a plant where [01:02:30] there was no testing and I think that's a great step.

And I would implore the PSCAA to hold the line on any pushback by Cadman, because there are a lot of people who are depending upon you to keep us healthy. I think probably the whole impact on the environment, the biological side, in terms [01:03:00] of fish and birds is clearly inadequate. The list of endangered species has a whole list of fish, half of which are not endangered or threatened and is even missing some. Steelhead were listed in Puget Sound and in Lake Washington and not included, but cutthroat trout are not listed, which is probably good for them that they're not in that much trouble, but [01:03:30] it's clearly not being taken very seriously in terms of what the impact is. And I'm down to one minute. Thank you. But yeah, I would... But at the same time, I don't want to hold up this permit. I think it's great. It would be important to get the testing in, to get it done soon and to help people feel a little bit safer. Thank you.

Betsy Wheelock: All right. Thank you. [01:04:00] Next up, we have John Paul Mickle please. Thank you.

John Paul Mickl...: Yeah, thanks for your time today. I appreciate the public hearing and the ability to comment. I also want to make sure that Cadman gets a thank you, since 2017 for trying to bring this plant into operational standards and requirements that we all want for our city. Unlike the previous owner operator of the plant, which also [01:04:30] predates the incorporation of Kenmore as a city. I think it's concerning what I'm hearing a lot today is a lot of not in my backyard kind of comments that the Kenmore Planning Commission has increased the density of this location for development without considering that it's already got an industrial point to it with all of the companies that are down along Lake Washington, along this front. As I already mentioned, Kenmore Air, all of the auto body shops that produce pollutants of their own, the concrete plant

[01:05:00] and the asphalt plant, that leads to a comment that there's a lot of confusion.

When I talk to most Kenmore citizens, they can't point out the difference between the asphalt production and the concrete production at this location. I would love for Cadman to invite the city in for an open house to kind of educate and walk in an open house format, how they produce asphalt there. So we can educate the public what actually goes on, on the property that's there. We've had a couple of comments that, hey, I don't know where the asphalt is today. I don't know where the stacks [01:05:30] are at. I don't know how they can do this within 200 feet of the northern perimeter, because they don't understand what the difference is between the concrete plant and the asphalt plant.

One of the comments today that mentioned that, hey, it was so much better during the concrete strike. And actually there was no limitation to Cadman's operations on the asphalt site due to the concrete strike. So perception and reality are two totally different things from a lot of the comments that are being made today.

I also want to say that I find the science and the actual execution [01:06:00] of the testing as mentioned by Nancy that five year testing versus three year testing as a Kenmore citizen, I would much prefer five year testing. So we're not firing the plant up at full 100% capability in producing basically throwaway asphalt, that then becomes an environmental hazard. I'd rather stick to the five year testing plan that's required, that the agency requires as well as a much more environmentally friendly way of doing business. I also want to mention that I [01:06:30] use the Burke-Gilman Trail on a daily basis. I'm an avid runner, long distance runner. I've been running for my entire life. I'm 53 years old. I run past this plant on a daily basis. Sometimes twice a day. I've never experienced an odor problem. I shop in this market development area every day. I've never noticed an odor problem. My wife is a healthcare worker that works within about 500 yards of this plant on a daily basis for up to 10 hours a day, she's never made a complaint of any odors.

[01:07:00] The only disruption I've seen to wildlife recently, that eagles nest that used to nest outside of Log Boom park have been disrupted, which I have to assume, by the construction that's been going on for the last year, by the City of Kenmore. So actually I think what the City of Kenmore has done is had a campaign or spirited, a campaign where they've targeted one business amongst all of the business that they could have targeted for environmental improvement without actual factual scientific data or [01:07:30] any data. Other than I will quote several of the people, anecdotal information, my feelings on the plant, but yet not having actual any information that we could actually consider at a permit hearing like this.

So again, I want to thank you for your time, and I want you to make sure that we follow the procedures that are equal and open and transparent for all businesses and make sure that we're not singling out one business because we

don't like it because it predates the City of Kenmore itself. Thank you [01:08:00] for your time.

Betsy Wheelock: Okay. Thank you. And I want to thank everybody for unraising their hands as they got a chance to speak, that makes everything much easier for me. So at this point, if there's anybody who would like to speak, I'd invite you to raise your hand or even just jump in case the hand raise feature is not there. Elizabeth Moony. I see your hand. Thank you. I will [01:08:30] quiet myself.

Elizabeth Moony: So if you can just give me like 30 seconds, I'm trying to get over to where I can just pull the car over?

Betsy Wheelock: Yes.

Elizabeth Moony: Thank you.

Betsy Wheelock: That is just fine. Take your time and then jump in when you get a chance, I will pause my timer here and we'll get going when you're ready. I don't want you to comment and drive, so.

John Dawson: And [01:09:00] while she's getting ready, again if anybody else who hasn't spoken has a comment, this would be an opportunity to raise your hand as well if you wanted to speak after Ms. Moony.

[01:10:30] Actually, while we wait for Ms. Moony to be ready, I do want to remind everyone that we are continuing to accept written comments through May 2nd. You can send those to publiccomment@pscleanair. [01:11:00] gov. And there are a few other methods that are listed in the public notice as well. And as I said, we'll be responding to all the comments, both the hearing comments as well as the written comments. We'll be responding to those in our final determination document that we'll issue after the end of the comment period and when we've had a chance to digest public comments.

Betsy Wheelock: Thank you, John. Those are good reminders and it looks like [01:11:30] Elizabeth Moony if you're ready, we're ready.

Elizabeth Moony: Thank you very, very, very much for the... I just was trying to get a hold of people that care about these. And so I'm just going to sort of speak from my heart right now. Our community, some of whom were on today, have put together what we want, which is safe, clean air in Kenmore. Years ago, [01:12:00] we started a nonprofit, PERK, People for Environmentally Responsible Kenmore. And we started off trying to save the salmon and we need clean water for that. But what we found in our stream fest is people who were concerned about cutting down trees and cement dust. Janet Hayes was on. And that led to us getting to know the good people at Puget Sound Clean Air Agency. And then that led into Shoreline Master Plan [01:12:30] complaints, because we knew that there were dioxins out in the lake that led to watching

our city place manufacturing into our shoreline master plan, which led to the 520 project here.

And ever since then, it seems like the day we lost the Shoreline Master Plan appeal, Anne Hearst, Janet Hayes and I tried to work with Department of Ecology and our city to say, you've got a gap in where the toxins are. And then it seems like that [01:13:00] very day that we lost, we watched kind of the chug-chug-chugging of the asphalt plant, which maybe wasn't chug-chugging as much as before. I don't know. But what that led to as is us going down to your office, Puget Sound Clean Air Agency, we got to know CMAX because CMAX rented the facility from Cal Portland. Cadman now leases the facility from Cal Portland. The owner [01:13:30] is Cal Portland. And so this is just this mess of big corporations that yes, they sat here on our shoreline.

And we used to have ospreys here. Those aren't here anymore. Yes, we have eagles, but what's happened in the meantime is behind me here. And this is Ostroms. Ostroms is a pharmacy and yes, there is a state highway and yes, it would be very hard to [01:14:00] pluck out the difference in the VOCs between what comes on our highway versus what comes from the asphalt. But that is no excuse to have a grandfathered asphalt facility that is apparently on the land that Cal Portland owns. It is just too much on this pristine piece of north Lake Washington, which there are so many high value purposes, ecological purposes, cultural purposes, and [01:14:30] asphalt is not one of them. And our city tried, I guess, to call this nonconforming and my understanding from the good people at Cadman, they are nice people. Christie McDonough has been available for our Kenmore Clean Air Coalition to speak with.

We talked to Benedict... I'm sorry, I'm forgetting his last name. But I said to him one day, I said to him as the owner of [01:15:00] this big Cadman, "Would you want to live next to this this plant?" My friend, Kate Donaldson, lives next to this plant. She lives where I was earlier today, right up there near Patrick O'Brien. And you know this, I think, she tasted the asphalt on her sheets, in her hair. I know that's not good. And when I would run down here and maybe that's when the cutback asphalt, maybe when [01:15:30] other... I'm not going to get into whether or not they have cutback asphalt there anymore, but something made the hair on the back of my neck stand up. And when I would jog down in this part of my city, I couldn't jog here because it was like being behind a diesel truck and thanks to David Morton coming into our community and educating us about all the complexities we discovered in that violation, that there was perhaps cutback asphalt that at least used to be included in the production.

Okay. I see the one minute. [01:16:00] So, the main thing here is we deserve a health survey and if Puget Sound Clean Air Agency, and thank you, Brian Reninger and Melissa McAfee for coming out here, thank you to all the people who've come out here for over a decade. But when COVID hit, we thought for sure you would stop this unmonitored and the stacks not being tested. We would really like you to add in, and if Cadman [01:16:30] can't put up with it, having us test the stacks, then maybe it's time for us to work together and find

another use for our beautiful shoreline. We would even work together with a company to do something that's great for climate action. So lets think outside the box and make it super healthy, but for the ending. Thank you.

Betsy Wheelock: Thank you. [01:17:00] John, I see, we have one more hand up.

John Dawson: First, I'd like to make sure anybody who has not spoken yet if they would like to, I know Ms. Kershner did have an opportunity to speak earlier.

Betsy Wheelock: Yes. I agree. And we should... I see another hand raised of a name that I don't think has had a chance [01:17:30] to speak. And I do agree we should give everybody...

John Dawson: Yeah. I see a Nancy.

Betsy Wheelock: Nancy.

John Dawson: Yeah.

Betsy Wheelock: At Glenwood.

John Dawson: Yeah, Glenwood. So Nancy, we're going to invite you to unmute and Elizabeth, I may ask you to take your hand down if you're done, just to help me out here. Thank you. Thank you.

Nancy Hanson: This is Nancy Hanson. I live in Kenmore. I am agreeing with part of this and not agreeing [01:18:00] with other parts. And this has been really a difficult issue because I know it's not an issue of one single thing, but I am concerned that this area, which has the Sammamish River and the mouth of the river and Lake Washington was not selected on the whole big list of the areas to renovate for salmon, because there is so much degradation [01:18:30] of the water frontier. And I think we can't just ignore that. We need to be doing something about it. And I think we all have to... I agree with what Elizabeth said. We need to all be working together for the water quality here. And I guess that's all I have to say. And I'll write more in a written comment, but it's extreme here with the problems and it's going to be a hard goal, but we can do it. So thank you.

Betsy Wheelock: [01:19:00] Thank you, Nancy. I just want to be sure you're all done because we're giving everybody. [inaudible 01:19:11]

Nancy Hanson: Yes. That's all today. [inaudible 01:19:13] say something.

Betsy Wheelock: I didn't want to move on unless you were done. Thank you.

Nancy Hanson: Mm-hmm.

Betsy Wheelock: I was muted myself. If there's anybody else who hasn't had a chance to speak, [01:19:30] we would invite them to raise their hand. Or I always like to give folks a chance in case their hand raise isn't working. Just unmute and jump right in. So I'm going to give a minute or two of quiet for that in case there's somebody who may have a technical difficulty with the hand raise option. [01:20:00] All right. I don't... Then I guess we can circle back. What do you think John?

John Dawson: I would say, and Ms. Kershner my apologies. I think since you already had a chance and since we're still accepting written comments, I think if you have more to say, I would encourage you to submit written comments. It looks like there's nobody who hasn't spoken yet. [01:20:30] And as I said, we are accepting written comments through May 2nd, email address is publiccomment@pscleanair.gov. And it appears that is everybody who would like to speak to us. [01:21:00] So I think we should close this hearing, Betsy.

Betsy Wheelock: I think so. And again, John, I appreciate you letting us know, the comment period is still open. You can go to our website, PScleanair.gov under permits, open for comment for more information.

John Dawson: Great. Thank you everyone.

Betsy Wheelock: Thank you for coming everyone.

Speaker 21: [01:21:30] Thank you. We appreciate it.