Notice of Construction – Order of Approval Technical Worksheet

NOC No. **1430**	Source: Williams - Northwest Pipeline, LLC Sumas Compressor Station 4738 Jones Road Sumas, Washington 98295 NOC Contact: Kirsten Derr, Environmental Specialist NWCAA No.: 1434
Permit Engineer: **Christos Christoforou**	
NOC Received: **12 May 2025**	

A. Project Description

Northwest Pipeline Sumas Compressor Station (NWP) proposes to install a new Solar Mars 100-16000S turbine (144 MMBtu/hour) at their facility. The new turbine will replace an existing Solar Mars 90 turbine (Unit 9).

In addition, NWP will replace a previously permitted Waukesha generator with a similar sized Cummins emergency generator. Installing the Cummins emergency generator is categorically exempt from NSR under NWCAA 300.3 (I), provided it operates less than 500 hours per year for non-emergency purposes (e.g. testing and maintenance). Federal NSPS and NESHAP regulations apply to such a unit that require maintenance and record keeping (see section M). Therefore, it is not discussed/reviewed further here.

On April 24, 2026, the applicant sent an email with further information regarding the project. According to the email, the housing for the existing turbine (Unit 9) is sized to accommodate the Mars 100 turbine core, so it will be retained. The Mars 100 turbine core is where the fuel is burned to produce the power to drive the compressor. The compressor will also be replaced per 6/9/26 facility inspection. This additional information does not affect the emission calculations presented in the original application nor those listed below.

B. New Source Review (NSR) Fees

NWCAA NSR fees have been assessed in accordance with the NWCAA fee schedule. The NSR fees assessed, and amount paid are listed in the NSR Fee Worksheet kept in the electronic folder for this project. The filing fee was submitted with the application, and the facility paid invoice 15882 ($16,125, the remainder) on 7/11/2025.

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New Source Review Fees

(Internal Billing Form)
Effective January 1, 2025

New Source Review Fee Schedule

Facility Name: NW Pipeline Sumas Compressor
OAC No.: 1430
Billing Address:
NWCAA Reg. No.: 1434
City State: Zip Code:
Date Received: May 9, 2025

QTY	Fee Description	Amount	Total
	New Source Review Fees		
1	NSR Filing Fee ($1,479)	1479.	$1,479.00
	Equipment		
1	Fuel burning (as an aggregate): >/= 100MM btu/hr,but <250MM Btu/hr ($12,573)	12573.	$12,573.00
	Additional NSR fees		
2	Each stationary source subject to NSPS, per subpart, excluding 40 CFR 60 subpart Dc (exclu	1184.	$2,368.00
1	Source test required in OAC ($1,184)	1184.	$1,184.00

If publications fees are incurred they will be billed separately

Assigned Engineer:

Instructions for Engineer:
Make edits, save and EMAIL or LINK to Accounting for invoicing, even if paid in full. *Do not print form.*

Invoice Number 15882
Date Jun 23, 2025

TOTAL NSR FEE: $17,604.00

Date	May 9, 2025	***Pre-payment***	$1,479.00
Date		***Payment***	
Date		***Payment***	
Date		***Payment***	

Balance Due $16,125.00

Comments:

C. Public Notice

In accordance with NWCAA Section 305.1, an internet notice that the NWCAA received this NOC application and/or OAC revision request was posted on the NWCAA website for a minimum of 15 consecutive days ending on 27 May 2025.

Formal public involvement and notification (i.e., comment period and/or hearing) is required for this project because it has been requested by an individual during the period that the NOC was posted on the NWCAA website.

_____ LEFT OPEN FOR INFORMATION FROM PUBLIC COMMENT PERIOD

D. SEPA Review

The project at the Sumas compressor station is part of the larger Huntingdon Connector project and hence reviewable as part of the SEPA for the larger project. The SEPA review for the Huntingdon Connector Project is being led by the Washington Department of Ecology, and **Ecology will host the public comment period for SEPA.**

Puget Sound Clean Air Agency (PSCAA) received an air permit application for a nearly identical turbine replacement project at the Snohomish compressor station. Both the PSCAA permit and this NWCAA permit (OAC 1430) are included in Ecology's SEPA review.

While the Washington Department of Ecology is taking lead for the SEPA review, PSCAA and NWCAA are co-leads.

In accordance with applicable regulations, OAC 1430 cannot be issued until AFTER the SEPA determination is issued. However, work on the draft OAC 1430, including public comment, can be held while SEPA review and public comment is ongoing.

E. Permit History

This Solar Mars 100-16000S turbine will replace the existing Mars 90 turbine (Unit 9). Unit 9 was originally permitted under OAC 793, issued on 10/18/2002. The current version of the permit is OAC 793e, issued on 10/18/2024. Upon issuance of OAC 1430, OAC 793e will need to be modified to remove provisions for the Mars 90 turbine. As the Solar Mars 100-16000S turbine will use the housing of the existing Mars 90, the installation of the Solar Mars 100-16000S turbine makes the existing Mars 90 inoperable.

F. Basis for New Source Review Applicability

The following analysis is provided as a basis for reviewing the proposed 144 MMBtu/hr Solar Mars 100-16000S unit under Section 300 of the NWCAA Regulation. For new emission units the potential to emit is based on operating at 100% capacity and uncontrolled for 8,760 hours per year.

The application showed facility-wide emissions of pollutants (including emissions from other emissions units present at the facility). The values shown in Table 1 represent PTE of controlled emissions from the Mars 100 unit and include turbine start and stop (TSS) emissions[1].

All criteria emission factors come from Solar data presented in the application (page 47 of 217) except for SO_2, which comes from AP-42 Table 3.1-2a (April 2000). The unit is assumed to be operating at typical operating rates (80% or greater) with a historical number of start/stops. Emissions during startup and shutdown are typically higher than steady state operation (though for a shorter period), so this provides a conservative estimate of emissions. Values are based on historical start/stop operations.

Table 2 shows TAP emissions for the proposed turbine. The emission factors come from AP-42, Table 3.1-3 (April 2000), except that for formaldehyde, NOx, and CO, which come from vendor data.

[1] NSR applicability is based on uncontrolled emissions, but since all criteria pollutants, except SO_2, are subject to permitting based on post-control emissions, uncontrolled emissions are clearly above permitting thresholds and NSR is needed.

The rightmost columns on Tables 1 and 2 indicate the pollutants for which the proposed unit is subject to NSR, according to NWCAA 300.4(D).

Table 1 Emissions Analysis for NSR – Criteria Pollutants

Pollutant	Emission Factor (lb/MMBtu)	Emissions (lb/hour)	Emissions (ton/yr)	NWCAA 300.4 de minimis threshold (ton/yr)	NSR?
TSP	**6.6 E-03**	**0.95**	**4.18**	**1.25**	**YES**
PM_{10}	**6.6 E-03**	**0.95**	**4.18**	**0.75**	**YES**
$PM_{2.5}$	**6.6 E-03**	**0.95**	**4.18**	**0.5**	**YES**
SO_2	5.5 E-04	0.44	1.9	2.0	No
NOx	**@ 9 ppm**	**4.67**	**20.56**	**2.0**	**YES**
VOC	**6.25 E-03**	**0.90**	**4.32**	**2.0**	**YES**
CO	**@ 25 ppm**	**7.89**	**37.00**	**5.0**	**YES**

Table 2 Emissions Analysis for NSR - Toxic Air Pollutants

Pollutant	Emission Factor (lb/MMBtu)	PTE (lb/yr)	Avg period	SQER (lb/avg period)	NSR?
Acetaldehyde	4.0 E-05	50.5	year	60	No
Acrolein	6.4 E-06	8.1	day	0.03	No
Benzene	1.2 E-05	15.1	year	21	No
Butadiene, 1,3-	4.3 E-07	0.54	year	5.4	No
Ethylbenzene	3.2 E-05	40.4	year	65	No
Formaldehyde	**2.3E-04**	**290**	**year**	**27**	**YES**
Nitrogen dioxide	**@9 ppm**	**40910**	**hour**	**0.87**	**YES**
Toluene	1.3 E-04	164	day	370	No
Xylenes	6.4 E-05	80.7	day	16	No

The Solar Mars 100-16000S unit is subject to NSR for TSP/PM10/PM2.5, NOx, VOC, CO, formaldehyde, and NO_2.

G. Criteria Air Pollutant Emissions and Impacts

Criteria pollutant emissions from the proposed project may not exceed, or cause to exceed, any ambient air quality standard for criteria air pollutants such as the National Ambient Air Quality Standards (NAAQS). At this step, NWCAA evaluates the effect of federally enforceable controls and limits, best available control technology (BACT) limits, and proposed or as-permitted restrictions on the operation or use of the emission unit on the uncontrolled criteria pollutant emissions subject to NSR. NWCAA then compares the projected controlled criteria pollutant emissions against the NWCAA minor NSR modeling thresholds. Based on engineering judgement, NWCAA has set the modeling thresholds are at 50% of the Prevention of Significant Deterioration (PSD) Significant Emission Rate (SER) found in 40 CFR 52.21(b)(23). This decision was made to be protective of the NAAQS. If any projected controlled criteria pollutant emissions exceed the minor NSR modeling thresholds, air dispersion modeling must be conducted to further evaluate ambient impacts.

Table 3 includes emission data from Table 2 and shows that emissions are below NWCAA's minor-NSR modeling thresholds. Therefore, modeling to show compliance with NAAQS is not required.

Table 3 Criteria Air Pollutant Emissions – Controlled as Permitted

Pollutant	Emission Factor (lb/MMBtu)	Emissions (lb/hour)	Emissions (ton/yr)	PSD SER [a] (ton/yr)	Minor NSR Modeling Thresholds [b] (ton/yr)
PM_{10}	6.6 E-03	0.95	4.18	15	7.5
$PM_{2.5}$	6.6 E-03	0.95	4.18	10[c]	5
NOx	@ 9 ppm	4.67	20.56	40	40
CO	@ 25 ppm	7.89	37.00	100	100
VOC	6.25 E-03	0.90	4.32	40	No ambient std

[a] Prevention of Significant Deterioration (PSD) Significant Emission Rates for major sources in attainment or unclassified areas (40 CFR 52.21(b)(23)).
[b] Ambient impacts of a criteria pollutant are modeled under minor NSR if they exceed the minor NSR modeling threshold. In addition, NWCAA may require modeling when a pollutant is below this threshold if there are reasonable concerns regarding ambient impacts (e.g., horizontal or downward ventilating stacks, close property boundary, projects that include non-emergency internal combustion engines, stacks less than six feet above roofline, sensitive or high population density nearby).
[c] The SER for $PM_{10/2.5}$ is based on the combined filterable and condensable portions.

While not required (as discussed above), NWP chose to conduct modeling to show that criteria pollutant emissions from the turbine do not cause an exceedance to NAAQS. AERMOD (version 24142) was used in the modeling analyses. Default AERMOD control options were used. A detailed description of the methodology is included in Section 6 of the application.

NWP modeled, and NWCAA reviewed, the Mars 100 emissions without subtracting the emissions from the Mars 90 turbine, which will be removed from the site. This is a conservative assumption. All criteria pollutants were modeled except sulfur dioxide, which is not subject to NSR.

In its application, NWP compared the maximum modeled concentrations from the Mars 100 turbine to significant impact levels (SILs). SILs aren't normally used in NWCAA's minor-NSR permitting program. SILs are numerical thresholds that are used in Prevention of Significant Deterioration (PSD) permitting reviews. In PSD permitting reviews, if modeled air emissions from a given project are below a SIL, no further modeling is needed for that pollutant. If they are above, an additional modeling step needs to be taken to show NAAQS compliance.

While it's not normally required by NWCAA, since NWP included this analysis in its application, we are including the results in Table 4 and 5 below. The conclusions reached further support NAAQS compliance for this project.

Table 4 SIL model results

Pollutant	Averaging period	Maximum AERMOD concentration ($\mu g/m^3$)	SIL ($\mu g/m^3$)	% of criteria
NO_2	1-hr	20.61	7.5	275
	annual	0.34	1.0	34
PM_{10}	24-hr	1.63	5.0	33
$PM_{2.5}$	24-hr	1.03	1.2	86
	annual	0.06	0.13	45
CO	1-hr	155.04	2000	8
	8-hr	98.48	500	20

As note in Table 4, the SIL was exceeded only for 1-hour NO_2. NWP conducted further modeling to show compliance with the 1-hour NO_2 NAAQS. The modeled results are compared to the NAAQS in Table 5. As show, the total concentration for NO_2 is less than the corresponding NAAQS. Therefore, compliance has been demonstrated.

Table 5 NAAQS model results

Pollutant	Averaging period	Rank of model impacts	Maximum AERMOD predicted concentration(µg/m^3)	Ambient background concentration (µg/m^3)	Total concentration (µg/m^3)	NAAQS (µg/m^3)
NO_2	1-hr	98th	15.18	95.88	111.06	188

H. Toxic Air Pollutant Emissions and Impacts

Air dispersion modeling for any TAPs that exceed their SQERs, defined in WAC 173-460-150, is required to ensure that the respective Acceptable Source Impact Level (ASIL) are not exceeded. The NWP SQER evaluation conservatively used the full emission rates resulting from the Solar Mars 100-16000S turbine without factoring in the emissions reductions from removing the existing Mars 90.

Table 6 summarizes the results of the analysis presented in the application. NWCAA reviewed the analysis and agrees with the conclusions reached.

Two TAPs were estimated to be emitted over the Small Quantity Emission Rate (SQER) of WAC 173-460. Estimated emissions of NO_2 and formaldehyde were modeled by the applicant using AERMOD to evaluate ambient impacts.

Table 6 Toxic Air Pollutant Emissions and Ambient Impacts

Toxic Air Pollutant	Averaging period	Emissions (lb/averaging period)	SQER (lb/averaging period)	ASIL (µg/m^3)	Modeled ambient impact (µg/m^3)	Percent of impact to ASIL
NO_2	1-hour	4.66	0.87	4.7 E+02	5.91E+00	1.3
Formaldehyde	Year	261	27	1.7 E-01	1.85E-03	1.1

Modeling demonstrates that the maximum impacts of NO_2 and formaldehyde are below their respective ASILs.

I. Prevention of Significant Deterioration (PSD) Program

Emission increases associated with this project were reviewed for Prevention of Significant Deterioration (PSD) Program applicability. The facility is an existing PSD major source and operates under two PSD permits from Washington State's Department of Ecology.

This project is BELOW the PSD significance thresholds (including 75,000 tpy CO_2e). See Table 3 for project emissions and thresholds. PSD does not apply.

J. Air Operating Permit (AOP) Program

The facility is an existing Title V source and conditions of this OAC will be incorporated into the AOP during the next AOP opening.

K. NWCAA Compliance Database (Stratus)

The NWCAA Stratus database has not been updated (as of 5/4/2026) to include the emission unit approved by this OAC.

L. Confidential Business Information (CBI)

The NOC application does not contain any information deemed by the applicant to be CBI.

M. Applicable/Inapplicable Regulations

Relevant sections of NWCAA, state and federal regulations as they relate to the approved emission units listed in the OAC:

1. Northwest Clean Air Agency

As related to emissions from the new turbine compressor, the most relevant sections of NWCAA regulations are:

- Section 367 & Appendix A – General requirements for monitoring and testing
- Section 451.1 – General limitation on visual emissions
- Section 455.11 – General limitation on particulate matter emissions (0.05 gr/dscf @ 7% oxygen)
- Section 462.1 – General limitation on sulfur emissions (1,000 ppmvd @ 7% oxygen)
- Section 520.14 – General limitation on sulfur in fuel (50 grains per 100 scf)
- Section 530.1 – General limitation on creating a nuisance

2. State

WAC 173-400 contains requirements similar to those listed above. WAC 173-460 contains requirements for new sources of Toxic Air Pollutants.

3. Federal

<u>40 CFR 60 Subpart GG – Standards of Performance for Stationary Combustion Turbines</u>

According to 40 CFR 60.4305a(b) the Solar Mars 100-16000S turbine is exempt from the requirements of GG and is instead subject to the requirements of 40 CFR 60 Subpart KKKKa (see below).

<u>40 CFR 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines</u>

According to 40 CFR 60.4305a(b) the Solar Mars 100-16000S turbine is exempt from the requirements of KKKK and is instead subject to the requirements of 40 CFR 60 Subpart KKKKa (see below).

<u>40 CFR 60 Subpart KKKKa – Standards of Performance for Stationary Combustion Turbines</u>

According to 60.4305a, Subpart KKKKa applies to the unit, since construction will be after December 13, 2024 and has a base load rating greater than 10 MMBtu/hr.

The applicable requirements of the subpart include:

- NO_X limited to 15 ppm @ 15% oxygen (note that the limit in this OAC is more stringent, so it will govern);
- Sulfur emissions are limited to 0.060 lb SO_2/MMBtu. Fuel sulfur content must be monitored and is used to demonstrate compliance with the sulfur emissions limitation;
- Emissions must be monitored either with CEMS or by performing annual source testing;
- Recordkeeping and monitoring requirements.

40 CFR Part 60 Subpart OOOOb – Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced after December 6, 2022

Subpart OOOOb includes requirements for new, modified, or reconstructed centrifugal compressors with wet or dry seals. The centrifugal compressor associated with the combustion turbine will be equipped with dry gas seals and is therefore applicable.

The collection of fugitive equipment components at the Sumas Compressor Station will make the compressor station is also an affected source under NSPS Subpart OOOOb. Requirements include:

- leak survey and repair requirements outlined in the regulation for the Compressor
- Subpart OOOOb applies standards to super-emitter events, which have the potential to occur at the Sumas Compressor Station. In accordance with the standards in 60.5371b, the Sumas Compressor Station will comply with the follow-up actions should a super-emitter event occur or be suspected to occur.

40 CFR Part 63 Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

Subpart YYYY only applies at major sources of HAPs. While the facility used to be HAP major, but they became HAP minor following the removal of the 6 RICE compressors (NOC 1402a). The facility is currently a HAP area source, therefore YYYY does not apply.

N. Best Available Control Technology (BACT) Technology Review

BACT and t-BACT apply to those pollutants emitted from the emissions unit under review, as proposed by the applicant,[2] that trigger NSR. In this case, those criteria pollutants are TSP, PM_{10}, $PM_{2.5}$, NO_X, CO and VOC. TAPs that are reviewed for t-BACT are formaldehyde and NO_2.

[2] NWCAA follows EPA policy regarding what is under BACT review. Following this policy, NWCAA does not redefine what equipment the applicant proposed (e.g., require an electric turbine when a gas driven unit was proposed). See https://www.epa.gov/sites/default/files/201501/documents/bact_source_definition_questions.pdf for a discussion of EPA policy. This issue was also reviewed and precedent set for WA local air agencies like NWCAA by the WA Pollution Control Hearings Board, (PCHB) case No. 19-087c. Paragraph 165, pg. 85, "BACT and an agency's Permit application review does not authorize or require PSCAA to redesign the project".

1. This Project is Similar other NWCAA approved projects

1. NWP – Sumas Compressor Station, OAC 1402 (issued on October 5, 2023 and modified on November 25, 2024). The OAC was issued for a Solar Mars 100-16000S turbine compressor equipped with SoLoNOx technology. Limits include 9 ppmvd NOx at 15% O2, 25.0 ppmvd CO at 15% O2, 0% opacity, annual stack testing according to Methods 9, 10, and 20 of Appendix A to 40 CFR 60, testing for NOx and CO every 4380 hours of operation using a handheld analyzer according to EPA CTM 34, and boroscope analysis according to the manufacturer's recommendations.

   Note that this unit is the same as the unit being permitted here.

2. PSE – Sumas – One GE 7EA combined cycle, natural gas fired combustion turbine with a heat input rate of 1138 MMBtu/hr (OAC 304; issued on June 25, 1991). Limits: NO_X - 6 ppmvd @ 15% oxygen; CO - 6 ppmvd @ 15% oxygen; VE 5% for 6-minutes in any hour. Controlled with steam injection and selective catalytic reduction. Annual source testing required for CO and ammonia and CEMS for Oxygen and NO_X (Part 75).

3. Northwest Pipeline – Sumas – Replacement of two turbines and addition of one turbine. All new turbines are Mars 90S units with heat input rates of about 100 MMBtu/hr (OAC 793; issued on October 18, 2002). Limits: NO_X – 25 ppmvd @ 15% oxygen. Controlled with dry SoLoNO$_X$ technology. Annual source testing for NO_X and periodic monitoring using portable analyzer (CO is addressed in the PSD 01-08 Amendment 5 with a limit of 50 ppmvd @ 15% oxygen with annual source test and periodic monitoring).

2. *Case-By-Case BACT*

When considering BACT for the proposed unit, the following considerations were taken into account:

1. The proposed unit is identical to a unit permitted on 10/5/2023 for the same facility. See N1.1 above.

2. The proposed unit is subject to 40 CFR 60 Subpart KKKKa. Under the provisions of that regulation, the limit for NOx is 15 ppmvd at 15% oxygen, which is higher than what the proposed unit will achieve. (Note: according to manufacturer's information, the proposed unit for OAC 1430 can achieve 9 ppmvd NOx at 15% oxygen).

3. A review of the EPA BACT clearinghouse for similar projects identified a project permitted by the Michigan Department of Environmental Quality (RBLC ID MI-0420) on 6/3/2016, with BACT limits on NOx of 15 ppmvd.

3. The applicant submitted a BACT analysis in the application. See application for details.

4. BACT CONCLUSION

NWCAA has reviewed the analysis provided by the applicant, conducted its own review, and agrees with the applicant's proposal (summarized below):

- **Nitrogen Oxides (includes TBACT for NO_2)**

  BACT for NOx from the new turbine is proposed as 9 ppm in the exhaust, achievable with low-NOx burners employing good combustion control practices[3]. The proposed unit will be equipped with Solar's proprietary DLN combustion technology,

SoLoNOx®, capable of achieving the NOx emission rate determined to represent BACT.

Other methods of NOx control that were reviewed, and rejected:

- Water injection: technically infeasible because of the burner technology,
- Selective non-catalytic reduction (SNCR): technically infeasible because the exhaust temperatures of the proposed unit are not high enough for SNCR, and
- Selective catalytic reduction (SCR): cost of NOx removal is $22,345/ton. This is deemed too high to meet BACT.

- **CO**

  BACT for CO emissions from the new turbine is proposed to be the use of good combustion practices to achieve a design CO exhaust concentration of 25 ppm in the exhaust.

- **VOC and Formaldehyde**

  BACT for VOC and tBACT for formaldehyde from the new turbine is proposed to be the use of good combustion practices to achieve a design VOC emission rate of 0.90 lb/hr and a design formaldehyde emission rate of 0.03 lb/hr.

- **Particulate matter**

  BACT for PM emissions from the new turbine is proposed to be the use of pipeline quality natural gas as a fuel.

O. Basis for OAC conditions

(1) Combusting pipeline quality natural gas will ensure compliance with sulfur limits.

(2) Combustion of pipeline quality natural gas is BACT for PM. The permit will list a limit of 0% opacity as a surrogate for monitoring.

(3) A limit of 9.0 ppmvd @ 15% oxygen is BACT for NO_X.

(4) A limit of 25.0 ppmvd @ 15% oxygen is BACT for CO.

(5) Periodic monitoring for NO_X and CO will help ensure continuous compliance after tune-ups or other maintenance and ensure NO2 (NOx as surrogate) and formaldehyde (CO as surrogate) are limited. This aligns with the requirements for the other turbines onsite.

(6) Verifying the accuracy of the portable analyzer ensures the periodic monitoring measurements remain accurate.

(7) Annual source testing is required by 40 CFR Part 60 Subpart KKKKa in lieu of using CEMS.

(8) General requirements for source testing and specifying process data required to collect during tests.

(9) – (11) Maintenance requirements

(12) Nuisance limit

(13) Notification requirements

P. Key correspondence & additional info

Outlook

Regulatory applicability clarification for Sumas

From Derr, Kirsten <Kirsten.Derr@williams.com>
Date Thu 4/23/2026 2:40 PM
To Christos Christoforou <ChristosC@nwcleanairwa.gov>
Cc Mogg, Monica <Monica.Mogg@Williams.com>

Hi Christos,

I wanted to share some insights regarding the regulatory applicability for the upcoming permit. As you are aware, NSPS KKKKa was promulgated since the permit application was submitted. I've spent quite some time evaluating the NSPS GG versus NSPS KKKKa question. it turns out that this isn't a complete equipment replacement so it is not a new turbine. Instead, a 9 ppm Mars 100 core is being placed into the existing turbine body. While the associated costs are less than 50% of what would be considered reconstruction, and the NOx emissions are notably reduced, there is a slight increase in the PTE for SO2. According to the definition of modification in 40 CFR 60 Subpart A, this does count as an increase in a pollutant for which a standard exists. Since NSPS rules don't provide a de minimis threshold for what constitutes an increase, it appears the turbine will now be subject to NSPS KKKKa.

Turning to NSPS OOOOb, there are a couple of factors to consider. The horsepower increase means the facility will need to comply with fugitive emission standards, which brings periodic LDAR requirements into play. However, regarding the compressor, the determination hinges on whether it's considered new, modified, or reconstructed. At Sumas, the compressor will remain the same, only undergoing an overhaul similar to routine maintenance with some minor enhancements. Given that it's already a dry seal compressor and will operate within the same parameters, there's no modification that would lead to higher emissions.

To clarify reconstruction applicability, we reached out to the manufacturer for a ballpark estimate of the cost to replace just the compressor, since compressors are typically purchased as a package with turbines. The cost for the upcoming work is priced as follows:

	LIST PRICE (USD)	CONTRACT DISCOUNT (USD)	SELL PRICE (USD)
BASE SCOPE			
Compressor Overhaul and Restage	$1,121,349.96	-$112,135.00	$1,009,214.96
GRAND TOTAL	**$1,121,349.96**	**-$112,135.00**	**$1,009,214.96**

The estimated cost of a wholly new compressor is as follows:

Preliminary Budgetary Pricing

Item	Description	Budgetary Price (USD)
Compressor Only	C505 / C50 frame, 5-impeller compressor, baseplate mounted (no turbine)	**~$4.5M**
(Reference Only) Mechanical Drive Package	Mars 100 gas turbine (M100-16000), inlet filter, baseplate, exhaust stack	**$9.75M**
(Reference Only) Complete Train	Mars 100 + C45 compressor train	**~$14.25M**

Therefore, the work done for this project is well under 50% of the price of a new compressor, which means NSPS OOOOb does not apply to the compressor. I recognize that this point may become less significant once NSPS OOOOc is adopted by the agency.

I hope this helps clarify the questions around applicability for the permit at this facility. If you have any more questions or would like additional details, please let me know.

Williams. **Kirsten Derr** | Williams | Environmental Specialist | Air Permitting Group
Cell: 303-475-0989
Kirsten.Derr@williams.com

June 9, 2026 inspection by Christos C. at NWP Sumas facility: The facility is replacing the compressor, as per Mr. VanBeek, operations supervisor, during the inspection.

Additional correspondence is stored with the electronic files at NWCAA's office.