1	BEFORE THE ENVIRONMENTAL QUALITY COMMISSION		
2	OF THE STATE OF OREGON		
3	)		
4	IN THE MATTER OF ) MUTUAL AGREEMENT SCHNITZER STEEL INDUSTRIES, INC,) AND FINAL ORDER		
5	d/b/a RADIUS RECYCLING )		
6	Respondent. ) CASE NO. AQ-V-NWR-2022-110		
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8	I. DEQ'S FINDINGS OF FACT		
9	1. Respondent owns and operates a metals recycling facility located at 12005 N.		
10	Burgard Road in Portland, Oregon (the Facility or the Portland Facility).		
11	2. Respondent commenced metal shredding operations at the Facility in the early 1970s,		
12	using an electric powered hammermill shredder (the Old Shredder).		
13	3. In July 2007, Respondent installed and began operating a new, higher capacity,		
14	hammermill metal shredder at the Facility (the Shredder). Like the Old Shredder, the Shredder is		
15	used to reduce end-of-life automobiles, appliances, and other metals to smaller pieces.		
16	Respondent refers to the end-of-life automobiles processed by the Shredder as "auto bodies" and		
17	the rest of the metal processed by the Shredder as "light iron."		
18	The Portland Shredder Notice of Intent to Construct		
19	4. On August 12, 2009, after learning about the installation and operation of the Shredder		
20	at the Facility, DEQ requested that Respondent estimate the air contaminant emissions from the		
21	Facility and submit an air quality notice of intent to construct or permit application, as		
22	appropriate, to DEQ.		
23	5. On August 25, 2009, Respondent submitted a Type 2 Notice of Intent to Construct		
24	application no. 023818 to DEQ (the 2009 NC Application). The 2009 NC Application estimated		
25	volatile organic compound (VOC), particulate matter (PM) and hazardous air pollutant (HAP)		
26	emissions from the Shredder using emission factors from a 1996 study for the auto-shredding		
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- 6. In response to the 2009 NC Application and noting more recent VOC data from source tests conducted on other metal shredders in the United States, DEQ requested that Respondent either conduct a source test to measure the Shredder's emissions or submit updated emissions data to DEQ.
- 7. On December 28, 2011, Respondent submitted to DEQ a study that reviewed source test data from various metal shredders around the United States. The study compared the operating scenarios tested to Respondent's operation of the Shredder and proposed a VOC emission factor of 0.03 lb/ton for the Shredder. Among other source tests, Respondent evaluated a 2007 source test conducted at the Oakland Shredder, which had been conducted (like other source tests evaluated in the study) using a temporary hood to capture VOC emissions. The study noted that "The Oakland Shredder is about the same size, same configuration, and is operated very similarly to the Portland shredder. It processes about a 50/50 mix of auto bodies to light iron. It operates under the same scrap metal acceptance criteria with all liquids drained from the scrap." (page 3-2).
- 8. On October 8, 2012, DEQ approved Respondent's 2009 NC Application, applying the VOC emission factor of 0.03 lb/ton from Respondent's emissions study described in Section I, paragraph 7, above. Based on the VOC emission factor and other production information provided by Respondent (maximum anticipated annual shredder throughput of 416,000 tons/year and scrap composition of 50% auto bodies), DEQ's 2012 NC approval stated that the Facility was below the 10-ton per year Air Contaminant Discharge Permit (ACDP) threshold for VOCs and PM.

## The Everett and Oakland Shredders

- 9. Respondent owns and operates other high-capacity metal shredders in Everett,
  Massachusetts (the Everett Shredder, installed in 2006) and Oakland, California (the Oakland
  Shredder, installed in 2006)
- 10. On September 14, 2015, Respondent entered into a consent judgement with the Commonwealth of Massachusetts requiring Respondent to construct a permanent enclosure to

1	capture the emissions of air pollutants from the Everett Shredder and to install controls that met
2	Best Available Control Technology (BACT) requirements for VOCs, PM, and acid gases.
3	11. In November 2015, in accordance with the consent judgment, Respondent submitted
4	a synthetic minor permit application to the Massachusetts Department of Environmental
5	Protection (MassDEP), proposing an annual and monthly throughput limit for the Everett
6	Shredder to stay under the major source threshold of 100 tons per year VOCs until the proposed
7	enclosure and controls were installed and operational. <sup>1</sup>
8	12. In the spring of 2017, in response to an investigation by the State of California
9	regarding the deposition of light fibrous material emitted from the Shredder onto neighboring
10	properties and into waters of the state, Respondent completed a project to fully and permanently
11	enclose the Oakland Shredder. The enclosure project included an enhanced dust collection and
12	emission control system to direct the captured emissions to a drop out box, two wet venturi
13	scrubbers and two cyclonic separators to reduce PM emissions.
14	13. In June 2017, October 2017, January 2018, October 2018, and January 2019,
15	Respondent conducted source tests at the Oakland Shredder that measured emissions of VOCs,
16	PM, and HAPs.
17	Updated Emissions Information & the Portland Facility ACDP Application
18	14. On May 23, 2018, DEQ and the United States Environmental Protection Agency
19	(EPA) conducted a joint inspection of the Facility for the purpose of evaluating whether DEQ's
20	2012 determination that no ACDP was required remained valid.
21	15. On August 24, 2018, based on the source test information then available to DEQ, DEQ
22	notified Respondent in writing that an ACDP was required for the Facility according to ORS
23	468A.045(1)(b), OAR 340-216-0020(3), and OAR 340-216-8010, Table 1, categories 84 and 85.
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26	On or about May 2020, following permitting by MassDEP, Respondent completed construction
27	and began operation of an enclosure and pollution control devices to control VOC, PM, and acid gas emissions from the Everett Shredder.

16. On December 21, 2018, Respondent submitted an ACDP application for the Portland Facility to DEQ (the 2018 ACDP Application). The 2018 ACDP Application included emission factors derived from the Oakland Shredder source test data from the June 2017, October 2017 and January 2018 tests and proposed a throughput limit for the Shredder. Regarding VOC emissions, the emissions calculations in the 2018 ACDP Application used a weighted VOC emission factor of 0.385 lb/ton, based on the percentage of auto bodies processed by the Shredder. Based on the proposed throughput limit and emission factors, the 2018 ACDP Application included the annual air emissions estimates and requested Plant Site Emission Limits (PSELs) described in Table 1, below.

Table 1. Annual air emissions and requested PSELs in 2018 ACDP Application

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Source	Total PM	VOCs	Combined HAPs
	(tons/year)	(tons/year)	(tons/year)
Shredder	23.00	88.6	$14.0^2$
Other emissions	5.6	2.4	0.1
Facility Total	28.6	91.0	14.1
Requested PSEL	29	91	14

17. In October 2019, Respondent's consultants completed a technical memorandum titled "Recommended Test Methods and Emission Factors for Metal Shredding Operations Conducted at SSI Facilities" (the Foulweather Report). The Foulweather Report was "prepared at the request of Schnitzer Steel Industries, Inc. and its affiliated companies (SSI) to guide air discharge permitting and engineering activities for SSI's metal shredders" (p. 1). The Foulweather Report includes recommended emission factors for VOCs, PM and HAPs based on five source tests conducted at the Oakland Shredder equipped with a permanent total enclosure, venturi wet scrubber (for control of PM) and stack. The report states that these emission factors can be adapted for different degrees of enclosure and control with fugitive vs. stack emissions allocated based on the capture efficiency of the enclosure. The report states that "For total (non-speciated) VOC measurements, EPA Method 25C appears to provide the most consistent and representative test results" (p. 2). The Foulweather Report's recommended VOC emission factor without an

<sup>&</sup>lt;sup>2</sup> More specifically, the 2018 ACDP Application estimated Shredder annual combined organic HAP emissions of 13.84 tons per year (Table 3-8), and Shredder Metal HAP emissions of 0.155 tons per year (Table 3-9).

enclosure and controls, based on EPA Method 25C, is 0.84 lbs/ton for auto bodies and 0.525 lbs/ton for light iron. The Foulweather Report recommends weighting the VOC emission factors based on the nominal average mix of auto bodies and light iron fed into the shredder on a facility-specific basis (p. 6).

18. In December 2019, Respondent emailed DEQ and requested that DEQ put its review of the ACDP on hold "pending operational adjustments/modifications that would most likely affect the final permit." Respondent requested a meeting with DEQ in January 2020.

19. In January 2020, Respondent met with DEQ and communicated that it planned to enclose the Shredder and route the Shredder's emissions to pollution control devices.

20. On June 12, 2020, Respondent submitted to DEQ supplemental information for its ACDP application, proposing to build a Permanent Total Enclosure to capture the Shredder's emissions and to route those emissions to air pollution control devices (the 2020 ACDP Addendum). Specifically, Respondent proposed to install a filtration system designed to achieve 99% control of PM, followed by regenerative thermal oxidizers (RTO), designed to achieve 98% control of VOCs, and finally packed bed scrubbers designed to achieve 90% control of the acid gases formed in the RTOs. This project is referred to hereinafter in this MAO as the "Enclosure & Controls." The 2020 ACDP Addendum estimated Shredder emissions based on the Foulweather Report Method 25C emission factors, assuming that the Enclosure & Controls were in place at the Facility. The 2020 ACDP Addendum also included the same proposed annual throughput limit that was included in the 2018 ACDP Application. Based those assumptions, the 2020 ACDP Addendum included the annual air emissions estimates and requested PSELs described in Table 2, below.

Table 2. Annual air emissions and requested PSELs in 2020 ACDP Addendum

Source	Total PM (tons/year)	VOCs (tons/year)	Combined HAPs
Shredder	4.1	10.5	2.9
Other emissions	9.2	2.5	0.1
Facility Total	13.3	13.0	3.0
Requested PSEL	24	39	-

1	<u>1ttle V Operating Permit Application and Notice of Intent to Construct for Enclosure &amp; Controls</u>
2	21. On September 3, 2021, DEQ issued Pre-Enforcement Notice No. 2021-PEN-6507 to
3	Respondent. In the Pre-Enforcement Notice, DEQ explained that "In consultation with the United
4	States Environmental Protection Agency (EPA) and after analyzing SSI's shredder throughput
5	capacities, shredder emission rates, and the appropriate emission factors, DEQ has determined
6	that SSI has the potential to emit more than 100 tons per year of volatile organic compounds
7	(VOCs) from its facility, in excess of the Clean Air Act Title V Operating Permit threshold." The
8	Pre-Enforcement Notice cited Respondent for operating without a Title V Operating Permit, in
9	violation of ORS 468A.045(1)(b) and OAR 340-218-0120(2)(a).
10	22. On September 16, 2021, Respondent submitted a Type 2 Notice of Intent to Construct to
11	DEQ, proposing to construct the Enclosure & Controls at the Facility (the Enclosure & Controls
12	NC). Like the 2020 ACDP Addendum, the Enclosure & Controls NC relied on the Foulweather
13	Report emission factors (including the Method 25C VOC emission factor) to estimate post-
14	project emissions.
15	23. On October 12, 2021, DEQ approved the Enclosure & Controls NC, authorizing
16	Respondent to construct the Enclosure & Controls. The NC approval states that "issuance of an Air
17	Contaminant Discharge Permit is required prior to the operation of the proposed control system."
18	24. On October 28, 2021, Respondent submitted to DEQ an application for a Title V
19	Operating Permit for the Facility (Title V Application). Like the 2020 ACDP Addendum, the Title
20	V Application estimated Shredder emissions based on the Foulweather Report emission factors
21	(including the Method 25C VOC emission factor), assuming that the Enclosure & Controls were
22	in place at the Facility. The Title V Application also included the same proposed annual throughput
23	limit from the 2018 ACDP Application, described as the Shredder's "maximum design capacity" (p.
24	21). Based on those assumptions, the Title V Application included the annual air emissions
25	estimates and requested PSELs described in Table 3, below.
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Source	Total PM (tons/year)	VOCs (tons/year)	Combined HAPs
Shredder	4.6	10.7	2.9
Other emissions	10.2	2.4	0.1
Facility Total	14.8	13.1	3.0
Requested PSEL	24	39	-

25. On or before early 2023, EPA developed a linear regression equation for metal shredder VOC emissions plotted against percent autos in the scrap feed. The EPA equation is based on nine metal shredder source tests using Method 25A, including five Method 25A source tests conducted at the Oakland Shredder. The equation is:

Y = 0.2873x + 0.2246

Where: Y = VOC emission factor in lbs/gross ton, and

x = percent auto bodies in scrap feed.

26. As of the date of this MAO, EPA recommends use of Method 25A emission factors for estimating metal shredder emissions. Based on the equation above, the EPA recommended VOC emission factor assuming 100% autos in the scrap feed is 0.573 lbs/ton (0.512 lbs/gross ton); the EPA recommended VOC emission factor assuming 50% autos in the scrap feed is 0.412 lbs/ton (0.368 lbs/gross ton).

27. On April 13, 2023, Respondent submitted additional information to DEQ regarding the EPA recommended VOC emission factors described in Section I, paragraphs 25-26, above.

Respondent requested that DEQ consider the use of the EPA VOC emission factor information in evaluating its air quality permit applications pending with DEQ.

## Additional facts

28. An enclosure to capture mega-shredder emissions is essentially a large metal box with an outlet for exhaust gases to exit. Emissions have been partially captured at some metal shredders in the United States since the 1990s.

1	29. DEQ first adopted a Title V operating permit program (now OAR Chapter 340, division
2	218) and the federal Hazardous Air Pollutant program (now OAR Chapter 340, division 244) on
3	September 24, 1993.
4	30. The Oregon Title V operating permit program became effective when it was approved
5	by the EPA on November 27, 1995.
6	31. As of the date of this MAO, Respondent has not submitted an ACDP application to
7	DEQ that meets the requirements for Major New Source review.
8	32. As of the date of this MAO, DEQ has not issued an air quality operating permit for the
9	Facility.
10	33. On August 23, 2023, DEQ sent a request for a regulatory interpretation to EPA Region
11	10 regarding the application of Section 112(g) of the Clean Air Act and 40 CFR § 63.40 to 63.43
12	(case-by-case Maximum Achievable Control Technology or MACT requirements) to the Facility
13	34. As of the date of this MAO, EPA has not responded to DEQ's request described in
14	Section I, paragraph 33, above.
15	<u>Cleaner Air Oregon</u>
16	35. On November 18, 2020, DEQ communicated to Respondent via letter that the Facility
17	meets the definition of an "existing source" for purposes of the Cleaner Air Oregon program and
18	requested that Respondent submit a Cleaner Air Oregon emissions inventory that DEQ would use to
19	complete a prioritization analysis and to inform the call-in schedule for existing sources.
20	36. On February 15, 2021, Respondent submitted a Cleaner Air Oregon emissions inventory
21	to DEQ. The emissions inventory estimates the Facility's toxic air contaminant emissions.
22	37. As of the date of this MAO, DEQ has not called the Facility into the Cleaner Air Oregon
23	program as an existing source.
24	38. As of the date of this MAO, Respondent has not completed a Cleaner Air Oregon Risk
25	Assessment for the Facility.
26	39. As of the date of this MAO, Respondent has not obtained a de minimis source
27	determination, permit, or Toxic Air Contaminant Permit Addendum pursuant to OAR Chapter

340, division 245 authorizing the operation of toxics emissions units and the discharge of toxic air contaminants from the Facility.

## II. DEQ'S CONCLUSIONS

1. DEQ has determined that neither the October 8, 2012 NC approval for the construction of the Shredder nor the October 12, 2021 NC approval for the Enclosure & Controls include limits on the Shredder's emissions that are enforceable by EPA or DEQ. OAR 340-210-0225(2)(d) [formerly OAR 340-210-0225(2)(a)]. Specifically, there are no enforceable throughput limits and no limits on the type of scrap that the Shredder can process (auto bodies, light iron, or otherwise). As of the date of this MAO, DEQ has not issued any other air quality authorizations or permits for the Facility that contain enforceable limits on the Shredder's emissions. Thus, from July 2007 (when the Shredder was first installed and operated) to the date of this MAO, the Shredder's potential to emit (which is a significant part of, but not all of, the Facility's potential to emit regulated pollutants) is the Shredder's regulated pollutant emissions capacity. OAR 340-200-0020(123)(a) [formerly OAR 340-200-0020(124)]. Respondent has not documented any inherent limits on the Shredder's physical and operational design. Therefore, potential to emit should be calculated based on the Shredder's rated capacity at 8,760 annual hours of operation. Regarding the VOC emission factor, Respondent has not described any inherent physical or operational limits on the Shredder's ability to process different scrap types, nor is there any enforceable requirements limiting Respondent's processing of different scrap types. Therefore, potential to emit VOCs should be based on EPA's recommended Method 25A VOC equation, described in Section I, paragraphs 25-26, above, assuming 100% autos in the scrap feed. For the remaining pollutants (PM and HAPs),

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<sup>&</sup>lt;sup>3</sup> "Potential to emit" or "PTE," means "the lesser of (a) The regulated pollutant emissions capacity of a stationary source; or (b) The maximum allowable regulated pollutant emissions taking into consideration any physical or operational limitation, including the use of control devices and restrictions on the hours of operation or on the type or amount of material combusted, stored or processed, if the limitation is enforceable by the Administrator." "Capacity" means "the maximum regulated pollutant emissions from a stationary source under its physical and operational design." OAR 340-200-0020.

DEQ has used the Foulweather Report emission factors included in Respondent's permit applications, as described in Section I, paragraphs 17, 20, 22 and 24, above.

2. Based on the information provided by Respondent as of the date of this MAO and the approach described in Section II, paragraph 1 above, DEQ calculates the Shredder's potential to emit, as defined in OAR 340-200-0020(123) [formerly OAR 340-200-0020(124)], as described in Table 4, below.

Table 4. Shredder potential to emit

Pollutant	Shredder potential to emit (tons/year)
VOCs	678
Total PM	311
$PM_{10}^{4}$	138
$PM_{2.5}^{5}$	47
Combined HAPs	162
2,2,4-Trimethylpentane (CAS No. 540841)	24
Ethyl benzene (CAS No. 100414)	11
Hexane (CAS No. 110543)	17
Toluene (CAS No. 108883)	44
Xylenes (CAS No. 1330207)	57

3. The Old Shredder that Respondent installed and began operating in the 1970s never had any air quality permits or approvals from DEQ. Therefore, like the current Shredder, the Old Shredder's potential to emit was the Old Shredder's regulated pollutant emissions capacity. OAR 340-200-0020(123)(a). Based on the information provided by Respondent as of the date of this MAO and the approach described in Section II, paragraph 1 above, DEQ calculates the Old Shredder's potential to emit as described in Table 5, below.

Table 5. Old Shredder potential to emit

Pollutant	Old Shredder potential to emit (tons/year)
VOCs	352

<sup>4</sup> PM<sub>10</sub> is estimated to be 44.4% of Total PM based on the size distribution for tertiary crushing in AP-42 Chapter 11.19.2, Table 11.19.2-1. *See* Foulweather Report, p. 8.

<sup>5</sup> PM<sub>2.5</sub> is estimated to be 15% of PM based on the size distribution for material handling and processing of aggregate and unprocessed ore from AP-42 Appendix B.2 Category 3. *See* 2018 ACDP Application, Table 3-1.

4. From at least September 1993 (when DEQ adopted the Federal Hazardous Air Pollutant Program), to the date of this MAO, Respondent's Facility has been a major source of HAPs according to OAR 340-200-0020(90)(b)(A)(i) and OAR 340-244-0030(15) [previously OAR 340-28-110(25)(b)(A) and OAR 340-32-120(25)] because the Old Shredder had, and the current Shredder has, a potential to emit, in the aggregate, 25 tons per year or more of combined HAPs and a potential to emit 10 tons per year or more of several individual HAPs, as described in Section II, paragraphs 2 (Table 4) and 3 (Table 5), above. The Facility will continue to operate as a major source of HAPs until it is issued a permit by DEQ with an enforceable limit that requires HAP emissions to remain below the 25- and 10-ton thresholds.

5. Since at least 1995, when the Title V operating permit program became effective in Oregon, it has been reasonable to construct an enclosure at the Facility such that some portion of the emissions from the Shredder could reasonably pass through a stack, chimney, vent or other functionally equivalent opening. As described in Section I, paragraph 28 above, the technology to capture metal shredder emissions is straightforward and has been available, and it was actually used in the metal recycling industry beginning in the 1990s. Thus, from at least that time, a portion of the Shredder's emissions have not been fugitive emissions according to OAR 340-200-0020(70)(b), and they should be considered in the major source determination for regulated pollutants including VOCs and PM according to OAR 340-200-0020(90)(b)(B), despite the fact that the Facility does not belong to one of the listed stationary source categories in OAR 340-200-0020(90)(b)(B)(i)-(xxvii).<sup>6</sup>

<sup>6</sup> The fugitive / non-fugitive distinction does not apply to a major source determination for HAPs. In other words, all HAP emissions are counted, whether they are fugitive or not. OAR

340-200-0020(90)(b)(A)(i).

- 7. Since July 2007, the Facility has been a major source of PM<sub>10</sub> according to OAR 340-200-0020(91)(b)(B) [formerly OAR 340-200-0200(91)(b)(B)] because the Shredder has a potential to emit 100 tons per year or more of PM<sub>10</sub>, as described above in Section II, paragraph 2 (Table 4). The Facility will continue to operate as a major source until it is issued a permit by DEQ with enforceable limits that require PM<sub>10</sub> emissions to remain below the 100 ton per year threshold.
- 8. Using the emission factors described in Section II, paragraph 1 above (EPA regression for VOCs and Foulweather report for other pollutants), and information submitted by Respondent to DEQ on the Shredder's actual throughput and percent autos, DEQ has calculated the estimated actual emissions from the Shredder and has determined that the Shredder's actual emissions have not exceeded the major source thresholds for VOCs, PM<sub>10</sub> or HAPs from January 2015 to September 2023 (the last month DEQ has operational data for). The production limits in Section V, paragraph 9 of this MAO impose a 12-month rolling throughput limit and monthly percent autos limit, such that Shredder emissions do not exceed major source thresholds until Respondent commences full time operation of the Enclosure & Controls.
- 9. According to OAR 340-232-0010(4), the Shredder is subject to the non-categorical Reasonably Available Control Technology (RACT) requirements in OAR 340-232-0040 because the Facility was an existing source operating before November 15, 1990, the Facility is located in the Portland-Vancouver Air Quality Maintenance Area for VOCs (see OAR 340-204-0040(2)(b) and OAR 340-204-0010(14)), there are no categorical RACT requirements for the Shredder, and the Shredder can emit over 100 tons per year of VOCs from aggregated, non-regulated emissions

units, based on the design capacity or maximum production or throughput capacity of the source operating 8,760 hours per year without the use of control devices or limits on hours of operation, as described above in Section II, paragraph 2 (Table 4). According to OAR 340-232-0030(54), RACT means the lowest emission limitation that a particular source or source category is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. According to OAR 340-232-0040(3), Respondent must submit a RACT analysis to DEQ within 3 months of this written notification by DEQ of the applicability of this rule. According to OAR 340-232-0040(1), sources that are subject to BACT are presumed to satisfy RACT. Therefore, DEQ will accept the BACT analysis required in Section V, paragraph 3 to satisfy the requirement to submit a RACT analysis.

10. The Facility is a Cleaner Air Oregon new source as defined in OAR 340-245-0020 because it is not an existing source. The Facility is not an existing source as defined in OAR 340-245-0020 because Respondent did not "commence" construction before November 16, 2018, the effective date of the Cleaner Air Oregon program, nor did Respondent submit all necessary applications to DEQ under divisions 210 or 216 before November 16, 2018. Respondent did not "commence" construction, as that term is defined in OAR 340-200-0020, because Respondent had not obtained all necessary preconstruction approvals required by the Federal Clean Air Act prior to November 16, 2018. As described in Section III, paragraph 2 below, Respondent should have obtained an ACDP that met Major NSR requirements prior to beginning construction of the Shredder in 2007. Respondent did not submit all necessary applications to DEQ under division 210 because the Type 2 NC application submitted by Respondent in 2009 was insufficient for a change that would increase emissions from the source by more than or equal to the significant emission rate of 40 tons/year of VOCs. OAR 340-210-0225(2)(b) [DEQ 6-2001. F. 6-18-01, cert. ef. 7-1-01]. Respondent did not submit all necessary applications to DEQ under division 216 prior to the November 16, 2018 Cleaner Air Oregon effective date because Respondent did not submit any ACDP application to DEQ until December 21, 2018. Thus, the Facility does not qualify as an existing source as defined in OAR 340-245-0020.

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## III. ALLEGED VIOLATIONS

1. From November 27, 1996 to the date of this MAO, Respondent violated 468A.045(1)(b) and OAR 340-218-0120(2)(a) [previously OAR 340-28-2200(2)(a)] by operating the Facility without a Title V Operating Permit. Respondent's Facility is a major source that is subject to the Oregon Title V Operating Permit program according to OAR 340-218-0020(1)(a) [previously OAR 340-28-2110(1)(a)] due to its emissions of HAPs, VOCs and PM<sub>10</sub>. As described above in Section II, paragraphs 4, 6 and 7, the Facility has been a major source of HAPs since at least September 1993, a major source of VOCs since at least 1995, and a major source of PM<sub>10</sub> since July 2007. As required by OAR 340-218-0040(1)(a)(B) [previously OAR 340-28-2120(1)(a)(A)], Respondent was required to have applied for an Oregon Title V Operating Permit from DEQ by November 27, 1996, i.e., within 12 months after the effective date of the federal operating permit program in Oregon. As described above in Section I, paragraph 24, Respondent did not submit a Title V Operating Permit application to DEQ until October 28, 2021. Respondent will continue to operate without a Title V permit until DEQ issues a Title V permit for the facility, or a synthetic minor ACDP that limits the Facility's emissions below major source levels. These are Class I violations, according to OAR 340-012-0054(1)(e).

2. In July 2007, Respondent began construction of a major source without first obtaining an ACDP from DEQ that meets the requirements of OAR Chapter 340, Division 224 (Major New Source Review), in violation of 340-224-0010(2)<sup>7</sup> and ORS 468A.045(1)(b). In July 2007, the Facility was located in the Portland-Vancouver Interstate Maintenance Area for Ozone (*see* OAR 340-204-0040(2)(b)). The installation of the Shredder in July 2007 was construction according to OAR 340-200-0020(25)(b) because it was the installation of an emissions unit that resulted in a change in actual emissions. The Shredder was a major source of VOCs, according to OAR 340-200-0020(67)(a) because the new Shredder in and of itself had the potential to emit 678 tons per year of VOC (see Section II, paragraph 2 above), which exceeds the significant emission

<sup>&</sup>lt;sup>7</sup> References in this paragraph are to the Division 200, 204 and 224 rules in effect in July 2007, *see* DEQ 1-2004, f. & cert ef. 4-14-04.

rate of 40 tons per year, see OAR 340-200-0020(124) and Table 2. According to OAR 340-224-0100, fugitive emissions are included in the calculation of emission rates of all air contaminants. Fugitive emissions are subject to the same control requirements and analyses required for emissions from identifiable stacks or vents. Thus, Respondent was required to meet the requirements for sources in maintenance areas, OAR 340-224-0060, including Best Available Control Technology (BACT) requirements. Respondent will continue to operate in violation of the requirement to obtain an ACDP that meets Major NSR requirements until DEQ receives a complete application demonstrating that Respondent can comply with the applicable requirements in OAR Chapter 340, Division 224 and DEQ issues an ACDP. These are Class I

- 3. From November 16, 2018 to the date of this MAO, Respondent violated OAR 340-245-0050(2)(a)(A) and OAR 340-245-0050(2)(b) by failing to complete a Risk Assessment for the Facility that demonstrates compliance with the applicable risk action levels for new or reconstructed sources. As described above in Section II, paragraph 10, the Facility is a new source as defined in OAR 340-245-0020. As described in Section I, paragraph 36, Respondent has not completed a Risk Assessment for the Facility. Respondent will continue to operate in violation of the Risk Assessment requirement until DEQ approves a Risk Assessment for the Facility. This is a Class I violation, according to OAR 340-012-0054(1)(c).
- 4. From November 16, 2018 to the date of this MAO, Respondent violated OAR 340-245-0050(2)(b), OAR 340-245-0050(7) and OAR 340-245-0100(1)(a)(B) by operating toxics emissions units and discharging toxic air contaminants without first obtaining a de minimis source determination, permit or Toxic Air Contaminant Permit Addendum authorizing those activities, as described in Section I, paragraph 37 and Section II, paragraph 10, above. Respondent will continue to operate in violation of these Cleaner Air Oregon requirements until DEQ issues a de minimis source determination, permit or Toxic Air Contaminant Permit Addendum authorizing the operation of toxics emissions units and discharging toxic air contaminants. This is a Class I violation, according to OAR 340-012-0054(1)(b).

violations, according to OAR 340-012-0054(1)(a).

1 5. From the date that Respondent begins operation of the Enclosure & Controls until DEQ 2 issues an air quality permit authorizing the operation of the Enclosure & Controls, Respondent will 3 violate the terms of DEQ's October 12, 2021 NC approval, described in Section I, paragraph 23, above. This is a Class I violation, according to OAR 340-012-0053(1)(a). 4 5 IV. **AGREEMENT** Respondent and DEQ hereby agree that: 6 7 1. This Mutual Agreement and Final Order (MAO) shall be effective upon the date 8 fully executed (MAO Effective Date). 9 2. The total civil penalty for the violations alleged in Section III of this MAO is \$500,000. 10 11 3. The U.S. Environmental Protection Agency (EPA) appropriately delegated the 12 federal Clean Air Act, 42 U.S.C. §§ 7401 et seq. (the Act), to DEQ, making DEQ the primary 13 administrator and enforcer of the Act in Oregon. This MAO furthers the goals of the Act by 14 ensuring progress towards compliance and is consistent with DEQ's goals of protecting human health and the environment. DEQ and Respondent recognize that this MAO does not eliminate the 15 16 possibility of additional enforcement of the Act by EPA or citizens under the federal citizen suit 17 provision. 18 4. DEQ and Respondent recognize that the Environmental Quality Commission (EQC) 19 has the authority to impose civil penalties and to issue an abatement order for the alleged violations 20 described in Section III of this MAO. Therefore, pursuant to ORS 183.417(3), DEQ and 21 Respondent wish to settle the violations alleged in Section III of this MAO. 5. 22 Pursuant to OAR 340-012-0030(19) and OAR 340-012-0145(2), the violations 23 alleged in Section III of this MAO, will be treated as "Prior Significant Actions," as defined by 24 OAR 340-012-0030(19), in the event DEQ assesses a civil penalty for violations not expressly settled herein. 25 6. 26 Both DEQ and Respondent agree that the proposed Enclosure & Controls will 27 significantly reduce toxic air contaminant emissions from the Facility, that are regulated under the

1 Cleaner Air Oregon program. The Parties do not want the process of completing Cleaner Air 2 Oregon requirements to slow down the permitting of the Facility or the operation of the Enclosure 3 & Controls. 7. 4 Notwithstanding the conclusion in Section II, paragraph 10 that the Facility is a new 5 source according to the Cleaner Air Oregon definition, and notwithstanding the alleged violations in 6 Section III, paragraphs 3 and 4 of this MAO, DEQ is exercising its discretion and not requiring a 7 Risk Assessment prior to the installation of the Enclosure & Controls. After the installation of the 8 Enclosure & Controls, DEQ will notify Respondent in writing, by issuing a call-in letter, at the time 9 that DEQ requires the Facility to demonstrate compliance with Cleaner Air Oregon 10 requirements. DEQ will prioritize call-in for the Facility based on the initial risk screening using 11 the Emissions Inventory required under Section V, paragraph 7, below. DEQ will notify 12 Respondent in writing when a Risk Assessment must be completed under OAR 340-245-13 0050(2). Respondent agrees that it will comply with the new source standards as provided in 14 OAR 340-245-0050(2) and OAR 340-245-8010, Table 1, and with the submittal and payment 15 deadlines as provided in OAR 340-245-0030 unless an alternative schedule is approved in 16 writing by DEQ. The following procedures will apply, based on the results of the DEQ-approved 17 Risk Assessment: 18 Subject to Section IV, paragraph 7.b below, if the Risk Assessment shows that the 19 Facility's risk is greater than the TLAER Level applicable at the time of call-in, 20 Respondent agrees that it will comply with the Risk Reduction Requirements in 21 OAR 340-245-0130(1)-(6) to reduce its risk to at or below the TLAER Level or 22 the Permit Denial Level, as applicable according to OAR 340-245-0050(2)(b), 23 except that Respondent agrees that all references in that rule to "TBACT" in OAR 24 340-245-0130 shall be interpreted as referenced to "TLAER," such that all of 25 Respondent's significant TEUs must meet TLAER.

If the Risk Assessment shows that the Facility's acute noncancer risk is greater than

the TLAER Level applicable at the time of call in but below the existing source

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the throughput limit was exceeded, and \$25,000 for each month that the percent autos limit was

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exceeded.

- 18. If any event occurs that is beyond Respondent's reasonable control and that causes or may cause a delay or deviation in performance of the requirements of this MAO, Respondent shall immediately notify DEQ verbally of the cause of delay or deviation and its anticipated duration, the measures that have been or will be taken to prevent or minimize the delay or deviation, and the timetable by which Respondent proposes to carry out such measures. Respondent shall confirm in writing this information within five (5) working days of the onset of the event. It is Respondent's responsibility in the written notification to demonstrate to DEQ's satisfaction that the delay or deviation has been or will be caused by circumstances beyond the control and despite due diligence of Respondent. If Respondent so demonstrates, DEQ may extend times of performance of related activities under this MAO as appropriate. Circumstances or events beyond Respondent's control include, but are not limited to, acts of nature, unforeseen strikes, work stoppages, fires, explosion, riot, sabotage, or war. Increased cost of performance or a consultant's failure to provide timely reports are not considered circumstances beyond Respondent's control.
- 19. Respondent agrees to refrain from using the value of the Supplemental Environmental Project(s) (SEPs) described in Section V, paragraph 2, as a tax deduction or as part of a tax credit application; and, whenever Respondent publicizes the SEP(s) or the results of the SEP(s), Respondent will state in a prominent manner that the project was undertaken as settlement of a DEQ enforcement action. An approved SEP(s) will be incorporated into this MAO by amendment. Respondent will be deemed to have completed the SEP when the DEQ Office of Compliance and Enforcement receives a final report documenting the completion of the SEP(s).
- 20. Civil penalty payments made pursuant to this MAO should be made as follows: send a check or money order made payable to "Department of Environmental Quality" to DEQ -

1 Business Office, 700 NE Multnomah Street, Suite #600, Portland, Oregon 97232. Please include 2 the case number on the check or money order. 3 V. FINAL ORDER The Environmental Quality Commission hereby enters a final order: 4 5 1. Imposing on Respondent a total civil penalty of \$500,000 for the violations alleged in Section III, Paragraphs 1 and 2 of this MAO, \$100,000 of which is due within 14 days of the 6 7 MAO Effective Date. DEQ is not assessing a penalty for the violations alleged in Section III, 8 Paragraphs 3, 4 and 5 of this MAO. 9 2. By no later than 90 days after the MAO Effective Date, requiring Respondent to 10 submit to DEQ a Supplemental Environmental Project (SEP) application for a project or projects 11 that meet DEQ's SEP approval criteria and contribute no less than \$400,000 to a third party 12 organization(s) to implement one or more SEPs that will benefit air quality in the vicinity of the 13 Facility. Within 30 days of DEQ's approval of the SEP application, Respondent must transmit 14 payment of no less than \$400,000 to the third party organization(s) and provide DEQ with documentation of the transmittal(s). 15 16 3. Requiring Respondent to submit to DEQ an ACDP application meeting the applicable 17 Major NSR requirements specified in OAR chapter 340, division 224 on the following schedule: 18 Within 30 days of the MAO Effective Date, submit a proposal for addressing the 19 preconstruction air quality monitoring requirement in OAR 340-224-0070 for 20 ozone. 21 b. Within 90 days of receiving DEQ approval for addressing preconstruction air 22 quality monitoring, submit a modeling protocol addressing the applicable 23 requirements of OAR chapter 340, divisions 224 and 225, including, at a minimum, the following: 24 25 i. The modeling protocol must address all emission sources at the Facility, 26 with the Enclosure & Controls installed and operating on the Shredder, for 27 the following pollutants:

1	1. Ozone (including a Modeled Emission Rates for Precursors			
2	analysis); and			
3	2. Any regulated pollutants subject to short-term NAAQS that ex	2. Any regulated pollutants subject to short-term NAAQS that exceed		
4	the short-term Significant Emission Threshold (SET) values st	ated		
5	below:			
6	Pollutant SET			
7	24-hour PM <sub>2.5</sub> 5 lbs/day			
8	1-hour SO <sub>2</sub> 3 lbs/hr			
9	1-hour NOx 3 lbs/hr			
10	ii. Proposed background concentration values for modeled pollutants			
11	identified in Section V.3.b.i, above;			
12	iii. Proposed procedures for estimating whether VOC emissions would ca	use		
13	or contribute to an ozone NAAQS exceedance;			
14	iv. Proposed procedures for demonstrating whether modeled pollutants			
15	identified in Section V.3.b.i, above would cause or contribute to a sho	rt-		
16	term NAAQS exceedance;			
17	v. Proposed procedures for demonstrating whether Air Quality Related			
18	Values are protected;			
19	vi. Evaluation of whether and to what extent a cumulative impacts evaluation	tion		
20	is required;			
21	vii. Request for a competing source inventory from DEQ if required for			
22	modeled pollutants identified in Section V.3.b.i; and			
23	viii. All other information requested by DEQ pursuant to the U.S. EPA			
24	Guideline on Air Quality Models, 40 CFR part 51 and DEQ			
25	Recommended Procedures for Air Quality Dispersion Modeling, to en	able		
26	DEQ to confirm that the demonstration will meet all relevant			
27	requirements.			

1	c. Within 120 days of approval of the modeling protocol, submit a Major NSR
2	ACDP application including:
3	i. Ambient air quality analysis conducted in accordance with the approved
4	modeling protocol described in Section V.3.b;
5	ii. A complete BACT analysis for the Shredder for VOC emissions;
6	iii. Net Air Quality Benefit Analysis, to the extent applicable, in accordance
7	with OAR 340-224-0060(2).
8	4. By no later than December 31, 2023, requiring Respondent to complete construction
9	of the Enclosure & Controls as approved in DEQ's October 12, 2021 NC approval and any
10	subsequent DEQ amendments to that approval.
11	a. In addition to submitting a Notice of Approved Construction completion as
12	required in DEQ's October 12, 2021 NC approval, Respondent must submit a
13	written notification to DEQ within five business days of completing construction
14	of the Enclosure & Controls. The notification must include the commissioning
15	schedule for the Enclosure & Controls.
16	b. Respondent must provide written notification to DEQ within five business days of
17	commencing commissioning of the Enclosure & Controls.
18	5. By no later than March 31, 2024, requiring Respondent to complete commissioning
19	and begin full time operation of the Enclosure & Controls as approved in DEQ's October 12,
20	2021 NC approval and any subsequent DEQ amendments to that approval.
21	a. Respondent must provide written notification to DEQ within five business days of
22	completing commissioning and commencing full time operation of the Enclosure
23	& Controls.
24	b. From the date of Respondent's notification described in Section V, paragraph 5.a
25	above until DEQ issues an ACDP for the Facility, Respondent must monitor and
26	record control device operational parameters as proposed in its October 2021 Title
27	V Application.

1	6.	Wi	thin 60 days of commencing full time operation of the Enclosure & Controls,
2	Respondent must:		
3		a.	Complete EPA Method 204 testing and submit written documentation to DEQ
4			demonstrating that the Enclosure meets all of the criteria in EPA Method 204 for
5			a Permanent Total Enclosure. Compliance with EPA Method 204, Section 5.1
6			must be demonstrated by documenting that 1) the shredder VOC emitting points
7			are at least 1.5 equivalent opening diameters from any Natural Draft Opening
8			(NDO); and 2) there are two auxiliary hoods located adjacent to the shredder
9			infeed conveyor NDO and discharge conveyor NDO; and 3) Respondent is
10			maintaining a pressure inside the Enclosure of at least 0.007 inches of water less
11			than the outside of the Enclosure, which, following completion of the EPA
12			Method 204 testing, will be demonstrated using parametric monitoring of fan
13			amperage. Compliance with EPA Method 204, Section 5.4 must be demonstrated
14			using the procedures in EPA Method 204, Section 8.3.
15		b.	Complete source testing at the outlet of the acid gas controls for the following
16			pollutants using the following methods, unless otherwise approved in writing by
17			DEQ:
18			i. Total PM using ODEQ Method 5;
19			ii. VOCs using EPA Method 25A;
20			iii. The following acid gases using EPA Method 26A:
21			1. Hydrogen fluoride,
22			2. Hydrogen chloride, and
23			3. Hydrogen bromide.
24			iv. The following metals, using EPA Method 29:
25			1. Antimony,
26			2. Arsenic,
27			3. Barium,

1	4. Beryllium,	
2	5. Cadmium,	
3	6. Cobalt,	
4	7. Copper,	
5	8. Lead,	
6	9. Manganese,	
7	10. Mercury,	
8	11. Nickel,	
9	12. Phosphorus,	
10	13. Selenium,	
11	14. Silver,	
12	15. Thallium,	
13	16. Vanadium, and	
14	17. Zinc.	
15	v. Total and hexavalent chromium, using EPA SW-846 Test Method 0061;	
16	vi. The following pollutants, using EPA Method 23:	
17	1. Polychlorinated dibenzo-p-dioxins and polychlorinated	
18	dibenzofurans (PCDD/PCDF),	
19	2. Total and congener-specific polychlorinated biphenyls (PCB), and	
20	3. Polycyclic aromatic hydrocarbons (PAH);	
21	vii. The following VOC HAPs, using EPA Method 18, or similar method upon	
22	DEQ's written approval:	
23	1. 2,2,4 Trimethylpentane,	
24	2. Benzene,	
25	3. Ethylbenzene,	
26	4. Hexachloroethane,	
27	5. Hexane,	

1	6. Toluene, and		
2	7. Xylenes.		
3	c. To enable testing, Respondent must design and install, in accordance with EPA		
4	Method 1, accessible sampling ports at the outlet of the acid gas controls;		
5	d. The source testing described in Section V, paragraph 6.a through 6.c above must		
6	comply with DEQ's Source Sampling Manual and DEQ's source test plan		
7	approvals. Source test plans must be submitted at least 45 days before source		
8	testing and source test reports must be submitted at least 90 days after testing is		
9	completed, unless otherwise approved in writing by DEQ.		
10	7. Within 90 days of DEQ's approval of the source test report(s) for the source testing		
11	completed under Section V, paragraph 6, submit to DEQ an updated Cleaner Air Oregon		
12	Emissions Inventory for the Facility, which takes into account the Enclosure & Controls and the		
13	source test information.		
14	8. Once called in to the Cleaner Air Oregon Program pursuant to Section IV, paragraph		
15	7, Respondent must comply with the new source standards as provided in OAR 340-245-0050(2)		
16	and OAR 340-245-8010, Table 1, and with the submittal and payment deadlines as provided in		
17	OAR 340-245-0030 unless an alternative schedule is approved in writing by DEQ. The following		
18	procedures will apply, based on the results of the DEQ-approved Risk Assessment:		
19	a. Subject to Section V, paragraph 8.b below, if the Risk Assessment shows that the		
20	Facility's risk is greater than the TLAER Level applicable at the time of call-in,		
21	Respondent must comply with the Risk Reduction Requirements in OAR 340-		
22	245-0130(1)-(6) to reduce its risk to at or below the TLAER Level or the Permit		
23	Denial Level, as applicable according to OAR 340-245-0050(2)(b), except that		
24	Respondent agrees that all references in that rule to "TBACT" in OAR 340-245-		
25	0130 shall be interpreted as referenced to "TLAER," such that all of Respondent's		
26	significant TEUs must meet TLAER.		
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1 b. If the Risk Assessment shows that the Facility's acute noncancer risk is greater than 2 the TLAER Level applicable at the time of call in but below the existing source 3 TBACT Level applicable at the time of call in, Respondent may request, and DEQ may approve, additional extensions of time according to the criteria in OAR 340-5 245-0130(4)(b)(B) to complete implementation of the Risk Reduction Plan. Such extensions may exceed the 12 months maximum stated in OAR 340-245-6 7 0130(4)(b)(B). 8 If the Risk Assessment shows that the Facility's risk is greater than the existing 9 source Immediate Curtailment Level applicable at the time of call-in, then 10 Respondent must comply with the process for immediate curtailment in OAR 11 340-245-0130(7)-(9). 12 9. From the MAO Effective Date until Respondent completes commissioning and 13 commences full time operation of the Enclosure & Controls, Respondent shall not operate the 14 Shredder above a maximum 12-month rolling total throughput of 460,000 tons metal infeed/year 15 and a maximum percent autos of 50% (measured monthly). The first 12-month rolling 16 compliance period is the 12-calendar month period from November 1, 2022 through October 31, 17 2023. Respondent shall report 12-month rolling total metal throughput and monthly percent 18 autos information to DEQ each month, within 15 business days of the close of the previous 19 month. 20 10. Written documentation demonstrating compliance with the requirements of Section V, 21 paragraphs 3-9 must be submitted to David Graiver, DEQ, 700 NE Multnomah Street, #600, 22 Portland, Oregon, with an electronic copy sent via email to david.graiver@deq.oregon.gov and 23 becka.puskas@deq.oregon.gov. Please send any information marked as exempt from public 24 disclosure under the Oregon Public Records law in hard copy only, and provide email notification 25 of its mailing or delivery to DEQ.

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1	11. This MAO terminates when Respondent has (a) paid all penalties due under this MAO,		
2	(b) submitted all test reports due under this MAO, and (c) DEQ has issued an ACDP consistent with		
3	this MAO, including condition(s) that incorporate the Cleaner Air Oregon provisions of this MAO		
4	(Section IV, paragraph 7 and Section V, paragraph 8).		
5		COUNTRIED CREEK INDUCTRIES INC	
6		SCHNITZER STEEL INDUSTRIES, INC. (RESPONDENT)	
7	3 Nov-2023		
8	Date	Signature  Signature	
9	Date	John B Hebert Name (print)	
10		Vice President / COO Title (print)	
11		Title (print)	
12		DEPARTMENT OF ENVIRONMENTAL QUALITY and	
13		ENVIRONMENTAL QUALITY COMMISSION	
14			
15	11/6/2023		
16	Date	Kieran O'Donnell, Manager	
17		Office of Compliance and Enforcement on behalf of DEQ pursuant to OAR 340-012-0170	
18 19		on behalf of the EQC pursuant to OAR 340-011-0505	
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