



## YAKIMA REGIONAL CLEAN AIR AGENCY

Order of Approval Permit No. NSRP-02-CSC-08

**New Source Review Order of Approval for Canam Steel Corporation for a ESAB Model Sabre 2000 Dry Plasma Table with a FARR Gold Series Modular Dust Collector.**

IN THE MATTER OF approving a project which establishes a new air contaminant source at Canam Steel Corporation (CSC), THIS ORDER OF APPROVAL IS HEREBY ISSUED TO:

**Applicant/Permittee:** Canam Steel Corporation  
*Prefabricated Structural Steel metal parts*

**Located at:** 2002 Morgan Rd.  
Sunnyside, WA 98944

**Contact:** Canam Steel Corporation  
Sam Clark  
Safety, Health & Environmental Coordinator  
2002 Morgan Rd.  
Sunnyside, WA 98944  
(509) 837-7008

IN COMPLIANCE WITH THE PROVISIONS OF THE STATE OF WASHINGTON CLEAN AIR ACT (Revised Code of Washington (RCW) CHAPTER 70.94.152, WASHINGTON ADMINISTRATIVE CODE (WAC) 173-400-110 AND WAC 173-460-040.

ISSUE DATE: November 19, 2009

THIS ORDER OF APPROVAL PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:

**Construction of the equipment must be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise specified herein. The conditions and limitations of this NSR Order of Approval are attached as follows and shall become federally enforceable and required provisions of the Title V Air Operating Permit AOP # Y-005-01:**



## DESCRIPTION OF THE SOURCE

1. Canam Steel Corporation hereafter referred to as the permittee or CSC is a Title V company in accordance with the Federal Clean Air Act. The permittee has been issued an Air Operating permit in March 21, 2000 and renewed and issued in September 8, 2006 for a period of five years term. The permittee operates and fabricate structural steel members i.e., trusses and joist (processes details for the facility are found in the statement of bases of the Title V AOP permit AOP # Y-005-01). The facility operation is located at 2002 Morgan Rd., Sunnyside, WA. The permittee has installed an ESAB Model Sabre 2000 Dry Plasma Table with a FARR Gold Series Modular Dust Collector with 5000 actual cubic feet per minute (acfm) capacity.
2. Air emissions from this operation are primarily in the form of Particulate Matter (PM), Nitrogen Oxides (NO<sub>x</sub>), Ozone (O<sub>3</sub>), Volatile Organic Compounds (VOCs), some of which are known as Hazardous Air Pollutants (HAPs) and/or Toxic Air Pollutants (TAPs) in accordance with the Federal Clean Air Act (FCAA) or Washington Administrative Code (WAC) 173-460-150 and 160, respectively. These emissions are emitted from the plasma table and the dust collector. The City of Sunnyside issued a Determination of Non-Significance (DNS) with respect to the State Environmental Policy Act (SEPA) review for this facility.
3. The layout and specifications of plasma table and dust collector were submitted with the NSR application and are part of this permit as provided by the permittee.
4. Installation of the plasma table and dust collector is a source of an air contaminants requiring a NSR permit pursuant to the Revised Code of Washington (RCW) 70.94.152 and the WAC 173-400-110 and 173-460-040. This facility is located in an area that is in attainment with all state and federal air quality standards for all criteria pollutants.

**THEREFORE**, it is hereby ordered that the project as described above, in the NSR application, and in detailed plans, specifications and other information submitted in reference thereto, is approved for construction, installation and operation, provided the following conditions are met:

## OPERATIONAL CONDITIONS

5. This Order of Approval permit is for the plasma table and dust collector, located at 2002 Morgan Rd., Sunnyside, Washington, in accordance with the plan and specifications submitted with the NSR application to Yakima Regional Clean Air Agency (YRCAA) and specified in Table 1 of this Order of Approval.





6. As provided in the RCW 70.94.152, WAC 173-400-113 and WAC 173-460-060, Best Available Control Technology (BACT) and Toxic-BACT (T-BACT), respectively, are required to control all air emissions from any proposed new facility or modified source. YRCAA finds BACT and T-BACT analysis to be satisfied as follows:
  - 6.1 FARR Gold Series Modular Dust Collector with 5000 acfm flow rate and 99.99 % control efficiency; and
  - 6.2 The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) plan for the plasma table and dust collector, including appropriate training for all operators.
7. The permittee shall install and maintain a gauge/manometer to measure the pressure drop across the exhaust of dust collector within 30 days of the receipt of this permit as specified in by the manufacturer. The acceptable range for the gauge shall be developed based on the manufacturer's specification and clearly marked on or nearby the gauge.
8. This facility is subject to 40 CFR Part 63, Subpart M (Surface Coating of Miscellaneous Metal Parts and Products). The maximum combined fugitive and point source emissions of HAP's in the overall facility operation shall not exceed 24.1 and/or 9.9 tons for any combined or single HAP, respectively, on a moving 12 month arithmetic average.
9. This permit authorizes the use of the following equipment:

**Table 1. Authorized Equipment List.**

Emission Unit or Activity	Description
Plasma Table	ESAB Model Sabre 2000 Dry Plasma Table
Dust Collector	FARR Gold Series Modular Dust Collector; Model GS12SQ; 5000 cfm @ 12.00 Inches SP

10. There must be no fallout or any fugitive emissions from operation of these specified installation or any of the facility operation beyond the property boundary in a quantity that interferes unreasonably with the use and enjoyment of the property owner upon which the material is deposited or is detrimental to the health, safety or welfare of any person or causes damage to any property or business.
11. The permittee must develop and implement a site-specific O&M plan for the plasma table and dust collector based on the manufacturer and owners/operators experience as part of



BACT. The permittee must develop the O&M plan within 60 days after the issuance of this Order.

12. Within 60 days from the date of issuance of this order of approval, the permittee shall submit a letter notifying YRCAA that the O&M plan is completed and in place. If the permittee needs to make any future modification to the plasma table and dust collector, or their operating procedures, an approval in writing from YRCAA must be issued before such modification takes place. The O&M documents must be updated and implemented to reflect such modification.
13. Visible emissions from the dust collector shall be limited to zero percent (0 %) opacity as measured by 40 CFR 60 Appendix A, Method 9. No visible emission shall be allowed from any other stack or building opening. If the permittee observes visible emissions from any emission point, the permittee shall immediately stop the operation creating the emission and take corrective action as directed in the O&M Plan until no more visible emissions are observed.
14. Permit requirements apply to the facility owner and/or operator(s) and any contractor or subcontractor performing any activity authorized under this permit. Any person(s), including contractor(s) and/or subcontractor(s), not in compliance with the applicable requirements in this permit are in violation of Federal, State and local laws and subject to appropriate civil and criminal penalties. The facility owner and/or operator, and all contractor(s) or subcontractor(s) are liable for the actions and violations of their employee(s). Any violation committed by a contractor or subcontractor shall be considered a violation by the facility owner and/or operator, and is also a violation by the contractor and/or any subcontractor(s).
15. The YRCAA Air Pollution Control Officer (APCO) or his representative shall be allowed to enter the facility at reasonable times to inspect for compliance with applicable regulations and the conditions of this Order.

#### **GENERAL CONDITIONS**

16. Establishment of the plasma table and dust collector, and any other emission points at this facility shall be in compliance with all other requirements specified in all current federal, state and local air pollution laws and regulations, including but not limited to RCW 70.94.152 (Washington Clean Air Act), WAC 173-400 (General Regulations for Air Pollution Sources), WAC 173-460 (Controls for New Sources of Toxic Air Pollutants), and the YRCAA Regulation 1.
17. All plans, specifications or other information submitted to YRCAA and any further authorizations or approvals or denials in relation to this project, shall be incorporated herein





and made a part of the YRCAA file and this permit.

18. Nothing in this approval shall be construed as preventing or evading compliance with any other requirement(s) of law including those imposed pursuant to the Washington Clean Air Act, and rules and regulations thereunder. Any violation(s) of such rules and regulations are penalized in accordance with RCW 70.94.430 and YRCAA Regulation 1, Article 5, Penalties.
19. Authorization may be modified, suspended or revoked in whole or part for cause including, but not limited to, the following:
  - 19.1 Violation of any terms or conditions of this authorization; or,
  - 19.2 Obtaining this authorization by misrepresentation or failure to disclose fully all relevant facts.
20. The provisions of this authorization are severable and, if any provision of this authorization, or application of any provisions of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances, and the remainder of this authorization, shall not be affected thereby.
21. The RCW rules and regulations may be superseded or revised without notice. It is the permittee's responsibility to stay current with rules and regulations governing their business and therefore is expected to comply with all new rules and regulations immediately upon their effective date. Rules and regulation updates will be incorporated into existing permits or upon renewal or modification of said permits.
22. All air emissions from this facility shall be in compliance with air emission standards at all times. It is the responsibility of the owner to make sure that air emissions are within all known rules and regulations.
23. Deviations from these conditions are violations subject to penalties in accordance with RCW 70.94.430 and 431, WAC 173-400-230 and YRCAA Regulation 1, Article 5, Section 5.02.
24. Any person feeling aggrieved by this NSR order of approval permit may obtain review thereof by application, within thirty (30) days of receipt of this NSR permit to the Pollution Control Hearings Board (PCHB), P.O. Box 40903, Olympia, WA. 98504-0903. Concurrently, a copy of the application must be sent to the Yakima Regional Clean Air Agency, 329 N. 1<sup>st</sup> St., Yakima, WA. 98901. These procedures are consistent with the provisions of Chapter 43.12B RCW and the rules and regulations adopted thereunder.



25. If, or whenever the permittee wants to modify the operation, install new equipment or change the quantity set forth in Appendix A of this permit, another NSR application must be filed and approved with YRCAA before the changes take place and BACT and T-BACT requirements must be satisfied.

### EMISSION LIMITS

26. The permittee must meet the emission limit of 0.01 grains per dry standard cubic foot (gr/dscf) from the dust collector. Table 2 shows the actual air emissions from this dust collector, Appendix A shows the calculations for these air emissions.

**Table 2. Canam Steel Corporation Actual and Allowable Air Emissions.**

Pollutants	Actual Emissions (lbs/year)*	Allowable Emissions (lbs/year)
Particulate Matter (PM)	0.44	1.53
Nitrogen Oxides (NO <sub>x</sub> )	2388.8	8362.2
Ozone (O <sub>3</sub> )	408.5	1433.8
Metal fume	0.19	0.67

\*Above emissions are based on the information provided by Canam Steel Corporation and USEPA AP-42.

### MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

27. Once during each month that the dust collector is in use, the permittee shall determine and record if the pressure drop across the exhaust filters is within the acceptable range. If the pressure drop is not within the acceptable range, the permittee shall stop operation and take corrective action as specified in the facility's O&M plan.
28. Operation and Maintenance procedures shall include but not be limited to the following:
- 28.1 Required scheduled lubrication of all moving parts as specified by the equipment manufacturer;
  - 28.2 Required scheduled calibration of process control instruments as specified by the equipment manufacturer; and
  - 28.3 Scheduled inspection and replacement of equipment or parts for wear and tear, as



specified by the equipment manufacturer.

29. The plasma table and dust collector maintenance shall be logged and kept on site. Any log shall be designed by the permittee and shall contain at least the date, operator name and specific action taken.
30. The required records, logs and a copy of the O&M plan for this facility shall be kept on site and shall always be readily available, organized and accessible when requested by YRCAA APCO or his representative or during an inspection. The O&M plan shall be updated to reflect any changes in operating procedures and such changes shall be routinely implemented.
31. Material Safety Data Sheets (MSDS) of all materials contributing to HAP, TAP and VOC emissions shall be maintained on-site and readily accessible when requested by YRCAA personnel.
32. All records shall be kept and maintained at the site for at least the most recent three year period from any present time and be made available during inspections or when requested by YRCAA.
33. Total emissions for criteria pollutants, HAPs, TAPs and VOCs must be calculated and reported to YRCAA on an annual basis as specified in the annual emission inventory as required by the AOP #Y005-01.
34. All recordkeeping required in this permit must be reported to YRCAA as specified.
35. Any application form, report, or compliance certification, including the annual consumption report, submitted pursuant to this permit and the AOP must be signed by a responsible official.

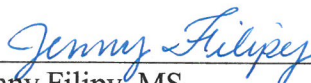




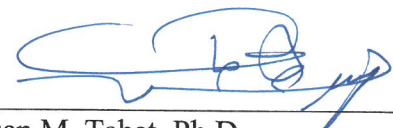
36. This permit and its conditions shall remain in effect in the event of any change in control or ownership of the facility. In the event of any such change in control or ownership of the subject facility, the permittee shall notify the succeeding owner of the permit and conditions and shall notify the YRCAA of the change in control or ownership as specified in the AOP.
37. This permit will be considered invalid without paying the complete appropriate/required fees to YRCAA, pursuant to RCW 70.94.152.

DATED at Yakima, Washington this 19 day of November, 2009.


PREPARED BY:

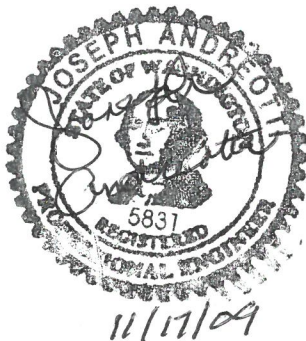
  
Jenny Filipy, MS  
Air Quality Engineer  
Yakima Regional Clean Air Agency

REVIEWED & APPROVED BY:

  
Hasan M. Tahat, Ph.D.  
Engineering and Planning Division Supervisor  
For  
Gary W. Pruitt  
Air Pollution Control Officer  
Yakima Regional Clean Air Agency

REVIEWED BY:

  
Joseph Andreotti, P.E.,  
Andreotti and Associates





	Cutting (hr/yr)	Plasma cut gas	Protection gas	Product Width	Particulate Emissions Factor* (lb/hr)	Particulate Emissions (lb/yr)	Emissions with 99.99% reduction	PM Emissions (g/s)	Model Emissions (ug/m <sup>3</sup> ) Annual Ave	NOx Emissions Factor	NOx (lb/yr)	NOx Emissions (g/s)	Model Emissions (ug/m <sup>3</sup> ) Annual Ave	Model Emissions (ppmv)
Allowable Production	174.7	nitrogen	oxygen	0.25	1.05	183.44	0.0183435	2.64E-07	0.000	0.331	57.83	0.001	0.27	0.0001
Output per year	7862.4	nitrogen	oxygen	0.375	1.76	13837.82	1.3837824	1.99E-05	0.032	0.97	7626.53	0.110	35.05	0.0186
24 hr/day 7days/week 52 weeks/year	698.8	nitrogen	oxygen	0.5	1.76	1229.89	0.1229888	1.77E-06	0.003	0.97	677.84	0.010	3.11	0.0017
Actual production output per year	49.9	nitrogen	oxygen	0.25	1.05	52.40	0.0052395	2.65E-07	0.000	0.331	16.52	0.001	0.27	0.0001
8 hr/day* 6 days/week * 52 weeks/year	2246	nitrogen	oxygen	0.375	1.76	3952.96	0.395296	2.00E-05	0.032	0.97	2178.62	0.110	35.14	0.0187
	199.68	nitrogen	oxygen	0.5	1.76	351.44	0.03514368	1.77E-06	0.003	0.97	193.69	0.010	3.12	0.0017
Total Allowable						15251.15	1.525	2.19E-05	0.035		8362.19	0.120	38.43	0.0204
Total Actual						4356.79	0.436	2.20E-05	0.035		2388.83	0.121	38.53	0.0058

Assuming 15 lb/hr gouge capacity and 5% dry basis VOC emission  
 dust collector efficiency 99.99%  
 Actual total VOC emission (lb per hour) with dust collector

(lb/hr)  
 7.5E-05

0.05 ppmv annual NAAQS

Pollutant	ASIL (ug/m <sup>3</sup> )	averaging period	WAC Small Quantity (lb/hr)	WAC Small Quantity (lb/yr)	Classification	Carbon Steels (% in Metal)	Actual Emissions w/ 99.99% control (lb/yr)	Allowable Emissions w/ 99.99% control (lb/yr)	Emissions w/ 99.99 % control (g/s)	Model Emissions (ug/m <sup>3</sup> ) 24 hour ave	Model Emissions (ug/m <sup>3</sup> ) Annual Ave
Aluminum, as Al welding fumes	17	24-hr	0.2	1750	TAP, VOC	0.07	0.00013	0.00046	6.62E-09	1.06E-05	
Chromium (II) compounds, as Cr	1.7	24-hr	0.02	175	HAP, TAP, VOC	0.9	0.00168	0.00590	8.51E-08	1.36E-04	
Chromium (III) compounds, Cr	1.7	24-hr	0.02	175	HAP, TAP, VOC	0.9	0.00168	0.00590	8.51E-08	1.36E-04	
Chromium (metal)	1.7	24-hr	0.02	175	HAP, TAP, VOC	0.9	0.00168	0.00590	8.51E-08	1.36E-04	
Chromium, hexavalent metal and compounds	0.000083	yr			HAP, TAP, VOC	0.1	0.00019	0.00066	9.45E-09		0.000003
Cobalt as Co metal Dust and fume	0.17	24-hr	0.02	175	HAP, TAP, VOC	0.01	0.00002	0.00007	9.45E-10	1.51E-06	
Copper, Fume	0.67	24-hr	0.02	175		0.5	0.00094	0.00328	4.73E-08	7.55E-05	
Iron oxide fume, Fe2O3 as Fe	17	24-hr	0.2	175		82.3	0.15404	0.53922	7.78E-06	1.24E-02	
Magnesium oxide fume	33	24-hr	0.6	175		1.65	0.00309	0.01081	1.56E-07	2.49E-04	
Manganese fume	3.3	24-hr	0.02	175	HAP, TAP, VOC	1.65	0.00309	0.01081	1.56E-07	2.49E-04	
Molybdenum, as Mo soluble cpds	17	24-hr	0.2	1750		0.35	0.00066	0.00229	3.31E-08	5.28E-05	
Molybdenum, insoluble cpds	33	24-hr	0.6	1750		0.35	0.00066	0.00229	3.31E-08	5.28E-05	
Nickel and compounds (as nickel subsulfide or nickel refinery dust)	0.0021	yr		0.5	HAP, TAP, VOC	2	0.00374	0.01310	1.89E-07		0.0001
Vanadium, as V2O5	0.17	24-hr	0.02	175		0.15	0.00028	0.00098	1.42E-08	2.26E-05	
Zinc oxide, fume	17	24-hr	0.2	175		10.5	0.01965	0.06880	9.93E-07	1.59E-03	
nitric oxide (NO)	100	24-hr	2	17500		0.06	0.00011	0.00039	3.40E-07	5.44E-04	
Total Metals						0.192		0.670			

USAF	Ozone estimate
3.100	ppm O3
7555.000	cfm
0.023	cfm O3
28.317	lbf3
0.663	lbfm
25.727	lbfm @ 20 C, 1 atm
0.026	gmol/nm
48.000	g O3/gmol
1.237	g/min
0.021	g/s
82.345	ug/m <sup>3</sup> model 1 hr ave
57.641	ug/m <sup>3</sup> model 8 hr ave
0.042	ppmv 1hr ave
0.029	ppmv 8 hr ave
	0.12 ppmv 1hr NAAQS
	0.075 ppmv 8 hr NAAQS