

September 10, 2019

Murray Godley, President
Northwest Innovation Works Kalama
222 Tradewinds Road
Kalama, WA 98625

RE: Final Determination to Extend Construction Deadline in Air Discharge Permit 16-3204

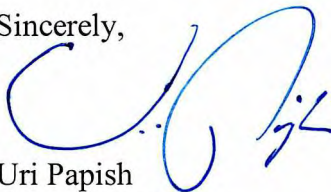
Dear Mr. Godley:

On November 8, 2018, the Southwest Clean Air Agency (SWCAA) issued a preliminary determination to extend the deadline to commence construction contained in Air Discharge Permit 16-3204. A 30-day public comment period was provided for the proposed extension. Notice to the public of SWCAA's preliminary determination was published in *The Columbian* and the public notice section of the agency's website. The public comment period ended on January 8, 2019. Multiple comments were received during the public comment period. SWCAA has compiled and responded to the comments in an attached document.

SWCAA has now made a final determination to extend the deadline to commence construction in Air Discharge Permit 16-3204 for a period of 18 months. This determination was made subsequent to issuance of the Final Supplemental Environmental Impact Statement (FSEIS). The deadline to commence construction in Air Discharge Permit 17-3223 is hereby extended to March 4, 2021.

If you need further assistance or have any questions regarding these matters, please contact me or Wess Safford at (360) 574-3058 extension 126.

Sincerely,



Uri Papish
Executive Director

UP:ws





SWCAA
Southwest Clean Air Agency

Northwest Innovation Works - Kalama

ADP 16-3204

Permit Extension

Public Comment and Comment Response

September 10, 2019

**Southwest Clean Air Agency
Public Comment and Comment Response**

**Northwest Innovation Works Kalama
ADP 16-3204 / ADP Application CO-964
Permit Extension**

September 10, 2019

Summary

Northwest Innovation Works Kalama (NWIWK) submitted ADP Application CO-964 to the Southwest Clean Air Agency (SWCAA) on March 1, 2016. ADP Application CO-964 proposed to construct and operate a methanol production facility on approximately 90 acres at the Port of Kalama's Northport site. The proposed facility is referred to as the Kalama Manufacturing and Marine Export Facility (KMMEF).

SWCAA made a preliminary determination to issue ADP 16-3204 in response to ADP Application CO-964 on November 21, 2016. Due to significant public interest, SWCAA provided both a public comment period and a public hearing for the preliminary determination. After reviewing and responding to comments received during the comment period, SWCAA issued ADP 16-3204 on June 7, 2017.

NWIWK made a request to extend the expiration date of Air Discharge Permit (ADP) 16-3204 on October 4, 2018. ADP 16-3204 was issued final on June 7, 2017 and expires on December 7, 2018. As stated in the extension request, NWIWK planned to commence construction of the facility after receiving permit approval in 2017 but was unable to do so due to appeals of selected permits and approvals. NWIWK has requested an 18-month extension of ADP 16-3204 to allow for resolution of the pending appeals.

SWCAA found that extension of ADP 16-3204 is justified, and made a preliminary determination to extend the deadline to commence construction in ADP 16-3204 by a period of 18 months. The scope of this action is limited to extension of the construction deadline in ADP 16-3204. No changes are proposed to existing emission limits or permit conditions. Due to significant public interest, SWCAA provided a public comment period for this determination.

Public Comment Period

The public comment period for the preliminary determination to extend the deadline to commence construction in ADP 16-3204 began on November 8, 2018 and ended on January 8, 2019. During the comment period a total of 14 public comments were received. The original comments are on file at SWCAA's business office. Public comments received during the comment period are organized by commenter and comment topic in the tables below. The first table contains a list of commenters with a cross reference to related comment topics. The second table contains a list of comment topics with SWCAA's corresponding comment response.

Table of Commenters		
Commenter ID	Commenter Affiliation	Comment ID
1	Citizen	1
2-5, 10	Citizen	2
6	Citizen	2, 3
7	Citizen	4
8	Citizen	5
9	Citizen	2, 4
11	Citizen	6, 7, 8, 9, 10, 11
12	Citizen	10, 12, 13, 14
13	Citizen	13, 14
14	Citizen	2, 4, 8

Table of Comments			
Category/Topic	Comment ID	Comment	Response
General Support	1	General support for approval of the proposed project.	SWCAA thanks you for your comment.
General Opposition	2	General opposition to approval of the proposed project.	SWCAA thanks you for your comment.
Methanol Shipping	3	Shipping methanol is dangerous. Leaking methanol from pipelines can pollute land and water.	Spill prevention for liquids stored at the proposed facility and/or transported on the river is not within the scope of New Source Review under the Clean Air Act and is not addressed in the facility's air discharge permit. Accidental spills are discussed in the EIS for the project.
Hydrocarbon Transport / Carbon Fuels	4	General opposition to any project the increases hydrocarbon transport. Increased production of carbon fuels will hasten the destruction of the environment.	New Source Review under the Clean Air Act is limited to air emissions from stationary sources. The general impact of carbon fuels and hydrocarbon transport are not within the scope of this permitting action.
SEPA	5	The SEPA analysis must include a review of all applicable environmental laws, reasonably foreseeable effects, indirect environmental effects, local ecosystem risks, river and ocean traffic, surface and quality impact, and climate change effects. A deficient review will be appealed.	The current permitting action proposes to extend the deadline to commence construction in an existing air discharge permit issued under the Clean Air Act. This action is not part of the formal EIS assessment. The SEPA lead agencies for this project are the Port of Kalama and Cowlitz County. Comments regarding the scope and detail of the EIS should be directed to the attention of those agencies.
ULE Complications	6	The number of shutdowns, upsets and maintenance due to complications with the 'ULE' process configuration are woefully underestimated. Upsets and shutdowns will dramatically increase emissions from the facility.	The air discharge permit for this facility reflects the information and specifications provided by the applicant in ADP Application CO-964. Emission limits and restrictions in the permit correspond to the proposed operating scheme. Any significant change in the submitted information and/or emissions would not be allowed until reviewed and approved by SWCAA via a new permit application.
ZLD / Wastewater	7	The ZLD and wastewater systems are not properly designed or permitted.	SWCAA has previously reviewed the ZLD process and determined it has negligible air emissions. Impacts of the ZLD wastewater process on media other than air are not within the scope of SWCAA's New Source Review authority and are not addressed in this permitting action.

Table of Comments			
Category/Topic	Comment ID	Comment	Response
Greenhouse Gas Emissions	8	The SDEIS falls short of evaluating GHG emissions from cradle to grave.	The current permitting action proposes to extend the deadline to commence construction in an existing air discharge permit issued under the Clean Air Act. This action is not part of the formal EIS assessment. The SEPA lead agencies for this project are the Port of Kalama and Cowlitz County. Comments regarding the scope and detail of the SDEIS should be directed to the attention of those agencies.
Soil Stabilization	9	NWIW does not have a soil stabilization design/plan for the project site.	The current permitting action proposes to extend the deadline to commence construction in an existing air discharge permit issued under the Clean Air Act. New Source Review under the Clean Air Act is limited to air emissions from stationary sources. The impact of the project on soil and soil stabilization are not within the scope of this permitting action.
Major Source of Air Emissions	10	This facility should be permitted as a major source of air pollution. SWCAA's permit should be modified to incorporate use of the 'CR' process configuration in addition to the proposed 'ULE' process configuration. The permit needs to be revised to reflect FEIS changes in infrastructure, number of upsets and shutdowns, maintenance, etc.	The air discharge permit for this facility reflects the information and specifications provided by the applicant in ADP Application CO-964. The applicant specified use of the 'ULE' process configuration, and permit emission limits and operating restrictions correspond to the proposed operating scheme. Any significant change in the submitted information and/or proposed emissions (e.g., use of the 'CR' process configuration) would not be allowed until reviewed and approved by SWCAA via a new permit application. As proposed and permitted, the facility does not meet the definition of a "major stationary source" under the Clean Air Act.
Permit Renewal	11	SWCAA should not renew the facility permit or stop/pause the permit until all FEIS appeals/proceedings are concluded.	SWCAA has made a preliminary determination to extend the deadline to commence construction in the facility's existing air discharge permit. Consistent with the established New Source Review process, a final determination will not be issued until such time as a final SEPA determination has been made.
EFSEC Jurisdiction	12	Facility is a petrochem refinery and should be considered an 'energy plant' subject to EFSEC jurisdiction.	The proposed methanol manufacturing plant does not meet the definition of an 'energy plant' and is not within the jurisdiction of the Energy Facility Siting Evaluation Council (EFSEC).

Table of Comments			
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Estimated Air Emissions	13	Are the emissions for the process boilers, process heaters and flare given in the ADP realistic? The makes/models of the equipment are to be determined.	Air emission estimates and permit limits for the process boilers, process heaters and flare are based on manufacturer's specifications and available emission data from EPA and other facilities. Permitted emission levels have been demonstrated in practice by a range of equipment and are not dependent on a specific make/model. Equipment installed by the applicant must comply with all permit requirements. The permit contains monitoring, testing and reporting requirements sufficient to assure compliance with applicable requirements.
Greenhouse Gas Emissions	14	CO ₂ e emissions from the production process are underestimated. The Coogee plant emitted 0.70 tonnes per tonne of methanol (2002) and the most efficient technologies reported are at 0.54 tonnes per tonne of methanol. NWIW will not be able to meet the proposed CO ₂ e emission rate.	The air discharge permit for this facility reflects the information and specifications provided by the applicant in ADP Application CO-964. Greenhouse gas emissions from minor stationary sources are not subject to New Source Review under the Clean Air Act. The facilitywide emission limit for greenhouse gases contained in the facility's permit was included at the request of the applicant pursuant to the provisions of SWCAA 400-091. Voluntary emission limits established under SWCAA 400-091 are enforceable and must be met. Also, the emission limits do not prevent SWCAA or the Department of Ecology from implementing other applicable air emission or greenhouse gas standards. The proposed project may be subject to the requirements of Washington's Clean Air Rule (WAC 173-442), which is administered by the Department of Ecology and requires progressive reduction of greenhouse gas emissions.

#1

Wess Safford

From: Mike Bridges <mikebridges@ibew48.com>
Sent: Tuesday, November 27, 2018 2:49 PM
To: Wess Safford
Subject: Proposed Extension of Air Discharge Permit NWIWK

I am in full support of the extension to allow time for NWIW to finish the process. This project has the ability to raise and set the new standard for how industry can and should be developing projects in WA and especially along the Columbia River. (1)

Best Regards,

Mike Bridges
President LKBCTC
Business Rep IBEW Local 48
360-431-1472 cell
mikebridges@ibew48.com



#2

Wess Safford

From: Blulady <blulady77@gmail.com>
Sent: Tuesday, November 27, 2018 3:18 PM
To: Wess Safford
Subject: Re: NW Innovation Works Kalama Permit Extension Start of Construction Notice

Our community has been asking for a COSTCO and a Trader Joes for two decades. Two decades. When those two stores came to town the local government ran them out. Our community has been asking for a more modern hospital for three decades and when the hospital came to town for a permit they were run out. Seems our community can't support anything better than a few crummy little stores and a crummy little hospital. Be aware if you have a heart attack, you will need Lifeflight to Vancouver or Portland at the very least. This is not a joke.

Our community has been fighting tooth and nail NOT to have the Kalama methanol plant placed in our area because of the many obvious dangers it proposes. There is no profit for our community in building it here. All the profit goes to China (who will own the plant) and a few lucky people will have a job. Of course those people will get their medical needs met in Vancouver or Portland and they will shop there too. We might get some of them to buy a home in Woodland but what is there to do in Woodland except for ...

Our area has no public interest locations. The museum in Kelso is tiny, kind of like a mom and pop setup. The County Fairground is dinky and little used. The community center inside the fairground, inside the city limits, is quite actually, the size of a cafeteria in a big city middle school. No wonder strategic big fossil fuel businesses are coming here. They have found a county of either total corruption or total rubes. Seriously. Who would put a gigantic bomb in front of a neighborhood built up a hillside next to it? Apparently the sociopathic builders of this dangerous plant that is of no use to our community. Shopping would be a better investment.

Eric de Place has written a very short concise description of this entire project at the sightline institute: <https://www.sightline.org/2015/08/17/what-methanol-means-for-the-northwest/> In his article he states that, "China is aiming to construct and operate three methanol refineries in Oregon and Washington in a move that would turn the Northwest into the nation's leading producer and exporter of methanol. The Chinese officials promoting the projects are working in partnership with senior US officials, including Washington Governor Jay Inslee.

A new company called Northwest Innovation Works—an offspring of the Chinese Academy of Sciences Holdings, which develops and markets new technologies—has hatched plans to develop three methanol production plants with storage facilities in the region. Many analysts predict that methanol use will increase dramatically in the coming years and industry backers argue that it presents an economic opportunity. Yet methanol is little understood by most of the public, and its production raises some risks and concerns."

The article is well worth reading. Short and to the topic. I have already sent a long letter describing the scientific dangers of this project but it seems to little avail. Here they are again trying to build it even though the people don't want it. So when do Americans get to build their own communities their own way? Or do the Chinese get precedence over our wishes?

Cynthia Baye

Kelso WA

On Tue, Nov 27, 2018 at 2:34 PM <wess@swcleanair.org> wrote:
Greetings,

You have previously provided comments on a permitting action for Northwest Innovation Works Kalama. Southwest Clean Air Agency is proposing to extend the deadline for start of construction as provided in the permit. Attached is a copy of the public notice for this activity.

More information can be found at <http://www.swcleanair.org/permits/othernotices.asp> web page.

For comments or questions direct those to wess@swcleanair.org

Southwest Clean Air Agency
Tina Hallock, Administrative Assistant
11815 NE 99th St, Ste 1294
Vancouver, WA 98682
Tel (360)574-3058 x 110

#3

Wess Safford

From: John Posey <posefish@kalama.com>
Sent: Tuesday, November 27, 2018 3:42 PM
To: Wess Safford
Subject: Methanol NO!

Hi,

I am a 17 year resident of Kalama and feel that this plant is being pushed down our throats by people who do not live in Kalama. We are going to pay for this with our property values, air quality and threat of disaster. I'm not a doom and gloom type of guy, but I really feel that this does nothing to benefit Kalama! How many pipefitters live in Kalama? Maybe 1 or 2. How many construction people live here? A few. How many chemists, engineers and other types for the plant live in Kalama? Probably very few, yet we will pay for this dearly.

I'm also not necessarily a "greenie", but when I see a biased article in the Daily News that says by building the plant here in Kalama, we will save the "WORLD" from pollution. What kind of crap is that anyway.

This is not for our town! Stop this plant now, so we can move on. I'm sure there are other factories that would love to come into town and serve as building blocks for our future. MW Innovations is NOT one of them. Thanks for your time.

Sincerely John Posey

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#4

Wess Safford

From: Mary Duvall <mudpuddle@hughes.net>
Sent: Tuesday, November 27, 2018 5:41 PM
To: Wess Safford
Subject: Other Notices Comments on: NuStar Main Permit Extension Start of Construction

I do not approve of the proposed extensions: permit 16-3204 and 17-3223. I do not approve of this monster methanol plant in our lower Columbia Air shed. We have horrible inversions more frequently each year. This plant is only going to add to the air pollution problem affecting both sides of the river AND it will increase river traffic AND it will be shipping methanol to China to produce more PLASTIC. Just what the world needs less of, not more. China continues to build and fuel coal fired plants; there is no guarantee that this plant will offset any of the coal plant pollution from mainland China: this natural gas fired plant will only increase fracking in the US and contribute to ongoing degradation of water sources and while stimulating well related earthquakes. The sequelae of this plant are unacceptable costs to the environment. You must reject extending the construction time line which only gives NIW more time to bully its way into creating this monster regardless of the objections of the state and the people.

Mary Duvall, MA, MSW
Clatskanie, Oregon 97016

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#5

Wess Safford

From: Patty Page <patty.page@gmail.com>
Sent: Tuesday, November 27, 2018 6:00 PM
To: Wess Safford
Subject: NW Innovation Works Permit Extension

Hello.

When I first joined the Clark County Clean Water Commission years ago, I was an environmentalist with spotty practical knowledge, at least in a business/industrial context. As such, it took me a while to wrap my head around the fact that an NPDES permit was, in fact, governmental *permission* to pollute. Eventually, of course, I came to understand that its intent was to put a lid on a particular source of pollution and, however unhappily, to agree that zero emissions are usually an unrealistic target for most human activities.

Even so, when I followed the link here, I experienced that same shock - the government giving *permission* to pollute the air. ②

My citizen-research has led me to the conclusion that this particular project promises to unleash unacceptable amounts of air pollution, along with an unacceptable drawdown of Kalama water resources plus all the risks attendant on transport of fossil fuels - with minimal benefit to the Kalama community as a whole. It's a bad deal to make, and every possible obstacle should be put in its way - including denial of this permit extension if there's any legal way to that end. I encourage all of you at the Southwest Clean Air Agency to find that legal way, and deny the extension.

Sincerely,
Patty Page
1209 NW Lakeview Road
Vancouver, WA 98665

#6

Wess Safford

From: Peter <ljandpm@gmail.com>
Sent: Wednesday, November 28, 2018 1:28 PM
To: Wess Safford
Subject: further considerations

The proposed ethanol and shipping facility would harm the world in the following ways:

More feedstock for more Chinese plastic to contaminate the world is harmful. More plastic from any source harms fish and ocean life, and also harms any organisms which use the sealife, including me.

Shipping ethanol is dangerous in itself. Leaking ethanol onto the land from pipelines harms life and pollutes the land and water. No risk with these enormous quantities of ethanol is acceptable risk.

This whole scheme carries the prospect of calamity and must not be allowed to move forward.

3

2

#1

Wess Safford

From: Richard W <reweiss38@gmail.com>
Sent: Wednesday, November 28, 2018 9:40 PM
To: Wess Safford
Subject: Kalama construction

Dear Wess,

I oppose strongly any construction for, or expansion of facilities that involve increased hydrocarbon transport in western Washington. The current, mindless drive to increase production of carbon fuels will only hasten the destruction of the environment when we most need to slow the degradation.

Richard Weiss

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#8

Wess Safford

From: Kevin Kane <aruncus2@msn.com>
Sent: Friday, December 28, 2018 4:26 PM
To: Wess Safford; Kevin Kane
Subject: Kalama Methanol Plant Draft EIS Comments

I have a strong background with much experience in NEPA and SEPA. I will appeal any decision based on this Assessment which has not fully disclosed all reasonably foreseeable consequences. The assessment should not be taken at face value, it needs a peer review by qualified scientists. It is written by and for the proponent, it is not neutral in it's analysis and should not be interpreted as factual. (5)

Here are my concerns and input:

- Start your analysis by stating all the environmental laws and policy that regulate this project. Discuss the failings and successes of these laws in limiting adverse environmental effects. Talk about the dangers of the methane production and past accidents worldwide. Tell the public how your plant is safe and unsafe.
- There is no analysis of escape methane at extraction, storage and distribution. These are all cumulative and must be discussed in terms of green house gases and association with climate change effects. You must analyze this if you are making claims about this being better for the climate.
- All reasonably foreseeable effects must be analyzed. There is no analysis for the indirect effects of the plastics that will result from this project. This needs analysis it is a great threat to our oceans and land ecosystems.
- All indirect effects must be analyzed. How will this methanol be used? What chemicals will be made and what are the effects of these chemicals on the environment?
- What risks does the project pose for the local ecosystem--- the ocean, the Columbia River and all species? Killer Whales and the salmon on which they rely needs analysis.
- Increased river and ocean traffic increases the risk of spills from shipping. This must be discussed in terms of present shipping traffic, increased vehicle traffic to and from the site, risk to pedestrians, boaters, fisherman. A ship on the river is not a natural event, discuss it and it's effects.
- Effects on both surface and water quality must be discussed for the entire proposal and all of it's activities.
- Air quality needs complete discussion. Including plumes, particulates, escape vapors, and their effects
- Climate change effects must be honestly analyzed. Any of your analysis must be statistical based science, not best guess. Confidence limits and intervals must be provided, otherwise you can not make the claims you do. You must state the limitations of your analysis, what is the precision of any measurements you cite and studies completed?
- I need acknowledgement that this has been received by the government agencies overseeing the project, the county and the proponent. Reply or it is an automatic appeal. This is way too important to have anyone interfere in a legal process such as an EIS.
- * All indigenous peoples have the right to free, prior and informed consent. That means documented in whatever way they agree to.
- * I have done appeals before and will do one if you do not follow the requirements of complete disclosure of all effects.

That is all for now, I would rather not have to appeal this, but I WILL APPEAL IF YOU DO NOT ADDRESS THE PUBLICS CONCERNS AND RAILROAD THIS PLANT THROUGH. I WANT A REPLY THAT THIS WAS RECEIVED BY THE AGENCIES WITH JURISDICTION, COUNTY, STATE, LOCAL, THE PROPONENT, GOVERNOR. ETC.

Thanks,
Kevin Kane
200 S Kent
Eat Wenatchee, Wa.
98802

#9

Wess Safford

From: Gail McDonough <mcdonoughwn@nwi.net>
Sent: Friday, December 28, 2018 5:04 PM
To: Wess Safford
Subject: Kalama methanol

I am writing to express my strong opposition to the Kalama methanol project. In addition to the environmental risks it poses to our state's lands, waters, and population, this is a disastrous detour from clean energy development into more carbon-emitting petrochemicals. This could prevent us from clean energy development that needs to happen to get our carbon output to the survivable level in the 10-14 year predicted window. We need and deserve to full EIS study before any decision is made, and time to respond to that study. ② ④

Respectfully,
Gail McDonough
1010 Yale Ave.
Wenatchee, WA 98801
509-664-2477

#10

Wess Safford

From: Jeanne Poirier <jeannepoirier@yahoo.com>
Sent: Friday, January 04, 2019 11:14 AM
To: Wess Safford
Subject: NWIW comment

Thank you for another opportunity to comment on this project, listed as permit 16-3204.

②

I do not know how an "Independent, Third-Party Analysis" could state this project results in reducing GHG emissions!

This project would create the world's largest gas to methanol facility in the world on our Columbia River. It takes our NW area in a direction we dare not go. At a time when the climate crisis is resounding action to stop carbon emissions, this is precisely the new fossil fuel infrastructure we cannot afford to build and survive. The analysis must rely on coal - which is already a disappearing economic option. Building new gas pipelines, using millions of gallons of water daily - most of which is lost in steam, creating incredible diesel particulate pollution and using our state retirement funds/pensions and other tax loopholes to build it on soil potentially susceptible to quakes is irresponsible if not insane! We need to move in the opposite direction! Put the new jobs and dollars into clean, renewable energy and infrastructure projects! Putting our northwest at risk for plastics &/or fuel is exactly what we need to stop. I've written Gov. Inslee, Ann Farr, Maia Bellon and your organization.

Thank you again for contacting me and allowing comment before Jan. 8th!!
Regards,
Jeanne Poirier

#11

Wess Safford

From: Chris Turner <caturner458@gmail.com>
Sent: Sunday, January 06, 2019 3:37 PM
To: Wess Safford
Subject: Renewal NWIW Adp 16-3204 Public comment
Attachments: Screenshot_2019-01-06-11-25-14.png

Wess..From Chris Turner 8 Cedar Gates Rd Longview Wa 98632 360 270 2914
Caturner458@gmail.com

As you know, the Original FEIS is under appeal to the Washington Shoreline Board. The Board has required NWIW to submit a Supplemental EIS regarding cradle to grave GHG emissions. NWIW has also added this extended scoping in the SDEIS. "The Supplemental EIS also identified any substantial changes to PROJECT DESIGN AND ENGINEERING since publication of the FEIS and will evaluate whether these changes would affect any analysis or conclusion set forth in the FEIS."

A quote from the SDEIS regarding the ULE process indicates that the methanol refinery may not be as smooth to bring on-line as the limited number of shutdowns, upsets, and maintenance suggest in the FEIS. The refinery emissions will increase dramatically when the actual number of upsets and shutdowns are honestly calculated. These figures need to be revised along with the changes in the refinery designs.

1. "ULE reforming is a proven technology commonly used for reforming other chemicals from natural gas and has been used at a SMALLER SCALE for the production of methanol" At this point, NWIW is still questioning the decision to use ULE technology in the World's Largest Methanol Refinery.

ULE IS NOT MITIGATION, it is an Alternative. Federal NEPA case law, "Alternatives and Mitigation analysis as TWO SEPARATE components, with mitigation analysis required in addition to discussion of alternatives." In the SDEIS, NWIW has often used Alternatives as mitigation, unavailable or useless mitigations to try and erase their refinery off the list as a Major Source of Pollution.

2. According to NWIW, the answer to upsets, lack of natural gas, ULE complications, lack of capacity in the 8-hour buffer tanks, and Zero Liquid Discharge issues, will be to shutdown the refinery. The NWIW wastewater system is in shambles. In the Original FEIS, attached, the number of shutdowns, upsets, and maintenance were woefully underestimated. These upsets, shutdowns, obviously, dramatically increase the emissions from this refinery. (6)

3. ZLD... Jim Moen PG/E Colusa Generating Station..."Under the best normal operating circumstances, these ZLD systems were a challenge to operate. ZLD system requires a very steep learning curve (Up to a year from system commissioning) to proficiently operate the system and that any changes in water quality of temperature could result in upset conditions. The system often takes up to a week to restart and stabilize the operation. ZLD should be a technology choice of last resort for wastewater disposal and that ZLD technology is 80 percent science and 20 percent magic." Redhawk, owner of a ZLD system, has a 28-acre foot brine concentration surge pond to deal with outages. The crystallizer, alone, requires cleaning every 2 to 3 weeks. The NWIW ZLD equipment has never been identified on the site plan, even though ZLD is a condition in the Shoreline permit. (7)

4. The offsite 9-acre holding pond (Slurry pond, evaporation lake etc.) for wastewater upsets, maintenance was removed from the NWIW engineering plans. The onsite Fire Pond is now being substituted for the same reasons, upsets, maintenance of the wastewater system, including the ZLD overflow. None of the permits address this discharge of wastewater to the Fire Pond in the Shoreline District, and how the Pond will be cleaned, maintained, or emptied to avoid discharge to the Columbia River, corrosion of the liner, or odors, for that matter etc. Neither the Shoreline Permit,

nor the DOE Water Quality Permit allow this discharge to surface waters. This Fire Pond has a combined outfall with Steelscape and the Port of Kalama Wastewater Treatment plant, then empties into the Columbia River. It is obvious to me, that NWIW is attempting to use the original Selective Treatment method from the FEIS, discharging wastewater to the River without obtaining the necessary permits, perimeters, or limitations.

5. The wastewater system through the use of the Bio-mass unit, will produce 13 tons a day of chemical laden sludge. NWIW has indicated that the sludge will be dried. But, they have removed the boiler/stack onsite that would be used for the purpose of drying the sludge or further drying the 10 tons a day of "brine concentrations" from the ZLD equipment. NWIW has never indicated how they would store this quantity of solid waste onsite. Now, they need to transport the wet sludge in a tanker truck to a local industry that has an industrial boiler to dry the sludge, will just increase this need for storage onsite until it can be transported. Also, NWIW will move some of its emissions to another, unidentified local industry that should have to account for these increased emissions and storage issues.

6. The SDEIS, falls extremely short of evaluating the GHG emissions from cradle to grave. NWIW has left out comparisons for the most obvious changes to their design/plans for the refinery. The KALAMA methanol, per NWIW, will now be used for transportation fuels, vessel fuels, and Olefins. The final effects of the GHG analysis on the refinery itself, is unknown at this time.

7. NWIW, after 6 years, still does not have a Soil Stabilization design/plan for the project site as well as the Shoreline Districts. The stabilization of 72 million gallons of flammable methanol, two production lines, and a pipeline to load vessels will require significant, extensive network of columns, improvements and underground designs to prevent lateral spreading. These often, toxic emissions from performing this at ground/underground concrete work etc have not been included in any of the existing permits. NWIW in the SDEIS has proposed to spread these construction emissions over a 40-year period, which indicates the significance of the 3-year construction timeframe emissions.

8. Modifying the FEIS to satisfy the Shoreline Board is becoming less and less attainable, due to the fact that NWIW is not answering even the most basic questions about the refinery.

The Kalama methanol refinery, should be considered a refinery in the true sense of the word. It will refine natural gas into transportation fuels. This refinery will be a Major Source of Pollution in Washington State and should be permitted as the Major Source of Pollution that it is. SWCAA needs to be able to modify this Air Discharge Permit, once all the appeals are exhausted, to reflect changes that will be made to the FEIS. Consideration needs to be given to the possibility that NWIW will revert to the CR technology, even though ULE is required in the existing permits. Limits, like on Benzene, need to be re-evaluated to reflect the current knowledge about this toxin. Due to the changes in infrastructure, and the number of upsets, shutdowns, maintenance etc. figures need to be revised and the associative emissions need to be evaluated.

In my opinion, SWCAA should either not renew this permit, or stop/pause this permit until all the appeal/proceedings are concluded. It is virtually impossible to see all the changes to the FEIS at this point, and since all permits are supposed to be based on the FEIS, it doesn't seem productive to renew a permit that no longer reflects the original design or intention of the refinery.

#12

Wess Safford

From: dickdl50@gmail.com
Sent: Sunday, January 06, 2019 9:29 PM
To: Wess Safford
Cc: Maia Bellon
Subject: NWIW Kalama methanol refinery comment deny air discharge permit extension
Attachments: 2019 01 07 SWCAA NWIWK.pdf; 1245343343 Coogee EIP 2003.pdf

January 7, 2019

Wess Safford
Southwest Clean Air Agency
11815 NE 99 Street, Suite 1294
Vancouver, Washington 98682-2322
Delivered by email wess@swcleanair.org

Re: Extension of Air Discharge Permit 16-3204 Northwest Innovation Works Kalama

Dear Mr. Safford,

Thank you for extending the comment period for extension of the ADP for NWIWK.

Please deny extension of ADP 16-3204 Northwest Innovation Works Kalama. Southwest Clean Air Agency (SWCAA) does not have the primary jurisdiction to review a project of this size and experimental nature. The refinery specifications provided to you are unrealistic for determining air emissions.

- 1) NWIW proposes a petrochemical refinery consuming up to 320 million cubic feet per day petroleum gas to refine into 10,000 tonnes per day methanol for export. Under RCW 80.50.20 NWIW Kalama meets the definition of an "energy plant," bringing siting and permitting jurisdiction under the Energy Facility Site Evaluation Council (EFSEC). EFSEC should be the permitting agency, not SWCAA. (12)
- 2) NWIW Kalama has potential to emit significant emissions impacting air quality. Department of Ecology should review the project for Prevention of Significant Deterioration Permit.

The FERC Kalama Lateral Environmental Assessment July 2015 Docket No. CP15-8-000 stated, "*Similar to the WEP, an environmental review of the Methanol Plant is underway; however, only qualitative information on possible impacts is available as of the time we prepared this cumulative impacts analysis. Based on our review of proposed facilities, we can conclude that within the region of influence for the Project:.... Preliminary air emission levels indicate the need for a Prevention of Significant Deterioration Permit.*" P. 79

The FEIS and ADP argue against the need for PSD review by stating the projected emissions would fall below certain regulatory limits. However those projections were based solely on the refinery using an alternative process, the ULE process. Even so, the ADP indicates emissions from VOCs, NOx, CO and PM will approach 75% of the 100 ton annual limit for which a PSD is required. (19)

If the original Combined Reforming (CR) methanol refinery process was used the project would clearly require a PSD permit.

"The initial air quality permitting review considered the Combined Reforming (CR) and Ultra-Low Emissions (ULE) configurations of the proposed methanol manufacturing facility. Based on emissions calculations, the CR Alternative configuration of the facility would be a major source that would need to be considered under federal PSD regulations, while the ULE Alternative configuration would be a minor source not subject to federal PSD regulations." FEIS p 4-5

Table 4-3 of the FEIS shows the CR process would produce over 500 tons per year of CO, over 100 tons of PM, over 80 tons each of NOx and VOC.

- 3) Are the emissions for the process boilers, process heaters, and flare provided in the ADP realistic? The makes/models for all this equipment in the air permit is "TBD." 13

The ULE process is not a conventional methanol process with conventional equipment and has only been used in one small facility that has since been closed, the Coogee Methanol Plant, Laverton North, Victoria, Australia, operated by Coogee Energy Pty Ltd.

<https://insider.thewest.com.au/august-2017/power-played/>

The best information on the Laverton Coogee methanol process and emissions can be found in *Coogee Energy Pty Ltd Methanol Plant Environment Improvement Plan*, December 2003. Attached.

http://s3.amazonaws.com/zanran_storage/www.coogee.com.au/ContentPages/1245343343.pdf

This was the plant's third improvement plan (EIP). They had problems. They admitted it was an experimental process that needed improvement.

"The Coogee Methanol Plant is Australia's only methanol production facility, and is currently capable of producing between 70,000 to 80,000 tonnes per annum of chemical grade methanol. The plant operates 24 hours a day, 7 days a week, all year round." EIP p. 10 The Coogee methanol plant had capacity to produce in one year what NWIW Kalama plans to produce in 8 days. In other words, the NWIW production capacity is proposed to be about 45 times greater than the prototype on which it is designed.

In 2003 the Coogee plant had been operating almost ten years. Their aim was to produce methanol with greater efficiency and less CO₂e emissions. The EIP states in 2002 **that 0.781 Tonnes CO₂e were produced per tonne of methanol**, EIP p. 21. If this emission rate were applied to NWIW Kalama production of 3.6 million tons methanol per year, then NWIW would be emitting 2,811,600 tons of CO₂e annually at the refinery site alone, over twice the estimate projected in the ADP.

So what about other emissions? Fortunately we have yearly emissions data provided by the Australian Department of Environment and Energy. Below are early and recent years of emission data from the Laverton Methanol Plant.



Individual report emissions

Home > Home > NPI Data > Emission Data > Emission Data > 2015-2016 > Company > COOGE ENERGY PTY LTD > Coogee Methanol Plant

- Summary**
- Emissions**
- Transfers
- Download
- Map

2015/2016 report for COOGE ENERGY PTY LTD, Coogee Methanol Plant - Laverton North, VIC

A list of substances for an individual report.

Substance	Air Total (kg) ^[1]	Air Fugitive (kg) ^[2]	Air Point (kg) ^[1]
Arsenic & compounds	0.0088		0.0088
Beryllium & compounds	0.000090		0.000090
Cadmium & compounds	0.048		0.048
Carbon monoxide	12.000		12.000
Chromium (III) compounds	0.058		0.058
Chromium (VI) compounds	0.00018		0.00018
Copper & compounds	0.037		0.037
Lead & compounds	0.022		0.022
Mercury & compounds	0.011		0.011
Methanol	2,400	2,300	91
Nickel & compounds	0.092		0.092
Oxides of Nitrogen	6,500		6,500
Particulate Matter 10.0 um	550		550
Particulate Matter 2.5 um	550		550
Polychlorinated biphenyls (PCB)	0.0000020		0.0000020
Polycyclic aromatic hydrocarbons (B[a]Peq)	0.79		0.79
Sulfur dioxide	210		210
Total Volatile Organic Compounds	6,400	2,300	4,100

[1] All emissions/transfer quantities are displayed to two significant figures. Displayed emission totals may not exactly equal the sum of their individual emissions.
 [2] Air Total = Air Point + Air Fugitive

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Taskbar area containing search bar, microphone, and application icons (File Explorer, Task View, Chrome, Word, Calculator, Outlook).



Summary Emissions Transfers Download Flag

2013/2014 report for COOGL ENERGY PTY LTD, Coogee Methanol Plant - Laverton North, VIC

A list of Substances for an individual report

Substance	Air Total (kg) ^[1,2]	Air Fugitive (kg) ^[1]	Air Point (kg) ^[1]
Arsenic & compounds ^[1]	0.011		0.011
Beryllium & compounds ^[1]	0.00010		0.00010
Cadmium & compounds ^[1]	0.060		0.060
Carbon monoxide ^[1]	25,000		25,000
Chromium (III) compounds ^[1]	0.071		0.071
Chromium (VI) compounds ^[1]	0.00024		0.00024
Copper & compounds ^[1]	0.046		0.046
Lead & compounds ^[1]	0.027		0.027
Mercury & compounds ^[1]	0.014		0.014
Methanol ^[1]	3,200	3,100	140
Nickel & compounds ^[1]	0.11		0.11
Oxides of Nitrogen ^[1]	11,000		11,000
Particulate Matter 10.0 um ^[2]	910		910
Particulate Matter 2.5 um ^[2]	910		910
Polychlorinated dioxins and furans (TEQ) ^[1]	0.00000025		0.00000025
Polycyclic aromatic hydrocarbons (B[a]Peq) ^[1]	1.8		1.8
Sulfur dioxide ^[1]	260		260
Total Volatile Organic Compounds ^[1]	12,000	3,100	9,000

[1] All emission/transfer quantities are displayed to two significant figures. Displayed emission totals may not exactly equal the sum of their individual emissions.

[2] Air Total = Air Point + Air Fugitive



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2003/2004 report for COOGEE ENERGY P/L, COOGEE ENERGY P/L - Laverton North, VIC

A list of Substances for an individual report

Substance	Air Total (kg) ⁽¹⁾	Air Fugitive (kg) ⁽²⁾	Air Point (kg) ⁽¹⁾
Arsenic & compounds	0.0090		0.0090
Beryllium & compounds	0.00053		0.00053
Cadmium & compounds	0.051		0.051
Carbon monoxide	10,500		10,500
Chromium (III) compounds	0.040		0.040
Chromium (VI) compounds	0.017		0.017
Copper & compounds	0.039		0.039
Lead & compounds	0.022		0.022
Mercury & compounds	0.012		0.012
Methanol	2,200		2,200
Nickel & compounds	0.096		0.096
Oxides of Nitrogen	7,400		7,400
Particulate Matter 10.0 um	940		940
Polycyclic aromatic hydrocarbons (PAHs)	0.76		0.76
Sulfur dioxide	240		240
Total Volatile Organic Compounds	5,900		5,900

(1) All emissions/transfer quantities are displayed to two significant figures. Displayed emission totals may not exactly equal the sum of their individual emissions.

(2) Air Total = Air Point + Air Fugitive

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In the latest data for Coogee the plant emitted 12 tons of CO, 6.4 tons of VOC, 6.6 tons of NOx. Multiply these numbers by NWIW’s 45 times greater output and the likelihood exists that NWIW will far exceed the 100 ton limits for these regulated pollutants, which upon exceeding a PSD permit becomes mandatory.

Northwest Innovation Works-Kalama will be a major emitter of air pollutants. It should have had its permits reviewed by EFSEC. While that opportunity may have been lost, it is not too late for Department of Ecology to conduct a proper review of air pollution emissions and permitting of the world’s largest methanol refinery. The magnitude of refining capacity, potential to pollute, and experimental unknowns require a more robust review than that provided for an air discharge permit. NWIWK requires a Potential for Significant Deterioration Permit.

Thank you,

Diane L. Dick
13 St. Helens Lane
Longview, WA 98632
DICKDL50@gmail.com

#13

Wess Safford

From: dldick@cni.net
Sent: Monday, January 07, 2019 1:52 PM
To: Wess Safford
Cc: Maia Bellon
Subject: ADDENDUM NWIW Kalama methanol refinery comment deny air discharge permit extension

Wess Safford
Southwest Clean Air Agency

Re: Extension of Air Discharge Permit 16-3204 Northwest Innovation Works Kalama- ADDENDUM

Mr Safford,

I have called into question the emissions data in the current ADP as unrealistic and unreliable, and therefore justification to deny extension of the current permit. (13)

Please add the following information regarding emissions from conventional and new methanol production facilities.

“Ten or more years ago, a typical methanol manufacturing plant would emit about 0.9 - 1.0 metric tonnes of carbon dioxide for every tonne of methanol produced. In addition to the environmental concerns, large CO₂ emissions represent operational inefficiencies in a methanol plant, since the carbon emitted as CO₂ is not available for making methanol molecules. For these reasons, methanol plants began and continue to focus on efficiency improvements that reduce CO₂ emissions.

Through the implementation of efficiency improvements, and through replacing of older facilities with newer plants that use more efficient technologies, over the last decade methanol plants have been able to significantly reduce CO₂ emissions by up to 40%; some facilities report emissions as low as 0.54 tonnes of CO₂ / tonne of methanol produced.”

<http://methanolfuels.wpengine.com/wp-content/uploads/2013/05/Improving-Methanol-Production-Efficiency.pdf>

Given that even the most efficient technologies have not been able to reduce CO₂ emissions below a half a tonne CO₂ per tonne of methanol produced, there is no basis to believe that NWIWK will be able to achieve emissions from 3.6 million tonnes annual production of methanol to as low as 1 million tonnes CO₂e. As noted the Coogee prototype apparently was only able to achieve emissions at about 0.70 tonnes per tonne methanol.

With such large discrepancies in data between what is claimed and what is reasonable, emissions data from other pollutants is likely and similarly faulty.

Thank you,

Diane L. Dick
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#14

Wess Safford

From: Cynthia Svensson <cynthia.svensson@gmail.com>
Sent: Tuesday, January 08, 2019 12:27 PM
To: Wess Safford
Cc: Uri@awcleanair.org; Tina Hallock
Subject: NW Innovation Works Kalama Permit Extension Comment

Dear Mr. Stafford;

In checking my records, I see that I commented to SWCAA on January 4, 2017. All of my comments about Diesel Particulate Matter in the Kalama area still stand. It is a major air quality issue, in addition to the Greenhouse Gasses that will be put in to the air all across the State of Washington, from the Canadian border to the Columbia River.

The Draft Supplemental Environmental Impact Statement on this proposed project relies upon the idea that fewer GHGs will be produced in China if we allow massive amounts (and they are massive on top of which the DSEIS vastly underestimates them) here, in Washington. Supposedly, the net result will be fewer GHGs for the Planet as a whole. The flaw is that there is no way to guarantee or insure that China will cut back on GHG production. The verifiable result is that the State of Washington will have hugely increased amounts of GHGs in the air and China will have huge quantities of Methanol to be used as an olefin feedstock or to be burned as fuel, again, the U.S.A. has no control over what they do with it. Either way, more pollution will be produced and it will be blowing toward the U.S.A. (B)

Throw in the fact that the project will use new technology that has never been used on this scale. It will be built on fewer than 90 acres wedged in between the Columbia River and the I-5 Freeway, plus a very high traffic rail line: all this directly across the river from the decommissioned Trojan Nuclear Plant. Think Mosier rail car explosion, just for a start. The risk to our SW Washington air quality is almost beyond imagining. That same statement could be made for the entire Pacific Northwest. (2)

I know your responsibility is for SW Washington and it is tempting to let the State of Washington take on this decision, but I do believe you have enough air quality information to simply deny this permit extension and end this dangerous flirtation with World Class fossil fuel exportation. The new plant would require another gas pipeline to bring in what it truly needs and that would provide fuel for more GHG producing projects to clamor for space in the PNW, not to mention all the GHGs leaking from a second pipeline. Those GHGs should be considered, as well. (4)

Please, I ask you to use all your power to protect the citizens and environment of our Southwest Washington home.

Thank you,

Cynthia Tatomer Svensson
M.S. Chemical Oceanography, University of Washington
Kalama resident

Cynthia Svensson