



**AIR EMISSION PERMIT NO. 00300020- 001
IS ISSUED TO**

United Defense LP/US Navy

UNITED DEFENSE LP ARMAMENT SYSTEMS DIVISION

4800 East River Road

Fridley, Anoka County, Minnesota 55421

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date
Total Facility Title V Operating Permit	June 15, 1995
Total Facility State Operating Permit	September 18, 2001

This permit authorizes the Permittees to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The Permittees must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

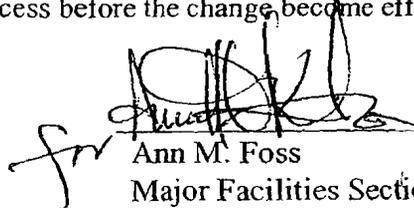
Permit Type: State; Syn Min Part 70

Issue Date: November 25, 2002

Expiration: Permit does not expire

All Title I Conditions do not expire.

"Title I Condition: SIP for SO₂ NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)" or Title I Condition: MN State Implementation Plan (SIP); 40 CFR § 50.5" are required to go through the federal State Implementation Plan approval process before the change become effective.


Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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FACILITY DESCRIPTION:

The Naval Industrial Reserve Ordnance Plant (NIROP) is operated by United Defense, L.P. The NIROP is owned by the U.S. Navy under the cognizance of the Naval Seas System Command, Washington, D.C. The operating contractor is Armament Systems Division (ASD) of United Defense, L.P. ASD is responsible for the day to day operation of the total plant. Thus this permit application is being made by Armament Systems Division, United Defense, L.P. as operator/part owner and the U.S. Navy as part owner.

The facility covered by this permit application is a manufacturing plant divided into two distinct areas on the basis of ownership. The larger area to the north consists is owned by the U.S. Navy and covers approximately 82 acres and is occupied by buildings containing approximately 1,567,000 square feet of space. These buildings and property (hereafter referred to as Naval Industrial Reserve Ordnance Plant) are contiguous and adjacent to buildings and property just to the south owned by United Defense, L.P. The United Defense owned buildings and property total 326,000 square feet and approximately 59 acres respectively. The two areas described above are collectively considered the total plant.

The facility designs, engineers, manufactures and tests components for advanced military weapon systems. The facility consists of boilers, diesel standby electric generators, painting and blasting booths.

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item:	Total Facility
What to do	Why to do it
STATE IMPLEMENTATION PLAN (SIP) REQUIREMENTS	hdr
Sulfur Content of Fuel: less than 0.05 percent by weight of No. 2 Fuel Oil and Diesel Fuel Oil	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP) for SO2
General Conditions for the SIP: The Administrative Order general conditions are still federally enforceable until US EPA REMOVES THE REQUIREMENTS FROM THE SIP	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP) for SO2
General Operating and Maintenance Requirements for the SIP: The owner or operator shall operate and maintain the process equipment described in Appendix B according to the parameters set forth in Appendix B. The parameters were used in the computer modeling performed to demonstrate that the SO2 maintenance will attain compliance with the SO2 NAAQS.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP) for SO2
Retain all records at the stationary source for a period of five (5) years from the date of the required monitoring, sample, measurement, or report that corresponds with the MN State Implementation Plan Title I Condition.	Title I Condition: Recordkeeping for MN State Implementation Plan (SIP) for SO2
FLEXCAP REQUIREMENTS	hdr
This permit establishes limits on the facility to keep it a minor source under 40 Section 70.2 and 40 CFR Section 63.2. The Permittee cannot make any change at the source that would make the source a major source under New Source Review and NESHAPS until a major permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: Limit to avoid classification as a major source and modification under 40 CFR Section 52.21; and to avoid major source classification under 40 CFR Section 70.2 and 40 CFR Section 63.2
Volatile Organic Compounds: less than or equal to 90 tons/year using 12-month Rolling Sum to be calculated by the 28th day of each month for the previous 12-month period. All emission units, except those deemed to be insignificant activities under Minn. R. 7007.1300 and fuel combustion sources shall be included in this calculation. VOC contents for each VOC-containing material shall be determined as described under the Material Content Requirement.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 52.21; 40 CFR Section 70.2; to avoid major source classification under 40 CFR Section 63.2
Nitrogen Oxides: less than or equal to 90 tons/year using 12-month Rolling Sum to be calculated by the 28th day of each month for the previous 12-month period. All emission units, except those deemed to be insignificant activities under Minn. R. 7007.1300, and those added to the facility as allowed in this permit shall be included in this calculation.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 70.2
Particulate Matter < 10 micron: less than or equal to 90 tons/year using 12-month Rolling Sum to be calculated by the 28th day of each month for the previous 12-month period as described in the permit. All particulate matter be conservatively assumed to be particulate matter less than 10 microns.	Title I Condition: Limit to avoid classification as a major source under 40 CFR 52.2; 40 CFR Section 70.2
HAP-Single: less than or equal to 9.0 tons/year using 12-month Rolling Sum to be calculated by the 28th day of each month for the previous 12-month period, not including fuel combustion HAP and emissions from Insignificant Activities listed in Minn. R. 7007.1300. HAP contents for each HAP-containing material shall be determined as described under the Material Content Requirement. The calculation of HAP usage may take into account recovered/recycled HAPs as described under the Waste Credit requirement in this permit.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 63.2; and Minn. R. 70.2
HAPs - Total: less than or equal to 24.0 tons/year using 12-month Rolling Sum to be calculated by the 28th day of each month for the previous 12-month period, not including fuel combustion HAP and emissions from Insignificant Activities listed in Minn. R. 7007.1300. HAP contents for each HAP-containing material shall be determined as described under the Material Content Requirement. The calculation of HAP usage may take into account recovered/recycled HAPs as described under the Waste Credit requirement in this permit.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 63.2; and Minn. R. 70.2

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

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Pre-authorized Changes: The Permittee may replace or move emission units, or add new emission units similar but not limited to the following: spray guns, spraying and coating booths, powder paint booths, abrasive blast booths, control equipment, welding booths, dip tanks, space heating units, ovens, boilers, emergency generators, make-up air units as well as coating, reagents and other solvent or material changes provided PM/PM10, NOx, VOC and HAP emissions are tracked and calculated as required by this permit. All changes must meet the requirements as listed in this section.

If a proposed change triggers an applicable requirement that is not contained in this permit, the change must go through the appropriate procedure in Minn. R. ch. 7007.

Title I Condition: Limit to avoid classification as a major source and modification under 40 CFR 52.21; and to avoid major source classification under 40 CFR 63.2

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Facility Name: United Defense LP

Permit Number: 00300020 - 003

Subject Item: GP 001 Coating and Painting Booths**Associated Items:** EU 008 24th Ave Paint Booth, 38637
EU 014 12th Ave Paint Booth, 38539
EU 021 Propulsor Abrasive Blast Booth
EU 022 Propulsor Paint Booth System
SV 032 JBI Spray Booth (24th Ave.)
SV 033 JBI Spray Booth (12th Ave)
SV 043 JBI Spray Booth (12th. Ave)
SV 044 JBI Spray Booth (24th. Ave)
SV 050 Propulsor Abrasive Blast Booth
SV 051 Propulsor Paint Booth System

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

Subject Item: GP 002 Boilers subject to NSPS

- Associated Items:** EU 001 Boiler 1
 EU 002 Boiler 2
 EU 003 Boiler 3 (81098)
 SV 026 Boiler 2 and 3
 SV 027 Boiler 1

What to do	Why to do it
B. OTHER LIMITS AND REQUIREMENTS	hdr
Sulfur Content of Fuel: less than 0.05 percent by weight of No. 2 fuel oil. [This limit is more stringent than the NSPS limit.]	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)
No. 2 Fuel Oil Certification: The owner or operator shall obtain and maintain written documentation of each shipment of No. 2 fuel oil received for the boilers. The written documentation shall include the following information: the sulfur content of the fuel and the method used to determine the sulfur content.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)
Fuel Restriction: Authorized to burn natural gas and No. 2 fuel oil only.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP
 Permit Number: 00300020 - 003

- Subject Item:** GP 003 Standby Generators
- Associated Items:** EU 016 Standby Generator - Sub 3 (w)
 EU 017 Standby Generator -Sub 3 (e)
 EU 018 Standby Generator - Sub 1
 EU 019 Standby Generator-Boiler
 EU 020 Standby Generator - Bdg 37
 SV 045 Cummins Stdby Generator-Sub 3 (w)
 SV 046 Cummins Stdby Generator-Sub 3(e)
 SV 047 Caterpillar Stdby Generator-Sub 1
 SV 048 Caterpillar Stdby Generator-Boiler Rm
 SV 049 Caterpillar Stdby Generator-Boiler Bdg 37

What to do	Why to do it
B. OTHER LIMITS AND REQUIREMENTS	hdr
Sulfur Content of Fuel: less than 0.05 percent by weight of diesel fuel.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)
Diesel Fuel Oil Certification: The owner or operator shall obtain and maintain written documentation of each shipment of diesel fuel oil received for the boilers. The written documentation shall include the following information: the sulfur content of the fuel and the method used to determine the sulfur content.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)
Fuel Restriction: Authorized to burn diesel fuel oil only.	Title I Condition: SIP for SO2 NAAQS 40 CFR pt. 50 and MN State Implementation Plan (SIP)

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

Subject Item: GP 004 Emission Control Equipment (Paint Booths)

Associated Items: CE 004 Mat or Panel Filter(24th Ave)

CE 006 Mat or Panel Filter(Paint System)

CE 010 Mat or Panel Filter(12th Ave)

What to do	Why to do it
Total Particulate Matter: greater than or equal to 92.0 percent control efficiency (capture efficiency of the booth x collection efficiency of the filter)	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Particulate Matter < 10 micron: greater than or equal to 92 percent control efficiency (capture efficiency of the booth x collection efficiency of the filter)	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR 70.2; 40 CFR Section 52.21; Minn. R. 7007.3000
MONITORING AND RECORDKEEPING	hdr
Operation of Pollution Control Equipment: The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080. The Permittee shall operate and maintain the fabric filter at all times that any process equipment controlled by the fabric filter is operating.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

Subject Item: GP 005 Emission Control Equipment (Blast Booths)

Associated Items: CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than 99.0 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR 70.2; 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than 99.0 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR 70.2; 40 CFR Section 52.21; Minn. R. 7007.3000

TABLE A: LIMITS AND OTHER REQUIREMENTS

11/19/02

Facility Name: United Defense LP

Permit Number: 00300020 - 003

Subject Item: EU 023 Firetube Boiler (new)

Associated Items: SV 052 Firetube Boiler

Facility Name: United Defense LP
 Permit Number: 00300020-001

Appendix B
 Parameters Relied Upon in Modeling

Source Name	Emission Unit Number	SV ID	Stack Height (feet)	Stack Height (m)	Stack Dia. (feet)	Stack Dia. (m)	Stack Velocity (m/s)	Exit Temp (F)	Modeled and Maximum Heat Input (million Btu/hr)	Flow Rate at Top (ACFM)
Boiler 1	001	027	139.99	42.67	6.988	2.130	3.90	325.0	6.9 3.5	29,466
Boiler 2 & 3	002 003	026	139.99	42.67	8.497	2.590	1.76	325.0	6.9	19,648
Standby Generator-Sub 3(w) and 3(e)	016 017	045 046	35.99	10.97	0.591	0.180	57.49	440.0	2.96 2.96	3,100
Standby Generator - Sub 1	018	047	24.02	7.32	0.591	0.180	54.80	440.0	3.46	2,955
Standby Generator - Boiler and Bdg 37	019 020	048 049	29.0	8.84	0.492	0.150	47.89	440	2.1 2.1	1,793