



STATE OF UTAH
DEPARTMENT OF HEALTH

NORMAN H. BANGERTER, GOVERNOR

SUZANNE DANDOOY, M.D., M.P.H., EXECUTIVE DIRECTOR

FEB 20 1988
533-6108

Phil Lammi
United States Air Force
Air Force Regional Civil Engineer
630 Sansom Street, Room 1316
San Francisco, California 94111-2278

RE: Approval Order for Industrial
Wastewater Treatment Facility
Davis County CDS A-1

Dear Mr. Lammi:

The above referenced project has been reviewed by the Executive Secretary, Utah Air Conservation Committee 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 Executive Secretary's original determination which resulted from the evaluation of the comments received. This air quality approval order authorizes the project with the following conditions:

1. Hill Air Force Base shall install the proposed industrial wastewater treatment plant according to the information submitted to the Executive Secretary in the notice of intent dated October 1, 1985.
2. Total emissions of reactive and non-reactive volatile organic compounds shall be reported to the Executive Secretary annually.
3. All installations and facilities authorized by this approval order shall be maintained and operated in proper condition.
4. The Executive Secretary shall be notified upon start-up of the installation, as an initial compliance inspection is required.
5. Plant through-put of reactive VOC shall not exceed 12 tons/year without prior approval of the Executive Secretary in accordance with Section 3.1, UACR.

4.2.4-969

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United States Air Force
Approval Order/LRM

The fee for issuing this approval order is \$245.14. The amount (see enclosure for breakdown of costs) is payable to the Utah Department of Health, sent to the Executive Secretary, Utah Air Conservation Committee, 2870 Connor Street, Salt Lake City, Utah 84109 and is due within 30 days after receipt of this approval order.

Sincerely,

Brent C. Bradford
Executive Secretary
Utah Air Conservation Committee

LRM/jg 7
0233A

CC: EPA Region VIII (Norm Huey)
Davis County Health Department

Enclosure

APPROVAL ORDER FEE

Review Engineer - total hours 8 (\$22.08/hr) = \$ 176.64
Modeler - total hours _____ (\$17.94/hr) = \$ _____
Computer Time - total hours _____ (\$ 5.00/hr) = \$ _____
Notice To Paper - _____ = \$ 18.50
Travel - total miles _____ (\$ 0.23/mile) = \$ _____
Filing Fee - _____ = \$ 50.00

Total = \$ 245.14

LRM/jg *EL*
0401Q

Phil Lammi
United States Air Force
Approval Order for Industrial Wastewater Treatment Facility

UTAH BUREAU OF AIR QUALITY
NEW/MODIFIED SOURCE PLAN REVIEW FOR:

Phil Lammi
United States Air Force
Air Force Regional Civil Engineer
630 Sansom Street, Room 1316
San Francisco, California 94111-2278

RE: Industrial Wastewater Treatment
Facility
Davis County CDS A-1

Engineer: Lynn Menlove

Date: December 2, 1985

Notice of Intent dates: 10-2-85; Info. 10-15-85

Plant contact: Darrell Hunt, Radian Corp.

Phone number: (916) 362-5332

Plant location: Hill Air Force Base

Filing Fee:	_____	= \$50.00
Review Engineer total hours	<u>8</u>	(\$22.08/hr) = \$176.64
Modeler total hours	_____	(\$17.94/hr) = _____
Computer time total hours	_____	(\$5.00) = _____
Notice to paper	_____	\$18.50
Travel total miles	_____	(\$0.21/mile) = _____
	Total	\$245.14

Approved by Section Manager DK 12/13/85

Approved by Executive Secretary RB 12/27/85

I. Description of Proposal

A. History

Hill Force Base is planning to construct an industrial wastewater treatment facility for their existing and future effluent from the Base.

B. Process

The facility will be stripping the reactive and non-reactive hydrocarbons from the wastewater. The waste HC stripped currently enters the atmosphere so this is not a change of HC emissions for existing rates of effluent. The increased effluent for Building 220 expansion will be included in this review.

75% of the HC stripped from the water is non-reactive as defined by UACR Section 3.1.7.f.

The wastewater facility follows an existing secondary clarifier.

The system is closed to the atmosphere except the air stripping tower where the HC is removed by a counter current flow of air contacting water in a packed tower. See Figure 1.

The air stripper is expected to remove 99.9% of the VOC from the water.

C. Rates of flow

Water through-put 461 gal/min average

VOC

Reactive = 5.6 ton/yr

Non-reactive = 18.4 ton/yr

Air Exhaust 7500 acfm

Time of Operation

24 hrs/day

365 days/year

Construction scheduled

Late 1986 Completion

II. BACT

Application of VOC control equipment for this source with an emission of 5.6 tons of reactive VOC per year is not reasonable.

I recommend no control equipment with the following limitations:

1. Annual reporting of reactive and non-reactive VOC emissions.
2. Reactive VOC shall not exceed 12 ton/yr.

III. Applicable Regulations

UACR 3.1.1 Engineering review

UACR 3.1.7.f Annual emission report of non-reactive VOC.

IV. Recommended Approval Order Conditions

1. Hill Air Force Base shall install the proposed industrial wastewater treatment plant according to the information submitted to the Executive Secretary in the notice of intent dated October 1, 1985.
2. Total emissions of reactive and non-reactive volatile organic compounds shall be reported to the Executive Secretary annually.
3. All installations and facilities authorized by this approval order shall be maintained and operated in proper condition.
4. The Executive Secretary shall be notified upon start-up of the installation, as an initial compliance inspection is required.
5. Plant through-put of reactive VOC shall not exceed 12 tons/year without prior approval of the Executive Secretary in accordance with Section 3.1, UACR.

LRM/jg
0234A

H-11 AFB
NIGHT WATER TREATMENT

12-4-85

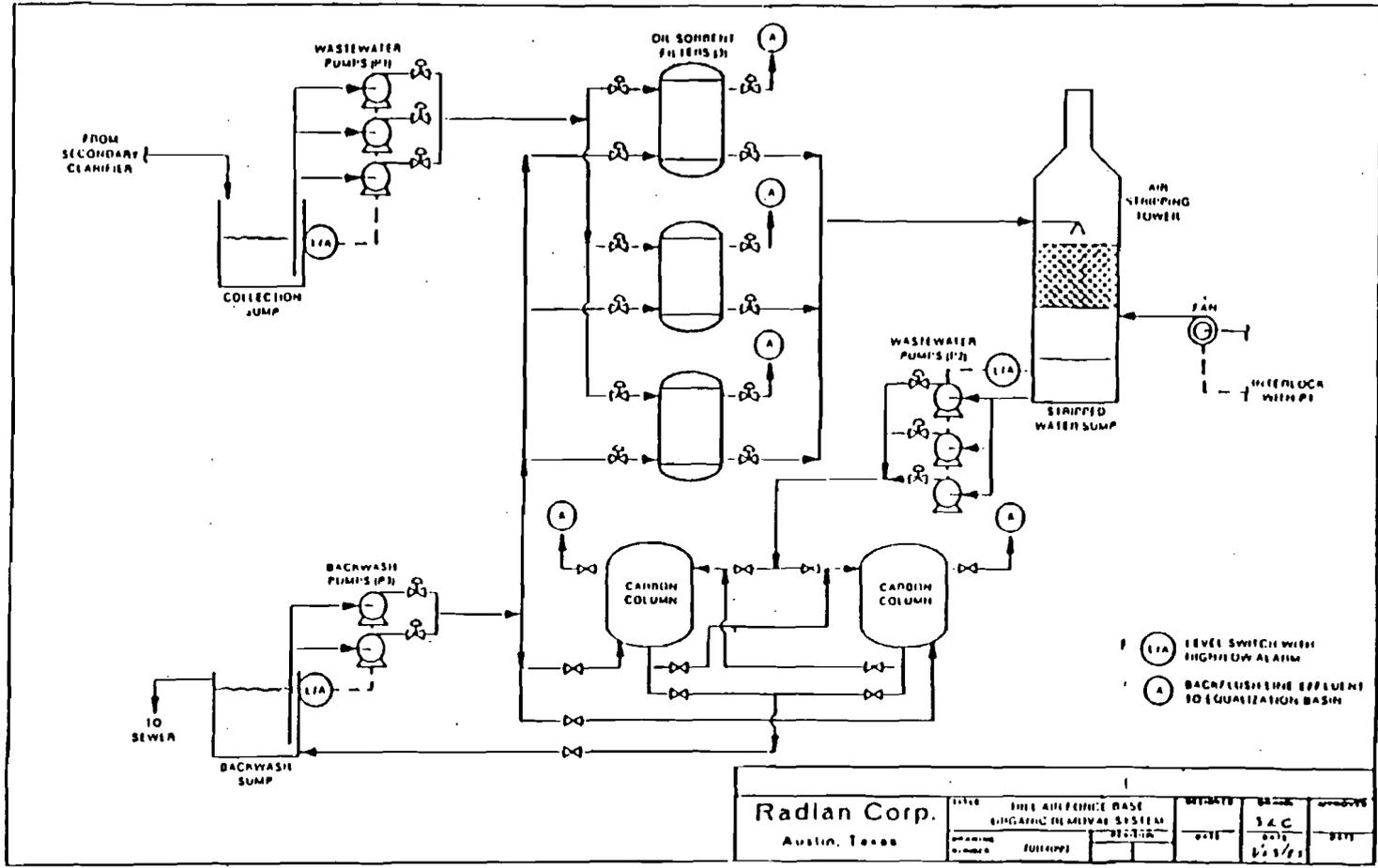


Figure 1. End of Pipe Air Stripping/Carbon Adsorption Treatment Process.

4.2.4-975

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1. Annual reporting of reactive and non-reactive VOC emissions.
2. Reactive VOC shall not exceed 12 ton/yr.

III. Applicable Regulations

UACR 3.1.1 Engineering review

UACR 3.1.7.f Annual emission report of non-reactive VOC

IV. Recommended Approval Order Conditions

1. Hill Air Force Base shall install the proposed industrial wastewater treatment plant according to the information submitted to the Executive Secretary in the notice of intent dated October 1, 1985.
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3. All installations and facilities authorized by this approval order shall be maintained and operated in proper condition.
4. The Executive Secretary shall be notified upon start-up of the installation, as an initial compliance inspection is required.
5. Plant through-put of reactive VOC shall not exceed 12 tons/year without prior approval of the Executive Secretary in accordance with Section 3.1, UACR.
- ~~6. For purposes of Section 3.1.5 UACR a "continuous program of construction" shall be defined as normal operation achieved by June 15, 1987.~~

II. EMISSION SUMMARY

Source	Pollutant	Uncontrolled tons/year	ton/year	Controlled lbs/hr	g/sec	% Cont:
<u>active VOC</u>	Particulate	0				
	SO ₂	0				
	NO _x	0				
	CO	0				
	VOC	5.6	5.6	1.3	0.16	0
	Other	0				
<u>Non-Reactive VOC</u>	Particulate	0				
	SO ₂	0				
	NO _x	0				
	CO	0				
	VOC	18.4	18.4	4.2	0.53	0
	Other	0				
<u>Total VOC</u>	Particulate	0				
	SO ₂	0				
	NO _x	0				
	CO	0				
	VOC	24.0	24.0	5.5	0.69	0
	Other	0				
	Particulate					
	SO ₂					
	NO _x					
	CO					
	VOC					
	Other					

CalculationsGiven

$$\text{Liquid Flow rate} = 461 \text{ gal./min}$$

$$24 \text{ hr/day} \quad 7 \text{ days/wk} \quad 52 \text{ wk./yr}$$

$$= 8760 \text{ hr/yr}$$

$$\text{VOC} = 6 \text{ mg/l of water (0.36 gr/gal)}$$

$$\text{Non-VOC} = 18 \text{ mg/l of water (1.07 gr/gal)}$$

Sol'n

$$\text{VOC} = \frac{461 \text{ gal/min} \cdot 0.36 \text{ gr/gal} \cdot 60 \text{ min/hr} \cdot 8760 \text{ hr/yr}}{7000 \text{ gr/lb} \cdot 2000 \text{ lb/Ton}}$$

$$= 6.2 \text{ ton/yr}$$

This agrees with the submitted numbers.



STATE OF UTAH
DEPARTMENT OF HEALTH

NORMAN H. BANGERTER, GOV.

SUZANNE DANDOO, M.D., M.P.H., EXECUTIVE DIRECTOR

OCT 7 1985

533-6108

Phil Lammi
United States Air Force
Air Force Regional Civil Engineer
630 Sansom Street, Room 1316
San Francisco, California 94111-2278

RE: Receipt of Notice of Intent

Dear Mr. Lammi:

This letter acknowledges receipt of your application for an air quality approval order for a Industrial Wastewater Treatment Facility. Your notice of intent dated October 1, 1985, was received October 2, 1985. Evaluation of the application has begun. If any additional information is necessary, a detailed request will be sent within 30 days. Please note the Utah Air Conservation Regulations (UACR) Section 3.1.1, requires an approval order be issued by the Executive Secretary prior to initiation of construction or modification.

Sincerely,

Lynn R. Menlove
Environmental Health Engineer
Bureau of Air Quality

LRM/jg
9430Q

4.2.4-979