

State Utah

State Agency Department of Environmental Quality

Affected Area Hill AFB

Regulation Source-specific requirements

Rule Number Ozone NAAQS Approval Orders

Rule Title BAQE-039-91, Approval Order for Building 1701 - Dip Tank, Bake Oven, Paint Booths, Davis County (2/7/1991)

State Effective Date 03/04/1997

State Adoption Date 02/05/1997

EPA Effective Date 08/18/1997

Notice of Final Rule Date 07/17/1997

Notice of Final Rule Citation 62 FR 38213

Comments

Rule:



[Hill AFB -](#) [-039-91.pdf](#)



DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

BAQE-039-91

Norman H. Bangarter
Governor
Suzanne Dandoy, M.D., M.P.H.
Executive Director
Kenneth L. Alkema
Director

Bureau of Air Quality
1950 West North Temple
P O. Box 16690
Salt Lake City, Utah 84116-0690
(801) 536-4000
(801) 536-4099 FAX

February 7, 1991

James R. Van Orman
Director, Environmental Management
Department of the Air Force
Headquarters Ogden Air Logistics Center
Hill Air Force Base, Utah 84056-5990

Re: Approval Order for Building 1701 - Dip Tank, Bake Oven, Paint Booths
Davis County CDS Al

Dear Mr. Van Orman:

The above-referenced project has been evaluated and found to be consistent with the requirements of the Utah Air Conservation Regulations (UACR) and the Utah Air Conservation Act. A 30-day public comment period was held and all comments received were evaluated. The conditions of this approval order reflect any changes to the proposed conditions which resulted from the evaluation of the comments received. This air quality approval order authorizes the project with the following conditions and failure to comply with any of the conditions may constitute a violation of this order:

1. Hill Air Force Base, located in Davis County, shall make the following changes according to the information submitted in the notice of intent dated April 27, 1990, and a letter from Hill Air Force Base dated December 21, 1990:
 - A. The owner/operator shall install a dip tank, 370 gallon capacity cylindrical tank, with dimensions of 4 feet in diameter and 4 feet high. The tank shall be equipped with a sealed clam-type lid, an outside pump for agitation, an electric heater, and a cover with a vent.
 - B. The owner/operator shall remove paint booth #1 and replace it with a Devilbiss Model ASEY-914-34 paint spray booth or equivalent. Equivalency shall be determined by the Executive Secretary. The booth shall be equipped with dry paint arrestor filters.

4.2.4-848

- C. The owner/operator shall remove paint booth #3 and replace it with two end-to-end paint spray booths. The booths shall be equipped with dry paint arrestor filters and High Volume Low Pressure (HVLV) type spray guns.
 - D. The owner/operator shall remove the electric powered bake oven and replace it with an oven fired by natural gas with a total heat input rate not to exceed two million BTU/hr.
2. Visible emissions from any point or fugitive emission source associated with the above emission points shall not exceed 10% opacity. Opacity observation of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.
3. The following operation limits for the bake oven shall not be exceeded without prior approval in accordance with Section 3.1, UACR:
- A. 2.2 million scf of natural gas per 12 month period
 - B. 2.0 million BTU/hr heat input
 - C. 8 hours per day
 - D. 1000 hours of operation per 12 month period

Compliance with the annual limitations shall be determined on a rolling monthly total. On the first day of each month a new 12-month total shall be calculated using the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Records of production shall be made available to the Executive Secretary or his representative upon request and shall include a period of two years ending with the date of the request. Fuel consumption for the bake oven shall be determined by the use of records from a fuel meter. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

4. The total VOC emissions from sources listed in this approval order shall not exceed 4.70 tons per 12-month period without prior approval in accordance with Section 3.1, UACR. Compliance with the limitation shall be determined using a material balance procedure on a rolling monthly total. On the first day of each month a new 12-month total shall be calculated using the previous 12 months. The total VOC emissions shall be determined by maintaining a record of paints, varnishes, thinners, and solvents used, and of operation parameters from other affected VOC emissions sources. The record shall include the following data for each item used:

4.2.4-849

- A. Name of paint, varnish, thinner, or solvent
- B. Weight in pounds per gallon
- C. Percent VOC by weight
- D. Amount used on a daily basis

Records of consumption shall be kept for all periods when the plant is in operation. Records of consumption shall be made available to the Executive Secretary upon request, and shall include a period of two years ending with the date of the request. The VOC emissions from paints/thinners shall not exceed 4.69 tons per 12 month period. The VOC emissions from other processes shall not exceed 0.01 tons per 12 month period.

Voc emissions shall be determined by the following manner:

$$\text{VOC} = (\% \text{ Volatile by Weight} / 100) * (\text{Density lb/gal}) * (\text{Gallons Consumed}) / (2,000 \text{ lb/ton})$$

The VOC content in pounds for each individual item or surface coating used shall be calculated, and then the total of all items shall be summed, such that the cumulative total shall not exceed the 4.69 tons per 12 month period as specified.

- 5. All paint spray booths shall be equipped with a set of paint arrestor particulate filters or equivalent to control particulate emissions. All air exiting any booth shall pass through a paint arrestor control system before being vented to the atmosphere. Equivalency shall be determined by the Executive Secretary.
- 6. The owner/operator shall operate the dip tank in following manner:
 - A. The cover shall remain closed at all times except during actual loading, unloading, or transfer operations.
 - B. Parts shall be completely drained in the internal draining rack until all dripping ceases.
 - C. Waste or used varnish shall be stored in covered containers and disposed by a method which prevents VOC emissions to the atmosphere.
 - D. Tanks, containers, and all associated equipment shall be maintained in good operating condition, and leaks shall be repaired immediately.
 - E. Written procedures for the operation and maintenance of the dip tank shall be posted in an accessible and apparent location near the equipment.

James R. Van Orman
January 31, 1991
Page 4

7. Eighteen months from the date of this approval order the Executive Secretary shall be notified in writing of the status of construction of this project unless the construction is complete and operation has commenced.
8. A copy of this approval order shall be posted on site and shall be available to the employees who operate the air emission producing equipment. All employees who operate the air emission producing equipment shall receive instruction as to their responsibilities in operating the equipment in compliance with the appropriate and relevant conditions.
9. All installations and facilities authorized by this approval order shall be adequately and properly maintained.
10. The Executive Secretary shall be notified in writing upon start-up of the installation, as an initial compliance inspection is required.

Any future modifications to the equipment approved by this order must also be approved in accordance with Section 3.1.1, UACR.

This approval order in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the Utah Air Conservation Regulations.

Annual emissions for sources listed in this approval order are calculated at 0.01 tons/yr for particulates, 0.01 tons/yr for PM₁₀, 0.0006 tons/yr for SO₂, 0.10 tons/yr for NO_x, 0.02 tons/yr for CO, and 4.70 tons/yr for VOC. These calculations are for the purposes of determining the applicability of PSD and nonattainment area major source requirements of the UACR. Except for VOC, they are not to be used for purposes of determining compliance.

Sincerely,


F. Burnell Cordner, Executive Secretary
Utah Air Conservation Committee

FBC:TB:jiw

cc: EPA Region VIII, Mike Owens
Davis County Health Department



DEPARTMENT OF THE AIR FORCE
 HEADQUARTERS OGDEN AIR LOGISTICS CENTER (AFLC)
 HILL AIR FORCE BASE, UTAH 84056-5990

RECEIVED
 12/27/90
 DEC 27 1990

Mr F Burnell Cordner, Executive Secretary
 Bureau of Air Quality
 1950 West North Temple
 PO Box 16690
 Salt Lake City, UT 84116-0690

AIR QUALITY

RE: Public comments on Intent to Approve building 1701. Dip Tank, Bake Oven & Paint Booths.

Dear Mr Cordner

Referenced ~~Intent to Approve~~ dated 7 Dec 90, we offer the following public comments for your consideration

Condition 1.A. - Per our 18 Oct 90 letter, dual wall dip tank shall be 370 gallon capacity measuring approximately 4 feet inside diameter and 4 feet high. The tank will be located above ground, therefore, cathodic protection will not be provided. The tank will be provided with a sealed clam type lid, outside pump liquid circulating type agitation, electric heater and a vent system.

Condition 4 - Our estimation of VOC emissions from sources listed in this Intent to Approve is 3.28 tons per year. Revised VOC evaporative emissions from the dip tank are as follows:

Uncontrolled AP-42 Emission Factor	= 0.15 Lb VOC/Hr, Ft ²
Evaporative area (revised)	= $\frac{3.14}{4} \times (4)^2 = 12.56 \text{ Ft}^2$
Operating hours	about 1,000 hrs/Yr
Uncontrolled evaporative loss	$\frac{.15 \text{ Lb}}{\text{hr, Ft}^2} \times 12.56 \text{ Ft}^2 \times 1,000 \text{ hrs} \times \frac{\text{Ton}}{2,000 \text{ Lbs}}$
	= 0.94 Ton/Yr
Emission Reduction Factor	30-60% use 40%
Evaporative VOC emissions	= 0.94 X .6 = .56 Ton/Yr
Dip tank usage Loss (NOI)	= .06 Ton/Yr
Paint booth #1 VOC emissions (NOI)	= .12 + .34 = .46 Ton/Yr
Baking Oven VOC emissions (NOI)	= .12 Ton/Yr
Paint booth #3 VOC emissions (NOI)	= 2.08 Tons/Yr
Total VOC emissions	= 0.56 + .06 + .46 + .12 + 2.08
	= 3.28 Tons/Yr

If you have any questions, please feel free to contact Jay Gupta at 777-6917.

Sincerely,

James N. Yining

JAMES N. YINING
 Deputy



DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL HEALTH

BAQE-745-90

Norman H. Bangertter
Governor
Suzanne Dandoy, M.D., M.P.H.
Executive Director
Kenneth L. Alkema
Director

Bureau of Air Quality
1950 West North Temple
P.O. Box 16690
Salt Lake City, Utah 84116-0690
(801) 536-4000
(801) 536-4099 FAX

December 3, 1990

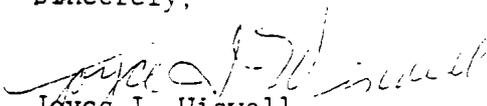
Newspaper Agency
Salt Lake Tribune
Legal Advertising Department
157 Regent Street
Salt Lake City, Utah 84111

Gentlemen:

This letter will confirm the authorization to publish the attached NOTICE in the Salt Lake Tribune and Deseret News on December 7, 1990.

Please mail the invoice and affidavit of publication to the Utah State Department of Health, Division of Environmental Health, Bureau of Air Quality, P.O. Box 16690, Salt Lake City, Utah 84110-0690.

Sincerely,


Joyce I. Wiswell
Office Technician
Bureau of Air Quality

MK:jiw

Enclosure

4.2.4-853

NOTICE

The following notice of intent to construct, submitted in accordance with Section 3.1, Utah Air Conservation Regulations, has been received for consideration by the Executive Secretary, Utah Air Conservation Committee:

Department of the Air Force

Building 1701, Dip Tank, Bake Oven, Paint Booths

Davis County CDS A1

Net emissions from this source (building 1701 only) are calculated at the following values:

Particulate	0.01	tons/yr
PM ₁₀	0.01	tons/yr
NO _x	0.10	tons/yr
CO	0.02	tons/yr
VOC	4.70	tons/yr

The engineering evaluation and air quality impact analysis has been completed and no adverse air quality impacts are expected. It is the intent to the Executive Secretary to approve the construction project.

The construction proposal and estimates of the effect on local air quality are available for public inspection and comment at the Bureau of Air Quality, Utah State Department of Health, 1950 West North Temple, Salt Lake City, Utah 84116-0690. Written comments received by the Bureau, 1950 West North Temple, P.O. Box 16690, Salt Lake City, Utah 84116-0690, on or before January 6, 1991, will be considered in making the final decision on the approval or disapproval of the proposed construction.

If anyone so requests within 15 days of publication of notice, a hearing will be held in the area of the proposed construction, installation, modification, relocation, or establishment.

Date of Notice: December 7, 1990

UTAH BUREAU OF AIR QUALITY
NEW/MODIFIED SOURCE PLAN REVIEW

James R. Van Orman
Director, Environmental Management
Department of the Air Force
Headquarters Ogden Air Logistics Center
Hill Air Force Base, Utah 84056-5990

ENGINEER: L. Carl Broadhead
RE: Building 1701, Dip Tank, Bake Oven, Paint Booths
Davis County, CDS A1
DATE: November 29, 1990
NOTICE OF INTENT DATED: April 27, 1990
PLANT CONTACT: Jay Gupta
PHONE NUMBER: (801) 777-7651
PLANT LOCATION: HAFB, Building 1701

FEES:

Filing Fee	\$100.00
Review Engineer - 26 hours at \$50.00/hour	\$1300.00
Modeler - 00 hours at \$23.22/hour	\$000.00
Computer Usage Fee	\$000.00
Notice to Paper	\$24.00
Travel - 00 miles at \$0.23/mile	<u>\$000.00</u>
Total	\$1424.00

APPROVALS:

Engineering Unit Manager

JK 11-29-90

Applicant Contact Made

JK eger

Technical Evaluation Section Manager

M. Keller 11/30/90

I. DESCRIPTION OF PROPOSAL

Hill Air Force Base has filed a notice of intent dated April 27, 1990. They are proposing to install and operate a dip tank, new paint spray booths (#1 and #3), and a bake oven. The location of these facilities will be in Building 1701. The description of each facility is as follows:

Dip Tank

The dip tank, an industrial heavy duty double wall tank, will contain thermelic insulating varnish for dip coating of locomotive electrical components including generators and their components. These components are currently hand coated using a brush, resulting in nonuniform electrical insulation. The cylindrical dip tank will have inner dimensions of 7 feet in diameter and 7 feet high with a capacity of 2,000 gallons. The tank will be installed vertically with 5 feet underground and 2 feet of tank above ground. The tank will be equipped with cathodic protection, a dip drain or catch system, a leak detection system, and a ventilation system installed on the upper side portion of the tank. A sealed clam-type lid will be also provided to cover the top of the tank. The lid will be kept closed except when loading or unloading components.

The tank will be agitated and fitted with an electric heater capable of heating varnish to a temperature of 90-100°F. The dip coated components will be air-dried in paint spray booth #1 and then baked in the bake oven. The following numbers describe the operation:

- A. Annual operating hours - 1000 hours per year.
- B. Annual usage rate - 144 gallons of varnish per 12 month period.
- C. Stack diameter - 12 inches.
- D. Stack height - 60 feet above ground.

Paint Spray Booth #1

This booth is a waterfall type paint spray booth and will be replaced with a Devilbiss Model ASEY-914-34 dry filters paint spray booth. The dimensions of the proposed paint spray booth are 15 feet long, 12 feet wide, and 10 feet high. The paint spray booth will be equipped with paint arrestor filters, exhaust plenum, a fan, and a 34 inch diameter vent. The following numbers describe the operation:

- A. Annual operating hours - 1000 hours per 12 month period
- B. Annual usage rate - 120 gallons of paint per 12 month period (current limitation).
- C. Exhaust face velocity - 100 feet per minute.
- D. Exhaust flow rate - 18,000 cubic feet per minute.
- E. Stack diameter - 34 inches.
- F. Stack height - 50 feet above ground

Paint Spray Booth #3

This booth will be replaced with two (2) end-to-end rail car drive-through, down draft air paint booths including material handling equipment, make-up air units and paint handling and spray equipment. The dimensions of the each segment, north and south, are 76 feet long, 20 feet wide, and 21 feet high and 22 feet long, 20 feet wide, and 21 feet high, respectively. The two segments will be

constructed as a single booth divided by bifolding doors. Each paint spray booth segment will be self supporting with its own balanced exhaust, make-up air units and controls. Each segment will also be equipped with an audible alarm to warn the painters when and if the air filters are functioning improperly.

This notice of intent also proposed to replace the existing conventional spray gun with High Volume Low Pressure (HVLV) spray guns which will result in high transfer efficiency. This should lower paint consumption for the same amount of work load resulting in lower VOC emissions to the atmosphere. The following numbers describe the operation:

- A. Annual operating hours - 1000 hours per year
- B. Annual usage rate - 800 gallons of paint per 12 month period (current limitation).
- C. Exhaust face velocity - 100 feet per minute.
- D. Exhaust flow rate - 18,000 cubic feet per minute.
- E. Stack diameter - 34 inches.
- F. Stack height - 50 feet above ground

Bake Oven

The electric bake oven will be replaced with a natural gas fired oven. The heat input for the proposed natural gas fired oven is 2 million BTU per hour. Its operating temperature range will be 0-450°F. The dimensions of the oven are 10 feet long, 10 feet wide, and 10 feet high. The following numbers describe the operation:

- A. Annual operating hours - 1000 hours per year.
- B. Total oven capacity - 2 million Btu per hour.
- C. Fuel - natural gas.
- C. Exhaust flow rate - 1,000 cubic feet per minute.
- D. Stack diameter - 10 inches.
- E. Stack height - 50 feet above ground

II. EMISSION SUMMARY

The emissions from this source (Building 1701) will be as follows:

Particulate	0.01	tons/year
PM ₁₀	0.01	tons/year
SO ₂	0.00	tons/year
NO _x	0.10	tons/year
CO	0.02	tons/year
VOC	2.03	tons/year

III. BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS

BACT will be required at all emission points. This includes the following points:

- A. Dip tank
- B. Paint spray booths
- C. Bake oven

Dip Tank

Several types of control techniques are available to reduce VOC emissions from a dip coating operation. These methods can be broadly categorized as either control equipment or new coating and application systems. Possible best available control technology equipment includes carbon adsorption and incineration. Installation of either of these options is not economical or practical, especially with modest VOC emissions. The capital cost of adsorption units is assumed to be \$10/CFM. New coatings with relatively low VOC contents can be used in place of high VOC content coatings. This method of control may not be available for HAFB due to the coating requisition for the electronic component insulation.

The engineering section recommends that BACT for the dip tank be the minimization of VOC emissions through good operating practice. The cover should be kept closed at all times except for loading and unloading of components. Waste or used coating shall be stored in covered containers and disposed by a method which prevents its emission into the atmosphere.

Paint Spray Booths

Several types of control techniques are available to reduce VOC emissions from surface coating operations. These methods can be broadly categorized as either control equipment or new coating and application systems. Best available control technology equipment includes carbon adsorption and incineration. Installation of these control devices is not economical or practical, especially with modest VOC emissions. New coatings with relatively low VOC coatings can be used in place of high VOC content coatings. This method of control may not be available for HAFB due to the requisition of coating materials.

The engineering section recommends that BACT for the paint spray booths be the minimization of emissions through good operating practice. Improvements in transfer efficiency decrease the amount of coating used which will result in reducing VOC emissions into the atmosphere. The distance between spray gun and substrate to be painted must be minimized to increase the transfer efficiency. Waste or used coating shall be stored in covered containers and disposed of by a method which prevents its emission into the atmosphere. Paint particulate emissions from the spray booth will be controlled by dry filters. All air exiting the booth shall pass through this control system before being vented into the atmosphere. The dry filter must be properly maintained and kept in good condition at all times.

Bake Oven

The engineering section recommends that BACT for the bake oven be 10% opacity and the minimization of emissions through good operating practices. The bake oven must be properly maintained and operated in good working condition. Natural gas is the cleanest fuel available. The properly maintained and operated oven will also be beneficial in that it will minimize VOC and CO emissions.

IV. APPLICABILITY OF FEDERAL AND UTAH AIR CONSERVATION REGULATIONS (UACR)

This notice of intent is for a modification to an existing major source. It is not a new major source or a major modification of existing sources. The following federal and state regulations have been examined to determine their applicability to this notice of intent:

1. Section 3.1.1, UACR - Notice of intent required a modified source. This regulation applies.

2. Section 3.1.8, UACR - Application of best available control technology (BACT) required at all emission points. This regulation applies.
3. Section 3.1.9, UACR - Rules for relocation of temporary sources. HAFB is a permanent source. Therefore, this regulation does not apply.
4. Section 3.1.10, UACR - Additional information requirements for a new major source or a major modification which emits precursors of ozone and impact an area of nonattainment for ozone. This notice of intent does not represent a new major source or a major modification. Therefore, this regulation does not apply.
5. Section 3.2, UACR - Particulate emission limitations for existing sources which are located in a nonattainment area. HAFB is listed in this regulation. However, these new emission points at the base are not included in that listing. Therefore, this regulation does not apply.
6. Section 3.3.1, UACR - Emission limitation for new major sources which are located in a nonattainment area or which impact a nonattainment area. This notice of intent does not represent a new major source or a major modification. Therefore, this regulation will not apply.
7. Section 3.3.2, UACR - Review requirements for new major sources or major modifications which are located in a nonattainment area or which impact a nonattainment area. This notice of intent does not represent a new major source or a major modification. Therefore, this regulation will not apply.
8. Section 3.5, UACR - Emission inventory reporting requirements. This regulation requires any source which emits 25 tons or more per year of any pollutant to submit an emission inventory to the Bureau of Air Quality every year. This source must comply with this regulation since its entire source emissions are greater than 25 tons per year. Therefore, HAFB shall include emissions from sources listed in this approval order in its annual emission inventory.
9. Section 3.6.5(b), UACR - Prevention of significant deterioration (PSD) review requirements for new major sources or major modifications. This notice of intent does not represent a new major source or a major modification under PSD rules. Therefore, this regulation does not apply.
10. Section 3.8, UACR - Stack height rule. This regulation limits the creditable height of stacks to that height determined to be good engineering practice. The formulas used to determine good engineering practice are found in 40 CFR 51.1. A de minimus height of 65 meters (213.2 feet) is allowed. This notice of intent does not have stacks which exceed 65 meters in height. HAFB is in compliance with this regulation.
11. Section 3.11, UACR - Visibility screening analysis requirements. This regulation requires all new major sources or major modifications to undergo a visibility screening analysis to determine visibility impact on any mandatory Class I area. This notice of intent does not represent a new major source or a major modification under UACR rules. Therefore, this regulation does not apply.

12. Section 4.1.2, UACR - 20% opacity limitation at all emission points unless a more stringent limitation is required by New Source Performance Standards (NSPS) or BACT or National Emission Standards for Hazardous Air Pollutants (NESHAPS). In this case, BACT will require a lower opacity limitation of 10%.
13. Section 4.1.9, UACR - EPA Method 9 to be used for visible emission observations. This regulation applies.
14. Section 4.2.1, UACR - Sulfur content limitations in oil and coal used for combustion. This notice of intent does not contain oil or coal burning sources. Therefore, this regulation does not apply.
15. Section 4.7, UACR - Unavoidable breakdown reporting requirements. This regulation applies.
16. Section 4.9, UACR - Review requirements for volatile organic compound (VOC) sources located in a nonattainment area for ozone. This regulation covers the following processes:
 - A. Petroleum liquid storage
 - B. Petroleum liquid transfer/storage
 - C. Control of hydrocarbon emissions in refineries
 - 1) vacuum producing systems
 - 2) wastewater separators
 - 3) process unit turnaround
 - 4) catalytic cracking units
 - 5) safety pressure relief valves
 - 6) leaks from petroleum refinery equipment
 - D. Degreasing and solvent cleaning operations
 - 1) cold cleaning facilities
 - 2) open top vapor degreasers
 - 3) conveyORIZED degreasers
 - E. Cutback asphalt
 - F. VOC used for various processes
 - 1) paper coating
 - 2) fabric and vinyl coating
 - 3) metal furniture coating
 - 4) large appliance surface coating
 - 5) magnet wire coating
 - 6) flat wood coating
 - 7) misc. metal parts and products
 - 8) graphic arts
 - G. Synthesized pharmaceutical manufacturing
 - H. Perchloroethylene dry cleaning plants.

This regulation would apply if these emission points were existing sources at the time of promulgation of this regulation. However, in this case, this regulation has been superceded by BACT requirements.

17. Section 5, UACR - Emergency episode requirements. This regulation applies.
18. National Emission Standards for Hazardous Air Pollutants (NESHAPS) - There are no NESHAPS for this industrial process.
19. National Ambient Air Quality Standards (NAAQS) - This source is located in Davis County, which is a nonattainment area for ozone. The Bureau of Air Quality guidelines does not call for this notice of intent to be modeled for any pollutant. The Bureau has found through experience that, because of the small increase in the quantity of emissions involved and the conservative predictions made by modeling, a source or emission point of this small size or increase is very unlikely to cause a new violation of the NAAQS.

4.2.4-860

20. New Source Performance Standards (NSPS) - There is no NSPS for this industrial process.
21. 40 CFR 60.14, Definition of Modification - Any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which an NSPS standard applies. The following are not by themselves considered modifications:
- 1) Maintenance, repair, and replacement
 - 2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility
 - 3) An increase in the hours of operation
 - 4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by 60.1, the existing facility was designed to accommodate that alternative use
 - 5) The addition or use of any system or device whose primary function is the reduction of air pollutants
 - 6) Relocation or change in ownership

This notice of intent represents a modification under this rule.

22. Definition of Major Modification - It means any physical change in or change in the method of operation of a major source that would result in a significant net emission increase of any pollutant. A net emissions increase that is significant for VOC shall be considered significant for ozone. A physical change or change in the method of operation shall not include:
- A. Routine maintenance, repair, or replacement
 - B. Use of an alternative fuel or raw material by reason of an order under Section 2a and b of the ESECA of 1974 or by reason of a natural gas curtailment plan pursuant to the Federal Power Act
 - C. Use of an alternative fuel by reason of an order under Section 125 of the CAA
 - D. Use of an alternative fuel at a steam generating unit to the extent that the fuel is generated from municipal solid waste
 - E. Use of an alternative fuel or raw material by a source:
 - 1) which the source was capable of accommodating before January 6, 1975, unless such change would be prohibited under any enforceable permit condition
 - 2) which the source is otherwise approved to use

F. An increase in the hours of operation or the production rate unless such change would be prohibited under any enforceable permit condition

G. Any change in ownership at a source

This notice of intent does not represent a major modification under this rule.

V. RECOMMENDED APPROVAL ORDER CONDITIONS

1. Hill Air Force Base, located in Davis County, shall make the following changes according to the information submitted in the notice of intent dated April 27, 1990:
 - A. Install a dip tank, 2000 gallon capacity cylindrical tank with dimensions of 7 feet diameter and 7 feet high, equipped with cathodic protection, a dip drain or catch system, a leak detection system, an electric heater, and a cover.
 - B. Remove paint booth #1 and replace it with a Devilbiss Model ASEY-914-34 paint spray booth or equivalent - Equivalency shall be determined by the Executive Secretary. The booth shall be equipped with dry paint arrestor filters.
 - C. Remove paint booth #3 and replace it with two end to end paint spray booths - The booths shall be equipped with dry paint arrestor filters and High Volume Low Pressure (HVLP) type spray guns.
 - D. Remove the electric powered bake oven and replace it with one fired by natural gas at a total heat input rate of 2 million Btu/hr.
2. Visible emissions from any point or fugitive emission source associated with the above emission points shall not exceed 10% opacity. Opacity observation of emissions from stationary sources shall be conducted in accordance with 40 CFR 60, Appendix A, Method 9.
3. The following operation limits shall not be exceeded without prior approval in accordance with Section 3.1, UACR:
 - A. Dip tank
 1. 144 gallons of varnish per 12 month period
 2. 8 hours per day
 3. 1000 hours of operation per 12 month period
 - B. Paint spray booth #1
 1. 120 gallons of paint per 12 month period
 2. 8 hours per day
 3. 1000 hours of operation per 12 month period
 - C. Paint spray booth #3
 1. 800 gallons of paint per 12 month period
 2. 8 hours per day
 3. 1000 hours of operation per 12 month period

D. Bake oven

1. 2.2 million SCF of natural gas per 12 month period
2. 2.0 million BTU/hr heat input
3. 8 hours per day
4. 1000 hours of operation per 12 month period

Compliance with the annual limitations shall be determined on a rolling monthly total. On the first day of each month a new 12 month total shall be calculated using the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Records of production shall be made available to the Executive Secretary or his representative upon request, and shall include a period of two years ending with the date of the request. Fuel consumption for the bake oven shall be determined by the use of records from a fuel meter. VOC emissions shall be determined by maintaining a record of paints, solvents, and varnish used. The records shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

4. The total VOC emissions from sources listed in this approval order shall not exceed 4.70 tons per 12-month period without prior approval in accordance with Section 3.1, UACR. Compliance with the limitation shall be determined using a material balance procedure on a rolling monthly total. On first day of each month a new 12 month total shall be calculated using the previous 12 months. The total VOC emissions shall be determined by maintaining a record of paints, varnish, thinners, and solvents used, and of operation parameters from other affected VOC emissions sources. The record shall include the following data for each item used:

- A. Name of paint, varnish, thinner, or solvent
- B. Weight in pounds per gallon
- C. Percent VOC by weight
- D. Amount used on a daily basis

Records of consumption shall be kept for all periods when the plant is in operation. Records of consumption shall be made available to the Executive Secretary or his representative upon request, and shall include a period of two years ending with the date of the request. The VOC emissions from paints/varnish/thinners/solvents shall not exceed 4.69 tons per 12 month period. The VOC emissions from other processes shall not exceed 0.01 tons per 12 month period.

5. Paint spray booths #1 and #3 shall be equipped with a set of paint arrestor particulate filters to control particulate emissions. All air exiting either booth shall pass through a paint arrestor control system before being vented to the atmosphere.
6. The owner/operator shall operate the dip tank in following manner:
 - A. The cover shall remain closed at all times except during actual loading, unloading, or transfer operations.
 - B. Parts shall be completely drained in the internal draining rack until all dripping ceases.
 - C. Waste or used varnish shall be stored in covered containers and disposed by a method which prevents VOC emissions to the atmosphere.

- D. Tanks, containers, and all associated equipment shall be maintained in good operating condition, and leaks shall be repaired immediately.
- E. Written procedures for the operation and maintenance of the dip tank shall be posted in an accessible and apparent location near the equipment.
- 7. Eighteen months from the date of this approval order the Executive Secretary shall be notified in writing of the status of construction of this project unless the construction is complete and operation has commenced.
- 8. A copy of this approval order shall be maintained on-site and available to the operators.
- 9. All installations and facilities authorized by this approval order shall be adequately and properly maintained.
- 10. The Executive Secretary shall be notified in writing upon start-up of the installation, as an initial compliance inspection is required.

Any future modifications to the equipment approved by this order must also be approved in accordance with Section 3.1.1, UACR.

This approval order in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including the Utah Air Conservation Regulations.

"Allowable emissions" as defined in Section 1.12, UACR, for sources listed in this approval order are calculated at 0.01 tons/yr for particulates, 0.01 tons/yr for PM₁₀, 0.0006 tons/yr for SO₂, 0.10 tons/yr for NO_x, 0.02 tons/yr for CO, and 4.70 tons/yr for VOCs. These calculations are for the purposes of determining the applicability of PSD and nonattainment area major source requirements of the UACR. They are not to be used for purposes of determining compliance.

CARL
HILL.ENG

MEMORANDUM TO : Donald E. Robinson, Manager, Engineering Section, BAQ
FROM: Tim Blanchard, Environmental Health Engineer
SUBJECT: Modify an Intent to Approve for Hill AFB Building 1701, Dip Tank, Bake Oven, and Paint Booth
DATE: January 2, 1991

=====
On October 19, 1990 a change to the dip tank specifications was received by the BAQ. The change was not incorporated into the subject Intent to Approve sent to James R. Van Orman at Hill AFB on December 7, 1990. The modified NOI indicated that the new dip tank would be installed above ground rather than underground. Because the tank is being installed above ground the cathodic protection and leak detection system will not be installed. The dimensions of the tank were reduced from 7 feet inside diameter to 4 feet inside diameter, and from 7 feet high to 4 feet high. The tank will now be a double wall construction. The capacity is reduced from 2000 gallons to 370 gallons. The emissions from the tank will less because the surface area has been reduced. December 21, 1990 a letter reflecting the above information was sent in as part of the public comment process.

It looks like the emissions will not increase as a result of the proposed change. Make the proposed changes in the FO.

DR

1-3-91

21 DEC 1990

Coordination		
Org	Name	Date
EME	Jay	12-21-90
EME	Stadig	12-21-90
EME	Jay	12-21-90

Mr F Burnell Cordner, Executive Secretary
 Bureau of Air Quality
 1950 West North Temple
 PO Box 16690
 Salt Lake City, UT 84116-0690

RE: Public comments on Intent to Approve building 1701, Dip Tank, Bake Oven & Paint Booths.

Dear Mr Cordner:

Referenced Intent to Approve dated 7 Dec 90, we offer the following public comments for your consideration

Condition 1.A. - Per our 18 Oct 90 letter, dual wall dip tank shall be 370 gallon capacity measuring approximately 4 feet inside diameter and 4 feet high. The tank will be located above ground, therefore, cathodic protection will not be provided. The tank will be provided with a sealed clam type lid, outside pump liquid circulating type agitation, electric heater and a vent system.

Condition 4 - Our estimation of VOC emissions from sources listed in this Intent to Approve is 3.28 tons per year. Revised VOC evaporative emissions from the dip tank are as follows:

Uncontrolled AP-42 Emission Factor = 0.15 Lb VOC/Hr, Ft²
 Evaporative area (revised) = $\frac{3.14}{4} \times (4)^2 = 12.56 \text{ Ft}^2$
 Operating hours about 1,000 hrs/yr
 Uncontrolled evaporative loss $\frac{.15 \text{ Lb} \times 12.56 \text{ Ft}^2 \times 1,000 \text{ hrs} \times \text{Ton}}{\text{hr, Ft}^2 \times 2,000 \text{ Lbs}}$
 = 0.94 Ton/Yr

Emission Reduction Factor 30-60% use 40%
 Evaporative VOC emissions = 0.94 X .6 = .56 Ton/Yr
 Dip tank usage Loss-(NOI) = .06 Ton/Yr
 Paint booth #1 VOC emissions (NOI) = .12 + .34 = .46 Ton/Yr
 Baking Oven VOC emissions (NOI) = .12 Ton/Yr
 Paint booth #3 VOC emissions (NOI) = 2.08 Tons/Yr
 Total VOC emissions = 0.56 + .06 + .46 + .12 + 2.08
 = 3.28 Tons/Yr

If you have any questions, please feel free to contact Jay Gupta at 777-6917.

Sincerely,

4.2.4-866

JAMES N. EPA approved source-specific regulations
 Deputy



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS OGDEN AIR LOGISTICS CENTER (AFLC)
HILL AIR FORCE BASE, UTAH 84056-5990

RECEIVED
OCT 18 1990

AIR QUALITY

Mr F. Burnell Cordner, Executive Secretary
Bureau of Air Quality
288 North 1460 West
PO Box 16690
Salt Lake City, UT 84116-0690

SEP 13 1990

RE: Notice of Intent to Construct a Dip Tank, Bake Oven and Paint Booth
Modification - Bldg 1701

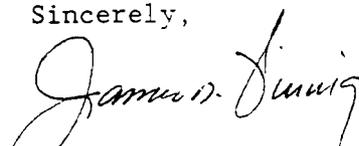
Dear Mr Cordner

On 27 April 90 we submitted the reference NOI. We have made several calls to your consultant, Tetra Tech, Inc in California. According to Tetra Tech, this NOI was processed by them and sent to UBAQ on 9 Sep 90. We wish to commence construction on this project during Nov 90. We, therefore, request an expeditious review and issue of an approval order.

Also, due to a design change, please note that the double wall dip tank will be located above ground and not underground as stated in our original NOI. New dip tank shall be 4' inside diameter, 6' outside diameter and 4' in height. A sealed clam type lid will be provided as before. Dip tank will be equipped with a ventilation system, as stated before, installed on the upper side portion of the tank. Exhaust vent will be 6" diameter approximately 55'-60' above ground. Exhaust volume is estimated to be 100 cubic feet per minutes.

If you have any questions, please feel free to contact Jay Gupta at 777-6917.

Sincerely,


JAMES N. VINING
Deputy
Council Met Dir

4.2.4-867

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: NET EMISSION INCREASES
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED				UNCONTROLLED	
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOx.....	0.0012	0.00	0.0006	0.00	0.00	0.0012	0.0006
NOx.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	4.06	0.51	2.03	0.06	36.23	6.37	3.19
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

SOURCE:
 TOTAL POST-MODIFICATION EMISSION ESTIMATE
 TOTAL PRE-MODIFICATION EMISSION ESTIMATE

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: TOTAL PRE-MODIFICATION EMISSION ESTIMATE
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED				UNCONTROLLED	
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PM-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOx.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOx.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VOC, NON-METHANE.....	5.34	0.67	2.67	0.08	0.00	5.34	2.67
VOC, METHANE.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE:
 PAINT SPRAY BOOTH #1 - PAINT SPRAYING OPERATION
 PAINT SPRAY BOOTH #3 - PAINT SPRAYING OPERATION

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.70	0.09	0.35	0.01	0.00	0.70	0.35

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: PAINT

COMMENTS			
VOC non METHANE	5.80	LBS/GAL	FROM NOI
V(%) (VOC CONTENT).....	78.80	%	(VOC DENISTY OF COATINGS)/(COATING DENISTY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TALBE 4.2.2.1-1
USAGE RATES.....	120.00	GAL/YR	FROM NOI
	0.12	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 3 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED					UNCONTROLLED	
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	4.64	0.58	2.32	0.07	0.00	4.64	2.32

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VOC CONTENT OF PAINT RANGED 3.2 TO 5.8 LBS/GAL

			COMMENTS
VOC non METHANE	5.80	LBS/GAL	FROM NOI, ASSUMED HIGHEST VALUE
V(%) (VOC CONTENT).....	78.80	%	(VOC DENISTY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TALBE 4.2.2.1-1
USAGE RATES.....	800.00	GAL/YR	FROM NOI
	0.80	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

...S OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: TOTAL POST-MODIFICATION EMISSION ESTIMATE
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED					UNCONTROLLED	
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOX.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOx.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	9.40	1.18	4.70	0.14	19.71	11.71	5.85
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

SOURCE:

- DIP TANK - USAGE LOSS
- DIP TANK - EVAPORATION LOSS
- PAINT SPRAY BOOTH #1 - USAGE LOSS FROM DIP TANK
- PAINT SPRAY BOOTH #1 - PAINT SPRAYING OPERATION
- PAINT SPRAY BOOTH #3 - PAINT SPRAYING OPERATION
- BAKE OVEN - USAGE LOSS FROM DIP TANK
- BAKE OVEN - NATURAL GAS FIRED

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: DIP TANK - USAGE LOSS
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.12	0.01	0.06	0.00	0.00	0.12	0.06

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

COMMENTS			
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
USAGE LOSS AT DIP TANK.....	20.00	%	FROM NOI, ASSUMED REMAIN 80% OF USAGE LOSS OCCURRED AT PAINT SPRAY BOOTH AND BAKE OVEN

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: DIP TANK - EVAPORATION LOSS
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED			UNCONTROLLED		
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	3.46	0.44	1.73	0.05	40	5.77	2.88

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.6 SOLVENT DEGREASING
 TABLE 4.6-2 SOLVENT LOSS EMISSION FACTORS FOR DEGREASING OPERATIONS
 TYPE: OPEN TOP VAPOR WITH A COVER

COMMENTS			
VOC non METHANE	0.15	LB/HR/FT2	TABLE 4.6-2
EVAPORATIVE AREAS.....	38.47	FT2	FROM NOI, BASED ON 7 FEET DIAMETER

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
PER WEEK	5	DAYS/WEEK	FROM NOI
PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - USAGE LOSS FROM DIP TANK
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.24	0.03	0.12	0.00	0.00	0.24	0.12

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

			COMMENTS
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
LOSS FROM DIP TANK....	40.00	%	FROM NOI,

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.70	0.09	0.35	0.01	0.00	0.70	0.35

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: PAINT

			COMMENTS
VOC non METHANE	5.80	LBS/GAL	FROM NOI
V(%) (VOC CONTENT).....	78.80	%	(VOC DENISTY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TALBE 4.2.2.1-1
USAGE RATES.....	120.00	GAL/YR	FROM NOI
	0.12	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 3 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	4.64	0.58	2.32	0.07	0.00	4.64	2.32

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VOC CONTENT OF PAINT RANGED 3.2 TO 5.8 LBS/GAL

			COMMENTS
VOC non METHANE	5.80	LBS/GAL	FROM NOI, ASSUMED HIGHEST VALUE
V(%) (VOC CONTENT).....	78.80	%	(VOC DENISTY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TALBE 4.2.2.1-1
USAGE RATES.....	800.00	GAL/YR	FROM NOI
	0.80	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: BAKE OVEN - USAGE LOSS FROM DIP TANK
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.24	0.03	0.12	0.00	0.00	0.24	0.12

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

			COMMENTS
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
EVAPORATION LOSS AT DIP TANK.....	40.00	%	FROM NOI,

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

ROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: BAKE OVEN - NATURAL GAS FIRED
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED				UNCONTROLLED	
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOX.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOX.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

! FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 1 EXTERNAL COMBUSTION SOURCES
 1.4 NATURAL GAS COMBUSTION
 TABLE 1.4-1 UNCONTROLLED EMISSION FACTORS FOR NATURAL GAS COMBUSTION
 FUEL TYPE: NATURAL GAS

EMISSION FACTOR IN LB PER MILLION CUBIC FEET

TOTAL PARTICULATE.....	5.00	LB/MM FT3	TABLE 1.4-1
PM-10	5.00	LB/MM FT3	TABLE 1.4-1
SOX.....	0.60	LB/MM FT3	TABLE 1.4-1
NOX.....	100.00	LB/MM FT3	TABLE 1.4-1
CO.....	20.00	LB/MM FT3	TABLE 1.4-1
VOC, NON-METHANE.....	5.30	LB/MM FT3	TABLE 1.4-1
VOC, METHANE.....	2.70	LB/MM FT3	TABLE 1.4-1
TOTAL POWER RATING.....	2000.00	K BTU/HR	FROM NOI
FUEL CONSUMPTION RATES....	0.00	MM FT3/HR	(TOTAL POWER RATING)/(1000 BTU/FT3)/(MM)
	2.00	MM FT3/YR	(TOTAL POWER RATING)/(1000 BTU/FT3)/(MM)* (ANNUAL OPERATING HOUR)

HOURS OF OPERATION

HOURS PER DAY.....	8.00	HRS/DAY	
DAYS PER WEEK.....	5.00	DAYS/WEEK	
WEEKS PER YEAR.....	52.00	WEEKS/YR	
HOURS PER YEAR.....	1000.00	HRS/YR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

4.2.4-879

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: NET EMISSION INCREASES
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED					UNCONTROLLED	
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CKTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOx.....	0.0012	0.00	0.0006	0.00	0.00	0.0012	0.0006
NOx.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	4.06	0.51	2.03	0.06	36.23	6.37	3.19
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

SOURCE:
 TOTAL POST-MODIFICATION EMISSION ESTIMATE
 TOTAL PRE-MODIFICATION EMISSION ESTIMATE

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: TOTAL PRE-MODIFICATION EMISSION ESTIMATE
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED					UNCONTROLLED	
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PM-10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOX.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOx.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CO.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
VOC, NON-METHANE.....	5.34	0.67	2.67	0.08	0.00	5.34	2.67
VOC, METHANE.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SOURCE:
 PAINT SPRAY BOOTH #1 - PAINT SPRAYING OPERATION
 PAINT SPRAY BOOTH #3 - PAINT SPRAYING OPERATION

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.70	0.09	0.35	0.01	0.00	0.70	0.35

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: PAINT

COMMENTS			
VOC non METHANE	5.80	LBS/GAL	FROM NOI
V(%) (VOC CONTENT).....	78.80	%	(VOC DENSITY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TABLE 4.2.2.1-1
USAGE RATES.....	120.00	GAL/YR	FROM NOI
	0.12	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

E: PAINT SPRAY BOOTH 3 - PAINT SPRAYING OPERATION
 NY NAME: DEPT. OF THE AIR FORCE
 ION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED					UNCONTROLLED	
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
non METHANE	4.64	0.58	2.32	0.07	0.00	4.64	2.32

42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VOC CONTENT OF PAINT RANGED 3.2 TO 5.8 LBS/GAL

COMMENTS			
non METHANE	5.80	LBS/GAL	FROM NOI, ASSUMED HIGHEST VALUE
V(%) (VOC CONTENT).....	78.80	%	(VOC DENSITY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TABLE 4.2.2.1-1
RELEASE RATES.....	800.00	GAL/YR	FROM NOI
	0.80	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
HOURS OF OPERATION			
HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: TOTAL POST-MODIFICATION EMISSION ESTIMATE
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED				UNCONTROLLED	
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOx.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOx.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	9.40	1.18	4.70	0.14	19.71	11.71	5.85
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

SOURCE:

- DIP TANK - USAGE LOSS
- DIP TANK - EVAPORATION LOSS
- PAINT SPRAY BOOTH #1 - USAGE LOSS FROM DIP TANK
- PAINT SPRAY BOOTH #1 - PAINT SPRAYING OPERATION
- PAINT SPRAY BOOTH #3 - PAINT SPRAYING OPERATION
- BAKE OVEN - USAGE LOSS FROM DIP TANK
- BAKE OVEN - NATURAL GAS FIRED

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: DIP TANK - USAGE LOSS
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.12	0.01	0.06	0.00	0.00	0.12	0.06

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

			COMMENTS
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
USAGE LOSS AT DIP TANK.....	20.00	%	FROM NOI, ASSUMED REMAIN 80% OF USAGE LOSS OCCURRED AT PAINT SPRAY BOOTH AND BAKE OVEN

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: DIP TANK - EVAPORATION LOSS
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	3.46	0.44	1.73	0.05	40	5.77	2.88

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 SECTION 4 EVAPORATION LOSS SOURCES
 4.6 SOLVENT DEGREASING
 TABLE 4.6-2 SOLVENT LOSS EMISSION FACTORS FOR DEGREASING OPERATIONS
 TYPE: OPEN TOP VAPOR WITH A COVER

COMMENTS			
VOC non METHANE	0.15	LB/HR/FT2	TABLE 4.6-2
EVAPORATIVE AREAS.....	38.47	FT2	FROM NOI, BASED ON 7 FEET DIAMETER

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - USAGE LOSS FROM DIP TANK
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.24	0.03	0.12	0.00	0.00	0.24	0.12

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

COMMENTS			
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
LOSS FROM DIP TANK....	40.00	%	FROM NOI,

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 1 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	CONTROLLED				UNCONTROLLED		
	LBS/HR	HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.70	0.09	0.35	0.01	0.00	0.70	0.35

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: PAINT

			COMMENTS
VOC non METHANE	5.80	LBS/GAL	FROM NOI
V(%) (VOC CONTENT).....	78.80	%	(VOC DENISTY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TALBE 4.2.2.1-1
USAGE RATES.....	120.00	GAL/YR	FROM NOI
	0.12	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: PAINT SPRAY BOOTH 3 - PAINT SPRAYING OPERATION
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	4.64	0.58	2.32	0.07	0.00	4.64	2.32

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VOC CONTENT OF PAINT RANGED 3.2 TO 5.8 LBS/GAL

			COMMENTS
VOC non METHANE	5.80	LBS/GAL	FROM NOI, ASSUMED HIGHEST VALUE
V(%) (VOC CONTENT).....	78.80	%	(VOC DENSITY OF COATINGS)/(COATING DENSITY)*100
COATING DENSITY	7.36	LBS/GAL	DEFAULT VALUE FROM TABLE 4.2.2.1-1

USAGE RATES.....	800.00	GAL/YR	FROM NOI
	0.80	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: BAKE OVEN - USAGE LOSS FROM DIP TANK
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	HOURLY GRAMS/SEC	CONTROLLED			UNCONTROLLED	
			TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
VOC non METHANE	0.24	0.03	0.12	0.00	0.00	0.24	0.12

AP-42 FOURTH EDITION SEPT. 1985 VOLUME 1
 SECTION 4 EVAPORATION LOSS SOURCES
 4.2 SURFACE COATING
 TABLE 4.2.2.1-1 VOC EMISSIONS FOR UNCONTROLLED SURFACE COATING
 PAINT TYPE: VARNISH

			COMMENTS
VOC non METHANE	4.10	LBS/GAL	V(%)*(COATING DENSITY)/100
V(%)	50.00	%	FROM NOI
COATING DENSITY	8.20	LBS/GAL	FROM NOI
USAGE RATES.....	144.00	GAL/YR	FROM NOI
	0.14	GAL/HR	(GAL/YR)/(HOURS/DAY)/(DAYS/WEEK)/(WEEKS/YR)
USAGE LOSS AT DIP TANK.....	40.00	%	FROM NOI,

HOURS OF OPERATION

HOURS PER DAY	8	HOURS/DAY	FROM NOI
DAYS PER WEEK	5	DAYS/WEEK	FROM NOI
WEEKS PER YEAR	52	WEEKS/YEAR	FROM NOI
HOURS PER YEAR	1000	HOURS/YEAR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY

CONTROLLED AND UNCONTROLLED EMISSION ESTIMATES FOR:

FILE: 1701
 DATE: AUG-28-90
 TIME: 9:00 AM

SOURCE: BAKE OVEN - NATURAL GAS FIRED
 COMPANY NAME: DEPT. OF THE AIR FORCE
 LOCATION: HILL AFB - BUILDING 1701

POLLUTANT	LBS/HR	CONTROLLED				UNCONTROLLED	
		HOURLY GRAMS/SEC	TONS/YR	ANNUAL GRAMS/SEC	% CNTRL	LBS/HR	TONS/YR
TOTAL PARTICULATE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
PM-10	0.01	0.00	0.01	0.00	0.00	0.01	0.01
SOx.....	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NOx.....	0.20	0.03	0.10	0.00	0.00	0.20	0.10
CO.....	0.04	0.01	0.02	0.00	0.00	0.04	0.02
VOC, NON-METHANE.....	0.01	0.00	0.01	0.00	0.00	0.01	0.01
VOC, METHANE.....	0.01	0.00	0.00	0.00	0.00	0.01	0.00

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SECTION 1 EXTERNAL COMBUSTION SOURCES

1.4 NATURAL GAS COMBUSTION

TABLE 1.4-1 UNCONTROLLED EMISSION FACTORS FOR NATURAL GAS COMBUSTION

FUEL TYPE: NATURAL GAS

EMISSION FACTOR IN LB PER MILLION CUBIC FEET

TOTAL PARTICULATE.....	5.00	LB/MM FT3	TABLE 1.4-1
PM-10	5.00	LB/MM FT3	TABLE 1.4-1
SOx.....	0.60	LB/MM FT3	TABLE 1.4-1
NOx.....	100.00	LB/MM FT3	TABLE 1.4-1
CO.....	20.00	LB/MM FT3	TABLE 1.4-1
VOC, NON-METHANE.....	5.30	LB/MM FT3	TABLE 1.4-1
VOC, METHANE.....	2.70	LB/MM FT3	TABLE 1.4-1
TOTAL POWER RATING.....	2000.00	K BTU/HR	FROM NOI
FUEL CONSUMPTION RATES....	0.00	MM FT3/HR	(TOTAL POWER RATING)/(1000 BTU/FT3)/(MM)
	2.00	MM FT3/YR	(TOTAL POWER RATING)/(1000 BTU/FT3)/(MM)* (ANNUAL OPERATING HOUR)

HOURS OF OPERATION

HOURS PER DAY.....	8.00	HRS/DAY	
DAYS PER WEEK.....	5.00	DAYS/WEEK	
WEEKS PER YEAR.....	52.00	WEEKS/YR	
HOURS PER YEAR.....	1000.00	HRS/YR	FROM NOI, INTERMITTENT OPERATION- FEW HOURS A DAY DURING DAY SHIFT ONLY