



YAKIMA REGIONAL CLEAN AIR AGENCY

Order of Approval Permit Number NSRP-01-YFTF-24

New Source Review Order of Approval for Yakima County Fire District #4 for an outdoor multipurpose live fire training facility with 4 burners at 4.5 million Btu per hour each located at Yakima County Fire District #4 (East Valley Fire Department).

IN THE MATTER OF approving a project which establishes a new air contaminant source at Yakima County Fire District #4, East Valley Fire Department at Yakima, WA. THIS ORDER OF APPROVAL IS HEREBY ISSUED TO:

Applicant/Permittee: Yakima County Fire District #4 (East Valley Fire Department)
Fire Department - Emergency response

Located at: 2003 Beaudry Road
Yakima, WA 98901

Responsible Official: Yakima County Fire District #4 (East Valley Fire Department)
Raymond Lamoureux, Deputy Fire Chief
r.lamoureux@ycfd4.org
2003 Beaudry Road
Yakima, WA 98901

IN COMPLIANCE WITH THE PROVISIONS OF THE STATE OF WASHINGTON CLEAN AIR ACT, Revised Code of Washington (RCW) CHAPTER 70A.15.2210, WASHINGTON ADMINISTRATIVE CODE (WAC) 173-400-110, and WAC 173-460-040:

ISSUE DATE: *May 24*, 2024

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

Construction/Installation and operation of the equipment must be conducted in compliance with all data and specifications submitted with the New Source Review (NSR) application under which this Order of Approval is issued unless otherwise specified herein. The conditions and limitations of this NSR Order of Approval are attached as follows:

1.0 DESCRIPTION OF THE SOURCE

- 1.1 Yakima County Fire District #4 -East Valley Fire Department, hereafter referred to as the Permittee, EVFD, the Facility or the Source is a Fire Department located at 2003 Beaudry Road, Yakima, WA, that serves the residents of Terrace Heights, Moxee and all of the east area of the Yakima River to mile marker 30.
- 1.2 The Permittee submitted a New Source Review (NSR) application on March 20, 2024 to install an outdoor multipurpose live fire training facility, hereafter referred to as training unit, training facility or unit, to provide training for firefighters. The training facility will include 4 propane burners at 4.5 Million Btu per hour (MMBtu/hr) each in the operation of the facility. The Google Earth view of the Facility site with the property boundary is shown in Figure 1 below.
- 1.3 The training facility will be a three-story built to include a fourth story platform, for vertical technical rope rescue training. The facility will be composed of two forty feet (40') Conex storage containers on the bottom level, one forty feet (40') Conex storage container on the second level, and a twenty feet (20') Conex storage container on the third level. The training facility will have two (2) Class B burn rooms. These burn rooms will be located on the first and second floors of the training facility and will be equipped with two (2) burners on each floor; one main burner and one rollover burner, both designed by Symtech. All four (4) burners will use propane as the only fuel source, with a maximum total heat input of eighteen (18) million Btu per hour (4.5 MMBtu/hr each). The design development layouts are shown in Figures 2 and 3. Figure 4 shows the four side-views of an example of an actual training facility.
- 1.4 This Order of Approval (Order/Permit) number NSRP-01-YFTF-24 is to permit the installation and operation of the outdoor multipurpose live fire training facility. Specifications for the equipment permitted in this Order are as submitted by the Permittee with the NSR application and are part of this NSR Permit.
- 1.5 The training operation will be conducted through training sessions. The burners will be running for fifteen (15) seconds at a time for each session for a total duration of three (3) minutes per burn. The Permittee estimates to conduct six (6) burns per hour, for maximum of eight (8) hours per day.
- 1.6 The four (4) propane burners are expected to operate in accordance with the specifications submitted with the NSR application to the Yakima Regional Clean Air Agency (YRCAA), the manufacturer specifications and the conditions of this Order.
- 1.7 Air emissions from this operation are in form of particulate matter (PM₁₀ and PM_{2.5}), carbon monoxide (CO), oxides of nitrogen (NO₂) and Volatile Organic Compounds (VOCs), some of which are Hazardous Air Pollutants (HAPs) and Toxic Air Pollutants (TAPs), pursuant to the Federal Clean Air Act (FCAA) and the Washington Administrative Code (WAC) 173-460-150, respectively.

- 1.8 The Yakima County issued a Mitigated Determination of Non-Significance (MDNS) for this project on March 14, 2024 (File Number MOD2023-00010/SEP2023-00037) to satisfy the State Environmental Policy Act (SEPA) requirements for this operation. A public notice for this NSR was published on April 2, 2024 in accordance with the Washington Clean Air Act (RCW) 70A.15.2210 and section 173-400-171 of the WAC.

2.0 DETERMINATIONS

In relation to the above installation, YRCAA determines that the Facility shall comply with all applicable federal, state and local regulations and laws including but not limited to the following determination:

- 2.1 Establishment and operation of this training unit at this Facility is considered an installation of a source of air contaminants requiring a NSR Permit pursuant to RCW 70A.15.2210, WAC 173-400-110 and WAC 173-460-040, thus, this NSR is being processed.
- 2.2 The Facility is subject to WAC 173-425 – Outdoor burning;
- 2.3 This Facility is located in an area that is in attainment with all state and federal air quality standards for all criteria pollutants;
- 2.4 The Facility is not a major stationary source as of the date of issuance of this Order. This modification is not subject to the Prevention of Significant Deterioration (PSD) permitting requirements of WAC 173-400-700 through 173-400-750;
- 2.5 The Facility is subject to the annual Registration Program pursuant WAC 173-400-099 Registration Program and YRCAA Regulation 1, Section 4.01 – Registration Program and it will be classified based on the approved YRCAA registration classification;
- 2.6 The corresponding allowable air emissions from this operation were calculated as indicated in Appendix A of this Order based on burners allowable operating hours; and
- 2.7 The calculation results showed that allowable air emissions will comply with the National Ambient Air Quality Standards (NAAQS) of 40 CFR Part 50 and the Acceptable Source Impact Level (ASIL) of WAC 173-460-150, if operated in accordance with this Order.

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

3.0 OPERATIONAL APPROVAL CONDITIONS

- 3.1 This Order is for the installation and operation of the outdoor multipurpose live fire training facility. The training unit includes four (4) propane burners, at Yakima County

Fire District #4, to be located at 2003 Beaudry Road, Yakima, WA, in accordance with the plan and specifications submitted with the NSR application to YRCAA, and specified in Table 1 of this Order below.

3.2 Best Available Control Technology (BACT) and Toxic BACT (t-BACT) pursuant to RCW 70A.15.2210, WAC 173 400-113 and WAC 173-460-060 shall be satisfied for any proposed new facility or modified air emission source to control air emissions. The YRCAA finds BACT and t-BACT to be satisfied as submitted in the NSR application and as follows:

3.2.1 Operation of the four (4) burners with a maximum heat input of 4.5MMBtu/hr for a total of 18MMBtu/hr utilizing propane as the only fuel source, per manufacturer's specifications and as submitted in NSR application. The only other fuel which may be used, in any future modification, and if it becomes available, is Natural Gas (NG);

3.2.2 Operation of the training facility with a maximum allowable operation hours of 876 hours per year (hr/yr) and a maximum allowable propane use of 14,519 gallons per year (gal/yr). The burners will be running for fifteen (15) seconds at a time during each session, with a total duration of three (3) minutes per burn.

3.2.3 Operation of the burners specified in Table 1 below, and all its ancillary equipment as per manufacturers' specifications and certifications; and

3.2.4 Development, maintenance and implementation of an Operation and Maintenance (O&M) plan for the equipment specified in Table 1 of this Order, and all ancillary equipment, as part of the training facility operation, including appropriate training for all operators, as per manufacturers recommended standards.

3.3 This Order authorizes the installation and operation of the following equipment:

Table 1: Authorized equipment list

Units	Equipment Name	Manufacturer	Specifications
1	Propane tank	-	1,000 gallons
2	Main burners	Symtech	4.5MMBtu/hour each Propane fuel
2	Rollover burners	Symtech	4.5MMBtu/hour each Propane fuel

3.4 Equipment specified in Table 1 of this Order above shall be operated and maintained as per manufacturer's specifications, the information submitted with the NSR application and the approval conditions of this Order. It shall be the responsibility of the Permittee to check and make sure that each equipment unit is maintained and operated as per manufacturer's specifications as also indicated in the O&M.

- 3.5 The Permittee shall not exceed the maximum allowable operation hours, fuel usage, and the fuel type specified in Appendix A of this Order. If, and when the Permittee would like to modify these specifications, an approval in writing from YRCAA must be obtained prior to any changes or modifications, and a NSR may be required pursuant to WAC 173-400-110.
- 3.6 If, and when the Permittee wants to change equipment or procedures, other than those submitted with the NSR application an approval in writing from YRCAA must be obtained prior to any changes or modifications, and a NSR may be required pursuant to WAC 173-400-110.
- 3.7 Air emissions shall meet the NAAQS of 40 CFR Part 50 at all times as specified in this Order.
- 3.8 TAPs emissions shall be below the ASIL pursuant to WAC 173-460-150 at all times as specified in Appendix A of this Order.
- 3.9 Total air emissions for Criteria Pollutants, HAPs, and TAPs, must be calculated and submitted to YRCAA annually with the annual registration program and shall not exceed any specified allowable limit in Appendix A of this Order.
- 3.10 The Permittee shall develop and implement a site specific O&M plan for the training facility including all units. The O&M shall be based on manufacturer's operation manuals, recommended standards or certified operator, and be part of BACT and t-BACT as stated above. The O&M plan shall contain at least four sections: general information, operation plan (i.e., key operating parameters), maintenance plan, and any other additional information. If an O&M is not developed yet, a plan must be completed within ninety (90) days of the issuance of this Order and shall include at a minimum, but not limited to the following:
 - 3.10.1 The monitoring of the physical conditions or signs of damage to the burners as per designers or manufacturers recommended intervals. If no recommended intervals, it shall be done at least on quarterly basis. The log of any major repair or replacement to the burners shall be recorded and reported to YRCAA with the annual registration;
 - 3.10.2 The regular schedule of the inspections and maintenance checks.
- 3.11 Within 90 days from the date of issuance of this Order of Approval, the Permittee shall submit notification to YRCAA indicating that the O&M plan is completed and in place. If the Permittee needs to make any future modification to the Facility's operation or equipment, an approval in writing from YRCAA must be issued before any modification takes place. The O&M documents must be updated and implemented to reflect such modification.

- 3.12 Visible emissions pursuant to WAC 173-400-040(2)(i), general standards for maximum emissions, shall not exceed twenty percent (20%) opacity limit. However, visible emissions from fixed and mobile firefighter training facilities occurring during the training of firefighters are exempt from the twenty percent opacity limit. But, shall comply with WAC 173-425 requirements.
- 3.13 Visible emissions, from the burners themselves when in operation shall not exceed five percent (5%). If visible emissions from the burners are observed, the Permittee shall immediately stop the operation creating the emission and take corrective action within 24 hours as directed in the O&M plan until no more visible emissions are observed. Corrective actions may include the following:
- 3.13.1 Conduct a visible emission evaluation in accordance with 40 CFR Part 60, Appendix A, Method 9. Such visible emission evaluation shall be conducted within 24 hours to verify compliance with the respective opacity limits. All observations using the opacity reference test method must be kept on-site and made available to YRCAA staff during an inspection or upon request. If opacity is greater than 5%, appropriate and timely corrective action must be taken no later than 24 hours to identify and correct the problem causing the opacity; or
- 3.13.2 Verify and certify that the affected equipment and/or operation is performing according to its design functions within the acceptable design parameters and is being operated according to O&M procedures. Therefore, it must be checked against any operational conditions that have resulted in compliance in the past. If the equipment is not performing according to design and O&M procedures, the Permittee must shutdown the equipment until it can be repaired and the equipment and/or operation is demonstrated to be in compliance with all applicable opacity limitations in the permit using the reference test method above.
- 3.14 Visible emission from the maintenance and testing of the burners of the training facility shall not exceed the 20% opacity limit.
- 3.15 There must be no fallout or any fugitive emissions from the Facility 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.
- 4.0 GENERAL APPROVAL CONDITIONS**
- 4.1 Installation and operation of this training facility must comply with all other requirements specified in all applicable Federal, State, and Local air pollution laws and regulations, including, but not limited to, RCW 70A.15, WAC 173-400, and YRCAA Regulation 1.
- 4.2 All plans, specifications or other information submitted to YRCAA and any further authorizations, approvals or denials in relation to this project, shall be incorporated herein and made to be part of YRCAA file and this Order.

- 4.3 Except as specified in this Order, a NSR will be required pursuant to RCW 70A.15.2210, WAC 173-400-110, WAC 173-460-040 before any modification or construction starts.
- 4.4 The YRCAA's Air Pollution Control Officer (APCO) or his designated staff shall be allowed to enter the Facility at reasonable times to inspect equipment or records specific to the control, recovery, or release of air contaminants into the atmosphere for compliance with applicable laws, regulations and the conditions of this Order pursuant RCW 70A.15.2500 and YRCAA Regulation 1.
- 4.5 Deviations from these conditions are violations subject to penalties in accordance with RCW 70A.15.3150 and 3160, WAC 173-400-230 and YRCAA Regulation 1, Article 5.
- 4.6 Nothing in this Order shall be construed as preventing or evading compliance with any other requirement(s) of law including those imposed pursuant to the Federal and State Clean Air Acts, and rules and regulations thereunder. Any violation(s) of such rules and regulations are subject to enforcement and penalty action in accordance with RCW 70A.15.3150, RCW 70A.15.3160, WAC 173-400-230 and YRCAA Regulation 1, Article 5.
- 4.7 This Order may be modified, suspended or revoked in whole or part for cause including, but not limited to, the following:
 - 4.7.1 Violation of any terms or conditions of this authorization; or
 - 4.7.2 If this authorization has been obtained by misrepresentation or failure to disclose fully all relevant facts.
- 4.8 The provisions of this authorization are severable and, if any provision or application of any provision 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.
- 4.9 The requirements of this Order apply to the Facility owner and/or operator(s) and any contractor or subcontractor performing any activity authorized under this Order. Any person(s), including contractor(s) and subcontractor(s), not in compliance with the applicable requirements of this Order are in violation of Federal, State and Local laws and regulations 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).

- 4.10 Laws, rules and regulations may be superseded or revised without notice. It is the Permittee's responsibility to stay current with laws, rules and regulations governing their business and therefore is expected to comply with all new laws, rules and regulations immediately upon their effective date. New laws, rules and regulation updates will be incorporated into existing Orders or upon renewal of said Orders.
- 4.11 All air emissions from the operation of this training 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 and future applicable Federal, State and Local laws, rules and regulation standards, including but not limited to 40 CFR Part 50 NAAQS, WAC 173-400-040, WAC 173-460-150 and WAC 173-425.
- 4.12 This Order is invalid without paying the complete appropriate/required fees to YRCAA, pursuant to RCW 70A.15.2210.

5.0 EMISSION LIMITS

- 5.1 The Permittee shall not exceed the allowable air emissions from this operation, which are based on allowable operating hours of the burners. This annual allowable limit for air emissions is specified in Appendix A of this Order.
- 5.2 The Permittee shall not exceed the allowable operation hours and/or fuel usage for this operation, specified in Appendix A of this Order.
- 5.3 Opacity from the training facility shall not be exceeded as specified above.
- 5.4 In addition to those specified limits in this Order, the Permittee shall comply with all applicable general standards for maximum air emissions as specified in WAC 173-400-040, WAC 173-460-150 and NAAQS of 40 CFR Part 50 at all times.

6.0 MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS

- 6.1 This Order and a copy of the O&M Plan for this Facility shall be kept on site at all times and shall always be readily available, organized and accessible when requested by the YRCAA's APCO or his designated staff or during an inspection. The O&M plan shall be updated to reflect any changes in operating procedures and such changes shall routinely be implemented.
- 6.2 All required records mentioned above, including but not limited to visible emissions inspections, maintenance procedures of the burners including repairs, and reports shall be maintained and kept on site for a rolling average of three (3) years, and shall be readily available, organized and accessible to the YRCAA's APCO or his designated staff during inspections or upon request.

- 6.3 Records shall include, at minimum, the monthly number of hours of training and operation of the training facility, the O&M items performed, and any opacity readings. Forms for recordkeeping must be designed by the Permittee and shall include at least the date, time of maintenance performed and the operator's name.
- 6.4 Safety Data Sheets (SDS) of all materials contributing to PM, HAP, TAP and VOC emissions shall be maintained on-site and readily accessible when requested by YRCAA personnel.
- 6.5 The Facility shall submit its annual registration report including the calculation of their total annual air emissions for Criteria Pollutants, HAPs, TAPs, the number of hours of operation and the amount of fuel used for this Facility with the required fees to YRCAA as specified in the sent-out annual registration forms on or before the specified date. Annual air emissions, hours of operation and fuel usage shall be based from the previous calendar year.
- 6.6 Any application forms, report, or compliance certification, monthly records and the annual registration, submitted to YRCAA pursuant to this Order must be signed by a responsible official.

- 6.7 This Order and its conditions shall remain in effect in the event of any change in control, ownership or name of the facility. In the event of any such change, the Permittee shall notify the succeeding owner of all Orders of Approval, if any including this one, and all conditions and shall notify the YRCAA of the change in control, ownership or name by filing an "Ownership or Name Change" form within fifteen (15) days of that change. The form can be obtained or requested from YRCAA's office or the agency's website.


You may appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process and applicable requirements is governed by Chapter 43.21B RCW. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB, P.O. Box 40903, Olympia, WA, 98504-0903. Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on YRCAA in paper form - by mail or in person. E-mail is not accepted.


DATED at the City of Yakima, Washington on this 24th day of May, 2024.

PREPARED BY:



Elizel Reynoso
Engineer Specialist
Yakima Regional Clean Air Agency

REVIEWED AND ISSUED BY:



Hasan M. Tahat, Ph.D., P.E.
Engineering and Planning Division Supervisor
Yakima Regional Clean Air Agency
For
Marc Thornsbury
Air Pollution Control Officer
Yakima Regional Clean Air Agency



Actual propane usage	4,137 gal/yr
Allowable propane usage	14,519 gal/yr
21 hrs/yr (15secburn*6burn/hour*8hour/day*2days/week*52weeks/yr)/hour/60min	104
73 hrs/yr (15secburn*6burn/hour*8hour/day*56days/year)/hour/60min	365
8760 hrs/yr (6minburn*6burn/hour*8hour/day*365days/year)/hour/60min	0.2
876 hrs/yr (6minburn*6burn/hour*8hour/day*365days/year)/hour/60min	0.2

Pollutant	Emission factor (lb/1000 gal) ¹	Potential emissions (lb/yr)	Exemption threshold (lb/yr)	Permitting required? ²	Modeling required? ³
PM _{2.5} ⁴	0.70	0.14	0.5	Yes	No
SO ₂ ⁶	0.105	-	2	Yes	No
NO _x as NO ₂	13	2.59	2	Yes	No
CO	7.5	1.49	5	Yes	No

AIRS/SCREEN Modeling results	
Max 1-hr concentration	875
Scaled 3-hr concentration	875.2
Scaled 8-hr concentration	787.7
Scaled 24-hr concentration	525.1
Scaled annual concentration	87.5

¹ US EPA, AP-42, Table 1.5-1. Emission factors for LBG combustion - Commercial Boilers.
² From WAC 173-400-116(5)(b). Updated and effective 12/31/12.
³ Permitting is required if the potential emissions exceed the corresponding NSR thresholds.
⁴ Modeling is required if the potential emissions exceed the corresponding NSR thresholds. For purposes of this permit, air emissions are controlled by the maximum allowable operating hours.
⁵ Listed as PM₁₀ Total, conservative by estimating air as in the form of PM_{2.5}.
⁶ S equals the sulfur content expressed in wt/100 lb gas vapor. Per US EPA, AP-42, Appendix A, Miscellaneous data and conversion factors, Sulfur content is negligible.
 HAPs and TAPs

Pollutant	Cas No.	HAP	TAP	Emission factors (lb/MMBtu)	Propane emission factors (lb/1000 gal) ²	Allowable Emissions (lb/hr)	Allowable Emissions (lb/day)	Allowable Emissions (lb/yr)	Averaging period ³	Allowable emissions (lb/yr)	Exceeded De Minimis (lb/averaging period) ⁴	Emissions Exceeded De Minimis (lb/averaging period) ⁵	SOQR (lb/averaging period) ⁶	Emissions exceeded SOQR	Allowable emissions (g/yr)	Model conc. (ug/m ³)	ASIL (ug/m ³) ⁷	Emissions exceed ASIL
2-Methyl naphthalene	91-57-6	-	-	1.8E-05	1.6E-07	3.2E-07	8.5E-08	3.1E-05	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	9.6E-05	-
3-Methyl naphthalene	54-95-3	-	Y	1.8E-05	1.6E-07	3.2E-07	8.5E-08	3.1E-05	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	8.5E-06	-
7,12-Dimethylbenzofluoranthene	171-40-2	-	Y	1.8E-05	1.6E-07	3.2E-07	8.5E-08	3.1E-05	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	-	-
Acenaphthylene	81-21-6	-	Y	1.8E-05	1.6E-07	3.2E-07	8.5E-08	3.1E-05	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	-	-
Acenaphthene	203-56-3	-	Y	1.8E-05	1.6E-07	3.2E-07	8.5E-08	3.1E-05	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	-	-
Anthracene	120-12-7	-	Y	2.4E-06	2.1E-07	4.2E-08	6.4E-09	3.1E-06	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	-	-
Ben(a)anthracene	56-55-7	-	Y	2.4E-06	2.1E-07	4.2E-08	6.4E-09	3.1E-06	year	2.3E-06	7.8E-04	No	1.4E-03	-	-	-	-	-
Benz(a)fluoranthene	71-43-2	Y	Y	2.1E-03	1.9E-04	3.7E-05	7.4E-06	2.7E-03	year	2.3E-06	7.8E-04	No	8.9E-01	-	-	-	5.1E-03	-
Benz(b)fluoranthene	50-32-8	Y	Y	2.1E-03	1.9E-04	3.7E-05	7.4E-06	2.7E-03	year	2.3E-06	7.8E-04	No	2.1E+01	-	-	-	1.1E-01	-
Benz(k)fluoranthene	205-99-2	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	2.3E-06	7.8E-04	No	1.6E-01	-	-	-	1.0E-01	-
Benzofluoranthene	191-24-2	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	2.3E-06	7.8E-04	No	8.9E-01	-	-	-	5.5E-03	-
Benzo(a)fluoranthene	207-408-9	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	2.3E-06	7.8E-04	No	8.9E-01	-	-	-	5.5E-03	-
Butane	106-97-8	-	Y	2.1E+00	1.9E-01	3.7E-02	7.4E-03	2.7E+00	year	2.3E-06	7.8E-04	No	8.9E-01	-	-	-	5.5E-03	-
Chrysene	218-01-9	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	2.3E-06	7.8E-04	No	8.9E+00	-	-	-	5.5E-02	-
Dibenz(a,h)anthracene	53-70-3	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	2.3E-06	7.8E-04	No	8.9E+00	-	-	-	5.5E-02	-
Dibenz(b,h)anthracene	25321-22-6	-	Y	1.2E-03	1.1E-04	2.1E-05	4.2E-06	1.3E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
1,4-Dichlorobenzene (DTCB) ⁸	106-46-7	Y	Y	1.2E-03	1.1E-04	2.1E-05	4.2E-06	1.3E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Ethene	74-84-0	-	-	3.1E+00	2.8E-01	5.5E-02	1.1E-02	4.0E+00	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Fluoranthene	206-44-0	-	-	3.0E-06	2.7E-07	5.3E-08	1.1E-08	3.9E-06	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Fluorene	86-71-7	-	-	2.8E-06	2.5E-07	4.9E-08	1.1E-08	3.6E-06	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Formaldehyde	50-00-0	Y	Y	7.5E-02	6.7E-03	1.3E-03	2.6E-04	9.9E-02	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Hexane	110-54-3	Y	Y	1.8E+00	1.6E-01	3.2E-02	6.4E-03	2.7E+00	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Indeno(1,2,3-cd)pyrene	191-39-5	-	Y	1.8E-05	1.6E-07	3.2E-08	6.4E-09	1.5E-06	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Naphthalene	91-20-3	Y	Y	6.1E+04	5.4E-05	1.1E-05	2.2E-06	3.7E+00	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Nonane	109-66-0	-	Y	2.6E+00	2.3E-01	4.6E-02	9.2E-03	3.7E+00	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Phenanthrene	85-01-8	-	Y	1.7E-05	1.5E-06	3.0E-07	6.0E-08	2.1E-05	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Propene	74-98-6	-	-	1.6E+00	1.4E-01	2.8E-02	5.6E-03	2.1E+00	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Toluene	120-10-9	-	Y	5.0E-06	4.4E-07	8.8E-08	1.8E-08	6.4E-06	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Toluene	108-88-3	Y	Y	3.4E-03	3.0E-04	6.0E-05	1.2E-05	4.8E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Styrene	7440-39-3	-	Y	4.4E-03	3.9E-04	7.8E-05	1.6E-05	5.7E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Benzo(a)pyrene	7440-41-7	-	Y	1.2E-05	1.1E-06	2.1E-07	4.2E-08	1.5E-05	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Benzo(b)pyrene	7440-43-9	-	Y	1.1E-03	9.8E-05	1.9E-05	3.9E-06	1.4E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Chromium (VI) ⁹	18520-39-9	-	Y	2.7E-04	2.4E-05	4.7E-06	9.4E-07	3.4E-04	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Cobalt	7440-48-4	Y	Y	8.4E-05	7.5E-06	1.5E-06	3.0E-06	1.1E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Copper	7440-50-8	-	Y	8.5E-04	7.5E-05	1.5E-05	3.0E-06	1.1E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Lead	7439-96-3	-	Y	3.8E-04	3.4E-05	6.7E-06	1.3E-06	4.9E-04	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Manganese	7439-96-3	-	Y	2.6E-04	2.3E-05	4.6E-06	9.2E-07	1.1E-04	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Methylcyclopentadiene	7440-01-0	-	Y	1.1E-03	9.8E-05	1.9E-05	3.9E-06	1.4E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Nickel	7440-02-0	Y	Y	2.1E-03	1.9E-04	3.7E-05	7.4E-06	2.7E-03	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Selenium	7782-46-2	-	Y	2.4E-05	2.1E-06	4.2E-07	8.5E-08	3.1E-05	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Vanadium	7440-42-3	-	Y	2.0E-04	1.8E-05	3.6E-06	7.2E-07	2.6E-04	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Zinc	7440-66-6	-	Y	2.9E-02	2.6E-03	5.1E-04	1.0E-04	3.7E-02	year	1.3E-03	7.4E-01	No	1.3E+01	-	-	-	9.1E-02	-
Sulfur Dioxide ⁴	630-08-0	-	Y	-	-	-	-	-	1-hr	1.9E+02	1.9E+02	Yes	8.7E+01	Yes	3.3E-01	2.9E-02	6.6E+02	-
Nitrogen Dioxide ⁴	10102-44-0	-	Y	-	-	-	-	-	1-hr	2.6E+00	2.6E+00	Yes	4.6E-01	Yes	4.3E-01	4.7E-02	4.7E+02	-
Carbon Monoxide ⁴	50-2884	-	Y	-	-	-	-	-	1-hr	1.5E+00	1.5E+00	No	4.3E-01	No	-	2.3E+04	-	
Total HAPs emissions (lbs/yr)																		
Maximum individual HAP emission (lbs/yr)																		
1.22E-03																		
1.16E-03																		

¹ Emission factors (EF) from AP-42 Tables 1.4.3 and 4; Emission factors for specified organic compounds from natural gas combustion and Emission factors for metals from natural gas combustion.
² No EF are listed for specified organic compounds or metals resulting from propane combustion in AP-42 Section 1.6 on Liquefied Petroleum Gas Combustion. However, natural gas combustion EF are used, making it a conservative approach. Propane EF are derived from natural gas emission factors by multiplying the given EF by the ratio of the heating value of propane to the heating value of natural gas. Use heat contents of 91.3 MJ/m³ for propane, 1020 MJ/MMBtu for methane, and 1020 MJ/MMBtu for methane when calculating an equivalent heat input basis. The equation for converting from methane to propane is: (lb methane/MMBtu) * (90.5 MJ/MMBtu methane) / (1020 MJ/MMBtu propane) = (lb propane/MMBtu methane).
³ Propane's emissions factors are as follows:
 a) propane's emissions factors = (lb methane/MMBtu methane) * (90.5 MJ/MMBtu methane) / (1020 MJ/MMBtu propane) = (lb propane/MMBtu methane).
⁴ WAC 173-400-150. Updated and effective 12/31/12.
⁵ 1,4-Dichlorobenzene (DTCB) is a HAP, the EF for it is for CAS No. 2321-22-6, which is a mixture of dichlorobenzene isomers, so the EF is conservative.
⁶ The AP-42 EF for Chromium includes Cr(VI). The EF was multiplied by 19% to obtain an EF for Cr(VI). See Appendix D in an Overview of Methods for Chromium (VI).
⁷ ASIL, SOQR and De Minimis Values were obtained for Chromium (VI).
⁸ Allowable emission from Criteria Pollutants calculations.



Figure 1. Google Earth® view of the Facility site. Property boundaries outlined in red, approximate training facility location outlined in blue.

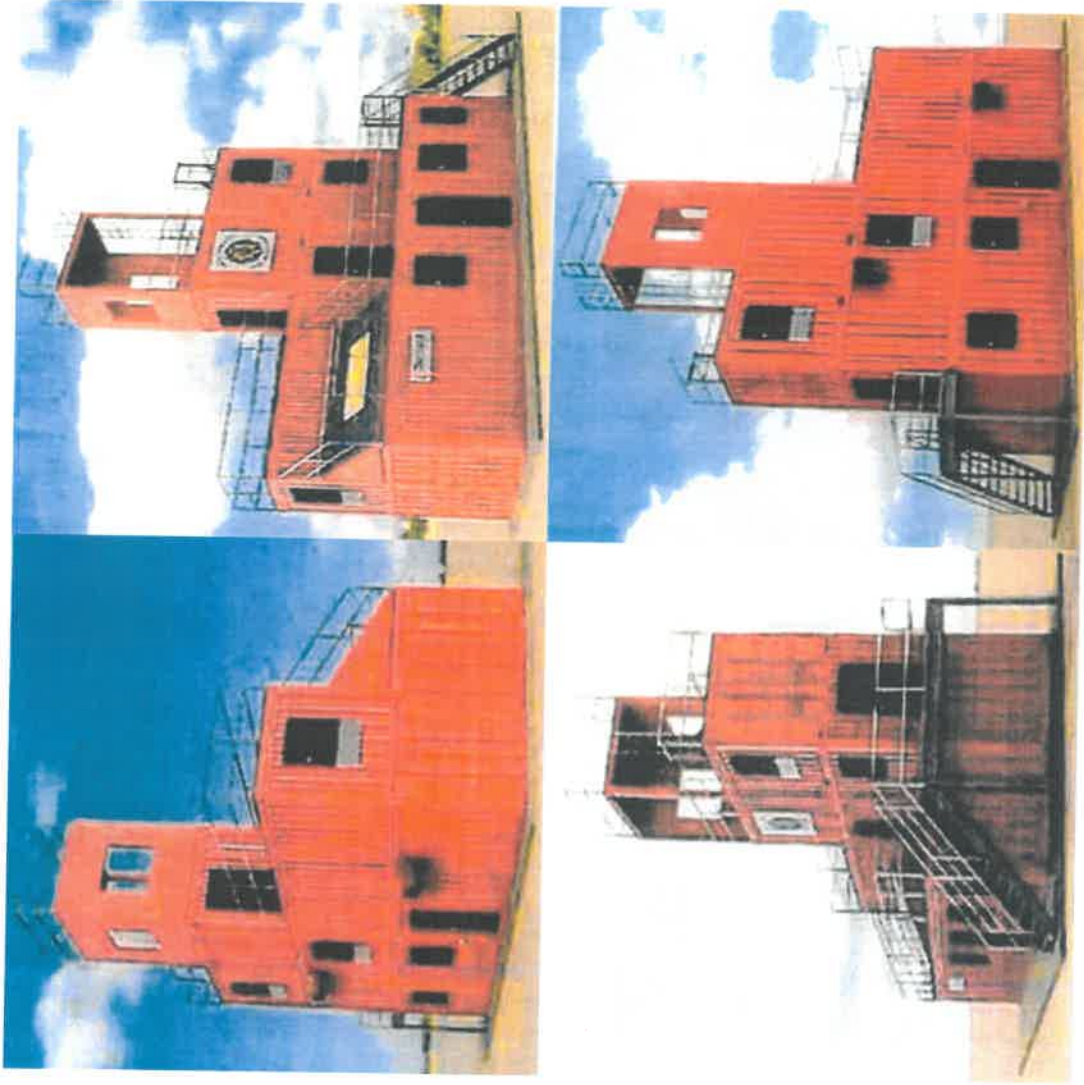


Figure 4. Design of the training facility: left, front, right and rear views.*

*Note: this training facility is an example and does not represent the actual final configuration of the training facility being permitted in this Order.