Draft Statement of Basis for
Arclin Surfaces, LLC

Operating Permit Renewal 2
<TBD>

1 Purpose of this Statement of Basis

1.1 General

This document summarizes the legal and factual bases for the draft permit conditions in Arclin Surfaces, LLC's (Arclin's) air operating permit to be issued under the authority of the Washington Clean Air Act, Chapter 70.94 Revised Code of Washington, Chapter 173-401 of the Washington Administrative Code and Puget Sound Clean Air Agency (PSCAA) Regulation I, Article 7. Unlike the permit, this document is not legally enforceable. It includes references to the applicable statutory or regulatory provisions that relate to Arclin's emissions to the atmosphere. In addition, this Statement of Basis provides a description of Arclin's activities and a compliance history.

2 Why Arclin is an Air Operating Permit Source

Arclin is subject to the requirement to obtain an air operating permit because it is a "major source" as defined in Title V of the federal Clean Air Act (CAA) Amendments of 1990 and its implementing regulations, 40 CFR Part 70 and Chapter 173-401 WAC. A major source has the potential to emit more than 100 tons per year of any pollutant subject to regulation (CO, SO_2, NO_X, VOC, particulate matter, etc.), 10 tons per year or more of any single hazardous air pollutant (HAP) listed in Section 112(b) of the federal Clean Air Act (such as hydrochloric acid), or 25 tons per year or more of any combination of HAPs.

The facility has the potential to emit more than 10 tons per year of a single HAP (methanol) and more than 25 tons per year of any combination of HAPs (methanol, formaldehyde and phenol). Therefore, Arclin is a major source for purposes of the Title V program.

3 Source Description

Arclin USA, LLC is a chemical manufacturing company providing high performance bonding products for a broad range of applications, including wood-based panels, engineered wood, mineral and glass fiber tissue and paper impregnation. Arclin USA, LLC also provides surfacing solutions for decorative panels, building products and industrial specialty applications for North American and export markets. Arclin USA, LLC is a Delaware corporation, headquartered in Roswell, GA. Arclin Surfaces in Tacoma is one of several facilities operated by Arclin USA, LLC.

The manufacturing facility located at 2144 Milwaukee Way in Tacoma is 155,000 square foot. This facility has three production (paper impregnation) lines. Line 1 is used for making industrial products impregnated with phenolic, melamine or urea formaldehyde resins and can coat one or both sides of the paper with a phenolic glue. The other two lines are used for making decorative products impregnated with a mixture of melamine and urea formaldehyde resins and can coat both sides of the paper with a melamine formaldehyde resin. Line 1 is limited to paper widths up to 64 inches, but lines 3 and 4 can accept paper widths up to 100 inches. The facility was operating a fourth line (Line 2), but the gas-fired boiler required to operate this line has been

permanently disabled. At time of AOP issuance, Line 2 and the associated boiler are physically located at the facility but inoperable. Start-up of this line would require additional permitting.

Each process begins with a specialty paper that is immersed in a resin bath before entering the first air floatation drying section. Products to be coated will exit the first drying zone in a cured state (normally <15% volatile). After passing the gravure (for Lines 3 and 4) and Meyr rod (for Line 1) coaters, the paper is then fed into additional air floatation drying zones. Upon exiting the final drying zone, the treated paper is cooled and slit, and then either rolled or sheeted.

The coating line dryers are natural gas-fired and rated at 1-2 MMBtu/hr. All drying and coating zones are maintained under negative pressure by means of an induction fan that directs the exhaust to an oxidizer. Line 1 is controlled by regenerative thermal oxidizers (RTO). Lines 3 and 4 are controlled by catalytic oxidizers. These oxidizers draw enough air from the building for it to function as a permanent total enclosure and capture all of the emissions.

Since the last operating permit renewal, Arclin has permitted two new operations for powder addition to a saturated resin mix. This is only used when a product requires the addition of this powder so is not a continuous operation, but instead used as needed. Arclin is currently manually adding powder to 250-gallon totes with potential particulate matter emissions controlled by a rental dust collector that is set up as needed. The dust collector uses HEPA filtration and is exhausted back inside the building. Arclin also has installed a stationary unit for powder additions called the IFA 3. This consists of a bulk-bag unloading station, a bulk bag hopper, flexible screw conveyors and bag dump stations. Particulate matter from the mixing operations is controlled by one Donaldson Torit DCE dust collector rated at 1,000 cfm equipped with MERV 15 filters.

The facility has an outside tank farm consisting of eighteen storage tanks.

	Tank Numbers and Storage (Gallons)
Melamine	# 1 (7,500), 2 (7,500), 9 (7,500), 12 (10,000), 17 (7,500)
Urea	# 5 (7,500), 6 (7,500), 10 (10,000), 13 (10,000)
Phenolic	# 3 (7,500), 4 (7,500), 7 (7,500), 8 (7,500)
Diethylene Glycol	# 14 (7,500), # 15 (7,500)
Methanol	# 11 (10,000)
Rainwater	# 16 (7,500)
N/A (Out of Service)	# 18 (7,500)

The facility also has a mixing room with 21 mixing tanks.

- Polyester Room
  - 2 x 500 Gallon Tanks (one tank not in use/out of service)
- IFA Room (downstairs)
  - 8 x 150 Gallon Tanks (melamine/urea)
- Phenolic Room (upstairs)_
  - 4 x 2,500 Gallon Tanks
  - 2 x 300 Gallon Tanks (not in use/out of service)
- IFA Area Main Scale
  - 2 x 100 Gallon Tanks (main mix tank)
  - 2 Sub Scale
  - 1 Color Scale

Additionally, there are 12 space heaters and 1 gas-fired boiler (research), and a small pilot treater for research and development of new products. Emissions from the pilot treater are vented to the oxidizer for line 4.

There are no emergency generators located at the facility.

4 Permitting History

4.1 New Source Review Permitting for the Facility

Permits issued prior to 2016 have been cancelled or superseded by newer permits.

On October 13, 2005, the applicant sent a letter requesting the Agency remove requirements in existing Orders of Approval Nos. 5089, 7208 and 7784 which are redundant with or conflict with the National Emission Standards for Hazardous Air Pollutants (NESHAP): Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ). They also requested the Agency remove specific requirements limiting the pilot treater requirements in Order of Approval No. 5181 since emissions are controlled by a thermal oxidizer, and basis of limited hours was because the intent was to vent directly to the atmosphere without controls.

Based on a review of previously issued Orders of Approval, the federal NESHAP requirements, and associated compliance test methods, Order of Approval No. 9326 with revised conditions that apply to facility operations was issued on April 20, 2016. The public comment for this Order was concurrent with the draft operating permit. The Order included the following actions:

- Maintained the 95% destruction efficiency requirement for oxidizers controlling Lines 3 and 4. Although this is similar to NESHAP requirement, this was a specific BACT determination. The NESHAP allows an alternative to meeting the 95% overall control efficiency by allowing measurement of 20 ppm at the exhaust. This was not incorporated into the BACT requirement.
- Maintained the 98% destruction efficiency requirement for oxidizer controlling emissions from Line 1. This is a BACT requirement and is more stringent than the NESHAP requirements.
- Eliminated the continuous temperature monitoring requirements in Order of Approval Nos. 5089, 7208, and 7784. These are redundant with the NESHAP.
- Eliminated the thermocouple auditing requirements in Order of Approval Nos. 7208 and 7784. These are redundant with the NESHAP.
- Revised negative pressure enclosure requirements in Order of Approval Nos. 7208 and 7784 since addressed in NESHAP.
- Eliminated annual catalyst activity analysis requirements in Orders of Approval Nos. 7208 and 7784. These are redundant with the NESHAP.
- Eliminated 2-year record retention requirement in Order of Approval No. 5089 since 5-year record retention requirement in facility operating permit is more stringent.
- Removed specific temperature requirements for oxidizers in Orders of Approvals. Defer to NESHAP requirement that temperature limits are established in most recent performance tests that demonstrate compliance with destruction efficiency requirements.

- Retained the requirement to conduct a source test every 5 years. This is more stringent than the NESHAP but consistent with BACT requirements in Order of Approval Nos. 7208 and 7784.
- Changed the Reference Test Method from Method 308 to Method 25A for determining VOC destruction efficiency. This is consistent with the NESHAP, and Method 25A would be the more appropriate method for determining VOC destruction efficiency.
- Eliminated hourly limits on the pilot treater since this unit is now controlled by thermal oxidizer.
- The Order formalized that alternative means of compliance (Regulation I, Section 3.23) since Arclin is uses oxidizers to control emissions of VOC which is more effective than meeting the VOC content limits on paper coating in Regulation II, Section 3.03.

Issuance of Order of Approval No. 9326 resulted in the cancellation of Order of Approval Nos. 5089 (dated 10/4/93), 5181 (dated 10/6/94), 6867 (dated 3/12/95), 7208 (dated 2/6/98), 7784 (dated 6/3/99), 9269 (dated 7/28/05), and 9632 (dated 8/1/07) since requirements in Order of Approval 9326 and the NESHAP assure compliance with requirements established in these Orders that still pertain to facility operations. All the permit requirements in Order of Approval No. 9326 remain in the operating permit as part of this renewal.

On April 18, 2018, Arclin submitted a Notice of Construction application for manual powder addition to a saturated resin mix. This was originally intended to be a temporary operation replaced with a more permanent mixing station. Order of Approval No. 11568 was issued on April 19, 2018, but was cancelled and superseded by Order of Approval No. 11889 so conditions from this NOC Order of Approval are not incorporated into this operating permit.

On September 27, 2019, Arclin submitted a Notice of Construction application for mixing of dry powder into a saturated resin mix with particulate matter controlled by one Donaldson Torit DCE dust collector rated at 1,000 cfm equipped with MERV 15 filters. The mixing operation includes a bulk-bag unloading station, a bulk bag hopper, flexible screw conveyors and bag dump stations. Order of Approval No. 11889 was issued on November 6, 2019. Although this permanent mixing station is not fully used, the Order of Approval conditions have been included into this operating permit as part of the renewal process.

On April 28, 2020, Arclin submitted a Notice of Construction application for One ConQuip, Inc. pilot treater controlled by the MEGTEC Magnum catalytic thermal oxidizer rated at 21,000 cfm. This unit is a new enclosed Pilot Treater to replace the existing unit. The new pilot treater consists of an unwind, pull, roll, and three enclosed coater stations each followed by an electric oven. The second oven is followed by a UV curing station. The pilot treater is operated as research equipment only as defined in 40 CFR 63.3310. Order of Approval No. 11977 was issued on May 29, 2020. Permit condition require operation consistent with the definition of research and laboratory equipment in the NESHAP and that emissions be combusted by the existing catalytic oxidizer as an alternative means of compliance to the VOC coating limits in Regulation II, Section 3.03 for paper coating operations. The Order of Approval conditions have been included into this operating permit as part of the renewal process.

On February 24, 2022, Arclin submitted a Notice of Construction application to allow the operation of the manual mixing operation previously permitted under Order of Approval No. 11889. Arclin determined there were reliability issues when they were commissioning the mixing operation permitted under Order of Approval No. 11889. Arclin requested authorization to continue to use the original mixing set-up with a rented dust collector. This would allow Arclin to operate under

either Order of Approval when conducting the mixing operation. Order of Approval No. 12225 was issued on March 4, 2022. On 7/29/2022, Arclin submitted a Notice of Construction application to increase the amount of dry powder that could be processed in the manual mixing operation. Order of Approval No. 12268 was issued on 9/2/2022. The Order of Approval conditions have been included into this operating permit as part of the renewal process

4.2 Regulatory Orders Issued to the Facility

No regulatory orders have been issued to the facility.

4.3 Operating Permit Issuance and Renewal

4.3.1 Issuance of Original Permit

An application for an air operating permit was submitted by Dynea Overlays on June 30, 1997, with supplementary information submitted on September 9, 1997. The original operating permit was issued on May 1, 2002.

Dynea Overlays maintained the facility until 2007, when Arclin Surfaces purchased the facility and took over all operations.

4.3.2 Renewal 1

On October 13, 2005, Arclin requested a modification to the operating permit to incorporate the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP): Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) and to remove requirements in existing Order of Approval Nos. 5089, 7208 and 7284 that were redundant with or conflicted with the NESHAP requirements. Arclin also requested to cancel the pilot treater requirements in Order of Approval No. 5181, since its exhaust is now ducted to an oxidizer.

On January 10, 2006, the Agency sent a letter to Arclin recommending that the permit modification and operating permit renewal be combined. The benefit of this approach was to avoid a second reopening of the permit and verify compliance with the NESHAP was achievable with the existing control equipment. A complete operating permit renewal application was received on April 28, 2006.

Changes made in the permit renewal include incorporation of the Paper and Other Web Coating NESHAP requirements (40 CFR Part 63, Subpart JJJJ) and inclusion of requirements in Notice of Construction Orders of Approval issued to Arclin since the original permit was issued, as well as several small changes.

The permit renewal was issued on April 20, 2016.

4.3.3 Renewal 2

On October 1, 2019, the Agency sent written notice to Arclin that a renewal application was due. The application was submitted to the Agency on April 16, 2020. On May 29, 2020, the Agency sent a letter to Arclin indicating that the renewal application had been found to be complete. In accordance with WAC 173-401-640, Arclin operated under the authority of their permit shield from April 20, 2021, until the Agency issued this renewal of the operating permit.

4.3.4 Administrative Amendment 1

On May 20, 2013, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 1 to make this change was issued June 20, 2013.

4.3.5 Administrative Amendment 2

On January 20, 2017, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 1 to make this change was issued March 23, 2017. On January 20, 2017, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 1 to make this change was issued March 23, 2017.

4.3.6 Administrative Amendment 3

On August 24, 2018, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 2 to make this change was issued October 3, 2018.

4.3.7 Administrative Amendment 4

On November 2, 2021, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 3 to make this change was issued December 10, 2021. On November 2, 2021, Arclin requested an Administrative Amendment to the Operating Permit to change the Responsible Official. Administrative Revision 3 to make this change was issued December 10, 2021.

5 Compliance History

Onsite inspections for Arclin since the last permit renewal were conducted on the following dates:

- August 3, 2017
- August 9, 2018
- August 14, 2019
- December 2, 2021

Additional inspections of the facility were conducted via telephone, due to the COVID-19 measures to protect agency and Arclin staff. These occurred on:

- August 13, 2020
- June 9, 2021
- September 22, 2021

The Agency has issued the following written warnings or Notices of Violation for the facility since the previous permit was issued:

- NOV 3-007465 was issued on October 27, 2016, for a violation on December 14, 2015 through January 1, 2016. Arclin failed to conduct required weekly inspection of coating line exhaust opacity for Line 1, Line 3 and Line 4 coating line oxidizers the week of December 14, 2015, December 21, 2015, and December 28, 2015. A civil penalty was recommended on February 22, 2017.

- Written Warning 2-009134 was issued on October 8, 2018 for a violation on August 1, 2018. Arclin failed to submit required Semiannual Paper Coating NESHAP 40 CFR Part 63, Subpart JJJJ Compliance Report electronically within 31 days following the end of the semiannual reporting period. Electronic filing was due July 31, 2018, and not received until August 16, 2018. In addition, Arclin failed to submit the semiannual Certification of Reports electronically within 31 days after the end of the period covered by the report. Electronic filing was due July 31, 2018 and not received until August 16, 2018.

- NOV 3-009717 was issued on August 22, 2019 for a violation on December 31, 2018. Arclin failed to conduct annual inspections of boiler, space heater and water heater stack exhaust for visible emissions in 2018. Arclin failed to conduct facility-wide inspections during the first and second quarter calendar quarter of 2019. Arclin failed to implement a site-specific inspection including an internal visual inspection the catalytic oxidizer catalyst bed in 2018. Arclin failed to conduct and record a daily visual check of the "Change Filter Light" on the rental dust collector HEPA filtration system used to control the particulate matter generated by the mixing of powder into resin. The violation was closed on May 14, 2020.

- NOV 3-009720 was issued on March 17, 2020 for a violation on February 29, 2020. The Operating Permit Annual Certification Form submitted for the 2019 operating year was received by the Agency on March 9, 2020, which was 10 days past the due date of February 28, 2020. A civil penalty was recommended on May 19, 2020.

- NOV 3-A000190 was issued on April 9, 2021 for violations on December 4, 2020, December 28, 2020 – December 29, 2020 and February 25, 2021 – February 26, 2021. The NOV was issued for failure to maintain operating temperature of the RTO. The line one RTO fell below the set point of 1653. A civil penalty was recommended on July 16, 2021.

- NOV 3-A000373 was issued on November 2, 2021 for violations on August 30, 2021, September 6, 2021, September 13, 2021. and September 27, 2021. According to the deviation report submitted to the Agency (Deviation Report 12048-181), Arclin was unable to locate their weekly opacity checklist for the week of 8/23/2021, 8/30/2021, 9/6/2021, and 9/20/2021. As a result, they are unable to demonstrate that the inspections were conducted.

The Agency has not received any complaints for the facility during the period since the last renewal.

6 Emission Inventory

Emission inventories are estimates of actual emissions from the facility developed by Arclin and submitted to the Agency annually. Emissions at this facility come principally from paper impregnation/coating lines. Most of the emissions come from the industrial products line.

Arclin uses a mass balance equation to determine annual emissions reporting. Starting with each individual resin formula, they determine the percentage of each HAP and/or VOC. Uncontrolled emissions are calculated based on annual production volume for each product line. Since the products are run through a drying process before completion, they assume a 100% loss of HAP and/or VOC, which allows determination of emissions for each product line. The total HAP and/or

VOC are multiplied by the destruction efficiency of each treater line, as determined by the most recent source testing, to determine the amount of HAP and/or VOC released to the air from each coating line. Source tests on the Line 1 thermal oxidizer were conducted October 19, 2005, February 3, 2006 (retest), and May 24, 2016. Source tests on the Line 3 catalytic oxidizer on March 9, 2005, November 21, 2005 (retest), August 31, 2010, and July 15, 2015, August 5, 2020, and August 6, 2020. Source tests on the Line 4 catalytic oxidizer were conducted on March 9, 2005, October 20, 2005, September 1, 2010, and July 14, 2015, August 5, 2020, August 6, 2020, and August 7, 2020.

Emissions from product storage are relatively small, based on the EPA's TANKS program. Mixing losses are assumed to equal tank working losses. Emissions of carbon monoxide and nitrogen oxides from natural gas combustion in the dryers, boiler, and thermal oxidizers are below the emission reporting thresholds in Regulation I, Section 5.05(b), based on EPA's emission factors. In 2014, Arclin used approximately 131,309 MMBtu of natural gas.

The table below summarizes the reportable air emissions for the previous 5 years. Emission inventories are estimates of actual emissions from the facility developed by Arclin and submitted to the Agency annually. Emissions will vary from year to year depending on production loads.

Table 1. Emission Inventory Summary (tons per year)

Pollutant	2016	2017	2018	2019	2020
Phenol (CAS #108-95-2)	0.85	0.74	0.65	0.68	0.58
Diethylene glycol (CAS #111-46-6	3.49	2.51	4.16	3.84	6.73
Formaldehyde (CAS #50-00-0)	1.98	1.66	2.06	1.86	2.59
Methanol (CAS #67-56-1)	8.91	9.65	10.5	13.2	15.64
Hazardous Air Pollutants (HAP)	11.7	12.0	13.2	15.7	18.8
Volatile Organic Compounds (VOC)	15.2	14.6	17.3	19.6	25.5

7 Compliance Assurance Monitoring, NESHAP and NSPS Applicability Review

7.1 Compliance Assurance Monitoring

The Compliance Assurance Monitoring (CAM) rule requires owners and operators to monitor the operation and maintenance of their control equipment, so they can evaluate the performance of their control devices and assure they are working properly. The rule also requires that facilities report whether or not they are meeting established emission standards. If owners and operators of these facilities find that their control equipment is not working properly, the CAM rule requires them to take action to correct any malfunctions and to report such instances to the appropriate enforcement agency, PSCAA in this case. Additionally, the CAM rule provides some enforcement tools that allows environmental agencies to require facilities to respond appropriately to the monitoring results and assure pollution control operations are as effective as represented by the facility.

The CAM rule applies at major sources with emission units that have control devices and emissions could exceed 100 tons per year if the control device was not operated. In accordance with 40 CFR Part 64, any emission unit that meets all three of the following criteria, and is not exempt under the CAM rule, requires a CAM Plan:

- The unit is subject to an emission limitation or standard for the applicable regulated air

pollutant. [40 CFR 64.2(a)(1)]
- The unit uses a control device to achieve compliance with any such emission limitation or standard. [40 CFR 64.2(a)(2)]
- The unit has potential pre-control device emissions of the applicable pollutant of at least 100% of the major source amount. [40 CFR 64.2(a)(3)].

Emission unit 1 (EU-1) consists of three natural gas coating lines and one pilot treater. Emissions are controlled by oxidizers. Potential pre-control VOC and HAP emissions from each coating line and the pilot treater are greater than 100% of the major source thresholds. VOC emission limits are included in New Source Review permits (Orders of Approval No. 9326 and 11977). The limits from the New Source Review Permits are subject to CAM. HAP emission limits are from 40 CFR Part 63, Subpart JJJJ. The HAP limits from Subpart JJJJ are exempt from CAM as the rule was promulgated after November 15, 1990.

Based on the federal register for the promulgation of the NESHAP for Paper and Other Web Coating (67 Fed. Reg. 72330 (December 4, 2002)), more than 99% of the organic HAP emissions regulated under the NESHAP are VOC. Therefore, the capture and control of organic HAP also results in capture and control of VOCs. For Coating Line 1, Arclin uses a thermal oxidizer to comply with the VOC emission limits in the NOCOA and the organic HAP limits in the NESHAP. For Coating Lines 3 and 4 and the pilot treater, Arclin uses catalytic oxidizers to comply with the VOC emission limits in the NOCOA and the organic HAP limits in the NESHAP.

To demonstrate compliance with the VOC emission limits in the NOCOA, EPA Method 25A or another method approved by the Agency must be used. In addition, the NOCOA requires Arclin to use EPA section 6 of Method 204 to document that the capture system associated with each oxidizer is a permanent total enclosure. The NESHAP requires performance testing with Method 25 or 25A which measures total gaseous nonmethane organic concentration and specifies that Arclin can assume their capture efficiency equals 100% if the capture system is a permanent total enclosure meeting the requirements of section 6 of WPA Method 204. In the response to comments for the most recent amendments to the NESHAP, EPA included a discussion in the response to comments clarifying that VOC tests required by the state permitting authority could be used to demonstrate compliance with the NESHAP and that VOC tests required by the state permitting authority can be used to meet the repeat performance testing requirements. Therefore, the Agency has concluded that the periodic performance testing conducted on the thermal oxidizer and catalytic oxidizers can be used to demonstrate compliance with both the emission limits in the NOCOA's and the NESHAP.

Based on the discussion in the technical worksheet for NOCOA 9326, the monitoring included in the previous NOCOA was removed since it was redundant or in conflict with the NESHAP. Instead, it was assumed the provisions in the NESHAP would provide reasonable assurance that the control devices are operated in a manner to maintain continuous compliance with both the VOC limits in the permits and the organic HAP limits in the NESHAP. Therefore, the Agency has approved the use of the monitoring in the NESHAP to fulfill the CAM requirements at this facility. This is consistent with 40 CFR 63.4(b) which specifies the owner or operator may rely in part on existing applicable requirements that establish monitoring for the applicable pollutant - specific emissions unit. The Agency concurs with Arclin that the monitoring in the NESHAP is presumptively acceptable monitoring as it applies to the control devices (40 CFR 63.4(b)(4)). In accordance with 40 CFR 63.4(c), Arclin has submitted control device operating permit data

obtained during each performance test conducted at the facility under conditions specified in the NESHAP. Since the VOC emission limits in the permits apply only to the VOC destruction efficiency across the thermal oxidizer and catalytic oxidizers, the CAM plan only addresses monitoring of the control devices and not the capture system.

As part of this permit renewal process, the Agency added CAM monitoring requirements in this permit to ensure all applicable requirements of CAM are in the permit.

Emission unit 2 (EU-2) consists of operations associated with mixing dry powders into saturated resin mix. Particulate matter emissions are controlled by a dust collection system. The New Source Review permits do not contain specific emission limitations for particulate matter, but there is a general grain loading standard in Regulation I, Section 9.09 that applies to each dust collector. Based on these emission calculations, CAM does not apply to EU-2.

EU ID and Description	Regulated Pollutant	Pre-Control PTE (tpy)	Post-Control PTE (tpy)	Control Device	Emission Limit	Regulatory Citation
EU 2: Mixing dry powders into a saturated resin mix	PM_{10}	0.3	<0.01	Donaldson Torit DCE dust collector rated at 1,000 cfm equipped with MERV 15 filters	0.05 gr/dscf	PSCAA Regulation I, Section 9.09
EU 2: Mixing dry powders into a saturated resin mix	PM_{10}	9	0.2	Rental dust collector using HEPA filtration	0.05 gr/dscf	PSCAA Regulation I, Section 9.09

The basis for potential pre-control and post-control potential to emit (PTE) is provided below:

- Donaldson Torit DCE dust collector rated at 1,000 cfm equipped with MERV 15 filters: This is a batch operation based on customer orders. The powder is supplied in super sacks. The New Source Review used the emission factor in EPA's AP-42, Chapter 6.4, for paint manufacturing to calculate uncontrolled emissions of particulate matter. This factor is for the physical processes of weighing, mixing, grinding, tinting, thinning and packaging. The processes take place in large mixing tanks at approximately room temperature. No chemical reactions are involved. Particulate emissions amount to 0.5 to 1.0 percent of the pigment handled (pigment handling). Since the operation is fully enclosed, the use of this factor would greatly overestimate emissions since most of the emissions in the EPA factor relate to processing of the dry powder. As a best engineering judgement, 1% of these emissions would potentially be emitted. The maximum powder that could be used is 513,000 lb/month. Assuming no control of emissions with the dust collector, potential pre-control PTE is 616 lb/yr:

513,000 lb/mo * 12 mo/yr * 0.01 (EPA factor) * 0.01 (engineering estimate) = 616 lb/yr PM_{10}

If post-control potential emissions are based on grain loading standard in Regulation I, Section 9.09 with the dust collector operating 24 hours/day, 365 days/year, post control emissions would exceed potential pre-control emissions. This system is only designed to operate the dust collector during certain scenarios and is not designed to operate with the dust collector system 24 hours/day, 365 days/year. Instead, potential post control emissions are estimated assuming the system is operated 10% of the time and provides 95% control of PM_{10}.

- Dust collector system equipped with HEPA filtration: This is a batch operation based on customer orders. The powder is supplied in 50-pound bags. The permit includes a limit of 5,000 bags of powder (250,000 pounds of powder) so potential emissions are based on that limit.

  To calculate uncontrolled emissions, the emission factor in EPA's AP-42, Chapter 6.4 for paint manufacturing was used. This factor is for the physical processed of weighing, mixing, grinding, tinting, thinning and packaging. The processes take place in large mixing tanks at approximately room temperature. No chemical reactions are involved. Particulate emissions amount to 0.5 to 1.0 percent of the pigment handled (pigment handling).

  Pre-control potential emissions (worst case based on permit limit):

  250,000 lb/mo * 12 mo/yr * 0.01 = 30,000 lb/yr PM_{10} (15 tons/yr PM_{10})

  Since this is a manual operation, it is assumed a small percentage would not reach the HEPA filtration system (2%), but the rest would be controlled to 99.97% efficiency.

  Controlled potential emissions (worst case based on permit limit)

  (30,000 lb/yr * 0.02% uncontrolled) + (30,000 lb/yr *0.98 * (1-.9997)) = 609 lb/yr PM_{10}

  If post-control potential emissions are based on grain loading standard in Regulation I, Section 9.09 with the dust collector operating 24 hours/day and assuming the dust collector is rated 500 cfm, post-control potential emissions would be 1 ton/yr PM_{10}.

7.2 NESHAP Applicability

As part of the renewal process, the Agency reviewed new federal National Emissions Standards for Hazardous Air Pollutants (NESHAPs) that might apply to this facility to determine applicability. There are no new NESHAPs that apply to this facility. However, there were significant changes to the NESHAP for HAPs: Paper and Other Web Coating that currently applies to the facility.

7.2.1 NESHAP: Paper and Other Web Coating (40 CFR 63 Subpart JJJJ)

On December 4, 2002, the EPA promulgated a NESHAP standard for Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ). This NESHAP applies to Arclin since it is a major source of hazardous air pollutant (HAP) emissions at which web coating lines are operated. The affected source subject to this NESHAP is the collection of all web coating lines at the facility, except for the pilot treater which meets the definition of research and laboratory equipment in 40 CFR 63.3310. *Research or laboratory equipment* means any equipment for which the primary purpose is to conduct research and development into new processes and products where such equipment

is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce except in a de minimis manner. The pilot treater is required by permit to be operated in a manner such that it meets this definition of research and laboratory equipment.

Arclin's operations are considered an existing source since construction or reconstruction commenced before September 13, 2000, and has not undergone reconstruction. As such, Arclin was required to comply with the NESHAP standard on December 5, 2005.

The NESHAP requirements were incorporated into the operating permit during the first renewal. There were significant changes to the NESHAP in 2020 which have been incorporated as part of this second renewal process. In 40 CFR 63.3300 (Which of my Emissions Sources are Affected by this Subpart?), additional web coating lines were identified as not part of the affected source. These do not apply to Arclin's operation. The revisions that apply to Arclin address emissions during startup, shutdown and malfunction (SSM) events, add repeat testing and electronic reporting requirements, and make technical and editorial changes. The EPA made these amendments to improve monitoring, compliance, and implementation of the rule. As part of this renewal process, the permit conditions were updated to reflect these changes to the regulation. The changes that apply to Arclin's operation and have been included in the AOP renewal are summarized in Section 10.1 of this document.

7.2.2 NESHAP: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD)

The NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR Part 63, Subpart DDDDD) does not apply to the small boiler in the Research and Technology area. 40 CFR 63.7491 specifies boilers and process heaters not subject to the subpart and includes "a boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility." The boiler used at Arclin is rated 0.2 MMBtu/hr. According to information submitted by Arclin in an 11/25/15 e-mail, the boiler is used for research and development (R&D) purposes only. The wood press that is served by the boiler does not produce saleable material and is operated based on R&D needs only. It does not supply steam to a process, but for a single use, non-production based, R&D equipment. Arclin had submitted an Initial Notification for this small boiler and for the Superior Boiler which was used to provide heat for Coating Line 2 oven dryers. The Superior Boiler has been permanently decommissioned. Arclin also has a water heater located behind Coating Line 1, but the unit was replaced with an electric unit since the previous renewal.

7.3 NSPS Applicability

As part of the renewal process, the Agency reviewed new federal New Source Performance Standards (NSPS) finalized since the last renewal that might apply to this facility to determine applicability. No NSPS apply to Arclin.

8 Explanation of Applicable Requirements Tables and Compliance Methods

Applicable requirements are listed in several sections of this operating permit as outlined below. The permit only lists the requirements that PSCAA has determined to be within the scope of the definition of "applicable requirements" under the operating permit program. Arclin is legally responsible for complying with all applicable requirements of the operating permit as well as other

requirements that do not fit the definition of “applicable requirements” found in Chapter 173-401 Washington Administrative Code (WAC). Some of the applicable requirements contain terms or monitoring, maintenance and recordkeeping conditions for which an explanation is included in this statement of basis. The specific requirements are listed below, along with any necessary explanations in monitoring, maintenance, and recordkeeping conditions.

Applicable requirements that are not ongoing are not included in the permit because they are not in effect during the term of the permit and are considered obsolete. These requirements are addressed later in this statement of basis.

A condition was added for each emission unit that has an active Order of Approval to include Condition 1 from each of the Orders. This condition states, “Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the installation address in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.” This condition was added into the permit to make it clear that the facility is always required to install and establish only that which was approved by the Order of Approval. Any changes to anything that was included in the Notice of Construction and/or Order of Approval would need to go through the New Source Review process.

8.1 Requirement Tables

Sections 1 and 2 of the permit have applicable requirements set up in tables. Section 1 contains the requirements that apply facility-wide to all the emission units regulated by this permit. These requirements also apply to emission units identified in Section 2 of the permit. If the compliance method for any requirement in Section 1 is more extensive for a specific emission unit, that requirement is repeated in Section 2 of the permit with the additional monitoring, maintenance and recordkeeping requirements.

The tables list the citation for the “applicable requirement” and the effective date in the second column. In some cases, the effective dates of the “Federally Enforceable” requirement and the “*State Only*” requirement are different because either the state (or local authority) has not submitted the regulation to the Environmental Protection Agency (EPA) for approval into the State Implementation Plan (SIP), or the state (or local authority) has submitted it and the EPA has not yet approved it. “*State Only*” effective dates are in italicized font and shall be understood to include the Washington Department of Ecology and PSCAA. When the EPA does approve the new requirement into the SIP, the old requirement will automatically be replaced and superseded by the new requirement. The new requirement will be enforceable by the EPA as well as PSCAA from the date that it is adopted into the SIP, and the old requirement will no longer be an applicable requirement.

The requirement tables in Sections 1 and 2 also contain a brief description of the applicable requirement. This description is not an enforceable condition. In the event of conflict or omission between the information contained in the brief description and the actual statute or regulation cited, the requirements and language of the actual statute or regulation cited shall govern. For more information regarding any of the requirements cited in the second column, refer to the actual requirements cited.

The "Compliance Method" listed in the tables refers to permit conditions below the tables that include monitoring, recordkeeping and reporting obligations the permittee must conduct to comply with the permit. Following the monitoring method is an enforceable requirement of this permit.

The "Reference Test Method" listed in the requirements table is the test method to be used when a source test is required to determine compliance. In some cases where the applicable requirement does not cite a test method, one has been added. If a reference test method is not listed with the requirement, this means a test method is not applicable to the requirement. Reference Test Methods included in the permit are listed in Section 7 of the permit and include the applicable averaging period.

Changes to the AOP during the Renewal Process:

A new table was added prior to Section 1 that gives a general description of the two emission units at the facility. The table is reproduced below and lists the emission units regulated under this permit located at Arclin. The information in the table is for informational purposes only.

EU No.	Brief Description
EU-1	This emission unit consists of three natural gas coating lines and one pilot treater. Coating Line 1 is used for making industrial products impregnated with phenolic, melamine or urea formaldehyde resins and can coat one or both sides of the paper with a phenolic glue. Emissions from Coating Line 1 are controlled by a thermal oxidizer. Coatings Lines 3 and 4 are used for making decorative products impregnated with a mixture of melamine and urea formaldehyde resins and can coat both sides of the paper with a melamine formaldehyde resin. Emissions from Coating Lines 3 and 4 and the pilot treater are controlled by catalytic oxidizers. The pilot treater is operated as research equipment only as defined in 40 CFR 63.3310.
EU-2	This emission unit consists of operations associated with mixing dry powders into a saturated resin mix. The IFA 3 permitted under NOCOA 11889 includes a bulk-bag unloading station, a bulk bag hopper, flexible screw conveyors and bag dump stations. Particulate matter from the mixing operations is controlled by one Donaldson Torit DCE dust collector rated at 1,000 cfm equipped with MERV 15 filters. In addition, there is a manual operation setup as needed and permitted under NOCOA 12268. When in operation, the permittee uses a dust collector rated at 500 cfm using HEPA filtration to control particulate matter.

The table includes Emission Unit 1 which was included in the previous permit and adds in a second emission unit related to the mixing of dry powder into the resin used in the coating process.

Sections 1 and 2 are reformatted in the AOP renewal so that all facility-wide requirements and the corresponding compliance methods are in Section 1, and the emission unit specific requirements and corresponding compliance methods are in Section 2. The intent was to make it easier to connect the applicable requirement and the compliance method.

In the previous AOP, some of the applicable requirements listed the effective date, and others listed the adoption date. For consistency, the AOP has been updated to list the effective date for all applicable requirements.

8.2 Compliance Methods

As noted above, compliance methods listed in the applicable requirements table are in permit conditions listed below the tables. The compliance methods include monitoring, recordkeeping and reporting obligations specific to the requirement that will be used by the permittee in determining if they are in continuous or intermittent compliance. In some cases where the

applicable requirement has no periodic testing or monitoring requirements, monitoring has been added. This is called “gapfilling” and is authorized under WAC 173-401-615(1)(b). In addition, the Agency has used our authority under WAC 173-401-630(1) to enhance periodic testing or monitoring requirements when it was determined the testing and monitoring in place was not sufficient to assure compliance.

We consider five criteria in determining how often the facility should perform a monitoring activity: hourly, once per shift, daily, weekly, monthly, quarterly, annually, or once per five-year permitting period. The five criteria are initial compliance, margin of compliance (monitoring method designed so source will identify potential problems early and take action before a violation occurs), variability of process and emissions, environmental impacts of problems, and other technical considerations.

9 General Facility-wide Emission Limits and Requirements

9.1 RACT Requirement (Condition 1.1)

PSCAA Regulation I, Section 3.04 establishes reasonably available control technology (RACT) requirements. There is no monitoring required. Condition 6.20 of the permit specifies that in accordance with WAC 173-401-605(3), emission standards and other requirements contained in rules or regulatory orders in effect at the time of this operating permit renewal shall be considered RACT for purposes of permit renewal.

Changes to the AOP during the Renewal Process: This requirement was previously not listed in the general facility-wide emission limits for Arclin. PSCAA Regulation I, Section 3.04, Reasonably Available Control Technology was approved in the 4/22/20 approval of the SIP and has been added as an enforceable requirement.

9.2 Opacity Standards (Condition 1.2)

PSCAA Regulation I, Section 9.03, Emission of Air Contaminant: Visual Standard, prohibits more than 20 percent opacity for more than three minutes in an hour and applies to all stationary sources. The compliance method is included in Condition 1.14 and requires weekly inspections of the coating line oxidizer stacks and annual inspections of the oxidizers, boilers and space heaters for visible emissions. The source must take corrective action or use the reference test method, Ecology Method 9A, to determine opacity if any visible emissions are noted. Based on a review of the facility activities, including compliance evaluations, the basis for the weekly and annual monitoring is still valid and the permit renewal retains the same monitoring requirements. No deviations of opacity or particulate matter emission limits have been reported by Arclin since issuance of the original permit. Similarly, the compliance history (above) shows no Notices of Violation of these standards have ever been issued and the Agency staff have not observed any visible emissions from this facility during any inspections. Fuel burning equipment fires on natural gas which should not generate visible emissions and yields very low particulate emissions except if there was a malfunction of the equipment.

Changes to the AOP during the Renewal Process: The monitoring method and frequency for the opacity monitoring have not changed, but recordkeeping requirements have been included in the compliance method and language has been added to make it clear that failure to implement one of the response actions must be reported as a deviation.

The 4/1/11 version of WAC 173-400-040(2), General Standards for Maximum Emissions – Visible Emissions, was previously listed as an enforceable requirement for opacity standards. WAC 173-

400-040(2) was replaced by PSCAA Regulation I, Section 9.03 in the 4/22/20 approval of the SIP, so the 4/1/11 version of WAC 173-400-040(2) has been removed as an enforceable requirement.

9.3 PM Standards (Conditions 1.3 and 1.4)

9.3.1 General Process Units

PSCAA Regulation I, Section 9.09, Particulate Matter Emission Standards, limits particulate emissions to 0.05 grain per dry standard cubic foot (gr/dscf) from equipment used in a manufacturing process. The monitoring method in the AOP is based on the assumption that particulate emissions less than 0.05 gr/dscf usually do not generally result in visible emissions over 20 percent opacity. Therefore, the permit requires the same monitoring method at the same frequency as the opacity requirements in Condition 1.2. The emission units that are general process units are unlikely to generate particulate matter emissions above this grain loading standard if operating as permitted.

Changes in the AOP Renewal: The monitoring method and frequency still include the opacity monitoring from the previous permit, but an additional requirement was added, Condition 5.12 Investigations. This condition allows the Agency or the Department of Ecology to require a test to determine whether the emission units are complying with the standard.

In addition, the recordkeeping requirements have been included in the compliance method.

The 2/10/05 version of WAC 173-400-060, Emission Standards for General Process Units was previously listed as an enforceable requirement for particulate matter emissions standards. WAC 173-400-060 was replaced by PSCAA Regulation I, Section 9.09 in the 4/22/20 approval of the SIP, so the 2/10/05 version of WAC 173-400-060 has been removed as an enforceable requirement.

9.3.2 Combustion Sources

PSCAA Regulation I, Section 9.09, Particulate Matter Emission Standards, limits particulate emissions to 0.05 gr/dscf corrected to 7% oxygen from fuel burning equipment (i.e., equipment that produces hot air, hot water, steam, or other heated fluids by external combustion of fuel) combusting natural gas.

There are 12 space heaters and 1 natural gas-fired boiler (research), which have very low particulate matter emissions when maintained and operated in good working order and should not have visible emissions. Therefore, the Agency has determined that the same compliance method as is used for particulate matter standards for general process units is adequate – weekly opacity monitoring.

Changes in the AOP Renewal: The monitoring method and frequency have not changed, but an additional requirement was added, Condition 5.12 Investigations. This condition allows the Agency or the Department of Ecology to require a test to determine whether the emission units are complying with the standard.

The 12/29/12 version of WAC 173-400-050(1) and (3), Emission Standards for Combustion and Incineration Units was previously listed as an enforceable requirement for particulate matter emissions standards. WAC 173-400-050 was replaced by PSCAA Regulation I, Section 9.09 in the 4/22/20 approval of the SIP, so the 12/29/12 version of WAC 173-400-050(1) and (3), has been removed as an enforceable requirement.

9.4 Fugitive Emissions (Conditions 1.5 and 1.6)

PSCAA Regulation I, Section 9.15, Fugitive Dust Control Measures, and WAC 173-400-040(4)(a), General Standards for Maximum Emissions – Fugitive Dust, both require reasonable precautions to minimize or prevent fugitive emissions. PSCAA's rule also describes specific examples of reasonable precautions. Quarterly facility-wide inspections and complaint response are sufficient to monitor for changes that would cause fugitive emissions or unexpected buildup of dust.

Changes in the AOP Renewal: The monitoring method and frequency have not changed, but the language has been updated to reflect the updated format. For facility-wide inspections, Arclin is required to examine/inspect the same elements as is currently required. For both the facility-wide inspections and complaint response, recordkeeping requirements have been included in the compliance methods and language has been added to make it clear failure to implement one of the response actions must be reported as a deviation.

The 4/1/11 version of WAC 173-400-040(9), General Standards for Maximum Emissions – Fugitive Dust Sources, was previously listed as an enforceable requirement for fugitive dust emissions standards. WAC 173-400-040(9)(a) was replaced by PSCAA Regulation I, Section 9.15 in the 4/22/20 approval of the SIP, so the 4/1/11 version of WAC 173-400-040(9) has been removed as an enforceable requirement.

9.5 Other Standards (Conditions 1.7 through 1.9)

PSCAA Regulation I, Section 9.11, Emission of Air Contaminant: Detriment to Person or Property, and WAC 173-400-040(5), General Standards for Maximum Emissions – Odors, are similar requirements that address emissions that may be environmentally detrimental or cause a nuisance. The monitoring method is based on responding to complaints and quarterly general inspections of the facility to identify any emissions that are likely to be injurious to human health, plant or animal life, or property, or that unreasonably interfere with enjoyment of life and property. Receiving complaints does not necessarily mean Arclin is in violation of this requirement, but Arclin has a responsibility to investigate complaints and take corrective action if necessary. PSCAA has not noted nor has PSCAA received complaints about Arclin causing emissions that are likely to be injurious to health, plant or animal life, or property or that unreasonably interferes with enjoyment of life and property. Arclin does not handle or process material that is likely to cause fugitive dust emissions.

The Agency has determined that the as-needed complaint response and the quarterly facility-wide inspections required in Condition 1.15 of the permit are sufficient to monitor for changes that would cause nuisance emissions.

Changes in the AOP Renewal: The requirements in WAC 173-400-040(3), General Standards for Maximum Emissions – Fallout, is a state-only requirement and is not federally enforceable as it regulates emissions which EPA does not regulate. The rule specifies that Arclin shall not deposit particulate matter beyond the property boundary in sufficient quantity to interfere unreasonably with the use and enjoyment of property have been included as a separate requirement. The monitoring method and frequency have not changed, but the language has been updated to reflect the updated format. For facility-wide inspections, Arclin is required to examine/inspect the same elements as is currently required. For both the facility-wide inspections and complaint response, recordkeeping requirements have been included in the compliance methods and language has been added to make it clear that failure to implement one of the response actions must be reported as a deviation.

The 4/1/11 version of WAC 173-400-040(6) was previously listed as an enforceable requirement for nuisance standards. WAC 173-400-040(6) was replaced by PSCAA Regulation I, Section 9.11(a) in the 4/22/20 approval of the SIP, so the 4/1/11 version of WAC 173-400-040(6) has been removed as an enforceable requirement.

9.6 SO_2 Standard (Condition 1.10)

PSCAA Regulation I, Section 9.07, Sulfur Dioxide Emission Standard, limits sulfur dioxide emissions to 1,000 ppmvd (corrected to 7% oxygen for fuel burning equipment).

The combustion units at the facility burn pipeline quality natural gas. "Natural gas" means a mixture of gaseous hydrocarbons, with at least 80 percent methane (by volume), and of pipeline quality, such as the gas sold or distributed by any utility company regulated by the Washington Utilities and Transportation Commission. Arclin receives the same natural gas as all of the other natural gas consumers, private and industrial, in the Northwest. According to Section 1.4-3 of AP-42, natural gas contains approximately 0.2 grain per hundred cubic feet (2000 grains of sulfur per 10^6 ft^3), which is equivalent to approximately 3.4 parts of sulfur per million cubic feet of natural gas, as shown in the following calculation:

Equation 1

$$\left(\frac{2{,}000\,gr\,S}{1{,}000{,}000\,ft^3\,nat.gas}\right)\left(\frac{1lb}{7000\,gr}\right)\left(\frac{385\,\frac{ft^3}{mole\,S}}{32\,\frac{lb}{mole\,S}}\right)=3.44\times10^{-6}\,\frac{ft^3\,S}{ft^3\,nat.gas}\equiv 3.44\,ppmdv\,S$$

According to *Perry's Chemical Engineer's Handbook*, each cubic foot of natural gas requires approximately 10 cubic feet of air for combustion, yielding approximately 11 cubic feet of combustion exhaust gases, consisting mostly of nitrogen, water vapor, and carbon dioxide. The sulfur in the natural gas will almost all be converted to sulfur dioxide, with each cubic foot of sulfur producing the same volume of sulfur dioxide. Since each cubic foot of natural gas contains 4.08 $\times$ 10^{-5} cubic foot of sulfur, each cubic foot of stack exhaust will contain approximately:

Equation 2

$$\left(3.44\times10^{-6}\,\frac{ft^3\,S}{ft^3\,nat.gas}\right)\left(\frac{1\,ft^3\,SO_2}{1\,ft^3\,S}\right)\left(\frac{1\,ft^3\,nat.gas}{11\,ft^3\,stack\,exhaust}\right)=3.13\times10^{-7}\,\frac{ft^3\,SO_2}{ft^3\,stack\,exhaust}$$

This is equivalent to 0.31 ppmdv SO_2 at stoichiometric combustion conditions. Correcting to 7% oxygen, we get:

Equation 3

$$0.31\,ppmdv\left(\frac{20.9}{20.9-\%O_{2\,(dry)}}\right)=0.31\,ppmdv\left(\frac{20.9}{20.9-7}\right)=0.46\,ppmdv$$

Note that this estimated value is less than one-tenth of one percent of the 1,000 ppmdv SO_2 standard. Therefore, it is reasonable to assume that combustion units that are fired on natural gas cannot exceed the 1,000 ppmdv SO_2 limits in Puget Sound Clean Air Agency Regulation I, Section 9.07.

Changes in the AOP Renewal: The 4/1/11 version of WAC 173-400-040(7), General Standards for Maximum Emissions – Sulfur Dioxide, was previously listed as an enforceable requirement for

maximum emissions standards. WAC 173-400-040(7) was replaced by PSCAA Regulation I, Section 9.07 in the 4/22/20 approval of the SIP, so the 4/1/11 version of WAC 173-400-040(7) has been removed as an enforceable requirement.

9.7 Hydrochloric Acid Standard (Condition 1.11)

PSCAA Regulation I, Section 9.10, Emission of Hydrochloric Acid, specifies that hydrochloric acid emissions shall not exceed 100 ppm (dry) corrected to 7% O_2 for combustion sources, including both internal and external combustion units. Since Arclin burns only pipeline-grade natural gas, the facility is incapable of violating the standard while complying with the other requirements in the permit. Therefore, the permit does not contain additional monitoring requirements.

Changes in the AOP Renewal: No changes.

9.8 Maintain Equipment in Good Working Order (Condition 1.12)

PSCAA Regulation I, Section 9.20(b), Maintenance of Equipment, requires Arclin, Inc. to maintain equipment or control equipment not subject to Section 9.20(a) in good working order. Section 9.20(a) applies to sources that received a Notice of Construction Order of Approval under PSCAA Regulation I, Article 6. Since it applies to specific emission units, Section 9.20(a) requirements are included in Section 2 of the permit.

Changes in the AOP Renewal: The specific requirements for the O&M Plan in the Agency's Regulation 1, section 7.09(b) have been explicitly included in the permit at EPA's request as new condition 1.19. This new condition was added to the compliance method for conditions 1.12 and 1.13.

The facility-wide inspections provide monitoring of the general effectiveness of Arclin's O&M Plan. This general monitoring and compliance with the O&M Plan provides sufficient monitoring criteria to certify that the equipment has been maintained in good working order. However, PSCAA reserves the right to evaluate the maintenance of each piece of equipment to determine if it has been maintained in good working order.

9.9 O&M Plan (Condition 1.13)

In accordance with PSCAA Regulation I, Section 7.09(b), General Reporting Requirements for Operating Permits – Operation and Maintenance Plan, Arclin is required to develop and implement an O&M Plan to assure continuous compliance with PSCAA Regulations I, II, and III. The requirement specifies that the Plan shall reflect good industrial practice, but does not define how to determine good industrial practice. To clarify the requirement, PSCAA added that, in most instances, following the manufacturer's operations manual or equipment operational schedule, minimizing emissions until the repairs can be completed, and taking measures to prevent recurrence of the problem may be considered good industrial practice. This language is consistent with the Ecology requirement in WAC 173-400-101(4). PSCAA also added language establishing criteria for determining if good industrial practice is being used. These include, but are not limited to, monitoring results, opacity observations, review of operations and maintenance procedures, and inspections of the emission unit or equipment. PSCAA added this wording in response to Washington State court decision, Longview Fibre Co. v. DOE, 89 Wn. App. 627 (1998), which held that similar wording was not vague and gave sufficient notice of the prohibited conduct.

As described in Condition 5.5, Arclin must report to PSCAA all deviations, including any instances where it failed to promptly repair any defective equipment. In addition, Arclin has the right to claim

certain problems were a result of an emergency (Condition 5.14) or unavoidable (Conditions 5.15 – 5.19).

Changes in the AOP Renewal: The specific requirements for the O&M Plan in the Agency's Regulation 1, section 7.09(b) have been explicitly included in the permit at EPA's request as new condition 1.19. This new condition was added to the compliance method for conditions 1.12 and 1.13.

Following these requirements demonstrates that Arclin has properly implemented the O&M Plan, but it does not prohibit PSCAA or EPA from taking any necessary enforcement action to address violations of the underlying applicable requirements after proper investigation.

9.10 Other Changes in the AOP Renewal

RCW 70.94.040 has been deleted from facility-wide applicable requirements. The provisions of RCW 70.94 RCW (now codified at RCW 70A.45), or the ordinances, resolutions, rules or regulations adopted thereunder are included in the permit as applicable requirements.

Regulation I, Section 6.11 has been deleted from the facility-wide applicable requirements. These provisions state that it is unlawful for any person to cause or allow the operation of a source in violation of any provision of Part 60, Title 40, of the Code of Federal Regulation (NSPS). There are currently no NSPS that apply at Arclin. Any new sources or modifications to existing sources would be required to meet applicable requirement in 40 CFR Part 60 at the time of action. If an NSPS became applicable, the Agency would include the requirements of the NSPS into the AOP and reference the Agency Authority in Regulation I, Section 6.11 with each of the requirements.

Regulation III, Section 2.02 has been deleted from the facility-wide applicable requirements. These provisions state that it is unlawful for any person to cause or allow the operation of a source in violation of any provision of Part 61 or Part 63, Title 40, of the Code of Federal Regulation (NESHAP). For NESHAP requirements, the Agency authority in Regulation III, Section 2.02 is listed with the specific NESHAP requirement as an enforceable condition.

10 Emission Unit Specific Applicable Requirements

Section 2 contains requirements that apply to specific emission units at the facility.

10.1 Requirements that Apply to Emission Unit No. 1 (Coating Lines)

The applicable requirements for Emission Unit No. 1 are listed in Table 2 of the operating permit, Conditions 2.1 through 2.19. The compliance methods specific to Emission Unit 1 are in Conditions 2.20 - 2.83.

- **Conditions 2.1:** The coating lines and associated control equipment in Emission Unit 1 are authorized under the Agency's New Source Review program - Notice of Construction Order of Approval (NOCOA) 9326 issued on 4/20/16. The pilot treater which is operated as research equipment as defined in 40 CFR 63.3310 is permitted under NOCOA 11977 issued May 29, 2020. Condition 1 of these NOCOA's specifies that approval is granted to install or establish the equipment, device or process described in accordance with the plans and specifications on file in the Engineering Division of the Agency. These are enforceable conditions of the NOCOA's which were erroneously omitted from the previous AOP renewal but have been added to this AOP renewal. This condition was added into the permit to make it clear that the facility is always required to install and establish only that which was approved by the Order of Approval. Any changes to anything that was

included in the Notice of Construction and/or Order of Approval would need to go through the New Source Review process.

- **Conditions 2.2:** NOCOA 9326, Condition 3 limits opacity from the oxidizers used to control emissions of VOCs from the coating lines. There was no monitoring identified in the NOCOA, so gap-filling applies to this condition. Because the oxidizers operate on natural gas, normal operations would result in no visible emissions. Therefore, the facility-wide monitoring in Condition 1.14 has been determined to be adequate. The facility-wide monitoring does identify an increased frequency of monitoring for coating line oxidizer stack exhausts (weekly). There was no change made to the compliance method as part of this AOP renewal.
- **Conditions 2.3:** The Agency has adopted a VOC content limit that applies to paper coating in Regulation II, Section 3.03. Based on a review of products in use, Arclin is able to meet the 2.9 lb/gal limit, but Arclin requested recognition in NOCOA 9326 that usage of a higher VOC coating (in past, up to 20% higher than 2.9 lb/gal) controlled by an oxidizer with 95-98% control would be an acceptable alternative means of compliance. The Agency approved use of control equipment as an alternative means of compliance and this condition has been included in the AOP. There are no changes in this renewal.
- **Conditions 2.4 – 2.6:** The requirements for the VOC emission limits a specified in NOCOA 9326 have not changed, but the Agency determined that 40 CFR Part 64 CAM applied to these VOC limits. For this AOP renewal, CAM monitoring requirements are included in the compliance method. The monitoring approach, quality assurance and control procedures, obligation and proper maintenance of monitoring equipment refer to the NESHAP requirements as presumptively acceptable monitoring.
    - **Condition 2.4 VOC CAM:** For the thermal oxidizer on Coating Line 1, the operating limits in Condition 2.16(a) must be established as required in Condition 2.28. These operating limits are used to assure compliance with the HAP limits in the NESHAP and the VOC limits in the NOCOA (CAM). The operating limit is based on the 3-hour average combustion temperature in the thermal oxidizer as established in the most recent performance test demonstrating compliance with the emission limits. The monitoring approach selected requires Arclin to conduct monitoring as specified in Conditions 2.34 through 2.43. Condition 2.34 requires monitoring continuously whenever Coating Line 1 is in operation. Conditions 2.35 and 2.36 provide requirements for the Continuous Parameter Monitoring System (CPMS) – temperature monitoring with continuous recording. For temperature sensors, Arclin must meet the requirements in Conditions 2.37 through 2.39 which specifies quality control program options, validation checks, routine inspection of temperature sensor components. Condition 2.40 addresses data recovery. Condition 2.41 and 2.42 specify how to calculate the hourly average and 3-hour average and Condition 2.43 specifies recordkeeping requirements. Based on a thorough review of these NESHAP requirements, the Agency determined using this to satisfy the requirements in CAM is appropriate. Condition 2.76 was added to define what an excursion is, and Condition 2.79 specifies the required response to an excursion as required by CAM. Condition 2.80 specifies Arclin must develop a QIP if excursions exceed 5% duration of the operating time during any semiannual reporting period. Finally, Conditions 2.81 through 2.83 include the required reporting, recordkeeping and criteria to be used to determine if there is a need for improved monitoring.

- **Condition 2.5 VOC CAM:** For the catalytic oxidizer on Coating Line 3, the operating limits in Condition 2.17(a) must be established as required in Condition 2.29. These operating limits are used to assure compliance with the HAP limits in the NESHAP and the VOC limits in the NOCOA (CAM). The operating limit is based on the 3-hour average temperature at the inlet to the catalytic oxidizer as established in the most recent performance test demonstrating compliance with the emission limits. For catalytic oxidizers, there is also a second operating limit identified – the temperature rise across the catalyst. However, based on previous testing, Arclin has find that this differential temperature is often very low so may not meet the criteria for use. Therefore, Arclin has chosen to use the alternative to monitoring the temperature difference across the catalyst bed, but instead monitors the inlet temperature and implements a site-specific inspection and maintenance plan to assure compliance with both the NESHAP and NOCOA emission limits. The monitoring approach selected requires Arclin to conduct monitoring as specified in Conditions 2.47 through 2.55. Condition 2.47 requires monitoring continuously whenever Coating Line 3 is in operation. Conditions 2.48 and 2.49 provide requirements for the Continuous Parameter Monitoring System (CPMS) – temperature monitoring with continuous recording. For temperature sensors, Arclin must meet the requirements in Conditions 2.50 through 2.52 which specifies quality control program options, validation checks, routine inspection of temperature sensor components. Condition 2.53 addresses data recovery. Condition 2.54 and 2.55 specify how to calculate the hourly average and 3-hour average and Condition 2.56 specifies recordkeeping requirements. Based on a thorough review of these NESHAP requirements, the Agency determined using this to satisfy the requirements in CAM is appropriate. Condition 2.77 was added to define what an excursion is, and Condition 2.79 specifies the required response to an excursion as required by CAM. Condition 2.80 specifies Arclin must develop a QIP if excursions exceed 5% duration of the operating time during any semiannual reporting period. Finally, Conditions 2.81 through 2.83 include the required reporting, recordkeeping and criteria to be used to determine if there is a need for improved monitoring.
- **Condition 2.6 VOC CAM:** For the catalytic oxidizer on Coating Line 4, the operating limits in Condition 2.18(a) must be established as required in Condition 2.29. These operating limits are used to assure compliance with the HAP limits in the NESHAP and the VOC limits in the NOCOA (CAM). The operating limit is based on the 3-hour average temperature at the inlet to the catalytic oxidizer as established in the most recent performance test demonstrating compliance with the emission limits. For catalytic oxidizers, there is also a second operating limit identified – the temperature rise across the catalyst. However, based on previous testing, Arclin has find that this differential temperature is often very low so may not meet the criteria for use. Therefore, Arclin has chosen to use the alternative to monitoring the temperature difference across the catalyst bed, but instead monitors the inlet temperature and implements a site-specific inspection and maintenance plan to assure compliance with both the NESHAP and NOCOA emission limits. The monitoring approach selected requires Arclin to conduct monitoring as specified in Conditions 2.47 through 2.55. Condition 2.47 requires monitoring continuously whenever Coating Line 3 is in operation. Conditions 2.48 and 2.49 provide requirements for the Continuous Parameter Monitoring System (CPMS) – temperature monitoring with continuous recording. For temperature

sensors, Arclin must meet the requirements in Conditions 2.50 through 2.52 which specifies quality control program options, validation checks, routine inspection of temperature sensor components. Condition 2.53 addresses data recovery. Condition 2.54 and 2.55 specify how to calculate the hourly average and 3-hour average and Condition 2.56 specifies recordkeeping requirements. Based on a thorough review of these NESHAP requirements, the Agency determined using this to satisfy the requirements in CAM is appropriate. Condition 2.78 was added to define what an excursion is, and Condition 2.79 specifies the required response to an excursion as required by CAM. Condition 2.80 specifies Arclin must develop a QIP if excursions exceed 5% duration of the operating time during any semiannual reporting period. Finally, Conditions 2.81 through 2.83 include the required reporting, recordkeeping and criteria to be used to determine if there is a need for improved monitoring.

- **Conditions 2.7:** NOCOA 9326 requires Arclin to maintain documentation confirming the capture system for each oxidizer meets the requirements for a permanent total enclosure. This is a standalone permit condition and separate from the VOC destruction efficiency determined to be BACT for each oxidizer. There is similar requirement in the NESHAP, but the organic HAP limit was established based on the destruction efficiency considering both the capture system efficiency and the control equipment efficiency. Because of the differences, the Agency has kept the monitoring associated with the NOCOA permit condition and the NESHAP monitoring in separate conditions instead of attempting to streamline these requirements. For this condition, there is no change in this AOP renewal.
- **Conditions 2.8 – 2.9:** The Agency determined that the pilot treater was not exempt from new source review requirements even though it is exempt from the NESHAP requirements. NOCOA 11977 requires continued operation in a manner consistent with the definition of research and laboratory equipment since that was the basis of our review. For this AOP renewal, CAM monitoring requirements are included in the compliance method.
    - **Condition 2.9 VOC CAM:** For the catalytic oxidizer on the pilot treater, see the discussion under Condition 2.6 for CAM requirements since both Coating Line 4 and the pilot treater have emissions controlled by the same catalytic oxidizer. However, the pilot treater is not subject to the NESHAP, but just the VOC limits in the NOCOA.
- **Conditions 2.10:** Regulation I, Section 9.20(a) is a general requirement requiring equipment permitted under an NOCOA to be maintained and operated in good working order. The Agency determined the general opacity monitoring, VOC source testing, thermal oxidizer monitoring, catalytic oxidizer monitoring, and capture system monitoring provide adequate monitoring to assure this equipment is maintained in good working order.
- **Conditions 2.11 – 2.14:** These requirements are associated with the general provisions that apply because Arclin. This includes a requirement to comply with the applicable general provisions according to 40 CFR Table 2 to Subpart JJJJ – Applicability of 40 CFR Part 63 General Provisions to Subpart JJJJ. This table was updated July 9, 2020 and November 19, 2020. In this AOP renewal, the updated table has been incorporated into the operating permit in this renewal as Attachment 3 to the permit. In addition, updates in

the permit have been made that reflect these revisions to what sections of the General Provision are applicable when language has specifically been included in the permit.

- **Conditions 2.15 – 2.19:** The requirements have been updated to reflect the updates to the NESHAP requirements in 40 CFR Part 63, Subpart JJJJ NESHAP. There were significant changes to the NESHAP in 2020 which have been incorporated as part of this second renewal process. Changes that were included in Conditions 2.15 – 2.19 are summarized below:
    - 40 CFR 63.3320 What Emission Standards Must I Meet? This section of the NESHAP was updated July 9, 2020 to specify limits on organic HAP emissions specified in this section apply for all periods of operations, including startup, shutdown and malfunction (SSM). In the original NESHAP, the standard did not apply during SSM. This change has been incorporated into the permit as part of this renewal process.
    - 40 CFR 63.3321 What Operating Limits Must I Meet? This section was updated on July 9, 2020 to add some clarifying language. The wording in the permit was updated to be consistent with this revised language in the NESHAP.
    - 40 CFR 63.3340 What General Requirements Must I Meet To Comply With The Standards? This section was updated July 9, 2020 to add language to reflect that the emission standards apply during periods of SSM after July 9, 2021 and to specify that performance tests must be conducted. This was a significant change with almost all new language included in this section. The language in Conditions 2.16 through 2.18 have been updated to specify emission standards apply at all times, including SSM to be consistent with this updated rule language. In addition, Condition 2.19 language has been updated to reflect the rule language in 40 CFR 63.3340(b).

10.1.1 Compliance Methods and Requirements (Conditions 2.20 – 2.83)

Conditions 2.20 through 2.83 contain the compliance methods and requirements for emission monitoring, NESHAP, recordkeeping and reporting, and Compliance Assurance Monitoring.

Changes in the AOP Renewal:

- The compliance methods have been updated to reflect the updates to the NESHAP requirements in 40 CFR Part 63, Subpart JJJJ NESHAP. As noted previously, there were significant changes to the NESHAP in 2020 which have been incorporated as part of this second renewal process. A summary of these changes and how they impact the AOP renewal are included below:
    - 40 CFR 63.3330 When Must I Comply? This section was updated July 9, 2020 to add language specifying that before July 9, 2021, the applicable emission limit did not apply during period of SSM but after that date, the emission limit does apply. There is also a requirement that was added for a periodic emissions performance test which must be performed by July 9, 2023 or within 60 months of the previous test. Coating Line 1 with the RTP will need to be retested prior to July 9, 2023. There is also new language specifying electronic submittal to CEDRI for reporting. This updated language has been included in the permit as part of the renewal process.

- 40 CFR 63.3340 What General Requirements Must I Meet To Comply With The Standards? This section was updated July 9, 2020 to add language to reflect that the emission standards apply during periods of SSM after July 9, 2021 and to specify that performance tests must be conducted. This was a significant change with almost all new language included in this section. This new language has been incorporated into the permit as part of this renewal process. For compliance methods in Conditions 2.24 and 2.25, language in 40 CFR 63.3340 specifies representative conditions during the performance testing.
- 40 CFR 63.3350 If I Use A Control Device To Comply With The Emission Standards What Monitoring Must I Do? This section was updated July 9, 2020. The language was updated throughout this section for clarity. A new section was added that requires the facility to develop a quality control program for temperature sensors which are used at Arclin – several methods for verifying the temperature sensors are operating properly have been added. These options for quality control are also allowed for CAM monitoring for VOC emission limits associated with NOCOA permits. Some of the requirements to calibrate the chart recorder have been eliminated which does impact Arclin's operations. All these changes have been incorporated into the permit as part of the renewal process.
- 40 CFR 63.3360 What Performance Tests Must I Conduct? This section was updated July 9, 2020 and significant changes were made including requires periodic performance testing every five years, adding language regarding the testing procedures, and specifying representative conditions for testing. The regulation was also change to allow combustion temperatures in the RTO combustion chamber and at the inlet to the catalytic oxidizer to be up to 50 F below the average temperatures measured during the source test. The rule used to require Arclin to maintain the average temperature measured during the test so this change provides flexibility for Arclin to maintain slightly lower temperatures in both their RTO and catalytic oxidizer. All these changes have been incorporated into the permit as part of this renewal process.
- 40 CFR 63.3370 How Do I Demonstrate Compliance with the Emission Standards? This section was updated July 9, 2020. Language was added to specify compliance needs to be demonstrated on a monthly basis. The regulation was silent on this before. The regulation also now specifies that there is no operating limit deviations if the thermal oxidizer and catalytic oxidizers are operating with the established temperature requirements. Changes that apply to Arclin have been incorporated into the permit as part of this renewal process.
- 40 CFR 63.3400 What Notifications and Reports Must I Submit? This section was updated on July 9 and November 19, 2020. The regulation has been updated to require compliance reports be submitted to EPA's electronic database, CEDRI through CDX, once the template is available. The regulation has details about this electronic reporting, and extensions for CDX/CEDRI outage or force majeure events. There is also updates to the language to clarify when a deviation must be reported and updates to what must be reported. The regulation has also been updated to specify that catalyst activity test results do not need to be submitted, when performance tests must be submitted, and that data collected using test methods supported by EPA's Electronic Reporting Tool (ERT) must be submitted to EPA via CEDRI. New sections have been added on Confidential Business

Information and performance evaluations reports. Finally, this section has been updated to clarify that SSM reports are not required after July 9, 2021. The changes to this section of the regulation have been incorporated into the permit as part of this renewal process.

- 40 CFR 63.3410 What Records Must I Keep? This section was updated July 9, 2020. Some clarifying language has been added and new language has been added which specifies records that must be maintained for deviations from an operating limit and records of results from the annual catalyst activity test since that is applicable to Arclin. It also specifies that any records required to be maintained that are submitted electronically to EPA's CEDRI may be maintained in electronic format. Changes that apply to Arclin have been incorporated into the permit as part of this renewal process.
- 40 CFR 63.3420 What Authorities May Be Delegated To The States? This section was updated July 9, 2020. Clarifying language was added to this section for authority not delegated to state, local or tribal agencies which include approval of alternative test methods for organic HAP content in 40 CFR 63.3360(c) and volatile matter determination under 40 CFR 63.3360(d).

In addition to the changes in the NESHAP, the Agency has changed the formatting and added general requirements to make this section of the AOP renewal more clear for required compliance methods:

- **Condition 2.20:** In addition to the test methods used to demonstrate compliance, the AOP renewal includes general source test requirements in Regulation I, Section 3.07 and the general provisions of the NESHAP. Although this was covered in standard terms, these changes make it clear that Arclin needs to notify that Agency at least 21 days prior to any compliance test to be in compliance with Regulation I, Section 3.07, but 60 calendar days prior to meet the NESHAP requirements. These requirements have not been streamlined, but instead, identified as separate requirements. Arclin must also develop and submit a test plan since the Agency determined review of a source test plan is important to verify the test will collect all information necessary to demonstrate compliance with both VOC and HAP limits. The NESHAP specifies submittal of the test plan only if requested by the Agency. This condition also covers both the reporting requirements in Agency regulations and the electronic reporting required in the NESHAP for periodic source testing.
- **Condition 2.21:** The updated NESHAP now requires periodic testing of the thermal oxidizer. Testing must be performed by July 9, 2023 or within 60 months of the previous test. Arclin has done several compliance tests on the thermal oxidizer:

Date	Test Method	Results
10/19/2005	NESHAP compliance test requiring 95% overall control or outlet concentration <20 ppmvd, as carbon	Outlet concentration was 16 ppmvd, as carbon with destruction efficiency of 99.7%. Average combustion temperature was 1755 F.
02/03/2006	NESHAP compliance test requiring 95% overall control or outlet	Compliance with the NESHAP standard but established new minimum RTO combustion temperature. The chamber

Date	Test Method	Results
	concentration <20 ppmvd, as carbon	has two thermocouples. Average was 1653 F.
07/14/2016	Test conducted to lower minimum temperature of RTO.	Compliance with NESHAP with average combustion temperature of 1627 F

The existing AOP requires 3-hour average combustion temperature remain above 1627 F based on this test result, but the updated NESHAP and AOP renewal will lower this to 1577 F. A new average combustion temperature minimum will be reestablished in the next compliance test.

The next compliance test for the thermal oxidizer on Line 1 is due no later than July 9, 2023. Tests must be conducted in accordance with Conditions 2.24 through 2.25 which specify representative conditions, Condition 2.26 which specifies test methods and the requirement to conduct three test runs with each test run lasting at least 1 hour, and Condition 2.26 which specifies process information that must be recorded during the test. Condition 2.28 specifies the applicable operating limits that must be established during the performance test.

- **Condition 2.22:** The updated NESHAP now requires periodic testing of the catalytic oxidizers. The NOCOA for these units already required testing every 5 years so this is not a new requirement for the catalytic oxidizers, but requires the tests to meet the requirements of the NESHAP. Testing must be performed by July 9, 2023 or within 60 months of the previous test. Arclin has done several compliance tests on the catalytic oxidizers:

Date	Test Method	Results
5/12/2005	NOCOA compliance tests on Lines 3 and 4 catalytic oxidizers requiring 95% overall control or outlet concentration <20 ppmvd, as carbon.	Line #3 catalytic afterburner averaged 99.2% destruction, with an inlet concentration of 781 ppm and an outlet concentration of 7 ppm. Line #4 catalytic afterburner averaged 99.8% destruction, with an inlet concentration of 2044 ppm and an outlet concentration of 5 ppm.
12/05/2005	NESHAP compliance tests on Lines 3 and 4 catalytic oxidizers requiring 95% overall control or outlet concentration <20 ppmvd, as carbon.	Compliance with the NESHAP standard. Average catalyst inlet temperature for Line 3 was 648 F. Average catalyst inlet temperature for Line 34 was 599 F.

Date	Test Method	Results
10/22/2010	Compliance tests on Lines 3 and 4 catalytic oxidizers required by NOCOA.	The NOCOA required use of Test Method 308 so was not considered a NESHAP compliance test. The tests demonstrated compliance with the NOCOA destruction efficiency requirements but did not establish new average catalyst inlet temperatures.
09/15/2015	Compliance tests on Lines 3 and 4 catalytic oxidizers required by NOCOA.	The NOCOA required use of Test Method 308 so was not considered a NESHAP compliance test. The tests demonstrated compliance with the NOCOA destruction efficiency requirements but did not establish new average catalyst inlet temperatures.
10/05/2020	Compliance tests on Lines 3 and 4 catalytic oxidizers required by NOCOA.	The NOCOA was updated to allow for consistent test method with NESHAP requirements. This test was conducted to demonstrate compliance with the NESHAP and the NOCOA using Method 25A. The average temperature at the catalyst inlet for Line 3 was 690 F. The average temperature at the catalyst inlet for Line 4 was 650 F.

The existing AOP requires 3-hour average combustion temperature at the inlet to the catalyst for the oxidizer on Line 3 remain above 690 F based on this test result, but the updated NESHAP and AOP renewal will lower this to 640 F. The existing AOP requires 3-hour average combustion temperature at the inlet to the catalyst for the oxidizer on Line 3 remain above 690 F based on this test result, but update NESHAP and AOP renewal will lower to 640 F. The existing AOP requires 3-hour average combustion temperature at the inlet to the catalyst for the oxidizer on Line 4 remain above 650 F based on this test result, but update NESHAP and AOP renewal will lower to 600 F. New average combustion temperature minimums at the inlet to each catalyst will be reestablished in the next compliance test.

The next compliance test for the catalytic oxidizers on Lines 3 and 4 is due 10/05/2025. Tests must be conducted in accordance with Conditions 2.24 through 2.25 which specify representative conditions, Condition 2.26 which specifies test methods and the requirement to conduct three test runs with each test run lasting at least 1 hour, and Condition 2.27 which specifies process information that must be recorded during the test. Condition 2.29 specifies the applicable operating limits that must be established during the performance test.

In addition to the inlet temperature to the catalyst bed, the NESHAP specifies that the 3-hour average temperature difference across the catalyst bed be maintained at no less than 80% of the average temperature differential measured during the most recent test,

provided the minimum temperature is always 50 F above the catalyst's ignition temperature. During testing, Arclin determined that the temperature rise across the catalyst was very low. Therefore, they have demonstrated compliance using the alternative to monitoring the temperature difference allowed by the NESHAP. This requires a site-specific inspection and maintenance plan. There is no change regarding this use of the site-specific inspection and maintenance plan in this AOP renewal.

- **Condition 2.30:** The language describing establishment of a control destruction efficiency curve for estimating emissions that occur during deviation of the 3-hour operating parameters has been added in the AOP renewal. This is new to this AOP renewal, but directly from the NESHAP requirements.
- **Conditions 2.31 and 2.32:** The language in the AOP renewal reflects the updated NESHAP language. The NESHAP provides an option to calculate capture efficiency, but Arclin is required by the current NOCOA's to have permanent total enclosures for each oxidizer. There is no change from the existing AOP. The NESHAP option to calculate capture efficiency and calculate overall organic HAP control efficiency (Condition 2.32) are included in the AOP renewal, but it is anticipated that Arclin will continue to demonstrate compliance with the permanent total enclosure requirement.
- **Condition 2.33:** The updated NESHAP allows volatile matter retained in the coated web and not emitted to the atmosphere to be taken into account when determining compliance with emission standards. This language has been added to the AOP as part of this renewal process. Arclin has not indicated any volatile matter is retained in the coated web, but this option would be available in the future, especially if there are product changes.
- **Conditions 2.34 through 2.46:** The language in the AOP renewal includes the language in the updated NESHAP that pertains to thermal oxidizer monitoring. This language is taken directly from the NESHAP. The monitoring is also referenced for the Part 64 CAM used to assure compliance with the VOC destruction efficiency which applies to the thermal oxidizer. The NESHAP monitoring is presumptively acceptable monitoring for the VOC limits in the NOCOA.
- **Conditions 2.47 through 2.58:** The language in the AOP renewal includes the language in the updated NESHAP that pertains to catalytic oxidizer monitoring. This language is taken directly from the NESHAP. The monitoring is also referenced for the Part 64 CAM used to assure compliance with the VOC destruction efficiency which applies to the thermal oxidizer. The NESHAP monitoring is presumptively acceptable monitoring for the VOC limits in the NOCOAs.
- **Conditions 2.59 through 2.61 and 2.63:** The language in the AOP renewal includes the language in the updated NESHAP that pertains to capture system monitoring. This language is taken directly from the NESHAP. Changes in the NESHAP are reflected in these conditions for this AOP renewal.
- **Condition 2.62:** The language in the AOP renewal includes the language in the NOCOA which requires Arclin to maintain documentation confirming the capture system associated with each oxidizer is a permanent enclosure. There is no change in this AOP renewal.
- **Conditions 2.64 through 2.71:** The language in the AOP renewal includes the language in the updated NESHAP that pertains to recordkeeping. There were significant changes made that have been incorporated in the AOP as part of this renewal process.

- **Conditions 2.72 through 2.74:** The language in the AOP renewal includes the language in the updated NESHAP that pertains to reporting. There were significant changes made that have been incorporated in the permit. This includes requirements for electronic submission of notifications or reports to EPA via CEDRI. The Agency regulations still require electronic submittals through our facilitysubmittal@pscleanair.gov e-mail in addition to paper copies.
- **Conditions 2.75 through and 2.83:** These conditions have been added to AOP through this renewal process to address the requirements of 40 CFR Part 64, CAM. The NESHAP monitoring is presumptively acceptable monitoring for assuring compliance with the VOC limits in the NOCOA's. Therefore, many of the conditions reference other conditions in the permit. CAM applies to Coating Lines 1, 3 and 4 and the pilot treater with respect to VOC emission limitations identified in Condition 2.4, 2.5, 2.6 and 2.9 of the permit. Continuous monitoring of the combustion temperature monitoring in the oxidizers is used to assure continuous compliance with the VOC limits.

10.2 Requirements that Apply to Emission Unit No. 2 (Dry Mixing Operations)

The requirements that apply specifically to Emission Unit No. 2 are listed in Table 3 of the operating permit. This emission unit includes a manual mixing operation and an enclosed mixing kitchen referred to as IFA 3. Conditions 2.84 through 2.94 in Table 3 are based on conditions from NOCOA 12268 which applies to the manual mixing operation and NOC 11889 which applies to IFA 3. In addition, Agency Regulation I, Section 9.20(a) requires Arclin to maintain equipment or control equipment that received a Notice of Construction Order of Approval in good working order. Since only Section 9.20(b) is included in the general facility-wide requirements in the operating permit, Section 9.20(a) requirements are listed in the emission unit-specific requirements (Condition 2.95 for Emission Unit No. 2).

Changes in the AOP Renewal: The dry mixing operations have been added since the last AOP renewal, so all applicable requirements have been added as part of this AOP renewal. The addition of the dry mixing operations were considered off-permit changes.

10.2.1 Compliance Methods and Requirements (Conditions 2.96 – 2.100)

Conditions 2.96 through 2.100 contain the compliance methods and requirements which are based on the conditions from the NOCOA. The compliance method was determined to be sufficient to assure compliance with the emission limitations in the permit.

Changes in the AOP Renewal: The dry mixing operations have been added since the last AOP renewal, so all applicable requirements have been added as part of this AOP renewal. The dry mixing operations have been added since the last AOP renewal, so all applicable requirements have been added as part of this AOP renewal.

10.3 Recordkeeping Requirements

A summary of specific recordkeeping requirements is included in the table below:

General and NOCOA	Records of opacity inspections	Condition 1.14
	Record of facility-wide inspections	Condition 1.15
	Records of complaints received and response	Condition 1.16

	Records supporting O&M Plan actions	Condition 1.20
	Records documenting capture system for each oxidizer is a permanent total enclosure	Condition 2.62
	Dry Powder Monitoring	Condition 2.99
	Inspection for Dry Powder Mixing Operations	Condition 2.100
	Record of off-permit changes	Condition 4.22
	Contemporaneous record of all deviations	Condition 5.5
	Records of the type and quantity of emissions	Condition 6.2
	Changes made that result in emissions of a regulated air pollutant	Condition 6.3
	Records to support emission inventory calculations	Condition 6.21
	Records to support GHG emissions calculations	Condition 6.22
Paper Coating NESHAP	General compliance documentation required by the NESHAP	Condition 2.64
	Records of all required maintenance performed on oxidizers and monitoring equipment	Condition 2.65
	Records of each period which a continuous monitoring system (temperature monitoring system) is malfunctioning or inoperative, including out-of-control periods	Condition 2.66
	Measurements needed to demonstrate compliance with NESHAP including 15-minute averages of temperature monitoring system data, performance measurements, evaluation measurements	Condition 2.67
	• All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods); • Each period which a CMS is malfunctioning or inoperative, including out-of-control periods); • The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks; • The date and time identifying each period during which the CMS was out of control; • The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in 40 CFR Part 63, Subpart JJJJ, that occurs during startups, shutdowns, and malfunctions of the affected source; • The specific identification (i.e., the date and time of	Condition 2.68

	commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in 40 CFR Part 63, Subpart JJJJ, that occurs during periods other than startups, shutdowns, and malfunctions of the affected source; the nature and cause of any malfunction (if known); • The corrective action taken or preventive measures adopted; the nature of the repairs or adjustments to the CMS that was inoperative or out of control; and • The total process operating time during the reporting period; and all procedures that are part of a quality control program developed and implemented for CMS	
	• All results of performance tests, CMS performance evaluations; • All measurements as may be necessary to determine the conditions of performance tests and performance evaluations; • All CMS calibration checks; • All adjustments and maintenance performed on CMS, and • All documentation supporting initial notifications and notifications of compliance status	Condition 2.69
	• Control device and capture system operating parameter data in accordance with the requirements in this permit; • Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results; • Emission factor development calculations and HAP content for coating materials used to develop the emission factor as needed for Condition **Error! Reference source not found.**; • Records of results from the annual catalyst activity test, if applicable; and • Any records required to be maintained that are submitted electronically via EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to the Agency or the EPA as part of an on-site compliance evaluation.	Condition 2.70
	For each deviation from an operating limit: • Total operating time of the coating line • Date, time duration and cause of deviations • If failed to meet emission limit, record estimate of HAP or VOC emitted in excess of the emission limit for the month and record used to estimate emissions and record action take to minimize emissions.	Condition 2.71

CAM	Records of the monitoring data described in this section, corrective actions taken, any QIP prepared under Condition 2.80, and any activities taken to implement a QIP	Condition 2.82

10.4 Reporting and Notification Requirements

A summary of routine reporting and notification requirements is included in the table below:

Report	Contents	Due	Permit Term
Deviation Report	All instances of deviation from the permit	If potential threat to human health or safety, ASAP but no later than 12 hours after discovered. Otherwise, no later than 30 days after end of month during which deviation occurred. May certify in semi-annual report. For CAM, summary information of number, duration and cause of each excursion and the corrective action taken, summary information on every failure to meet the date availability requirements, and a description of actions taken to implement a QIP during the reporting period, if required.	Condition 2.81 Condition 5.5
Certification of Reports	Summarizes each permit report during 6-month period with certification of responsible official (as applicable)	No later than July 31 for reporting period between January 1 through June 30. No later than January 31 for reporting period between July 1 through December 31	Condition 5.4
Annual Compliance Certification	Certification of compliance with permit terms and conditions	By February 28 for the reporting period between January 1 through December 31	Condition 5.3
Semiannual Paper Coating NESHAP Compliance Report	Reporting specified in NESHAP	No later than July 31 for reporting period between January 1 through June 30. No later than January 31 for reporting period between July 1 through December 31	Condition 2.74
Changes to Notifications	Change to information provided un 40 CFR 63.9	Within 15 calendar days after the change	Condition 2.73
CAM Report	Reporting required by CAM	Monthly deviation report required by Condition 5.5 if required	Condition 2.81
Source Test Notification	Notification of any compliance test	At least 21 days prior to compliance test, including site-specific test plan	Condition 2.20

		If conducted to demonstrate compliance with NESHAP limits, at least 60 calendar days before the performance test	
Source Test Report	Results of any NESHAP compliance Test, including process information, operating limits and destruction efficiency across oxidizer	Within 60 days of completing the test	Conditions 2.20
Compliance Test Report	Results of any compliance test	Within 60 days of completing the test	Condition 5.32
Annual Emission Inventory	Facility emission inventory	As required by Agency	Condition 6.21
Reporting of Greenhouse Gases	Greenhouse Gas Report	As required by Ecology	Condition 6.22

11 Standard Terms and Conditions

Some of the requirements that are more general in nature are included in Section 3, Standard Terms and Conditions. This section also contains the standard terms and conditions specifically listed in WAC 173-401-620. These terms have been updated to reflect the most recent rules and permit language.

12 General Permitting Requirements

Section 4 of the permit includes the requirements for renewing, revoking, reopening, amending, and modifying the operating permit. It also includes the new source review requirements, both minor NSR and Prevention of Significant Deterioration requirements. This section has been edited to more accurately reflect the Air Operating Permit regulations.

13 General Compliance Requirements

General compliance requirements are included in Section 5 of the permit. These include certification and reporting requirements, requirements associated with inspections and investigations, and compliance testing requirements. Actions required for an affirmative defense for emergencies or excess emissions are also included in this section. Finally, this section provides a table summarizing the effective date of the regulations in the permit at the time of permit issuance. Regulations that are approved into the Washington State Implementation Plan (SIP) are federally enforceable. In some cases, there are two versions of the regulation because the newer version has not been adopted into the SIP. In this case, the older version of the regulation would be federally enforceable, and the current rule would only be enforceable by the Agency (or State). The SIP is updated on a somewhat regular basis and what is contained in the SIP can change over time.

Changes in the AOP Renewal: Data recovery requirements were previously listed in Section V.Q of the AOP and are now listed in Condition 5.10. Language was added to clarify that data do not need to be collected during any period that the monitored equipment does not operate. In

addition, language was added requiring that the deviation reports required by Condition 5.5 include an explanation of each instance in which the permittee failed to meet the data recovery requirements of this condition for any monitored process or parameter and any instances of reconstructing lost data.

14 Generally Applicable Requirements

Some of the requirements that are generally applicable are included in Section 6 of the permit. This includes record retention, asbestos requirements, open burning requirements, stratospheric ozone and climate protection requirements, chemical accident prevention provisions in 40 CFR Part 68, concealment and masking, tampering, RACT requirements, annual emission reporting requirements, greenhouse gas reporting requirements and non-road engine notification requirements.

15 Obsolete Requirements

Some of the requirements in the NESHAP are obsolete as summarized below:

- The initial notification submitted on 12/6/04 in accordance with 40 CFR 63.9(b) as required by 40 CFR 63.3400(b)(1). This is a one-time notification requirement.
- The (revised) Notification of Compliance Status report was received by the Agency on March 10, 2006 in accordance with 40 CFR 63.9(h) as required by 40 CFR 63.3400(e). This is a one-time requirement and has been completed.

The following Orders of Approval are also obsolete:

- Order of Approval No. 9326 was drafted to remove requirements that are now redundant with or conflict with the NESHAP standard or are otherwise obsolete, and would cancel and supersede Order of Approval Nos. 5089 (dated 10/4/93), 5181 (dated 10/6/94), 6867 (3/12/95), 7208 (dated 2/6/98), 7784 (dated 6/3/99), 9269 (7/28/05), and 9632 (8/1/07). Order of Approval No. 5181 (dated 10/6/94) had canceled and superseded Order of Approval No. 5181 (dated 11/15/93). Order of Approval No. 7208 (dated 2/6/98) had canceled and superseded Order of Approval No. 6804 (dated 2/12/97).
- Order of Approval 11889, issued to replace the manual dry powder mixing operation with the enclosed dry powder mixing operations, cancels and supersedes Order of Approval No. 11568 dated April 19, 2018.
- Order of Approval 12268, issued to increase the dry powder usage in the manual dry powder mixing operations, cancels and supersedes Order of Approval No. 12225, dated March 4, 2022.

16 Inapplicable Requirements

The requirements identified in Section 8 of the air operating permit do not apply to the facility, or to the specific emissions units identified in the permit. The permit shield applies to all requirements so identified.

- WAC 173-400-050(2) limits emissions from incinerators to 100 ppmv of total carbonyls. The catalytic and regenerative thermal oxidizers used to control VOC emissions from the coating lines are not incinerators as defined in WAC 173-400-030.
- Chapter 173-434 WAC regulates emissions from solid waste incinerator facilities. Arclin does not burn solid waste and is not an incinerator facility as defined in WAC 173-434-030.

- WAC 173-490-030(1)(f), requires registration of surface coaters. However, RCW 70.94.161(17) states:

  "RCW 70.94.151 shall not apply to any permit program source after the effective date of United States environmental protection agency approval of the state operating permit program. that registration programs adopted pursuant to 70.94.151 shall not apply to operating permit sources."

  Additionally, Chapter 173-490 WAC applies only in ozone nonattainment areas. Arclin is not located in an ozone nonattainment area.

- 40 CFR Part 60, Subparts K, Ka and Kb require controls for storage tanks. Subparts K and Ka apply to tanks storing petroleum liquids with a rated capacity greater than 40,000 gallons Subpart Kb applies to tanks storing volatile organic liquids with a rated capacity greater than or equal to 20,000 gallons. Arclin doesn't have any tanks greater than 10,000-gallon capacity.

- Regulation II, Section 3.02 applies to tanks storing VOC with a rated capacity of greater than or equal to 40,000 gallons. Arclin doesn't have any tanks greater than 10,000-gallon capacity.

- 40 CFR 63.8 contains requirements for the operation and maintenance of continuous monitoring systems (CMS). Section 63.8(a)(2), applicability, states: "*all CMS required under relevant standards shall be subject to the provisions of this section upon promulgation of performance specifications for CMS as specified in the relevant standard*." Subpart JJJJ (and the preamble in the FR notice) doesn't use the term 'performance specifications except for continuous emission monitoring systems (CEMS). Although §63.3350(e)(9) requires that thermocouples must be capable of monitoring temperature with an accuracy of +/-1% of the temperature being monitored (in degrees Celsius), there are no performance specifications in Subpart JJJJ or 40 CFR Part 60, Appendix B, yet for thermocouples or pressure differential gauges. The pertinent substantive requirements of §63.8 also appear in §63.3350 and in §63.6, and these requirements are included in the operating permit. However, 40 CFR §63.8 has been determined to be inapplicable. Similarly, 40 CFR §63.9(g) has been determined to be inapplicable since it specifies additional notification requirements for sources with continuous monitoring systems that are required to complete performance evaluations under §63.8(e).

17 Insignificant Emission Units and Activities

Section 9 of the permit addresses insignificant emission units and activities. In accordance with WAC 173-401-530(1), determination of an emission unit or activity as insignificant does not exempt the unit or activity from any applicable requirement.

An emission unit or activity is insignificant based on one or more of the criteria identified in WAC 173-401-530. This includes categorical exemption, exemption based on emissions being below emission thresholds in WAC 173-401-530(4), or exemption based on size or production rate. Activities that generate only fugitive emissions which are subject to no applicable requirement other than generally applicable requirements can also be classified as insignificant. Categorically exempt units or activities do not need to be listed in the permit application, but all others do. Arclin has identified these to be the following:

Arclin has requested that the resin tanks be listed as insignificant emission units pursuant to WAC 173-401-530(1)(c) and WAC 173-401-533(2)(c). These tanks are rated at 10,000 gallons capacity or less, have fixed roofs or lids, and store products with a vapor pressure less than 80 mm Hg at 21 degrees Celsius.

Arclin has requested that the methanol storage tank be listed as an insignificant emission unit based on emissions, pursuant to WAC 173-401-530(1)(a). The emission threshold for this tank is 0.5 ton/yr, and the actual emission estimate from the EPA's TANKS3 program is only about 0.1 ton/yr. If the emissions ever exceed 0.5 ton/yr, the operating permit will need to be modified pursuant to WAC 173-401-725.

Arclin has requested that the 12 space heaters be listed as insignificant emission units pursuant to WAC 173-401-530(1)(c) and WAC 173-401-533(2)(r). The space heaters are each rated at less than 5 MMBtu/hr and are fired exclusively on natural gas. Therefore, they are insignificant on the basis of their size.

Arclin also has requested that their analytical laboratory operations including fume hoods and vacuum pumps be listed as insignificant emission units pursuant to WAC 173-401-530(1)(c) and WAC 173-401-533(3)(c). The laboratory performs some R&D work as well as routine QA/QC on their products.

Arclin requested that dust collectors be listed as insignificant emission units pursuant to WAC 173-401-530(4). There are two dust collectors at the facility. The first is a paper collection system used to collect edge slit paper which is delivered to a collection bin before being loaded into a trash dumpster. The filter system is used to ensure no dust is released during processing. The equipment is exempt from Notice of Construction permitting in accordance with Regulation I, Section 6.03(c)(43). The second is a dust collection system used to prevent sawdust from a panel saw used to cut plywood panels from entering the production area which would provide unacceptable product contamination. This unit is also exempt from Notice of Construction permitting requirements in accordance with Regulation I, Section 6.03(c)(39).

Insignificant emission units and activities that are categorically exempt under WAC 173-401-530(1)(b) and WAC 173-401-532 include the following:

Unit	Basis for IEU Designation
Lawn and Landscaping Activities	WAC 173-401-532(43)
Comfort Air Conditioning	WAC 173-401-532(46)
Vents/Bathroom Facilities	WAC 173-401-532(48)
Fire Fighting and Safety Equipment	WAC 173-401-532(52)
Fuel and Exhaust Emissions from Parking Lot	WAC 173-401-532(54)
Repair and Maintenance	WAC 173-401-532(74)
Trucks, Forklifts, Autos, etc.	WAC 173-401-532(10)
Plant Upkeep/Painting	WAC 173-401-532(33)
Cleaning of Paved Surfaces	WAC 173-401-532(35)
Portable Drums and Totes	WAC 173-401-532(42)
Office Activities	WAC 173-401-532(49)
Personal Care Activities	WAC 173-401-532(50)
Air Compressors	WAC 173-401-532(88)

Monitoring requirements for insignificant emission units are detailed in Condition 1.17 of the permit. In essence, Arclin will be required to use good industrial practices to maintain insignificant emission units, and to promptly repair defective equipment or shut down the unit until defective equipment can be repaired. Arclin will not have to keep records of maintenance of insignificant emission units except when such equipment are inspected and a problem requiring prompt repair is discovered during a quarterly plant-wide inspection.

18 Public Comments and Responses during renewal process

The draft permit and draft statement of basis were on public notice from <dates>. The notice was published in two newspapers, the Tacoma News Tribune and the Daily Journal of Commerce. In addition it was published in the Department of Ecology's Permit Register and posted on the Agency's website.

<comments?>.

19 EPA Comment Period

<include discussion after EPA review>

Attachment 1

Arclin Compliance Assurance Monitoring (CAM) Plan

Compliance Assurance Monitoring (CAM) Plan VOC Emission Limits from Coating Lines

BACKGROUND

I. EMISSIONS UNIT

Description: Coating Lines 1, 3 and 4

Facility: Arclin Surfaces

II. APPLICABLE REGULATIONS, EMISSION LIMIT, AND MONITORING REQUIREMENTS

Order of Approval:	Puget Sound Clean Air Agency (PSCAA) Notice of Construction Order of Approval 9326 Condition 4 dated April 20, 2016
Emission Limits:	VOC emissions from Line 1 shall be combusted in a thermal oxidizer with a VOC destruction efficiency greater than or equal to 98%.
Order of Approval:	Puget Sound Clean Air Agency (PSCAA) Notice of Construction Order of Approval 9326 Condition 5 dated April 20, 2016
Emission Limits:	VOC emissions from Lines 3 and 4 shall be combusted in a catalytic oxidizer with a VOC destruction efficiency greater than or equal to 95%.
Monitoring Requirements:	Condition 6 of NOCOA 9326 requires source testing for compliance with destruction efficiency for the catalytic oxidizer at a frequency no less than once every 6 calendar years, with no more than 61 months between the tests. Each test must be conducted in accordance with the procedures in 40 CFR 63.3360(e)(1), 40 CFR 63.7 and PSCAA Reg I, Section 3.07

Order of Approval:	Puget Sound Clean Air Agency (PSCAA) Notice of Construction Order of Approval 11977 Condition 4 dated May 29, 2020
Emission Limits:	VOC emissions from the pilot treater shall be combusted in a catalytic oxidizer with a VOC destruction efficiency greater than or equal to 95%.
Monitoring Requirements:	None

III. Control Technology

A thermal oxidizer is used to control VOC emission from Coating Line 1.

A catalytic oxidizer is used to control VOC emissions from Coating Line 3.

A catalytic oxidizer is used to control VOC emissions from Coating Line 4 and the pilot treater.

TABLE 1. Thermal Oxidizer on Coating Line 1

REQUIREMENT	PARAMETER
I. Indicator:	
A. Measurement Approach	Emissions Stack Testing
	Destruction efficiency across the thermal oxidizer measured once every five years. Emission testing shall be conducted under representative operation conditions for the coating operation and shall follow 40 CFR Part 60 Subpart A, Appendix A Method 25 or 25A of appendix A-7 to 40 CFR part 60 to determine total gaseous non-methane organic matter concentration at the inlet and outlet simultaneously.
B. Measurement Approach	Combustion Temperature Monitoring
	Continuous temperature monitoring in the combustion chamber at a location in the combustion zone. Calculate and record the block 3-hour average of all recorded readings.
II. Indicator Range:	
A. Indicator Range Emissions Stack Testing	An acceptable destruction efficiency is no less than 98%, average over three 1-hour tests.

REQUIREMENT	PARAMETER
QIP Threshold	The average of three 1-hour tests shows a destruction efficiency less than 98% shall be reported to PSCAA within 30 days after the end of the month that the exceedance occurred. If necessary, corrective actions shall be taken immediately.
B. Indicator Range	An acceptable average combustion temperature in any 3-hour period measured in the firebox of the thermal oxidizer or immediately downstream of the firebox shall be in compliance with 40 CFR 63.3321 as established in 40 CFR 63.3360(e)(3)(i).
C. Temperature Monitoring QIP Threshold	For any three-hour period during which the average combustion temperature falls more than 50 F below the average temperature measured in the most recent source test, report to PSCAA within 30 days after the end of the month that theevent occurred. The written report shall include a narrative report of the cause, duration, and steps taken to correct the problem and avoid a recurrence. QIP threshold: 5% duration of operating time for each coating line during any semiannual reporting period.
III. Performance Criteria:	
A. Data Representativeness	Destruction efficiency shall be measured at the inlet and outlet to the thermal oxidizer simultaneously by source testing. Emission test results shall meet the data quality requirements of the test methodology. Combustion temperature monitoring shall comply with the requirements in the 40 CFR Part 63, Subpart JJJJ NESHAP.
B. Verification of Operational Status	Emissions tests shall be performed as specified. The monitoring system shall be operated according to manufacturer specifications and comply with the requirements in the 40 CFR Part 63, Subpart JJJJ NESHAP.
C. QA/QC Practices and Criteria	Emissions testing shall be done at representative conditions as specified in 40 CFR 63.63.3340(c) and shall follow the relevant parts of 40 CFR 63.3360(e). Emission test results shall meet the data quality requirements of the test methodology.

REQUIREMENT	PARAMETER
IV. Performance Criteria:	
D. Monitoring Frequency and Data Collection Procedures	On a semi-annual basis, Arclin shall submit to PSCAA the required AOP monitoring report for the preceding 6 months in written (or electronic if permitted by PSCAA) form to PSCAA within 30 days of the end of each six-month period. (Unless a different testing and reporting schedule has been approved by PSCAA). In the case of an exceedance, the report shall document the month of the exceedance occurred, the endurance and magnitude of the exceedance, the probable cause of the occurrence, correction actions taken or planned, and the name of any other agency contacted. PSCAA shall be notified as soon as possible and in no case later than twelve hours after a breakdown, upset, startup or shutdown conditions occurs which results in or may have resulted in: a) exceedance of an emission or ambient standard; b) a potential threat to human health or safety.

TABLE 2. Catalytic Oxidizers on Coating Line 3 and 4 and Pilot Treater

REQUIREMENT	PARAMETER
I. Indicator:	
A. Measurement Approach	Emissions Stack Testing
	Destruction efficiency across the catalytic oxidizer measured once every five years. Emission testing shall be conducted under representative operation conditions for the coating operation and shall follow 40 CFR Part 60 Subpart A, Appendix A Method 25 or 25A of appendix A-7 to 40 CFR part 60 to determine total gaseous non-methane organic matter concentration at the inlet and outlet simultaneously.
B. Measurement Approach	Combustion Temperature Monitoring
	Continuous temperature monitoring at the inlet to the catalyst bed. Calculate and record the block 3-hour average of all recorded readings. Continuous temperature monitoring of the temperature difference across the catalytic catalyst bed. Calculate and record the block 3-hour average of all recorded readings. Alternatively conduct inspection and maintenance for each catalytic oxidizer in accordance with 40 CFR 63.3360(e)(3)(ii) including annual sampling and analysis of catalyst activity, monthly inspection of burner assembly and fuel supply lines, and annual internal and monthly external visual inspection of catalyst bed to heck for channeling, abrasion, and settling.
II. Indicator Range:	
A. Indicator Range Emissions Stack Testing QIP Threshold	An acceptable destruction efficiency is no less than 95%, average over three 1-hour tests.
	The average of three 1-hour tests shows a destruction efficiency less than 95% shall be reported to PSCAA within 30 days after the end of the month that the exceedance occurred. If necessary, corrective actions shall be taken immediately.
B. Indicator Range	An acceptable average temperature at the inlet to the catalyst bed in any 3-hour period must be in compliance with 40 CFR 63.3321 and 40 CFR 63.3360(e)(3)(ii). The temperature rise across the catalyst bed must no fall below 80% of the limit established according to 40 CFR 63.3360(e)(3)(ii), provided the minimum temperature is always 50 F above the

REQUIREMENT	PARAMETER
	catalyst's ignition temperature. Alternatively, conduct inspection and maintenance as required by the 40 CFR Part 63, Subpart JJJJ NESHAP.
C. Temperature Monitoring QIP Threshold	For any three-hour period during which the average combustion temperature falls more than 50 F below the average temperature measured in the most recent source test, report to PSCAA within 30 days after the end of the month that the event occurred. The written report shall include a narrative report of the cause, duration, and steps taken to correct the problem and avoid a recurrence. QIP threshold: 5% duration of operating time for each coating line during any semiannual reporting period.
III. Performance Criteria:	
A. Data Representativeness	Destruction efficiency shall be measured at the inlet and outlet to the catalytic oxidizer simultaneously by source testing. Emission test results shall meet the data quality requirements of the test methodology. Combustion temperature monitoring shall comply with the requirements in the 40 CFR Part 63, Subpart JJJJ NESHAP.
B. Verification of Operational Status	Emissions tests shall be performed as specified. The monitoring system shall be operated according to manufacturer specifications and comply with the requirements in the 40 CFR Part 63, Subpart JJJJ NESHAP.
C. QA/QC Practices and Criteria	Emissions testing shall be done at representative conditions as specified in 40 CFR 63.63.3340(c) and shall follow the relevant parts of 40 CFR 63.3360(e). Emission test results shall meet the data quality requirements of the test methodology.

REQUIREMENT	PARAMETER
IV. Performance Criteria:	
D. Monitoring Frequency and Data Collection Procedures	On a semi-annual basis, Arclin shall submit to PSCAA the required AOP monitoring report for the preceding 6 months in written (or electronic if permitted by PSCAA) form to PSCAA within 30 days of the end of each six-month period. (Unless a different testing and reporting schedule has been approved by PSCAA). In the case of an exceedance, the report shall document the month of the exceedance occurred, the endurance and magnitude of the exceedance, the probable cause of the occurrence, correction actions taken or planned, and the name of any other agency contacted. PSCAA shall be notified as soon as possible and in no case later than twelve hours after a breakdown, upset, startup or shutdown conditions occurs which results in or may have resulted in: a) exceedance of an emission or ambient standard; b) a potential threat to human health or safety.

JUSTIFICATION

IV. RATIONALE FOR SELECTION OF PERFORMANCE INDICATORS

The VOC performance indicators were selected based on the approval conditions in Order of Approval No. 9326 which specify VOC destruction efficiency across the oxidizer and the NESHAP standards in 40 CFR Part 63, Subpart JJJJ which specify a destruction efficiency across the process (capture system and oxidizers) or an outlet organic HAP limit.

Stack testing once every five years shall be considered satisfactory to determine performance regarding VOC destruction efficiency.

The combustion temperature monitoring which is consistent with the NESHAP indicates compliance with requirements to maintain adequate VOC destruction efficiency across the thermal oxidizer and catalytic oxidizers. Compliance with destruction efficiency is further confirmed with the periodic stack testing.

These indicators are justified by 40 CFR 64.4, which states, "*If an owner or operator relies on presumptively acceptable monitoring, no further justification for the appropriateness of that monitoring should be necessary other than an explanation of the applicability of such monitoring to the unit in question.*" Monitoring methods required by the NESHAP 40 CFR Part 63, Subpart JJJJ are already required and therefore may use them to satisfy the monitoring requirements of this CAM plan.