AD-A061 665 SCOTT ENVIRONMENTAL TECHNOLOGY INC PLUMSTEADVILLE PA F/G 21/5
U.S. AIR FORCE TURBINE ENGINE EMISSION SURVEY. VOLUME II. INDIV--ETC(U)
AUG 78 A F SOUZA, P S DALEY F29601-75-C-0046
UNCLASSIFIED SET-1492-50-0877 CEEDO-TR-78-34-VOL-2 NL

CEEDO-TR-78-34

LEVEL II

B.S.

U.S. AIR FORCE TURBINE ENGINE EMISSION SURVEY VOL II INDIVIDUAL ENGINE TEST REPORTS

Vol 3 - A061483

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SCOTT ENVIRONMENTAL TECHNOLOGY, INC.
PLUMSTEADVILLE, PENNSYLVANIA 18949

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ENVIRONMENTAL ASSESSMENT RESEARCH DIVISION
DIRECTORATE OF ENVIRONICS

AUGUST 1978

FINAL REPORT FOR PERIOD JANUARY 1975-JUNE 1978

Approved for public release; distribution unlimited

CEEDO

CIVIL AND ENVIRONMENTAL ENGINEERING DEVELOPMENT OFFICE
(AIR FORCE SYSTEMS COMMAND)
TYNDALL AIR FORCE BASE
FLORIDA 32403

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

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18. SUPPLEMENTARY NOTES

Available in DDC

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Gas Turbine Engines	Smoke	Oxides of Nigrogen
Exhaust Emissions	Particulates	Afterburner Emissions
Air Pollution	Carbon Monoxide	
	Total Hydrocarbons	

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

The gaseous exhaust emissions from 14 military gas turbine engines were measured at various power levels from idle to full power including afterburning. SAE smoke number was determined. All measurements were made using the Air Force Mobile Emissions Laboratory which is a self-contained state-of-the-art gas turbine emissions test laboratory. Emission rates of hydrocarbons, carbon monoxide and oxides of nitrogen were calculated. The emission rate of sulfur oxides was estimated from fuel analyses.

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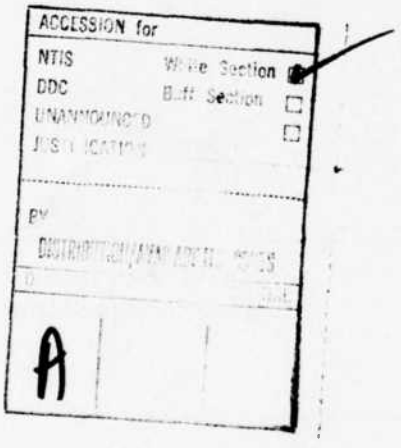
SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Continued from Block 20.

The body of data was analyzed to show relationships among the data. These studies included the effect of power setting on emission index and smoke number, variation of gas concentrations across the exhaust plume and the degree of uncertainty introduced by abbreviated sampling methods. A summary table of "Best Estimate" emission factors for all the engines tested is provided.



PREFACE

This report was prepared by Scott Environmental Technology, Inc. under Air Force Contract Number F29601-75-C-0046. The work reported herein was administered under the direction of the Environics Directorate of the Air Force Civil and Environmental Engineering Development Office (Det 1 ADTC) with Major Peter S. Daley serving as Project Officer. Work was performed from January 1975 through June 1977. The engine test program was performed with the cooperation of the following Air Force organizations and private engine overhaulers; their excellent cooperation is gratefully acknowledged.

Teledyne; Nesho MO
First Composite Wing; Andrews AFB MD
Air Force Logistics Command; Kelly AFB TX
Air Force Logistics Command; Tinker AFB OK
Air Force Tactical Air Command Headquarters; Langley AFB VA
General Electric Company; Lynn MA

This report is presented in three volumes. Volume I is an overall description of the work performed and the results obtained. A table of best estimate emission factors for Air Force gas turbine engines is presented in Volume I. Volume II contains the results of the individual tests of each engine. Volume III contains the Model Summaries which are statistical summaries of the test results by engine model.

PETER S. DALEY, Major, USAF, BSC
Project Officer

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Director of Environics

JOSEPH S. PIZZUTO, Col, USAF, BSC
Commander

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APPENDIX A

ENGINE TEST LOG

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY

REPORT DATE 07/19/77
USAF CONTRACT F29601-75-C-0096

TEST LOG

SCOTT TEST #	TEST CAT.	FIELD TEST #	DATE	ENGINE TESTED	ENGINE S/N	TEST LOCATION	TEST ID ENG#	REPL#	TC	LOC#	FS#	COMMENTS
1	B	101	03/11/75	J69-T25	321901	TELEDYNE,NEO	1	1	B	1	1	
2	B	102	03/12/75	J85-5	231118	TELEDYNE,NEO	2	1	B	1	1	PART.A/B
3	B	103	03/14/75	J69-T25	321142	TELEDYNE,NEO	1	2	B	1	1	
4	B	104	03/17/75	J69-T25	321989	TELEDYNE,NEO	1	3	B	1	1	
5	B	105	03/18/75	J69-T25	401301	TELEDYNE,NEO	1	4	B	1	1	
6	A	106	03/18/75	J69-T25	401565	TELEDYNE,NEO	1	5	A	1	1	
7	B	107	03/19/75	J69-T25	321512	TELEDYNE,NEO	1	6	B	1	1	
8	B	108	04/01/75	J69-T25	401654	TELEDYNE,NEO	1	7	B	1	2	
9	B	109	04/01/75	J69-T25	321492	TELEDYNE,NEO	1	8	B	1	2	
10	B	110	04/02/75	J69-T25	400365	TELEDYNE,NEO	1	9	B	1	3	
11	B	111	04/02/75	J69-T25	321322	TELEDYNE,NEO	1	10	B	1	3	
12	B	112	04/03/75	J85-5	230202	TELEDYNE,NEO	2	2	B	1	3	NO A/B
13	B	113	04/03/75	J85-5	230859	TELEDYNE,NEO	2	3	B	1	3	NO A/B
14	B	114	04/04/75	J85-5	232730	TELEDYNE,NEO	2	4	B	1	3	NO A/B
15	B	115	04/07/75	J85-5	231687	TELEDYNE,NEO	2	5	B	1	3	NO A/B
16	B	116	04/08/75	J85-5	232436	TELEDYNE,NEO	2	6	B	1	3	NO A/B
17	B	117	04/09/75	J85-5	231244	TELEDYNE,NEO	2	7	B	1	3	NO A/B
18	B	118	04/10/75	J69-T25	321612	TELEDYNE,NEO	1	11	B	1	3	
19	C	116	04/10/75	J69-T25	321612	TELEDYNE,NEO	1	11	C	1	3	
20	A	119	04/11/75	J85-5	232078	TELEDYNE,NEO	2	8	A	1	3	SMA-SAME W/A
21	B	120	04/14/75	J85-5	232810	TELEDYNE,NEO	2	9	B	1	3	
22	C	120	04/14/75	J85-5	232810	TELEDYNE,NEO	2	9	C	1	3	
23	B	121	04/14/75	J85-5	232437	TELEDYNE,NEO	2	10	B	1	3	
24	C	121	04/14/75	J85-5	232437	TELEDYNE,NEO	2	10	C	1	3	
25	B	201	05/02/75	J60-P5	637067	ANDREWS	3	1	B	2	4	
26	B	202	05/05/75	J60-P3	637236	ANDREWS	3	2	B	2	4	
27	B	203	05/06/75	J60-P3	637285	ANDREWS	3	3	B	2	4	
28	B	204	05/08/75	J60-P3	636815	ANDREWS	3	4	B	2	4	
29	B	205	05/12/75	J60-P5B	636976	ANDREWS	3	5	B	2	4	
30	A	206	05/13/75	J60-P5B	636920	ANDREWS	3	6	A	2	4	
31	B	207	05/15/75	J60-P5B	637064	ANDREWS	3	7	B	2	4	
32	C	207	05/15/75	J60-P5B	637064	ANDREWS	3	7	C	2	4	
33	A	208	05/27/75	J60-P3	637234	ANDREWS	3	8	A	2	4	
34	B	209	05/27/75	J60-P3	636786	ANDREWS	3	9	B	2	4	
35	C	209	05/27/75	J60-P3	636786	ANDREWS	3	9	C	2	4	
36	A	210	05/28/75	J60-P5B	636975	ANDREWS	3	10	A	2	4	NO GOOD
37	B	211	05/28/75	J60-P3	636845	ANDREWS	3	11	B	2	4	
38	B	301	06/16/75	J79-15	420655	KELLY AFB,TX	4	1	B	3	5	
39	B	302	06/19/75	J79-15	434497	KELLY AFB,TX	4	2	B	3	5	
40	B	303	06/20/75	J79-15	439359	KELLY AFB,TX	4	3	B	3	5	
41	B	304	06/24/75	J79-15	440165	KELLY AFB,TX	4	4	B	3	6	
42	B	305	06/25/75	J79-15	434801	KELLY AFB,TX	4	5	B	3	6	
43	C	305	06/25/75	J79-15	434801	KELLY AFB,TX	4	5	C	3	6	
44	A	306	07/01/75	J79-15	420966	KELLY AFB,TX	4	6	A	3	7	
45	B	407	07/15/75	T56-A7B	AE104293	KELLY AFB,TX	5	1	B	3	8	
46	B	408	07/17/75	T56-A7B	AE102369	KELLY AFB,TX	5	2	B	3	8	
47	B	409	07/18/75	T56-A7B	AE101691	KELLY AFB,TX	5	3	B	3	8	
48	B	410	07/22/75	T56-A7B	AE103319	KELLY AFB,TX	5	4	B	3	8	

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY

REPORT DATE 07/19/77
USAF CONTRACT F29601-75-C-0046

TEST LOG

SCOTT TEST #	TEST CAT.	FIELD TEST #	DATE	ENGINE TESTED	ENGINE S/N	TEST LOCATION	TEST ID ENG#	REPL#	TC	LOC#	FS#	COMMENTS
49	C	410	07/22/75	TS6-A7B	AE103319	KELLY AFB,TX	5	4	C	3	8	
50	A	411	07/24/75	TS6-A7B	AE103503	KELLY AFB,TX	5	5	A	3	8	
51	B	412	08/04/75	TS6-A7B	AE104060	KELLY AFB,TX	5	6	B	3	8	
52	A	413	08/06/75	TS6-A7B	AE105484	KELLY AFB,TX	5	7	A	3	8	
53	B	414	08/06/75	TS6-A7B	AE105484	KELLY AFB,TX	5	7	B	3	8	
54	B	415	08/08/75	TS6-A7B	AE101715	KELLY AFB,TX	5	8	B	3	8	
55	A	416	08/28/75	TF39	441128	KELLY AFB,TX	6	1	A	5	9	
56	A	417	09/17/75	TF39	441447	KELLY AFB,TX	6	2	A	5	10	
57	A	418	10/01/75	TF39	441169	KELLY AFB,TX	6	3	A	5	11	
58	A	419	10/03/75	TF39	441142	KELLY AFB,TX	6	4	A	5	12	
59	B	401	02/03/76	TF33-P3	643295	TINKER AFB	7	1	B	4	13	
60	B	402	02/04/76	J75-19W	612330	TINKER AFB	8	1	B	4	13	
61	B	403	02/04/76	J75-19W	612355	TINKER AFB	8	2	B	4	13	
62	B	404	02/06/76	J75-19W	612479	TINKER AFB	8	3	B	4	13	
63	B	405	02/10/76	TF33-P3	642636	TINKER AFB	7	2	B	4	13	
64	C	405	02/10/76	TF33-P3	642636	TINKER AFB	7	2	C	4	13	
65	B	406	02/11/76	J75-P17	610928	TINKER AFB	9	1	B	4	13	
66	C	406	02/11/76	J75-P17	610928	TINKER AFB	9	1	C	4	13	
67	B	407	02/12/76	TF33-P7	651524	TINKER AFB	10	1	B	4	13	
68	B	408	02/21/76	TF33-P3	642953	TINKER AFB	7	3	B	4	14	
69	A	408	02/21/76	TF33-P3	642953	TINKER AFB	7	3	A	4	14	
70	A	409	02/22/76	J75-P17	610829	TINKER AFB	9	2	A	4	14	
71	B	409	02/22/76	J75-P17	610829	TINKER AFB	9	2	B	4	14	
72	B	410	03/08/76	TF41-A1	141720	TINKER AFB	11	1	B	4	15	
73	B	411	03/10/76	TF41-A1	141060	TINKER AFB	11	2	B	4	15	
74	C	411	03/10/76	TF41-A1	141060	TINKER AFB	11	2	C	4	15	
75	A	412	03/12/76	TF41-A1	141077	TINKER AFB	11	3	A	4	15	
76	B	412	03/12/76	TF41-A1	141077	TINKER AFB	11	3	B	4	15	
77	B	413	03/15/76	TF41-A1	141174	TINKER AFB	11	4	B	4	15	
78	B	414	03/16/76	TF41-A1	141739	TINKER AFB	11	5	B	4	15	
79	B	415	03/20/76	J57-.9W	615677	TINKER AFB	12	1	B	4	16	
80	C	415	03/20/76	J57-19W	615677	TINKER AFB	12	1	C	4	16	
81	B	416	03/21/76	J57-19W	615383	TINKER AFB	12	2	B	4	16	
82	B	417	03/27/76	J57-43	629523	TINKER AFB	13	1	B	4	16	
83	C	417	03/27/76	J57-43	629523	TINKER AFB	13	1	C	4	16	
84	A	418	03/28/76	J57-43	629542	TINKER AFB	13	2	A	4	16	
85	B	418	03/28/76	J57-43	629542	TINKER AFB	13	2	B	4	16	
86	B	419	03/28/76	J57-43	627781	TINKER AFB	13	3	B	4	16	
87	B	420	04/01/76	TF33-P7	651471	TINKER AFB	10	2	B	4	16	
88	C	420	04/01/76	TF33-P7	651471	TINKER AFB	10	2	C	4	16	
89	B	421	04/02/76	TF33-P7	651354	TINKER AFB	10	3	B	4	16	
90	B	422	04/03/76	J57-F43WB	618130	TINKER AFB	13	4	B	4	16	
91	A	423	04/04/76	J57-19W	607076	TINKER AFB	12	3	A	4	16	
92	B	423	04/04/76	J57-19W	607076	TINKER AFB	12	3	B	4	16	
93	B	424	04/06/76	TF33-P3	642614	TINKER AFB	7	4	B	4	16	
94	B	425	04/06/76	TF33-P7	651631	TINKER AFB	10	4	B	4	16	
95	A	425	04/07/76	TF33-P7	651631	TINKER AFB	10	4	A	4	16	
96	B	426	04/13/76	TF30-P3	659091	TINKER AFB	14	1	B	4	17	

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY

REPORT DATE 07/19/77
USAF CONTRACT F29601-75-C-0046

TEST LOG

SCOTT TEST #	TEST CAT.	FIELD TEST #	DATE	ENGINE TESTED	ENGINE S/N	TEST LOCATION	TEST ID ENG#	REPL#	TC	LOC#	FS#	COMMENTS
97	B	427	04/13/76	TF30-P100	679595	TINKER AFB	15	1	B	4	17	
98	B	428	04/14/76	TF30-P3	658705	TINKER AFB	14	2	B	4	17	
99	C	428	04/14/76	TF30-P3	658705	TINKER AFB	14	2	C	4	17	
100	B	429	04/17/76	TF30-P7	674984	TINKER AFB	16	1	B	4	17	
101	A	429	04/17/76	TF30-P7	674984	TINKER AFB	16	1	A	4	17	
102	B	430	04/19/76	TF30-P7	675686	TINKER AFB	16	2	B	4	17	
103	C	430	04/19/76	TF30-P7	675686	TINKER AFB	16	2	C	4	17	
104	B	431	04/20/76	TF30-P7	675567	TINKER AFB	16	3	B	4	17	
105	B	432	04/21/76	TF30-P100	679679	TINKER AFB	15	2	B	4	17	
106	C	432	04/21/76	TF30-P100	679679	TINKER AFB	15	2	C	4	17	
107	B	433	04/22/76	TF30-P100	679581	TINKER AFB	15	3	B	4	17	
108	A	434	04/23/76	TF30-P3	658713	TINKER AFB	14	3	A	4	17	
109	B	434	04/23/76	TF30-P3	658713	TINKER AFB	14	3	B	4	17	
110	B	435	04/24/76	J57-P21B	607168	TINKER AFB	17	1	B	4	17	
111	C	435	04/24/76	J57-P21B	607168	TINKER AFB	17	1	C	4	17	
112	A	436	04/25/76	J57-P21B	607217	TINKER AFB	17	2	A	4	17	
113	B	436	04/25/76	J57-P21B	607217	TINKER AFB	17	2	B	4	17	
114	B	437	04/26/76	J57-P21B	602586	TINKER AFB	17	3	B	4	17	
115	A	438	04/27/76	TF30-P100	679747	TINKER AFB	15	4	A	4	18	
116	B	438	04/27/76	TF30-P100	679747	TINKER AFB	15	4	B	4	18	
117	B	501	07/24/76	F100-PW100	680266	LANGLEY AFB	18	1	B	5	19	
118	B	502	07/27/76	F100-PW100	680327	LANGLEY AFB	18	2	B	5	19	
119	B	503	07/30/76	F100-PW100	680209	LANGLEY AFB	18	3	B	5	19	
120	B	504	08/03/76	F100-PW100	680227	LANGLEY AFB	18	4	B	5	20	
121	B	505	08/06/76	F100-PW100	680305	LANGLEY AFB	16	5	B	5	20	
122	C	505	08/06/76	F100-PW100	680305	LANGLEY AFB	18	5	C	5	20	
123	A	506	08/12/76	F100-PW100	680209	LANGLEY AFB	18	3	A	5	21	
124	S	507	08/13/76	F100-PW100	680209	LANGLEY AFB	18	3	S	5	21	STACK-IDLE
125	S	508	08/14/76	F100-PW100	680209	LANGLEY AFB	18	3	S	5	22	STACK-80% 0
126	S	509	08/14/76	F100-PW100	680209	LANGLEY AFB	18	3	S	5	22	STACK-80% 6
127	S	510	08/14/76	F100-PW100	680209	LANGLEY AFB	18	3	S	5	22	STACK-MIL
128	A	601	08/30/76	TF34-DEV	201025-4A	GE LYNN, MA	19	1	A	6	23	
129	A	602	08/31/76	TF34-DEV	201025-4A	GE LYNN, MA	19	2	A	6	24	
130	B	603	09/08/76	TF34-100	205082	GE LYNN, MA	20	1	B	6	25	
131	A	604	09/10/76	TF34-100	205083	GE LYNN, MA	20	2	A	6	26	
132	B	605	09/11/76	TF34-100	205081	GE LYNN, MA	20	3	B	6	27	
133	C	605	09/11/76	TF34-100	205081	GE LYNN, MA	20	3	C	6	27	
134	B	606	09/15/76	TF34-100	205084	GE LYNN, MA	20	4	B	6	28	
135	B	607	09/16/76	TF34-100	205085	GE LYNN, MA	20	5	B	6	29	
136	B	608	09/22/76	TF34-100	205089	GE LYNN, MA	20	6	B	6	30	
137	A	609	09/24/76	T700	010-58	GE LYNN, MA	21	1	A	6	31	HELICOPTER
138	A	610	09/27/76	T700	010-58	GE LYNN, MA	21	2	A	6	32	HELICOPTER

APPENDIX B

INDIVIDUAL ENGINE TEST REPORTS

ENGINE J69-T25

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 1. TYPE A

TEST DATE : 3/11/75

ENGINE ID. NUMBER 1

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : T-32190
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAD
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PH
SMOKE OPERATOR : DD

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1030	1125
INLET AIR TEMP.(DEG.F) :	34.0	34.5
ATMOSPHERIC PRESS.(IN.HG) :	28.63	28.63
RELATIVE HUMIDITY (%) :	100	105
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0043	0.0046

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 290 DEG.F
LENGTH : 140 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.95
C/H RATIO-MASS: 5.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	38	74	235	19556	.012	.011	1.035	648.60	1819.28	2.00	12.26	0.88	11.38	47.71	0.0231
NORMAL	92	700	470	67848	.013	.013	1.587	13.80	573.54	2.60	26.22	13.65	12.57	0.00	0.0231
MILITARY	100	975	1120	73884	.015	.016	1.783	6.85	547.31	3.28	40.37	24.39	15.98	0.00	0.0236

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	31.90	156.26	2814	1.73	0.12	1.60	7.50	36.7	661	0.41	0.03	0.38	0.47
NORMAL	0.59	43.10	3077	3.24	1.69	1.55	0.52	37.5	2677	2.82	1.47	1.35	1.74
MILITARY	0.24	32.84	3095	3.98	2.40	1.57	0.26	36.8	3466	4.46	2.69	1.76	2.49

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SEI 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 3. TYPE B

TEST DATE : 3/14/75

ENGINE I. NUMBER 2

ENGINE TYPE & MODEL : J69-25
ENGINE SERIAL # : 321142
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAO
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1458	1545
INLET AIR TEMP.(DEG.F) :	34.0	34.0
ATMOSPHERIC PRESS.(IN.HG) :	28.82	28.82
RELATIVE HUMIDITY (%) :	90	90
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0038	0.0038

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.96
C/H RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	37	70	240	19259	.012	.012	1.031	412.93	1411.44	2.18	11.29	8.39	10.90	36.25	0.0224
INTERMED. 1	45	106	298	23587	.012	.011	1.054	232.74	1062.88	2.83	13.01	9.91	12.10	34.16	0.0239
INTERMED. 2	75	394	520	49100	.011	.011	1.256	113.49	616.18	2.11	18.58	7.42	11.17	0.00	0.0231
NORMAL	92	749	835	67458	.012	.013	1.542	27.30	475.71	2.56	26.26	14.82	11.44	0.00	0.0230
MILITARY	100	965	1085	73820	.015	.014	1.737	14.87	415.46	2.90	37.12	23.53	13.59	0.00	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	24.07	119.76	2904	1.57	0.05	1.52	4.82	28.8	697	0.38	0.01	0.36	0.48
INTERMED. 1	12.38	98.61	2958	1.98	0.14	1.85	3.59	28.6	858	0.58	0.04	0.54	0.58
INTERMED. 2	5.95	56.40	3042	2.79	1.12	1.68	3.09	29.3	1582	1.45	0.58	0.87	1.04
NORMAL	1.20	36.50	3086	3.31	1.87	1.44	1.00	30.5	2577	2.76	1.56	1.20	1.67
MILITARY	0.58	28.25	3101	4.15	2.63	1.52	0.63	30.6	3364	4.50	2.85	1.65	2.17

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC. SET 1492-0004-1275 REPORT DATE 12/15/75
USAF TURBINE ENGINE EMISSIONS INVENTORY USAF CONTRACT F29601-75-C-0046
INDIVIDUAL ENGINE TEST REPORT

SCOTT TEST NUMBER 4* TYPE B TEST DATE : 3/17/75 ENGINE I.D. NUMBER 3

ENGINE TYPE & MODEL : J69-T25 TEST LOCATION : TELEDYNE-NEO
ENGINE SERIAL # : 321989 TEST CELL NUMBER : 2
TOTAL ENGINE TIME : 00 HRS. TEST CELL OPERATOR : *
PERFORMANCE TEST RESULTS : PASS SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJ

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1218	1305
INLET AIR TEMP.(DEG.F) :	62.5	63.0
ATMOSPHERIC PRESS.(IN.HG) :	28.67	28.54
RELATIVE HUMIDITY (%) :	57	55
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0072	0.0071

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.12
H/C RATIO-ATM.: 1.96
C/H RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	38	61	230	17420	.013	.012	1.031	485.76	1511.04	2.26	13.43	0.74	12.68	48.85	0.023
INTERMED. 1	45	98	285	22540	.013	.011	1.054	154.40	1132.90	2.21	15.04	1.56	13.48	37.55	0.023
INTERMED. 2	75	371	535	45686	.012	.010	1.242	39.47	656.89	1.98	15.92	5.98	9.93	5.34	0.023
NORMAL	84	535	670	54989	.012	.010	1.383	31.91	571.16	1.97	17.53	7.39	10.13	2.20	0.023
MILITARY	100	940	1100	78360	.016	.013	1.692	14.43	455.00	2.68	31.86	19.54	12.32	5.14	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000 # FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	22.67	143.10	2091	1.80	0.10	1.70	5.21	28.3	665	0.41	0.02	0.39	0.46
INTERMED. 1	7.57	97.10	2973	2.12	0.22	1.90	2.16	27.7	847	0.60	0.06	0.54	0.57
INTERMED. 2	2.21	64.11	3040	2.55	0.96	1.59	1.18	34.3	1626	1.37	0.51	0.85	1.07
NORMAL	1.40	50.27	3053	2.84	1.20	1.64	1.21	37.7	2246	1.90	0.80	1.10	1.34
MILITARY	1.01	33.39	3093	3.84	2.36	1.48	0.67	36.7	3402	4.22	2.59	1.63	2.20

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-0004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER S. TYPE B

TEST DATE : 3/18/75

ENGINE I. NUMBER 4

ENGINE TYPE & MODEL : JT9-T23
ENGINE SERIAL # : 4R1301
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : MMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	915	1030
INLET AIR TEMP.(DEG.F) :	46.0	49.5
ATMOSPHERIC PRESS.(IN.HG) :	28.31	28.35
RELATIVE HUMIDITY (%) :	100	97
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0069	0.0076

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.96
C/H RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	38	66	230	18468	.012	.012	1.032	420.04	1276.11	2.22	9.23	0.49	8.75	45.32	0.023
NORMAL	84	570	555	56742	.012	.010	1.396	23.49	525.38	1.96	16.05	6.96	9.09	7.97	0.023
MILITARY	100	990	1090	71812	.015	.016	1.735	12.33	524.30	3.20	35.41	21.26	14.15	11.20	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	24.19	186.95	2923	1.27	0.07	1.20	4.64	24.5	672	0.29	0.02	0.28	0.46
NORMAL	1.34	52.15	3061	2.62	1.14	1.48	0.87	34.2	2005	1.71	0.74	0.97	1.31
MILITARY	0.43	32.30	3095	3.58	2.15	1.43	0.47	35.2	3373	3.91	2.34	1.56	2.18

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC. SET 1492-0004-1275 REPORT DATE 12/15/75
USAF TURBINE ENGINE EMISSIONS INVENTORY USAF CONTRACT F29601-75-C-0046
INDIVIDUAL ENGINE TEST REPORT

SCOTT TEST NUMBER 60 TYPE A TEST DATE : 3/18/75 ENGINE I.D. NUMBER 5

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 421565
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST LOCATION : TELEDYNE, NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : CW
SCOTT SUPERVISOR : RMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DD

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1550	1720
INLET AIR TEMP.(DEG.F) :	52.5	51.5
ATMOSPHERIC PRESS.(IN.HG) :	28.35	28.40
RELATIVE HUMIDITY (%) :	87	87
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0077	0.0074

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 134 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.00
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.95
C/H RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	38	70	220	18770	.012	.012	1.032	334.29	1511.99	2.20	11.10	0.47	10.62	32.55	0.023
NORMAL	84	575	670	55340	.012	.010	1.386	24.39	545.26	2.02	16.49	6.67	9.82	1.67	0.023
MILITARY	100	950	1090	71095	.015	.013	1.773	12.49	464.40	2.68	29.87	17.00	12.87	3.24	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	15.98	134.54	2892	1.52	0.06	1.46	3.52	29.6	636	0.33	0.01	0.32	0.44
NORMAL	1.35	52.64	3060	2.61	1.06	1.56	0.90	35.3	2050	1.75	0.71	1.04	1.34
MILITARY	0.53	34.24	3092	3.60	2.05	1.55	0.57	37.3	3370	3.93	2.23	1.69	2.18

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 7. TYPE M

TEST DATE : 3/19/75

ENGINE I. NUMBER 5

ENGINE TYPE & MODEL : JAY-125
ENGINE SERIAL # : 321512
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE.NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAD
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1412	1448
INLET AIR TEMP.(DEG.F) :	67.0	68.0
ATMOSPHERIC PRESS.(IN.HG) :	28.55	28.52
RELATIVE HUMIDITY (%) :	42	39
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0061	0.0059

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.96
C/H RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	38	65	230	17442	.013	.010	1.031	178.75	1028.14	1.86	10.04	9.22	9.82	35.10	0.0231
NORMAL	84	537	660	53451	.012	.009	1.367	9.94	444.56	1.74	16.60	8.46	8.14	2.72	0.0233
MILITARY	100	919	1000	69005	.016	.014	1.590	7.02	411.80	2.72	34.24	22.01	12.23	2.60	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	10.34	103.83	2955	1.67	0.04	1.63	2.38	23.9	680	0.38	0.01	0.37	0.46
NORMAL	3.64	49.80	3067	3.05	1.56	1.50	0.42	32.9	2024	2.02	1.03	0.99	1.32
MILITARY	0.29	29.86	3094	4.08	2.62	1.46	0.31	32.3	3347	4.40	2.83	1.57	2.16

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-0004-1275

REPORT DATE 12/15/75
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 8. TYPE R

TEST DATE : 4/ 1/75

ENGINE). NUMBER 7

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 401484
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAU
SCOTT SUPERVISOR : ZGI
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : JO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	945	1045
INLET AIR TEMP.(DEG.F) :	61.0	61.0
ATMOSPHERIC PRESS.(IN.HG) :	28.60	28.60
RELATIVE HUMIDITY (%) :	45	45
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0053	0.0053

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 2
TYPE : JP-4
WT.% CARBON : 85.98
WT.% HYDROGEN : 14.30
WT.% SULFUR : 0.05
H/C RATIO-ATM.: 2.00
C/H RATIO-MASS: 6.01

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	38	65	248	18318	.013	.013	1.073	294.39	1389.64	2.49	10.75	1.37	9.37	45.67	0.023
NORMAL	84	521	668	54833	.012	.012	1.375	41.56	584.16	2.48	12.91	7.84	5.07	2.25	0.032
MILITARY	100	932	1080	70567	.015	.016	1.740	17.76	511.48	3.17	26.16	22.04	4.12	1.14	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	12.69	104.57	2939	1.33	0.17	1.16	3.04	25.1	705	0.32	0.04	0.28	0.24
NORMAL	1.87	45.93	3060	1.67	1.01	0.65	1.23	30.3	2020	1.10	0.67	0.43	0.56
MILITARY	0.63	31.70	3086	2.66	2.24	0.42	0.68	34.2	3333	2.89	2.42	0.45	1.00

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F296#1-75-C-##46

SCOTT TEST NUMBER 9. TYPE A

TEST DATE : 4/ 1/75

ENGINE I. NUMBER 5

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 321492
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : IELEUYNE,NEV
TEST CELL NUMBER : 2
TEST CELL OPERATOR : A
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	141#	151#
INLET AIR TEMP.(DEG.F) :	78.#	78.#
ATMOSPHERIC PRESS.(IN.HG) :	28.52	28.52
RELATIVE HUMIDITY (%) :	28	28
INLET AIR HUMIDITY - (GM H2#/GM DRY AIR) :	#.##59	#.##59

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 3## DEG.F
LENGTH : 6# FT.

FUEL ANALYSIS :
SAMPLE # : 2
TYPE : JP-4
WT.% CARBON : 85.98
WT.% HYDROGEN : 14.3#
WT.% SULFUR : #.#5
H/C RATIO-ATM.: 2.##
C/H RATIO-MASS: 6.#1

TEST MODE	% RATED POWER	THROUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	38	62	23#	17637	.#13	.#11	1.##	153.47	1389.32	2.15		12.71		34.26	#.#23#
NORMAL	84	5##	66#	52667	.#13	.#11	1.353	29.97	6##.43	2.24		28.45		3.85	#.#23#
MILITARY	1##	895	1#6#	68126	.#15	.#14	1.6##	19.3#	466.1#	2.9#		34.3#		4.95	#.#23#

EXHAUST MASS EMISSION INDICES :

	# / 1##,### FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	7.62	1##.48	2928		1.81		1.75	27.7	673		#.42		#.23
NORMAL	1.49	52.#1	3#52		2.91		#.98	34.3	2#14		1.92		#.66
MILITARY	#.75	31.53	3#86		3.81		#.79	33.4	3271		4.#4		1.#6

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 10, TYPE B

TEST DATE : 4/ 2/75

ENGINE 1, NUMBER 9

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 4**36S
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1205	1305
INLET AIR TEMP.(DEG.F) :	33.0	33.0
ATMOSPHERIC PRESS.(IN.HG) :	28.59	28.59
RELATIVE HUMIDITY (%) :	100	100
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0041	0.0041

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	36	80	235	19928	.012	.012	1.045	644.30	1943.10	2.14	10.05	7.19	2.85	31.16	0.0230
NORMAL	84	5800	670	58701	.011	.011	1.408	33.47	577.62	2.29	17.59	14.63	2.96	0.00	0.0230
MILITARY	100	10000	1120	73792	.015	.015	1.803	11.78	465.89	2.99	29.63	26.77	2.86	1.67	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	30.66	161.45	2798	1.37	0.98	0.39	7.20	37.9	657	0.32	0.23	0.09	0.19
NORMAL	1.63	49.12	3054	2.46	2.04	0.41	1.09	32.9	2046	1.65	1.37	0.28	0.54
MILITARY	0.44	30.61	3086	3.20	2.89	0.31	0.58	34.3	3457	3.58	3.24	0.35	0.98

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 11. TYPE 4

TEST DATE : 4/ 2/75

ENGINE I.D. NUMBER 10

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 321322
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAU
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1410	1510
INLET AIR TEMP.(DEG.F) :	38.0	38.0
ATMOSPHERIC PRESS.(IN.HG) :	28.61	28.61
RELATIVE HUMIDITY (%) :	50	50
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0025	0.0025

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 302 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE w/A
IDLE	38	66	230	19111	.012	.012	1.045	763.34	1868.73	2.19	10.97	4.70	6.27	24.48	0.023
NORMAL	84	570	470	58426	.011	.012	1.487	35.98	658.49	2.41	15.96	11.13	4.83	1.14	0.023
MILITARY	100	975	1120	72870	.015	.016	1.793	13.27	479.98	3.15	29.57	25.85	3.72	0.00	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	35.57	152.87	2799	1.47	0.63	0.84	8.18	35.0	644	0.34	0.14	0.19	0.18
NORMAL	1.66	53.82	3048	2.11	1.47	0.64	1.11	35.5	2042	1.41	0.99	0.43	0.54
MILITARY	0.47	29.92	3087	3.03	2.65	0.38	0.53	33.5	3458	3.39	2.96	0.43	0.98

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

ENGINE J85-5

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 2. TYPE B

TEST DATE : 3/12/75

ENGINE 2. NUMBER 1

ENGINE TYPE & MODEL : JT8-5
ENGINE SERIAL # : 231114
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE.NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : CAW
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : FL

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1300	1400
INLET AIR TEMP.(DEG.F) :	35.0	37.5
ATMOSPHERIC PRESS.(IN.HG) :	28.52	29.00
RELATIVE HUMIDITY (%) :	100	87
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0245	0.0042

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 86.23
WT.% HYDROGEN : 14.06
WT.% SULFUR : 0.10
H/C RATIO-ATM.: 1.95
C/M RATIO-MASS: 6.13

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE --- SN	W/A
IDLE	47	88	450			.011		990.54	2342.51	1.96	9.68	6.21	3.46	3.10	0.0230
NORMAL	92	1531	1470			.010		78.23	495.43	1.98	19.52	4.54	14.98	3.67	0.0231
MILITARY	100	2655	2690			.016		21.83	546.92	3.21	36.93	14.66	22.27	7.37	0.023
MAX AB	100	3870	3430			.059		1.22	1567.75	11.44	75.68	47.74	27.94	8.70	0.0231

EXHAUST MASS EMISSION INDICES :

	---------- # / 1000# FUEL ----------						*---------- # / HR ----------*						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	49.48	204.35	2690	1.39	0.89	0.50	22.27	92.0	1210	0.62	0.40	0.22	0.90
NORMAL	4.39	48.58	3058	3.14	0.73	2.41	6.46	71.4	4496	4.62	1.08	3.55	2.94
MILITARY	0.77	33.48	3092	3.71	1.47	2.24	2.06	90.1	8318	9.99	3.97	6.02	5.37
MAX AB	0.01	27.00	3104	2.15	1.35	0.79	0.10	224.1	25169	18.09	11.41	6.68	16.84

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 12. TYPE B

TEST DATE : 4/ 3/75

ENGINE 2. NUMBER 2

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 230202
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZGI
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : JD

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	900	1000
INLET AIR TEMP.(DEG.F) :	34.0	34.0
ATMOSPHERIC PRESS.(IN.HG) :	28.54	28.54
RELATIVE HUMIDITY (%) :	72	72
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0031	0.0031

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	90	440			.012		562.98	1990.89	2.12	9.51	3.30	6.21	0.00	0.0230
NORMAL	92	1510	1480			.010		96.19	478.96	2.01	14.07	5.66	8.41	1.04	0.0234
MILITARY	100	2720	2770			.018		26.39	538.14	3.51	26.13	18.79	7.34	2.65	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	27.13	168.22	2797	1.31	0.46	0.86	11.94	74.0	1231	0.58	0.20	0.38	0.35
NORMAL	5.32	46.22	3048	2.23	0.90	1.33	7.87	68.4	4511	3.30	1.33	1.97	1.18
MILITARY	0.85	30.13	3086	2.40	1.73	0.67	2.34	83.5	8548	6.66	4.79	1.87	2.21

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-0#4-1275

REPORT DATE 12/15/75
USAF CONTRACT F296#1-75-C-##46

SCOTT TEST NUMBER 13• TYPE #

TEST DATE : 4/ 3/75

ENGINE 2• NUMBER 3

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 230859
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE•NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAU
SCOTT SUPERVISOR : ZGI
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	143#	153#
INLET AIR TEMP.(DEG.F) :	47.#	47.#
ATMOSPHERIC PRESS.(IN.HG) :	28.64	28.64
RELATIVE HUMIDITY (%) :	53	53
INLET AIR HUMIDITY - (GM H2#/GM DRY AIR) :	#.##37	#.#037

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : ### DEG.F
LENGTH : 7# FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : #.#4
H/C RATIO-ATM.: 2.#1
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	8#	46#			.#12		594.72	2276.73	2.18	9.72	3.18	6.54	1.#4	#.#23#
INTERMED. 1	65	214	59#			.#09		224.##	1238.42	1.7#	8.78	2.54	6.24	#.##	#.#23#
INTERMED. 2	87	1#71	116#			.#1#		12#.14	554.39	1.88	12.5#	3.43	9.#6	1.#4	#.#23)
NORMAL	92	1632	157#			.#11		46.6#	514.39	2.2#	15.13	5.68	9.45	1.#4	#.#23)
MILITARY	1##	2581	264#			.#17		38.78	564.16	3.43	26.99	5.85	21.15	1.55	#.#23)

EXHAUST MASS EMISSION INDICES :

	# / 1#### FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	27.5#	103.82	2771	1.29	#.42	#.87	12.65	84.6	1275	#.59	#.19	#.4#	#.37
INTERMED. 1	24.56	133.1#	2870	1.55	#.45	1.1#	12.13	78.5	1693	#.91	#.27	#.65	#.47
INTERMED. 2	7.#4	56.71	3#27	2.1#	#.58	1.52	#.16	65.8	3511	2.44	#.67	1.77	#.93
NORMAL	4.39	45.77	3#52	2.19	#.62	1.37	6.#9	71.9	4791	3.45	1.29	2.15	1.25
MILITARY	1.27	32.25	3#81	2.54	#.5[illegible]	1.[illegible]	3.35	85.2	8135	6.69	1.45	5.24	2.11

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 14. TYPE B

TEST DATE : 4/ 4/75

ENGINE 2. NUMBER 4

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 232700
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE.NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAD
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PM
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1320	1420
INLET AIR TEMP.(DEG.F) :	64.0	64.0
ATMOSPHERIC PRESS.(IN.HG) :	28.74	28.74
RELATIVE HUMIDITY (%) :	31	31
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0040	0.0040

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	75	460			.013		529.64	2137.04	2.29	10.15	3.16	6.99	0.00	0.023
NORMAL	92	1472	1420			.010		37.35	426.85	2.10	16.70	10.16	6.55	5.58	0.023
MILITARY	100	2535	2540			.017		13.43	476.11	3.47	29.62	21.55	8.06	2.83	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	23.70	166.98	2808	1.30	0.41	0.90	10.90	76.8	1292	0.60	0.19	0.41	0.37
NORMAL	1.99	39.72	3068	2.55	1.55	1.20	2.83	56.4	4356	3.63	2.20	1.42	1.13
MILITARY	1.44	27.04	3092	2.76	2.01	0.75	1.11	68.6	7853	7.01	5.10	1.91	2.03

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-084-1275

REPORT DATE 12/15/75
USAF CONTRACT F296#1-75-C-#046

SCOTT TEST NUMBER 15. TYPE B

TEST DATE : 4/ 7/75

ENGINE 2. NUMBER 5

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 231687
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAD
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1420	1520
INLET AIR TEMP.(DEG.F) :	54.#	54.#
ATMOSPHERIC PRESS.(IN.HG) :	28.54	28.54
RELATIVE HUMIDITY (%) :	22	22
INLET AIR HUMIDITY - (GM H2#/GM DRY AIR) :	#.#021	#.#021

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 3## DEG.F
LENGTH : 7# FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : #.#4
H/C RATIO-ATM.: 2.#1
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	46	82	45#			.#12		743.53	>238.47	2.14	9.22	1.47	7.74	#.##	#.#23#
NORMAL	92	15#6	147#			.#11		7#.25	48#.#4	2.21	16.45	5.48	1#.98	1.14	#.#23#
MILITARY	1##	257#	26##			.#17		36.66	527.#2	3.46	27.92	16.52	11.41	3.94	#.#231

EXHAUST MASS EMISSION INDICES :

	# / 1#,### FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	34.8#	182.97	2753	1.24	#.2#	1.#4	13.64	82.3	1239	#.56	#.#9	#.47	#.36
NORMAL	3.55	42.32	3#59	2.38	#.79	1.59	5.21	62.2	4497	3.5#	1.17	2.34	1.17
MILITARY	1.19	29.87	3#85	2.6#	1.54	1.#6	3.#9	77.7	8#22	6.76	4.##	2.76	2.##

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D04-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0045

SCOTT TEST NUMBER 16, TYPE B

TEST DATE : 4/ 8/75

ENGINE 2, NUMBER 6

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 232436
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAO
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PH
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1345	1445
INLET AIR TEMP.(DEG.F) :	64.0	64.0
ATMOSPHERIC PRESS.(IN.HG) :	28.53	28.53
RELATIVE HUMIDITY (%) :	65	65
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0087	0.0087

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	85	460			.013		663.06	2489.14	2.36	9.57	0.92	8.65	0.00	0.0230
INTERMED. 1	65	195	590			.011		354.70	1485.60	1.98	9.43	0.57	8.86	0.00	0.0231
INTERMED. 2	87	996	1130			.010		79.56	526.88	1.90	10.62	1.75	8.88	0.52	0.0231
NORMAL	92	1402	1425			.011		52.51	468.38	2.11	12.93	5.21	7.72	2.00	0.023
MILITARY	100	2496	2570			.017		26.05	490.92	3.46	25.49	15.74	9.75	2.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	28.38	180.09	2775	1.17	0.11	1.06	13.06	82.8	1276	0.54	0.05	0.49	0.37
INTERMED. 1	18.82	139.23	2879	1.43	0.09	1.35	11.10	76.8	1699	0.85	0.05	0.80	0.47
INTERMED. 2	4.63	53.57	3039	1.77	0.29	1.48	5.23	60.5	3434	2.00	0.33	1.68	0.90
NORMAL	2.78	42.51	3061	1.96	0.79	1.17	3.96	60.6	4362	2.79	1.13	1.67	1.14
MILITARY	0.85	28.44	3080	2.38	1.47	0.91	2.18	73.1	7937	6.12	3.78	2.34	2.05

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 17, TYPE B

TEST DATE : 4/ 9/75

ENGINE 2, NUMBER 7

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 231244
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1645	1745
INLET AIR TEMP.(DEG.F) :	71.0	71.0
ATMOSPHERIC PRESS.(IN.HG) :	28.46	28.46
RELATIVE HUMIDITY (%) :	34	34
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0057	0.0057

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4

WT.% CARBON :	85.58
WT.% HYDROGEN :	14.32
WT.% SULFUR :	0.04
H/C RATIO-ATM.:	2.01
C/H RATIO-MASS:	5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	46	85	450			.013		554.69	2442.49	2.39	18.36	2.25	8.12	0.00	0.0230
NORMAL	92	1380	1370			.011		29.71	481.93	2.17	15.41	5.53	9.88	0.00	0.0231
MILITARY	100	2460	2490			.017		19.95	518.80	3.47	31.41	20.45	18.96	2.13	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	23.53	180.90	2787	1.26	0.27	0.99	10.59	81.4	1254	0.57	0.12	0.44	0.36
NORMAL	1.53	43.24	3063	2.27	0.81	1.46	2.09	59.2	4197	3.11	1.12	2.00	1.09
MILITARY	0.65	29.38	3080	2.92	1.90	1.02	1.61	73.2	7688	7.28	4.74	2.54	1.99

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-0004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 18, TYPE B

TEST DATE : 4/10/75

ENGINE I. NUMBER 11

ENGINE TYPE & MODEL : J69-T25
ENGINE SERIAL # : 321612
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAU
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1500	1600
INLET AIR TEMP.(DEG.F) :	61.0	61.0
ATMOSPHERIC PRESS.(IN.HG) :	28.60	28.60
RELATIVE HUMIDITY (%) :	54	54
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0064	0.0064

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	38	64	220	17948	.012	.012	1.045	144.48	1396.84	2.25	11.78	1.25	10.53	46.00	0.0230
NORMAL	84	531	660	54955	.012	.011	1.044	13.09	569.50	2.25	19.71	9.72	10.00	0.00	0.0230
MILITARY	100	953	1100	70946	.016	.015	1.774	13.97	467.33	3.00	36.69	24.11	12.58	0.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	6.86	115.81	2935	1.60	0.17	1.43	1.51	25.5	646	0.35	0.04	0.32	0.18
NORMAL	0.65	49.26	3056	2.80	1.38	1.42	0.43	32.5	2017	1.85	0.91	0.94	0.53
MILITARY	0.51	29.84	3087	3.85	2.53	1.32	0.56	32.8	3396	4.23	2.78	1.45	0.88

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D04-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 20. TYPE A

TEST DATE : 4/11/75

ENGINE 2. NUMBER 8

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 232078
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	0950	1130
INLET AIR TEMP.(DEG.F) :	41.0	41.0
ATMOSPHERIC PRESS.(IN.HG) :	28.80	29.10
RELATIVE HUMIDITY (%) :	68	68
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0038	0.0038

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	46	80	450			.012		646.81	2062.91	2.11	9.38	1.23	8.15	0.00	0.0230
NORMAL	92	1450	1410			.010		67.63	428.09	2.82	14.84	4.28	10.57	0.00	0.0231
MILITARY	100	2710	2720			.018		27.02	517.89	3.63	28.45	17.02	11.43	3.58	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	31.05	172.93	2779	1.29	0.17	1.12	13.97	77.8	1250	0.58	0.08	0.50	0.36
NORMAL	3.74	41.38	3060	2.35	0.68	1.67	5.27	58.2	4315	3.32	0.96	2.36	1.13
MILITARY	0.84	28.87	3089	2.53	1.51	1.42	2.28	76.3	8482	6.89	4.12	2.77	2.17

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 21. TYPE B

TEST DATE : 4/14/75

ENGINE 2. NUMBER 4

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 232818
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE.NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	845	950
INLET AIR TEMP.(DEG.F) :	47.0	47.0
ATMOSPHERIC PRESS.(IN.HG) :	28.60	28.60
RELATIVE HUMIDITY (%) :	100	100
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0071	0.0071

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	85	458			.012		632.86	>2720.23	2.21	8.92	1.08	7.84	0.00	0.0230
NORMAL	92	1460	1458			.011		64.07	470.65	2.16	14.29	9.64	4.66	0.00	0.0230
MILITARY	100	2590	2640			.018		30.11	493.42	3.57	27.07	16.47	10.60	2.00	0.0231
MAX AB	100	3715	9320			.064		9.21	1472.32	12.19	73.87	50.61	23.26	1.75	0.0125

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	28.96	181.44	2771	1.17	0.14	1.03	13.03	81.6	1247	0.53	0.06	0.46	0.36
NORMAL	3.31	42.50	3060	2.12	1.43	0.69	4.80	61.6	4436	3.07	2.07	1.00	1.16
MILITARY	0.95	27.16	3090	2.45	1.49	0.96	2.51	71.7	8158	6.46	3.93	2.53	2.11
MAX AB	0.09	23.81	3098	1.96	1.34	0.62	0.71	198.1	25774	16.33	11.19	5.14	6.65

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 22, TYPE C

TEST DATE : 4/14/75

ENGINE 2, NUMBER 3

ENGINE TYPE & MODEL : J85-5
ENGINE SERIAL # : 232810
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : K
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DU

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	845	950
INLET AIR TEMP.(DEG.F) :	47.0	47.0
ATMOSPHERIC PRESS.(IN.HG) :	28.60	28.60
RELATIVE HUMIDITY (%) :	100	100
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0071	0.0071

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	80	450			.013		675.33	2373.80	2.29	9.19	1.02	8.17	0.00	0.0230
NORMAL	92	1460	1450			.011		63.03	473.52	2.20	14.33	10.52	3.81	0.00	0.0231
MILITARY	100	2590	2640			.018		26.22	494.51	3.58	26.79	16.65	10.14	2.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	29.74	182.55	2767	1.16	0.13	1.03	13.38	82.1	1245	0.52	0.06	0.46	0.36
NORMAL	3.24	41.97	3061	2.09	1.53	0.55	4.70	60.9	4438	3.02	2.22	0.80	1.16
MILITARY	0.83	27.19	3091	2.42	1.50	0.92	2.18	71.8	8159	6.39	3.97	2.42	2.11

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 23. TYPE R

TEST DATE : 4/15/75

ENGINE 2. NUMBER 10

ENGINE TYPE & MODEL : J85-5R
ENGINE SERIAL # : 232437
TOTAL ENGINE TIME : ## HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE-NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAD
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DD

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	845	1###
INLET AIR TEMP.(DEG.F) :	59.0	63.0
ATMOSPHERIC PRESS.(IN.HG) :	28.74	28.88
RELATIVE HUMIDITY (%) :	67	65
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0074	0.0082

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/M RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	46	82	460			.013		548.31	3227.36	2.28	9.47	3.32	6.14	0.00	0.0238
NORMAL	92	1581	1555			.012		57.34	492.26	2.33	14.81	6.32	8.49	0.00	0.0231
MILITARY	100	2613	2640			.018		19.31	506.85	3.61	28.53	18.15	10.38	0.50	0.0231
MAX AB	100	3678	9220			.064		13.31	1693.92	12.24	70.65	48.51	22.14		

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	24.52	173.96	2795	1.21	0.43	0.79	11.28	80.0	1286	0.56	0.20	0.36	0.37
NORMAL	2.75	41.23	3063	2.04	0.87	1.17	4.28	64.1	4763	3.17	1.35	1.82	1.24
MILITARY	0.60	27.53	3091	2.55	1.62	0.93	1.59	72.7	8159	6.73	4.28	2.45	2.11
MAX AB	0.12	27.24	3092	1.87	1.28	0.58	1.01	223.9	25419	15.34	10.53	4.81	6.57

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-004-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 24, TYPE C

TEST DATE : 4/15/75

ENGINE 2, NUMBER 10

ENGINE TYPE & MODEL : J85-5A
ENGINE SERIAL # : 232437
TOTAL ENGINE TIME : 00 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TELEDYNE,NEO
TEST CELL NUMBER : 2
TEST CELL OPERATOR : MAJ
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OU

AIR FLOW MEASUREMENT METHOD : BELL-MOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	845	1000
INLET AIR TEMP.(DEG.F) :	59.0	63.0
ATMOSPHERIC PRESS.(IN.HG) :	28.74	28.88
RELATIVE HUMIDITY (%) :	67	65
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0074	0.0082

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 70 FT.

FUEL ANALYSIS :
SAMPLE # : 3
TYPE : JP-4
WT.% CARBON : 85.58
WT.% HYDROGEN : 14.32
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
MILITARY	100	2613	2648			.018		18.72	502.24	3.61	27.53	17.79	9.75	0.00	0.0264

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
MILITARY	4.58	27.37	3091	2.46	1.59	0.87	1.54	72.3	8160	6.51	4.20	2.30	2.11

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE J60-P5B

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D#5-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-#046

SCOTT TEST NUMBER 25. TYPE B

TEST DATE : 5/ 2/75

ENGINE 3. NUMBER 1

ENGINE TYPE & MODEL : J58-P5
ENGINE SERIAL # : 637#67
TOTAL ENGINE TIME : # HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6##1
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	12##	134#
INLET AIR TEMP.(DEG.F) :	63.#	68.#
ATMOSPHERIC PRESS.(IN.HG) :	29.82	29.8#
RELATIVE HUMIDITY (%) :	74	63
INLET AIR HUMIDITY - (GM H2#/GM DRY AIR) :	#.##91	#.##92

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 3## DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : #.#3
H/C RATIO-ATM.: 1.9#
C/H RATIO-MASS: 6.#6

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		455	43275	.#11	.#07	1.#64	198.39	569.47	1.42	6.82	#.43	6.39	1.5#	#.#23#
INTERMED. 1	75		1825	122341	.#14	.#07	1.393	16.37	216.19	1.41	9.13	5.14	3.99	3.5#	#.#231
INTERMED. 2	85		145#	133627	.#11	.#08	1.662	5.34	133.#4	1.61	13.71	1#.57	3.15	1#.5#	#.#231
NORMAL	97		2125	162865	.#13	.#1#	2.186	1.52	61.33	2.1#	25.2#	21.85	3.35	11.7>	#.#231
MILITARY	1#3		271#	171321	.#16	.#12	2.481	1.19	44.98	2.5#	35.86	31.81	4.#5	1#.5#	#.#231

EXHAUST MASS EMISSION INDICES :

	# / 1#,### FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	15.21	76.22	2981	1.5#	#.#9	1.4#	6.92	34.7	1356	#.6#	#.#4	#.64	#.27
INTERMED. 1	1.31	3#.22	3#91	2.1#	1.1#	#.92	1.34	31.#	3168	2.15	1.21	#.94	#.61
INTERMED. 2	#.38	16.3#	3116	2.77	2.13	#.63	#.54	23.7	4518	4.#1	3.#9	#.92	#.87
NORMAL	#.#8	5.81	3133	3.92	3.4#	#.52	#.18	12.3	6657	8.33	7.23	1.11	1.27
MILITARY	#.#5	3.58	3136	4.69	4.1#	#.53	#.15	9.7	85#8	12.72	11.29	1.43	1.52

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-085-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 29, TYPE A

TEST DATE : 5/12/75

ENGINE 3, NUMBER 5

ENGINE TYPE & MODEL : J60-P5B
ENGINE SERIAL # : 636976
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : WHP
SMOKE OPERATOR : FAL

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	930	1016
INLET AIR TEMP.(DEG.F) :	71.2	76.0
ATMOSPHERIC PRESS.(IN.HG) :	29.67	29.66
RELATIVE HUMIDITY (%) :	62	55
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0101	0.0107

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 340 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/M RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		460	54123	.008	.008	1.091	85.69	541.80	1.57	6.72	0.90	5.82	1.50	0.023
INTERMED. 1	75		1008	119627	.008	.007	1.399	8.52	197.59	1.52	10.59	7.90	2.69	5.25	0.023
INTERMED. 2	85		1450	132743	.011	.008	1.681	4.53	124.90	1.65	15.38	12.32	3.06	14.75	0.023
NORMAL	97		2175	157499	.014	.011	2.138	3.08	60.04	2.19	28.09	23.44	4.65	22.00	0.023
MILITARY	103		2500	168374	.015	.013	2.449	3.45	47.59	2.64	39.89	33.46	6.42	18.50	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	6.02	66.46	3021	1.35	0.18	1.17	2.77	30.6	1390	0.62	0.08	0.54	0.28
INTERMED. 1	0.63	25.68	3100	2.26	1.69	0.57	0.63	25.7	3100	2.26	1.69	0.57	0.60
INTERMED. 2	0.31	15.05	3118	3.04	2.44	0.61	0.45	21.8	4521	4.41	3.53	0.88	0.87
NORMAL	0.16	5.48	3133	4.21	3.51	0.70	0.35	11.9	6815	9.16	7.64	1.51	1.30
MILITARY	0.15	3.60	3136	4.95	4.15	0.80	0.37	9.0	7841	12.38	10.39	1.99	1.50

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-085-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 30. TYPE A

TEST DATE : 5/13/75

ENGINE 3. NUMBER 5

ENGINE TYPE & MODEL : J60-P3A
ENGINE SERIAL # : 636928
TOTAL ENGINE TIME : 1646 HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : ZGI
INSTRUMENT OPERATOR : WMP
SMOKE OPERATOR : FAL

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	950	1125
INLET AIR TEMP.(DEG.F) :	66.7	79.0
ATMOSPHERIC PRESS.(IN.HG) :	29.63	29.64
RELATIVE HUMIDITY (%) :	82	55
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0115	0.0118

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 340 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.96
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		490	55452	.009	.008	1.079	123.20	582.14	1.52	7.16	0.51	6.65	0.25	0.023
NORMAL	97		2025	159749	.013	.011	2.176	2.54	63.64	2.20	27.32	22.21	5.11	17.25	0.023
MILITARY	103		2575	169451	.015	.013	2.461	2.34	51.31	2.60	37.80	30.88	6.91	17.75	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	8.86	73.10	3003	1.48	0.11	1.37	4.34	35.8	1472	0.72	0.05	0.67	0.29
NORMAL	0.13	5.78	3133	4.07	3.31	0.76	0.27	11.7	6344	8.25	6.71	1.54	1.21
MILITARY	0.10	3.94	3136	4.77	3.90	0.87	0.26	10.1	8075	12.28	10.03	2.25	1.54

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-DBS-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 31. TYPE B

TEST DATE : 5/15/75

ENGINE SO. NUMBER 7

ENGINE TYPE & MODEL : J60-P3B
ENGINE SERIAL # : 637064
TOTAL ENGINE TIME : 2044 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : WMP
SMOKE OPERATOR : FAL

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1327	1514
INLET AIR TEMP.(DEG.F) :	79.5	78.8
ATMOSPHERIC PRESS.(IN.HG) :	29.66	29.64
RELATIVE HUMIDITY (%) :	47	46
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0102	0.0095

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 200 DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		480	55162	.009	.008	1.055	92.66	528.87	1.61	8.03	0.93	7.10	0.67	0.023
INTERMED. 1	75		975	118173	.008	.008	1.361	6.57	186.24	1.68	12.21	8.97	3.24	3.75	0.023
INTERMED. 2	85		1485	130956	.011	.008	1.645	3.89	124.82	1.71	16.56	13.00	3.56	9.75	0.023
NORMAL	97		2193	156870	.013	.010	2.100	2.59	68.62	2.08	27.59	22.79	4.80	18.33	0.023
MILITARY	103		2450	166391	.015	.012	2.413	0.97	47.28	2.51	38.76	32.55	6.22	20.00	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	6.34	63.24	3025	1.58	0.18	1.39	3.05	30.3	1452	0.76	0.09	0.67	0.29
INTERMED. 1	0.44	21.95	3107	2.36	1.74	0.63	0.43	21.4	3029	2.31	1.69	0.61	0.58
INTERMED. 2	0.26	14.50	3119	3.16	2.48	0.68	0.36	20.4	4382	4.44	3.49	0.95	0.84
NORMAL	0.14	5.81	3133	4.34	3.59	0.76	0.30	12.2	6579	9.12	7.53	1.59	1.26
MILITARY	0.04	3.75	3136	5.05	4.24	0.81	0.11	9.2	7684	12.38	10.40	1.99	1.47

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 32, TYPE C

TEST DATE : 5/15/75

ENGINE 3, NUMBER 7

ENGINE TYPE & MODEL : J58-P58
ENGINE SERIAL # : 637064
TOTAL ENGINE TIME : 2040 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P600I
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : ZGI
INSTRUMENT OPERATOR : WHP
SMOKE OPERATOR : FAL

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1327	1514
INLET AIR TEMP.(DEG.F) :	79.5	78.0
ATMOSPHERIC PRESS.(IN.HG) :	29.66	29.64
RELATIVE HUMIDITY (%) :	47	46
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0102	0.0095

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 330 DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	43		480	55162	.009	.008	1.056	102.48	557.88	1.68	8.43	0.78	7.64	1.59	0.0262
INTERMED. 1	75		975	118173	.008		1.361								
INTERMED. 2	85		1485	130956	.011		1.645								
NORMAL	97		2100	156070	.013	.012	2.100	2.05	64.65	2.42	31.69	25.99	5.70	20.50	0.0262
MILITARY	103		2450	166391	.015	.015	2.413	1.44	48.17	2.98	46.31	38.37	7.95	22.25	0.0262

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	6.73	63.99	3023	1.59	0.15	1.44	3.23	30.7	1451	0.76	0.07	0.69	0.29
INTERMED. 1													0.58
INTERMED. 2													0.84
NORMAL	0.10	5.33	3134	4.29	3.52	0.77	0.20	11.2	6581	9.01	7.39	1.62	1.26
MILITARY	0.06	3.23	3137	5.10	4.23	0.88	0.14	7.9	7686	12.51	10.36	2.15	1.47

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 36. TYPE F

TEST DATE : 5/28/75

ENGINE 3. NUMBER 10

ENGINE TYPE & MODEL : J58-P58
ENGINE SERIAL # : 636975
TOTAL ENGINE TIME : 2778 HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : OJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1305	1413
INLET AIR TEMP.(DEG.F) :	80.0	82.0
ATMOSPHERIC PRESS.(IN.HG) :	29.76	29.74
RELATIVE HUMIDITY (%) :	35	37
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0077	0.0085

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		445												
NORMAL	97		1750												

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE													
NORMAL													

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

ENGINE J60-P3

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
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SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 26, TYPE B

TEST DATE : 5/ 5/75

ENGINE 3, NUMBER 2

ENGINE TYPE & MODEL : J60-P3
ENGINE SERIAL # : 637236
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P600I
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1430	1530
INLET AIR TEMP.(DEG.F) :	63.0	64.0
ATMOSPHERIC PRESS.(IN.HG) :	29.57	29.56
RELATIVE HUMIDITY (%) :	69	65
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0086	0.0084

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		480	53185	.009	.007	1.074	148.00	558.45	1.40	7.47	6.62	0.85	1.50	0.0230
INTERMED. 1	75		1025	96070	.011	.008	1.371	10.83	225.42	1.67	13.59	11.93	1.66	10.50	0.0230
INTERMED. 2	85		1550	135447	.011	.009	1.724	5.01	137.61	1.77	18.07	16.41	1.67	18.75	0.0230
NORMAL	97		2125	160380	.013	.011	2.215	2.14	68.30	2.34	29.03	26.78	2.26	21.00	0.0230
MILITARY	103		2625	167265	.016	.014	2.468	0.92	52.50	2.81	39.22	36.53	2.69	22.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	11.49	75.68	2992	1.56	1.47	0.19	5.52	36.3	1436	0.80	0.71	0.09	0.29
INTERMED. 1	0.73	26.62	3098	2.64	2.31	0.32	0.75	27.3	3176	2.70	2.37	0.33	0.61
INTERMED. 2	0.32	15.45	3117	3.33	3.03	0.31	0.50	23.9	4832	5.17	4.69	0.48	0.93
NORMAL	0.10	5.81	3133	4.06	3.74	0.32	0.22	12.3	6657	8.63	7.96	0.67	1.27
MILITARY	0.04	3.73	3136	4.58	4.26	0.31	0.10	9.8	8233	12.01	11.19	0.82	1.57

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
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SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 27. TYPE B

TEST DATE : 5/ 6/75

ENGINE 3. NUMBER 3

ENGINE TYPE & MODEL : JT8D-P3
ENGINE SERIAL # : 637285
TOTAL ENGINE TIME : 2051 HRS.
PERFORMANCE TEST RESULTS :

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1245	1405
INLET AIR TEMP.(DEG.F) :	69.5	73.0
ATMOSPHERIC PRESS.(IN.HG) :	29.58	29.52
RELATIVE HUMIDITY (%) :	62	56
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0096	0.0097

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 350 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4

WT.% CARBON :	85.72
WT.% HYDROGEN :	14.14
WT.% SULFUR :	0.03
H/C RATIO-ATM.:	1.98
C/H RATIO-MASS:	6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	43		468	51390	.009	.008	1.067	187.54	635.62	1.47	7.90	3.09	4.82	2.50	0.0230
INTERMED. 1	75		1015	113678	.009	.008	1.393	7.76	192.94	1.64	12.43	9.83	2.60	5.00	0.0230
INTERMED. 2	85		1460	127968	.011	.008	1.667	4.42	123.74	1.64	15.64	13.40	2.24	13.00	0.0231
NORMAL	97		2100	157934	.013	.010	2.165	0.88	57.96	2.13	26.12	23.90	2.21	13.50	0.0231
MILITARY	103		2500	165428	.015	.012	2.429	0.75	50.74	2.48	34.93	32.62	2.31	11.25	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	13.86	82.02	2975	1.68	0.65	1.02	6.37	37.7	1369	0.77	0.30	0.47	0.28
INTERMED. 1	0.53	23.19	3104	2.45	1.94	0.51	0.54	23.5	3151	2.49	1.97	0.52	0.61
INTERMED. 2	0.31	14.97	3118	3.11	2.66	0.45	0.45	21.9	4552	4.54	3.89	0.65	0.88
NORMAL	0.05	5.42	3134	4.01	3.67	0.34	0.10	11.4	6581	8.43	7.71	0.71	1.26
MILITARY	0.03	4.08	3136	4.61	4.31	0.30	0.09	10.2	7839	11.52	10.76	0.76	1.50

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 28, TYPE B

TEST DATE : 5/ 8/75

ENGINE 3, NUMBER 4

ENGINE TYPE & MODEL : J60-P3
ENGINE SERIAL # : 636815
TOTAL ENGINE TIME : 2619 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1012	1204
INLET AIR TEMP.(DEG.F) :	64.0	74.0
ATMOSPHERIC PRESS.(IN.HG) :	29.82	29.82
RELATIVE HUMIDITY (%) :	70	40
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0089	0.0071

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 350 DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	43		460	51574	.009	.008	1.067	121.54	542.01	1.57	5.28	1.17	4.11	1.00	0.023
NORMAL	97		2010	158685	.013	.011	2.159	1.87	58.30	2.22	29.09	25.62	3.47	13.25	0.023
MILITARY	103		2525	168247	.015	.013	2.438	1.01	48.07	2.58	39.69	35.61	4.09	17.50	0.025

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	8.48	66.07	3015	1.06	0.23	0.82	3.90	30.4	1387	0.49	0.11	0.38	0.28
NORMAL	0.10	5.23	3134	4.29	3.78	0.51	0.19	10.5	6299	8.62	7.59	1.03	1.20
MILITARY	0.04	3.72	3136	5.04	4.52	0.52	0.11	9.4	7919	12.73	11.42	1.31	1.51

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 33. TYPE A

TEST DATE : 5/27/75

ENGINE I. NUMBER 5

ENGINE TYPE & MODEL : J58-P3
ENGINE SERIAL # : 637234
TOTAL ENGINE TIME : 2144 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P600I
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : OJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1325	1445
INLET AIR TEMP.(DEG.F) :	83.0	87.0
ATMOSPHERIC PRESS.(IN.HG) :	29.56	29.54
RELATIVE HUMIDITY (%) :	59	54
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0144	0.0152

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 65 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		420	53732	.008	.008	1.064	108.96	534.42	1.63	7.64	0.81	6.83	1.83	0.0231
NORMAL	97		1750	152762	.011	.010	2.076	4.58	63.29	2.13	24.24	20.43	3.81	20.17	0.0231
MILITARY	103		2125	163597	.013	.012	2.360	5.00	53.64	2.48	32.08	27.74	4.34	22.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	7.37	63.10	3023	1.48	0.16	1.33	3.10	26.5	1270	0.62	0.07	0.56	0.25
NORMAL	0.25	5.93	3132	3.73	3.14	0.59	0.43	10.4	5481	6.53	5.50	1.03	1.05
MILITARY	0.23	4.32	3135	4.24	3.67	0.57	0.49	9.2	6662	9.01	7.80	1.22	1.27

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 34, TYPE B

TEST DATE : 5/27/75

ENGINE 3, NUMBER 9

ENGINE TYPE & MODEL : J60-P3
ENGINE SERIAL # : 636786
TOTAL ENGINE TIME : 1394 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1900	2008
INLET AIR TEMP.(DEG.F) :	80.0	75.0
ATMOSPHERIC PRESS.(IN.HG) :	29.56	29.58
RELATIVE HUMIDITY (%) :	58	74
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0127	0.0139

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE --- SN	w/A
IDLE	43		445	54124	.008	.008	1.000	91.60	533.23	1.55	7.43	1.11	6.31	2.75	0.023
INTERMED. 1	75		925	115345	.008	.009	1.387	6.55	209.35	1.73	12.21	8.51	3.70	8.75	0.023
INTERMED. 2	85		1320	131328	.010	.009	1.688	2.47	122.48	1.74	15.88	12.54	3.35	14.00	0.023
NORMAL	97		1900	151614	.013	.010	2.073	0.88	78.20	2.11	23.70	20.16	3.54	19.00	0.023
MILITARY	103		2250	163355	.014	.012	2.379	1.36	56.43	2.48	31.76	27.76	3.99	21.50	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	4.51	66.20	3020	1.51	0.23	1.29	2.98	29.5	1344	0.67	0.10	0.57	0.27
INTERMED. 1	0.43	22.80	3105	2.29	1.60	0.69	0.40	21.1	2872	2.12	1.48	0.64	0.55
INTERMED. 2	0.16	13.99	3120	2.98	2.35	0.63	0.21	18.5	4118	3.93	3.10	0.83	0.79
NORMAL	0.05	6.63	3132	3.68	3.13	0.55	0.89	12.6	5950	6.98	5.94	1.04	1.14
MILITARY	0.06	4.46	3135	4.20	3.67	0.53	0.14	10.0	7054	9.45	8.26	1.19	1.35

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 35. TYPE C

TEST DATE : 5/27/75

ENGINE S. NUMBER 9

ENGINE TYPE & MODEL : J58-P3
ENGINE SERIAL # : 636786
TOTAL ENGINE TIME : 1394 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : P6001
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : FAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1900	2000
INLET AIR TEMP.(DEG.F) :	80.0	75.0
ATMOSPHERIC PRESS.(IN.HG) :	29.56	29.58
RELATIVE HUMIDITY (%) :	52	68
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0116	0.0126

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : <5 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	43		445	54124	.008	.008	1.080	100.39	562.17	1.64	7.79	0.94	6.86	3.25	0.0262
INTERMED. 1	75		925	115345	.008		1.387								
INTERMED. 2	85		1320	131328	.010		1.680								
NORMAL	97		1900	151614	.013	.012	2.073	1.12	77.58	2.42	26.74	22.73	4.00	20.25	0.0262
MILITARY	103		2250	163355	.014	.014	2.379	1.54	58.85	2.80	35.44	30.76	4.67	22.25	0.0262

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	6.73	85.79	3020	1.58	0.18	1.32	2.98	29.3	1344	0.67	0.08	0.59	0.27
INTERMED. 1													0.55
INTERMED. 2													0.79
NORMAL	0.05	0.38	3132	3.62	3.08	0.54	0.10	12.1	5951	6.87	5.84	1.03	1.14
MILITARY	0.06	4.19	3136	4.14	3.60	0.55	0.14	9.4	7055	9.33	8.10	1.23	1.35

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SEI 1492-005-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 37. TYPE 5

TEST DATE : 5/28/75

ENGINE SERIAL NUMBER 1

ENGINE TYPE & MODEL : J58-P3
ENGINE SERIAL # : 636845
TOTAL ENGINE TIME : 1970 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : ANDREWS
TEST CELL NUMBER : PC01
TEST CELL OPERATOR : FC
SCOTT SUPERVISOR : MS
INSTRUMENT OPERATOR : PAL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1655	1755
INLET AIR TEMP.(DEG.F) :	83.0	80.0
ATMOSPHERIC PRESS.(IN.HG) :	29.72	29.74
RELATIVE HUMIDITY (%) :	56	51
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0135	0.0112

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 55 FT.

FUEL ANALYSIS :
SAMPLE # : 4
TYPE : JP-4
WT.% CARBON : 85.7
WT.% HYDROGEN : 14.14
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.98
C/H RATIO-MASS: 6.06

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE w/A
IDLE	43		440	54605	.008	.008	1.001	202.72	620.11	1.53	7.89	0.36	7.53	4.00	0.027
INTERMED. 1	75		900	117139	.008	.008	1.386	13.56	195.12	1.67	12.50	8.62	3.88	10.25	0.027
INTERMED. 2	85		1325	131435	.010	.009	1.644	7.41	116.98	1.74	17.23	13.90	3.33	16.00	0.027
NORMAL	96		1825	155913	.012	.011	2.093	5.90	62.59	2.34	30.45	26.32	4.13	17.50	0.027
MILITARY	102		2300	166243	.014	.014	2.388	4.45	51.38	2.85	43.46	38.18	5.28	17.50	0.027

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	14.40	76.92	2982	1.61	0.87	1.53	6.34	33.8	1312	0.71	0.83	0.68	0.26
INTERMED. 1	0.92	23.11	3103	2.43	1.68	0.76	0.83	20.8	2793	2.19	1.51	0.68	0.24
INTERMED. 2	0.48	13.33	3126	3.23	2.60	0.62	0.64	17.7	4134	4.27	3.45	0.83	0.79
NORMAL	0.29	5.33	3133	4.26	3.68	0.58	0.53	9.7	5718	7.77	6.72	1.05	1.09
MILITARY	0.18	3.60	3136	5.20	4.39	0.61	0.41	8.3	7213	11.49	10.09	1.40	1.35

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE J79-15

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 38. TYPE B

TEST DATE : 6/16/75

ENGINE 4. NUMBER 1

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 420655
TOTAL ENGINE TIME : 1400 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : COC
SCOTT SUPERVISOR : RMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1240	1455
INLET AIR TEMP.(DEG.F) :	90.0	90.0
ATMOSPHERIC PRESS.(IN.HG) :	29.05	29.05
RELATIVE HUMIDITY (%) :	47	47
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0147	0.0147

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 5
TYPE : JP-4
WT.% CARBON : 85.37
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.01
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	65	675	1125			.0085		49.48	325.87	0.96	7.33	4.79	2.54	15.65	0.0230
INTERMED. 1	75	1348	1590			.0104		37.26	128.12	0.72	7.12	4.62	2.50	26.63	0.0230
INTERMED. 2	93	4577	7345			.0111		17.12	39.96	2.33	39.94	34.85	5.89	63.45	0.0231
NORMAL	89	5724	8565			.0069		24.46	44.58	1.84	26.48	22.56	3.92	60.38	0.0230
MILITARY	100	10479	9880			.0113		15.39	34.49	2.57	60.29	51.53	8.76	60.27	0.0230
MID AB	100	12187	15458			.0123		183.60	1158.44	4.52	65.29	23.98	41.31	51.50	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	5.68	65.31	3017	2.41	1.58	0.84	6.39	73.5	3394	2.71	1.77	0.94	0.22
INTERMED. 1	5.75	32.38	3069	3.15	2.05	1.11	9.15	51.5	4879	5.02	3.25	1.76	0.32
INTERMED. 2	0.84	3.42	3128	5.62	4.79	0.83	6.16	25.1	22974	41.25	35.17	6.08	1.47
NORMAL	1.51	4.81	3124	4.78	4.07	0.78	8.42	26.8	17384	26.13	22.26	3.87	1.11
MILITARY	0.68	2.67	3129	7.67	6.56	1.11	6.06	23.7	27789	68.07	58.18	9.89	1.77
MID AB	4.51	49.30	3046	4.60	1.69	2.91	75.06	821.3	50735	76.57	28.13	48.44	3.33

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER SV. TYPE 6

TEST DATE : 5/19/75

ENGINE SN. NUMBER 2

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 434487
TOTAL ENGINE TIME : 1500 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : CDC
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1400	1515
INLET AIR TEMP.(DEG.F) :	89.0	89.0
ATMOSPHERIC PRESS.(IN.HG) :	29.23	29.24
RELATIVE HUMIDITY (%) :	26	26
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0077	0.0077

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 5
TYPE : JP-4
WT.% CARBON : 85.37
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.01
H/C RATIO-ATM.: 2.01
C/M RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE --* SN	W/A
IDLE	65	676	1140			.004		88.75	246.32	0.88	7.12	3.23	3.89	23.50	0.0230
INTERMED. 1	75	1424	1540			.004		15.04	103.74	0.85	8.69	5.96	2.73	42.75	0.0235
INTERMED. 2	93	8785	7380			.011		2.30	33.27	2.32	47.73	42.56	5.17	63.75	0.0230
NORMAL	89	5907	5520			.009		3.13	40.88	1.93	32.79	28.90	3.89	62.75	0.0230
MILITARY	100	10330	8950			.012		2.03	24.36	2.48	56.24	50.89	6.35	60.25	0.0230
MAX AB	100	15141	31234			.040		54.92	1784.88	7.79	73.33	40.39	32.93	43.00	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	100.00	53.50	3024	2.54	1.15	1.39	11.46	61.1	3447	2.90	1.32	1.58	0.23
INTERMED. 1	1.09	24.02	3092	3.31	2.27	1.04	3.07	37.0	4762	5.09	3.49	1.60	0.31
INTERMED. 2	0.11	2.45	3131	6.72	5.93	0.73	0.83	21.0	23105	49.59	44.22	5.37	1.47
NORMAL	0.19	4.14	3128	5.56	4.90	0.66	1.02	22.9	17269	30.71	27.07	3.64	1.10
MILITARY	2.09	1.90	3132	8.76	7.92	0.84	0.84	17.5	28033	78.36	70.84	7.52	1.79
MAX AB	2.79	44.67	3063	3.01	1.66	1.35	24.59	1395.2	95674	94.15	51.86	42.29	6.24

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 46. TYPE B

TEST DATE : 6/20/75

ENGINE 4. NUMBER 3

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 434359
TOTAL ENGINE TIME : 1800 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : M
SCOTT SUPERVISOR : MHS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1700	1800
INLET AIR TEMP.(DEG.F) :	82.0	82.0
ATMOSPHERIC PRESS.(IN.HG) :	29.22	29.23
RELATIVE HUMIDITY (%) :	52	52
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0124	0.0124

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 5
TYPE : JP-4
WT.% CARBON : 85.37
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.01
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.98

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	65	653	1125			.005		81.40	276.37	0.95		2.21		19.45	0.023
INTERMED. 1	75	1343	1475			.005		14.18	90.40	1.02		4.43		42.30	0.023
INTERMED. 2	93	4729	7270			.008		1.75	31.19	1.58	41.06	37.43	3.63	59.15	0.023
NORMAL	89	6557	5215			.006		2.73	35.18	1.30	26.50	23.76	2.74	56.65	0.023
MILITARY	100	10557	8975			.009		1.56	25.52	1.83	53.28	50.42	4.86	61.75	0.023
MAX AB	100	16577	32178			.031		254.78	1692.53	6.05	67.50	38.12	29.38	38.25	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	9.41	55.81	3022		0.73		10.59	62.8	3400		0.83		0.22
INTERMED. 1	1.58	19.28	3101		1.41		2.32	28.4	4574		2.08		0.29
INTERMED. 2	0.13	3.94	3129	8.51	7.76	0.75	0.92	28.6	22748	61.90	56.43	5.47	1.45
NORMAL	0.24	5.37	3126	6.65	5.96	0.69	1.24	28.0	16304	34.68	31.09	3.59	1.04
MILITARY	0.10	2.77	3131	11.30	10.43	0.87	0.87	24.9	28100	101.45	93.65	7.80	1.79
MAX AB	4.66	54.04	3038	3.54	2.01	1.54	149.91	1739.0	97750	113.93	64.34	49.59	6.43

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 41. TYPE A

TEST DATE : 6/24/75

ENGINE A. NUMBER 4

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 440165
TOTAL ENGINE TIME : 900 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : CDC
SCOTT SUPERVISOR : MMS
INSTRUMENT OPERATOR : PM
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	840	950
INLET AIR TEMP.(DEG.F) :	78.0	78.0
ATMOSPHERIC PRESS.(IN.HG) :	29.40	29.40
RELATIVE HUMIDITY (%) :	64	64
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0133	0.0133

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 6
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.00
C/H RATIO-MASS: 6.01

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	65	673	1160			.005		113.27	282.38	1.00		2.59		23.82	0.023
INTERMED. 1	75	1409	1530			.003		23.52	90.26	0.68		4.55		38.20	0.023
INTERMED. 2	93	9140	7570			.011		1.59	34.84	2.19	45.21	40.21	5.00	57.90	0.023
NORMAL	89	6856	5385			.009		3.29	35.72	1.72	33.87	25.67	4.42	55.75	0.023
MILITARY	100	10445	8830			.012		1.19	26.84	2.42	63.97	57.68	6.29	59.88	0.023
MAX AB	100	15577	32924			.041		477.17	2756.39	7.72	73.65	45.79	27.86	29.85	0.023

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	12.43	54.12	3019		0.82		14.42	62.8	3502		0.95		0.46
INTERMED. 1	3.89	20.07	3086		2.16		5.95	30.9	4722		3.30		0.51
INTERMED. 2	0.68	2.74	3133	6.76	5.01	0.75	0.63	28.7	23718	51.19	45.53	5.66	3.03
NORMAL	0.22	4.14	3131	6.45	4.89	0.84	1.18	22.3	16859	34.71	26.31	4.53	2.15
MILITARY	0.06	2.21	3134	8.64	7.79	0.85	0.49	19.5	27674	76.32	68.81	7.50	3.53
MAX AB	6.78	68.39	3012	3.40	1.87	1.14	223.23	2251.8	99157	98.83	61.45	37.39	13.16

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SEI 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 42. TYPE M

TEST DATE : 6/25/75

ENGINE 4. NUMBER 5

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 434801
TOTAL ENGINE TIME : 1300 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : CDC
SCOTT SUPERVISOR : MHS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1115	1300
INLET AIR TEMP.(DEG.F) :	84.0	84.0
ATMOSPHERIC PRESS.(IN.HG) :	29.30	29.31
RELATIVE HUMIDITY (%) :	38	38
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0096	0.0096

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 6
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.00
C/H RATIO-MASS: 6.01

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	65	883	1125			.0105		103.55	256.49	0.92	7.10	3.37	3.73	23.67	0.0234
INTERMED. 1	75	1302	1455			.0104		23.55	116.83	0.81	7.62	5.48	2.14	43.13	0.0234
INTERMED. 2	93	4953	7525			.0111		4.86	38.76	2.34	46.93	43.41	3.52	64.25	0.0231
NORMAL	89	4734	5330			.0089		5.74	37.41	1.85	38.49	28.02	2.46	62.63	0.0231
MILITARY	100	10531	8980			.0112		5.00	23.48	2.50	65.27	60.46	4.81	61.38	0.0231
MAX AB	100	15442	31992			.0338		947.24	1471.66	7.40	67.37	39.86	27.51	37.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	12.39	53.37	3020	2.44	1.16	1.28	13.94	60.0	3397	2.74	1.30	1.44	0.45
INTERMED. 1	3.25	28.14	3085	3.02	2.17	0.84	4.73	40.9	4488	4.39	3.16	1.23	0.58
INTERMED. 2	0.24	2.62	3133	6.57	6.08	0.49	1.78	19.7	23576	49.44	45.73	3.71	3.01
NORMAL	0.35	3.98	3131	5.39	4.95	0.44	1.87	21.1	16592	28.55	26.24	2.31	2.12
MILITARY	0.23	1.90	3134	8.55	7.92	0.63	2.05	17.1	28145	76.82	71.15	5.67	3.59
MAX AB	14.18	38.46	3038	2.89	1.71	1.18	453.58	1230.3	97205	92.52	54.74	37.78	12.78

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F296#I-75-C-##46

SCOTT TEST NUMBER 43. TYPE C

TEST DATE : 6/25/75

ENGINE 4. NUMBER 5

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 434##I
TOTAL ENGINE TIME : 1300 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : CDC
SCOTT SUPERVISOR : WMS
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1115	13##
INLET AIR TEMP.(DEG.F) :	84.#	84.#
ATMOSPHERIC PRESS.(IN.HG) :	29.3#	29.31
RELATIVE HUMIDITY (%) :	36	38
INLET AIR HUMIDITY - (GM H2#/GM DRY AIR) :	#.##96	#.##96

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 3## DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 6
TYPE : JP-4
WT.% CARBON : 85.72
WT.% HYDROGEN : 14.27
WT.% SULFUR : #.#2
H/C RATIO-ATM.: 2.##
C/H RATIO-MASS: 6.#1

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE w/A
IDLE	65	683	1125			.##7		146.32	357.72	1.4#	9.65	3.96	5.69	25.##	#.#262
NORMAL	89	6734	53##			.#12		4.76	46.87	2.44	38.47	35.#2	3.46	65.##	#.#262
MILITARY	1##	10531	8980			.#15		3.95	29.10	3.#3	77.35	7#.79	6.55	62.63	#.#26.
MAX AB	1##	15499	32113			.#63		38.56	2#81.33	11.9#	1#6.16	77.75	28.41	4.75	#.#262

EXHAUST MASS EMISSION INDICES :

	# / 1#,### FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	11.54	49.25	#329	2.18	#.9#	1.29	12.98	55.4	3#07	2.46	1.#1	1.45	#.45
NORMAL	#.22	3.83	3131	5.16	4.7#	#.46	1.18	2#.3	16595	27.36	24.9#	2.46	2.12
MILITARY	#.15	1.91	3134	#.36	7.65	#.7I	1.34	17.2	28146	75.#5	68.69	6.36	3.59
MAX AB	#.36	34.1#	3#83	2.86	2.#9	#.76	11.62	I#95.#	9981#	91.75	67.2#	24.55	12.53

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 12/15/75
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 44. TYPE A

TEST DATE : 7/ 1/75

ENGINE 4. NUMBER 5

ENGINE TYPE & MODEL : J79-15
ENGINE SERIAL # : 42G965
TOTAL ENGINE TIME : 1800 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 45
TEST CELL OPERATOR : [illegible]
SCOTT SUPERVISOR : [illegible]
INSTRUMENT OPERATOR : [illegible]
SMOKE OPERATOR : [illegible]

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1820	2035
INLET AIR TEMP.(DEG.F) :	78.0	76.0
ATMOSPHERIC PRESS.(IN.HG) :	29.28	29.29
RELATIVE HUMIDITY (%) :	56	63
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0118	0.0123

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 75 FT.

FUEL ANALYSIS :
SAMPLE # : 7
TYPE : JP-4
WT.% CARBON : 85.81
WT.% HYDROGEN : 14.07
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 1.97
C/H RATIO-MASS: 6.09

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	05	698	1110			.004		106.16	246.15	0.81	6.43	2.68	3.75	21.42	0.0231
NORMAL	89	8719	5241			.008		3.58	37.34	1.59	26.57	24.23	2.34	57.62	0.0231
MILITARY	100	10699	5910			.011		3.89	25.34	2.35	62.47	56.90	5.57	58.42	0.0231
MAX AB	100	15852	32864			.036		121.76	2698.87	7.29	71.39	50.28	21.11	24.45	0.0242

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	14.39	58.26	3013	2.50	1.04	1.46	15.98	64.7	3345	2.78	1.16	1.62	0.57
NORMAL	0.26	4.66	3136	5.47	4.98	0.48	1.37	24.3	16310	28.42	25.92	2.50	3.12
MILITARY	0.19	2.16	3141	8.73	7.96	0.78	1.69	19.2	27983	77.83	70.88	6.94	5.34
MAX AB	1.84	71.33	3027	3.10	2.18	0.92	60.56	2344.3	99492	101.86	71.74	30.12	19.70

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE T56-A7B

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SPT 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 45. TYPE R

TEST DATE : 7/15/75

ENGINE S. NUMBER 1

ENGINE TYPE & MODEL : TS6-A74
ENGINE SERIAL # : AE10#4293
TOTAL ENGINE TIME : 7594 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1330	1430
INLET AIR TEMP.(DEG.F) :	88.0	90.0
ATMOSPHERIC PRESS.(IN.HG) :	29.33	29.33
RELATIVE HUMIDITY (%) :	41	41
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0092	0.0092

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : A
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE w/A
LO GRND.IDLE	3	183	628			.005		149.25	168.27	1.01	12.23	3.79	8.44	30.75	0.0230
HI GRND.IDLE	8	244	757			.003		8.91	25.41	0.67	14.44	11.99	2.44	31.50	0.0230
APPROACH	18	574	852			.004		4.96	26.47	0.89	17.77	15.89	2.69	36.13	0.0231
CRUISE	72	2259	1518			.009		3.31	24.68	1.76	47.72	42.58	5.14	37.00	0.0231
NORMAL	100	3202	1860			.011		2.11	23.17	2.26	54.60	48.82	5.78	40.13	0.0231
MILITARY	109	3443	1976			.012		2.17	23.62	2.48	59.47	52.06	7.40	39.63	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	16.43	32.29	3038	3.85	1.19	2.66	10.17	20.0	1883	2.39	0.74	1.65	0.25
HI GRND.IDLE	1.51	7.53	3117	7.02	5.83	1.19	1.14	5.7	2360	5.32	4.42	0.90	0.30
APPROACH	0.63	5.91	3122	6.52	5.53	0.98	0.54	5.0	2660	5.55	4.72	0.84	0.34
CRUISE	0.21	2.78	3128	8.84	7.89	0.95	0.32	4.2	4724	13.35	11.92	1.44	0.58
NORMAL	0.11	2.84	3130	9.34	8.51	0.84	0.20	3.8	5821	17.38	15.82	1.56	0.74
MILITARY	0.10	1.82	3130	9.17	8.19	0.98	0.20	3.6	6145	18.11	16.18	1.93	0.79

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 46. TYPE A

TEST DATE : 7/17/75

ENGINE S. NUMBER 2

ENGINE TYPE & MODEL : T56-A7B
ENGINE SERIAL # : AE100369
TOTAL ENGINE TIME : 2147 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	905	1[illegible]
INLET AIR TEMP.(DEG.F) :	73.0	77.0
ATMOSPHERIC PRESS.(IN.HG) :	29.31	29.33
RELATIVE HUMIDITY (%) :	69	63
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0123	0.0128

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : A
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	184	628			.005		219.89	167.84	1.02	11.98	3.24	8.74	26.75	0.0230
HI GRND.IDLE	8	241	768			.003		45.42	29.85	0.67	13.32	10.99	2.32	27.38	0.0230
APPROACH	18	592	854			.004		41.46	30.27	0.89	16.33	14.00	2.33	32.63	0.0230
CRUISE	72	2456	1556			.008		36.85	25.51	1.72	38.29	36.79	1.50	42.65	0.0231
NORMAL	100	3379	1930			.011		23.28	25.73	2.31	57.92	54.90	3.01	39.88	0.0231
MILITARY	109	3684	2036			.012		18.11	23.80	2.47	63.73	60.21	3.52	44.63	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	23.66	31.54	3019	3.70	1.00	2.70	14.67	19.6	1872	2.29	0.62	1.67	0.25
HI GRND.IDLE	7.63	8.52	3090	6.42	5.30	1.12	5.80	6.5	2355	4.88	4.03	0.85	0.30
APPROACH	5.28	6.73	3100	5.95	5.11	0.85	4.51	5.7	2654	5.09	4.37	0.73	0.34
CRUISE	2.44	2.95	3122	7.24	6.96	0.28	3.80	4.6	4858	11.32	10.88	0.44	0.62
NORMAL	1.15	2.21	3127	8.14	7.75	0.43	2.18	4.2	5941	15.54	14.73	0.81	0.76
MILITARY	0.84	1.92	3128	8.43	7.96	0.47	1.70	3.9	6368	17.16	16.21	0.95	0.91

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 47. TYPE R

TEST DATE : 7/18/75

ENGINE S. NUMBER 3

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE101891
TOTAL ENGINE TIME : 9755 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJD

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1310	1420
INLET AIR TEMP.(DEG.F) :	86.0	89.0
ATMOSPHERIC PRESS.(IN.HG) :	29.28	29.26
RELATIVE HUMIDITY (%) :	54	31
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0147	0.0092

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	* RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE ---* SN	W/A
LO GRND.IDLE	3	183	638			.004		143.39	128.41	0.71	9.42	4.33	5.08	17.00	0.0230
HI GRND.IDLE	8	241	756			.002		20.84	23.27	0.39	10.60	8.80	1.80	22.75	0.0231
APPROACH	18	578	846			.003		18.42	25.12	0.61	13.01	11.10	1.91	26.00	0.0231
CRUISE	72	2214	1480			.006		14.06	37.18	1.32	34.99	33.16	1.83	35.25	0.0231
NORMAL	100	3025	1800			.008		3.37	24.73	1.64	49.43	47.81	2.24	35.00	0.0231
MILITARY	109	3333	1920			.009		4.69	21.47	1.80	55.57	52.76	2.81	34.50	0.0231

EXHAUST MASS EMISSION INDICES :

	---------- # / 1000# FUEL ----------						*---------- # / HR ----------*						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	22.31	32.72	3021	4.28	1.93	2.27	14.06	20.6	1903	2.65	1.22	1.43	0.25
HI GRND.IDLE	6.07	11.84	3098	8.86	7.35	1.51	4.59	9.0	2342	6.70	5.56	1.14	0.30
APPROACH	3.40	8.09	3111	6.83	5.87	1.01	2.87	6.8	2632	5.82	4.97	0.85	0.34
CRUISE	1.21	5.59	3121	8.67	8.21	0.45	1.80	8.3	4619	12.83	12.16	0.67	0.59
NORMAL	0.23	3.07	3128	9.84	9.52	0.45	0.42	5.4	5630	17.72	17.13	0.80	0.72
MILITARY	0.30	2.37	3129	10.07	9.56	0.51	0.57	4.5	6007	19.34	18.36	0.98	0.77

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SFT 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 48, TYPE A

TEST DATE : 7/22/75

ENGINE S, NUMBER 4

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE103319
TOTAL ENGINE TIME : 7335 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1010	1150
INLET AIR TEMP.(DEG.F) :	80.0	82.0
ATMOSPHERIC PRESS.(IN.HG) :	29.28	29.28
RELATIVE HUMIDITY (%) :	38	34
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0085	0.0080

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	102	575			.0205		180.83	179.00	1.09	12.53	3.34	9.19	21.75	0.0230
HI GRND.IDLE	8	241	720			.0204		12.50	23.40	0.78	15.23	13.02	2.21	27.25	0.0231
APPROACH	18	592	810			.0205		10.15	23.30	1.01	19.05	16.74	2.30	29.00	0.0231
CRUISE	72	2214	1470			.0209		19.01	21.63	1.79	45.84	42.59	3.25	34.00	0.0231
NORMAL	100	3139	1825			.0212		14.06	20.73	2.39	60.08	56.03	4.06	39.75	0.0231
MILITARY	109	3390	1940			.0213		6.91	20.33	2.56	66.65	61.44	5.21	44.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	18.30	31.28	3034	3.64	0.97	2.67	10.52	18.0	1744	2.09	0.56	1.53	0.23
HI GRND.IDLE	1.83	5.97	3119	6.39	5.46	0.93	1.32	4.3	2246	4.60	3.93	0.67	0.29
APPROACH	1.14	4.56	3123	6.13	5.39	0.74	0.92	3.7	2530	4.96	4.36	0.60	0.32
CRUISE	1.21	2.40	3126	8.35	7.75	0.59	1.77	3.5	4595	12.27	11.40	0.87	0.59
NORMAL	0.67	1.73	3129	8.21	7.66	0.55	1.22	3.1	5710	14.99	13.98	1.01	0.73
MILITARY	0.31	1.58	3130	8.51	7.85	0.67	0.60	3.1	6072	16.51	15.22	1.29	0.78

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 49, TYPE C

TEST DATE : 7/22/75

ENGINE S. NUMBER 4

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE103319
TOTAL ENGINE TIME : 7335 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1010	1150
INLET AIR TEMP.(DEG.F) :	80.0	82.0
ATMOSPHERIC PRESS.(IN.HG) :	29.28	29.28
RELATIVE HUMIDITY (%) :	38	34
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0085	0.0080

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 174 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
LO GRND.IDLE	3	182	575			.0185		184.57	177.46	1.08	11.94	2.62	9.32	20.25	0.0264
HI GRND.IDLE	8	241	720			.0184		11.14	23.53	0.78	15.31	12.94	2.37	26.00	0.0264
NORMAL	100	3139	1825			.0116		18.91	27.38	3.15	76.36	70.64	5.72	43.50	0.0264
MILITARY	109	3390	1940			.0117		11.01	26.81	3.45	86.09	78.09	8.01	45.25	0.0264

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	18.88	31.70	3032	3.51	0.77	2.74	10.86	18.2	1743	2.02	0.44	1.57	0.23
HI GRND.IDLE	1.62	5.97	3119	6.38	5.39	0.99	1.17	4.3	2246	4.59	3.88	0.71	0.29
NORMAL	0.68	1.73	3129	7.92	7.32	0.59	1.25	3.2	5710	14.46	13.38	1.08	0.73
MILITARY	0.36	1.55	3130	8.15	7.40	0.76	0.71	3.0	6072	15.82	14.35	1.47	0.78

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 50. TYPE A

TEST DATE : 7/24/75

ENGINE S. NUMBER 5

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE10035B3
TOTAL ENGINE TIME : 7929 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1205	1420
INLET AIR TEMP.(DEG.F) :	87.0	88.0
ATMOSPHERIC PRESS.(IN.HG) :	29.23	29.21
RELATIVE HUMIDITY (%) :	48	46
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0136	0.0134

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	103	585			.005		164.27	167.72	1.06	11.59	4.21	7.38	23.58	0.0230
HI GRND.IDLE	8	241	720			.003		8.75	25.80	0.66	13.61	11.98	1.63	30.00	0.0230
NORMAL	100	2873	1785			.013		10.90	28.32	2.27	62.40	57.91	4.49	36.42	0.0231
MILITARY	109	3289	1895			.012		7.26	26.39	2.45	68.80	62.85	5.95	37.25	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	17.21	38.69	3038	3.48	1.26	2.22	10.07	18.4	1777	2.04	0.74	1.30	0.23
HI GRND.IDLE	1.50	7.71	3117	6.68	5.80	0.80	1.08	5.5	2244	4.81	4.23	0.58	0.29
NORMAL	0.55	2.48	3128	8.98	8.34	0.65	0.98	4.4	5583	16.03	14.88	1.15	0.71
MILITARY	0.34	2.15	3129	9.19	8.39	0.80	0.64	4.1	5929	17.41	15.91	1.51	0.76

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 51. TYPE B

TEST DATE : 8/ 4/75

ENGINE SQ. NUMBER 6

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE104060
TOTAL ENGINE TIME : 9345 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1325	1445
INLET AIR TEMP.(DEG.F) :	89.0	88.0
ATMOSPHERIC PRESS.(IN.HG) :	29.20	29.19
RELATIVE HUMIDITY (%) :	58	61
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0176	0.0179

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : A
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	103	585			.005		164.40	162.45	1.00	11.18	9.13	6.06	13.75	0.0230
HI GRND.IDLE	8	285	720			.003		39.87	28.29	0.63	13.16			21.00	0.0231
APPROACH	18	592	810			.004		49.91	28.67	0.86	17.58	16.55	1.03	26.00	0.0231
CRUISE	72	2325	1495			.008		68.90	25.52	1.57	45.18	38.91	6.27	32.75	0.0231
NORMAL	100	3246	1865			.011		71.58	24.96	2.15	64.72	55.74	8.98	31.50	0.0231
MILITARY	109	3487	1965			.011		88.65	25.14	2.32	68.90	55.69	13.21	32.33	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	18.22	31.45	3034	3.56	1.63	1.93	10.66	18.4	1775	2.08	0.95	1.13	0.23
HI GRND.IDLE	7.09	8.79	3100	6.72			5.11	6.3	2232	4.84			0.29
APPROACH	6.55	6.57	3105	6.62	5.23	0.39	5.30	5.3	2515	5.36	5.05	0.31	0.32
CRUISE	4.97	3.21	3115	9.34	5.04	1.30	7.42	4.8	4656	13.96	12.03	1.94	0.50
NORMAL	3.78	2.30	3119	9.82	5.45	1.36	7.06	4.3	5817	18.31	15.77	2.54	0.75
MILITARY	4.34	2.15	3118	9.67	7.82	1.85	8.52	4.2	6127	19.00	15.36	3.64	0.79

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 52. TYPE A

TEST DATE : 8/ 6/75

ENGINE S. NUMBER 7

ENGINE TYPE & MODEL : TS6-A7A
ENGINE SERIAL # : AE105484
TOTAL ENGINE TIME : 5411 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : OJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	910	1104
INLET AIR TEMP.(DEG.F) :	87.0	89.0
ATMOSPHERIC PRESS.(IN.HG) :	29.26	29.25
RELATIVE HUMIDITY (%) :	36	26
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0180	0.0077

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPP	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
LO GRND.IDLE	3	103	570			.005		231.17	180.68	1.09	9.37	4.61	4.76	23.25	0.0230
HI GRND.IDLE	8	241	695			.003		64.02	20.51	0.67	13.91			30.09	0.0231
NORMAL	100	3311	1900			.013		119.99	32.82	2.53	74.45			36.08	0.0231
MILITARY	109	3594	2810			.014		103.13	30.70	2.74	80.60			35.58	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	23.34	33.26	3017	2.71	1.34	1.38	13.30	19.0	1720	1.55	0.76	0.79	0.23
HI GRND.IDLE	10.70	8.62	3090	6.67			7.44	6.0	2148	4.64			0.28
NORMAL	5.37	2.57	3114	9.56			10.21	4.9	5917	18.17			0.76
MILITARY	4.27	2.22	3118	9.57			8.58	4.5	6267	19.24			0.90

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

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REPORT DATE 01/22/76
USAF CONTRACT F296#1-75-C-0046

SCOTT TEST NUMBER 53. TYPE 8

TEST DATE : 8/ 6/75

ENGINE S. NUMBER 7

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE10S484
TOTAL ENGINE TIME : 5411 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1220	1350
INLET AIR TEMP.(DEG.F) :	85.0	89.0
ATMOSPHERIC PRESS.(IN.HG) :	29.27	29.25
RELATIVE HUMIDITY (%) :	53	25
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0141	0.0077

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	103	570			.005		244.93	178.87	1.06	15.08	3.86	11.22	18.25	0.023
HI GRND.IDLE	8	241	695			.004		77.84	26.81	0.75	17.72	14.27	3.45	27.50	0.023
APPROACH	18	592	800			.005		79.70	28.21	1.06	22.96	19.04	3.92	30.75	0.023
CRUISE	72	2345	1510			.009		95.77	26.56	1.90	56.14	51.20	4.94	33.00	0.023
NORMAL	100	3224	1865			.013		110.37	27.25	2.67	81.08	76.53	4.55	28.50	0.023
MILITARY	109	3531	1990			.014		112.38	26.91	2.83	86.23	82.08	4.15	28.25	0.023

EXHAUST MASS EMISSION INDICES :

	# / 100# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	25.31	32.28	3013	4.47	1.14	3.33	14.43	18.4	1717	2.55	0.65	1.90	0.23
HI GRND.IDLE	11.65	6.88	3091	7.61	6.13	1.48	8.10	4.7	2148	5.29	4.26	1.03	0.28
APPROACH	8.48	5.24	3102	7.01	5.81	1.20	6.78	4.2	2481	5.61	4.65	0.96	0.32
CRUISE	5.71	2.77	3113	9.68	8.76	0.85	8.62	4.2	4701	14.58	13.23	1.28	0.58
NORMAL	4.70	2.03	3117	9.91	9.35	0.56	8.77	3.8	5814	18.47	17.44	1.04	0.75
MILITARY	4.52	1.99	3118	9.94	9.46	0.48	8.99	3.8	6205	19.78	18.83	0.95	0.80

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D86-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 54. TYPE H

TEST DATE : 8/ 8/75

ENGINE S. NUMBER 8

ENGINE TYPE & MODEL : T56-A7A
ENGINE SERIAL # : AE101715
TOTAL ENGINE TIME : 10851 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 52
TEST CELL OPERATOR : RM
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	825	935
INLET AIR TEMP.(DEG.F) :	78.0	74.0
ATMOSPHERIC PRESS.(IN.HG) :	29.32	29.34
RELATIVE HUMIDITY (%) :	100	91
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0161	0.0147

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 8
TYPE : JP-4
WT.% CARBON : 85.39
WT.% HYDROGEN : 14.33
WT.% SULFUR : 0.02
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	ESHP HP	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
LO GRND.IDLE	3	183	580			.026		256.02	184.73	1.16	14.31	1.05	13.26	34.00	0.0230
HI GRND.IDLE	8	241	715			.024		100.42	29.53	0.83	16.83	11.78	5.05	33.75	0.0231
APPROACH	18	592	820			.026		83.04	31.74	1.15	21.70	15.69	6.01	32.00	0.0231
CRUISE	72	2325	1585			.011		126.84	31.03	2.25	56.30	45.25	11.05	36.00	0.0231
NORMAL	100	3268	1855			.014		129.54	27.94	2.74	71.87	59.11	12.76	38.25	0.0231
MILITARY	109	3553	1975			.014		135.25	28.15	2.93	78.98	62.96	16.02	40.25	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
LO GRND.IDLE	24.18	30.47	3019	3.82	0.29	3.59	14.03	17.7	1751	2.25	0.17	2.08	0.23
HI GRND.IDLE	13.64	7.41	3005	6.56	4.59	1.97	9.76	5.0	2206	4.69	3.28	1.41	0.29
APPROACH	8.13	5.43	3102	6.09	4.41	1.69	6.67	4.5	2544	5.00	3.61	1.38	0.33
CRUISE	5.40	2.73	3111	8.15	6.55	1.60	9.63	4.1	4683	12.26	9.86	2.41	0.60
NORMAL	5.37	2.02	3115	8.35	7.03	1.52	9.97	3.8	5779	15.86	13.05	2.82	0.74
MILITARY	5.24	1.90	3116	8.77	6.99	1.78	10.34	3.8	6154	17.33	13.81	3.52	0.79

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE TF39

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 55. TYPE A

TEST DATE : 4/28/75

ENGINE 6. NUMBER 1

ENGINE TYPE & MODEL : TF39
ENGINE SERIAL # : 441128
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB.TX
TEST CELL NUMBER : 60
TEST CELL OPERATOR : P
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1148	1439
INLET AIR TEMP.(DEG.F) :	82.0	82.0
ATMOSPHERIC PRESS.(IN.HG) :	29.39	29.32
RELATIVE HUMIDITY (%) :	72	72
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0174	0.0174

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 120 FT.

FUEL ANALYSIS :
SAMPLE # : 9
TYPE : JP-4

WT.% CARBON :	85.69
WT.% HYDROGEN :	14.42
WT.% SULFUR :	0.05
H/C RATIO-ATM.:	2.02
C/H RATIO-MASS:	5.94

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	6	2256	1131			.009		357.72	6208.87	1.80	13.96	0.55	13.41	1.93	0.0231
INTERMED. 1	75	27850	4910			.018		2.51	15.71	3.64	191.22	167.98	23.24	7.93	0.0230
NORMAL	97	36625	12220			.021		2.97	17.19	4.21	333.67	286.13	47.54	7.36	0.0230
MILITARY	100	38214	12725			.021		2.62	17.31	4.29	362.44	300.73	61.71	5.14	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	21.52	45.21	2972	2.41	0.09	2.31	24.33	73.8	3361	2.72	0.11	2.62	1.13
INTERMED. 1	0.08	0.85	3132	17.02	14.95	2.07	0.69	7.6	27903	151.64	133.21	18.43	8.90
NORMAL	0.08	0.81	3132	25.95	22.26	3.70	0.90	9.9	38270	317.26	272.06	45.20	12.21
MILITARY	0.07	0.81	3132	27.69	22.97	4.71	0.89	14.2	39852	352.34	292.35	59.99	12.71

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-006-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 56. TYPE A

TEST DATE : 9/17/75

ENGINE S/N NUMBER 2

ENGINE TYPE & MODEL : TF39
ENGINE SERIAL # : 441647
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 60
TEST CELL OPERATOR : P
SCOTT SUPERVISOR : WHS
INSTRUMENT OPERATOR : FL
SMOKE OPERATOR : DJO

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1620	2021
INLET AIR TEMP.(DEG.F) :	91.0	85.0
ATMOSPHERIC PRESS.(IN.HG) :	29.06	29.04
RELATIVE HUMIDITY (%) :	70	75
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0228	0.0225

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 120 FT.

FUEL ANALYSIS :
SAMPLE # : 1
TYPE : JP-4
WT.% CARBON : 85.86
WT.% HYDROGEN : 14.23
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 1.99
C/H RATIO-MASS: 6.03

TEST MODE	* RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE ---* SN	W/A
IDLE	6	2147	1009			.009		352.94	529.53	1.75	14.95	0.62	14.33	0.77	0.0231
INTERMED. 1	75	26925	8790			.017		18.31	12.87	3.52	221.14	189.78	31.36	5.85	0.0231
NORMAL	97	33955	11340			.020		15.52	13.32	4.15	323.26	290.72	32.53	3.93	0.0231
MILITARY	100	37255	12515			.023		13.59	15.31	4.59	379.67	356.25	23.43	4.85	0.0231
TAKE-OFF	104	38554	13032			.024		4.66	16.00	4.81	390.00	355.41	34.67	4.14	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000.# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	22.43	57.95	2972	2.65	0.11	2.54	24.66	74.7	3266	2.91	0.12	2.79	0.88
INTERMED. 1	0.34	0.73	3138	20.61	17.68	2.92	2.95	6.4	27582	181.12	155.44	25.68	7.03
NORMAL	0.43	0.64	3138	25.57	22.99	2.57	4.85	7.3	35583	289.91	260.74	29.18	9.06
MILITARY	0.34	0.67	3138	27.16	25.49	1.68	4.24	8.3	39272	339.93	318.96	20.98	10.00
TAKE-OFF	0.11	0.66	3139	26.64	24.24	2.36	1.16	6.9	32742	277.52	252.85	24.67	8.34

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 57. TYPE A

TEST DATE : 14/ 1/75

ENGINE A/C NUMBER 3

ENGINE TYPE & MODEL : TF39
ENGINE SERIAL # : 441169
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 60
TEST CELL OPERATOR : P
SCOTT SUPERVISOR : FL
INSTRUMENT OPERATOR : DJO
SMOKE OPERATOR :

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1927	2213
INLET AIR TEMP.(DEG.F) :	80.0	73.0
ATMOSPHERIC PRESS.(IN.HG) :	29.32	29.41
RELATIVE HUMIDITY (%) :	68	75
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0153	0.0134

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 120 FT.

FUEL ANALYSIS :
SAMPLE # : 11
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.27
WT.% SULFUR : 0.03
H/C RATIO-ATM.: 2.00
C/H RATIO-MASS: 6.01

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	2224	1126			.018		350.68	630.70	1.97	22.62	1.22	21.40		
INTERMED. 1	75	28562	3030			.018		9.74	14.93	3.56	238.16	203.71	34.44		
NORMAL	97	37655	1237			.021		4.70	14.14	4.23	406.50	351.58	54.92		
MILITARY	100	39152	12835			.021		3.56	14.31	4.23	395.57	371.46	24.11		

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	19.40	48.94	2989	3.59	0.19	3.40	21.85	68.6	3365	4.04	0.22	3.82	0.67
INTERMED. 1	0.31	0.84	3136	21.90	18.74	3.17	2.82	7.6	28314	197.79	169.18	28.61	5.41
NORMAL	0.13	0.67	3136	31.44	27.24	4.25	1.57	8.3	38797	389.58	336.95	52.63	7.42
MILITARY	0.10	0.68	3136	30.69	28.82	1.87	1.24	8.7	40256	393.96	369.95	24.01	7.69

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-086-1275

REPORT DATE 01/22/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 58. TYPE A

TEST DATE : 10/ 3/75

ENGINE S. NUMBER 4

ENGINE TYPE & MODEL : TF39
ENGINE SERIAL # : 441142
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : KELLY AFB,TX
TEST CELL NUMBER : 60
TEST CELL OPERATOR : JF
SCOTT SUPERVISOR : FL
INSTRUMENT OPERATOR : DJO
SMOKE OPERATOR :

AIR FLOW MEASUREMENT METHOD : NOT MEASURED

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	949	1057
INLET AIR TEMP.(DEG.F) :	64.0	69.0
ATMOSPHERIC PRESS.(IN.HG) :	29.57	29.57
RELATIVE HUMIDITY (%) :	84	78
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0109	0.0117

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 12M FT.

FUEL ANALYSIS :
SAMPLE # : 12
TYPE : JP-4
WT.% CARBON : 85.63
WT.% HYDROGEN : 14.45
WT.% SULFUR : 0.04
H/C RATIO-ATM.: 2.03
C/H RATIO-MASS: 5.93

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	6	2237	1178			.018		524.91	764.42	1.97	20.09	1.32	18.77		
INTERMED. 1	75	28630	8305			.018		10.04	13.97	3.58	258.65	227.86	22.80		
NORMAL	97	36895	12170			.020		7.86	12.58	4.13	384.66	358.40	26.26		
MILITARY	100	38835	12675			.021		8.39	12.87	4.21	367.36	362.35	5.02		
TAKE-OFF	104	40190	13385			.022		10.10	15.70	4.46	415.39	402.55	12.85		

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	28.56	72.83	2938	3.14	0.21	2.93	33.65	85.8	3461	3.69	0.24	3.45	0.94
INTERMED. 1	0.32	0.78	3129	22.0-	20.00	2.00	2.85	6.9	27863	203.74	185.21	18.53	7.12
NORMAL	0.22	0.61	3129	30.44	28.36	2.28	2.64	7.4	38085	370.40	345.11	25.29	9.73
MILITARY	0.23	0.57	3129	28.54	28.15	0.39	2.80	7.2	39666	361.73	356.79	4.94	10.13
TAKE-OFF	0.26	0.62	3129	30.54	29.55	0.44	3.46	7.8	41888	408.19	395.57	12.62	10.74

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE J75-P17

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-008-0876

REPORT DATE 08/19/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 60. TYPE B

TEST DATE : 2/ 4/76

ENGINE 8, NUMBER 1

ENGINE TYPE & MODEL : J75-19W
ENGINE SERIAL # : 612330
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1213	1854
INLET AIR TEMP.(DEG.F) :	34.0	34.0
ATMOSPHERIC PRESS.(IN.HG) :	28.66	28.69
RELATIVE HUMIDITY (%) :	66	69
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0028	0.0029

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.08
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	964	1576	381257	.025	.025	1.057	484.96	339.97	0.94	7.73	1.15	6.58	11.00	0.0230
INTERMED. 1	69	11124	7851	568419	.012	.011	2.381	9.17	38.86	2.16	42.86	31.61	11.25	46.50	0.0230
INTERMED. 2	100	16149	12000	783581	.015	.014	2.600	6.88	23.62	2.83	79.33	67.92	11.41	50.00	0.0230
MILITARY	109	17616	13575	808251	.017	.015	2.751	10.35	19.90	3.08	101.86	92.13	9.73		

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	54.21	66.16	2883	2.48	0.37	2.11	85.43	104.3	4543	3.91	0.58	3.32	2.52
INTERMED. 1	0.48	3.54	3129	6.49	4.79	1.70	3.80	28.1	24562	50.95	37.58	13.37	12.55
INTERMED. 2	0.28	1.66	3132	9.18	7.86	1.32	3.33	20.0	37585	110.15	94.30	15.84	19.18
MILITARY	0.38	1.29	3132	10.83	9.80	1.03	5.21	17.5	42523	147.02	132.98	14.04	21.70

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC. SET 1492-0##-0876 REPORT DATE 08/19/76
USAF J-85 ENGINE EMISSIONS INVENTORY USAF CONTRACT F29601-75-C-0046
INDIVIDUAL ENGINE TEST REPORT

SCOTT TEST NUMBER 61. TYPE H TEST DATE : 2/ 4/76 ENGINE A. NUMBER 2

ENGINE TYPE & MODEL : J75-19W
ENGINE SERIAL # : 612355
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : B
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	2220	2254
INLET AIR TEMP.(DEG.F) :	30.0	29.0
ATMOSPHERIC PRESS.(IN.HG) :	28.77	28.79
RELATIVE HUMIDITY (%) :	63	63
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0023	0.0022

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	870	1520	295411	.005	.005	1.061	261.74	314.51	0.87	7.34	1.44	5.90	11.00	0.0231
INTERMED. 1	77	12427	8697	701781	.012	.011	2.234	7.66	37.25	2.31	49.12	37.02	12.10	45.00	0.0231
INTERMED. 2	99	15929	11700	778690	.015	.014	2.595	5.65	25.86	2.79	77.71	63.01	14.70	51.00	0.0231
MILITARY	110	17682	13490	809469	.017	.015	2.769	4.12	22.12	3.07	97.93	86.80	11.13	50.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	32.24	67.66	2941	2.59	0.51	2.08	49.01	102.8	4470	3.94	0.77	3.17	2.43
INTERMED. 1	0.39	3.21	3129	6.96	5.24	1.71	3.29	27.9	27216	60.5	45.60	14.90	13.90
INTERMED. 2	0.23	1.85	3132	9.12	7.39	1.73	2.70	21.6	36644	106.70	86.52	20.18	18.70
MILITARY	0.15	1.44	3133	10.45	9.26	1.19	2.07	19.4	42262	140.94	124.92	16.02	21.56

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-000-0876

REPORT DATE 08/19/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 62. TYPE R

TEST DATE : 27 6/76

ENGINE B. NUMBER 3

ENGINE TYPE & MODEL : J75-19W
ENGINE SERIAL # : 612479
TOTAL ENGINE TIME : # HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : B
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1429	1511
INLET AIR TEMP.(DEG.F) :	23.0	28.0
ATMOSPHERIC PRESS.(IN.HG) :	29.12	29.12
RELATIVE HUMIDITY (%) :	57	65
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0015	0.0015

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4

WT.% CARBON :	85.83
WT.% HYDROGEN :	14.40
WT.% SULFUR :	0.00
H/C RATIO-ATM.:	2.01
C/H RATIO-MASS:	5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	7	1307	1557	319502	.005	.005	1.071	232.75	257.83	0.90	7.58	1.49	6.01	10.00	0.0230
INTERMED. 1	82	12873	9385	718369	.013	.012	2.274	14.54	36.97	2.38	49.92	40.09	9.83	49.50	0.0231
INTERMED. 2	100	16043	12097	788281	.015	.014	2.598	10.32	29.07	2.79	72.87	59.56	13.31	52.00	0.0231
MILITARY	110	17757	13747	820537	.017	.015	2.771	9.77	26.05	3.08	95.55	90.18	5.37	53.00	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	29.03	54.05	2974	2.59	0.51	2.08	46.44	89.6	4927	4.29	0.85	3.44	2.65
INTERMED. 1	0.70	3.00	3129	6.86	5.51	1.35	6.54	29.0	29363	64.39	51.71	12.68	15.00
INTERMED. 2	0.42	2.00	3131	8.55	6.99	1.56	5.11	25.1	37877	103.42	84.53	18.89	19.34
MILITARY	0.36	1.69	3132	10.16	9.59	0.57	4.98	23.2	43054	139.63	131.79	7.85	21.97

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SFT 1492-D08-0876

REPORT DATE 08/19/76
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 65. TYPE H

TEST DATE : 2/11/76

ENGINE 9. NUMBER 1

ENGINE TYPE & MODEL : J75-P17
ENGINE SERIAL # : 618928
TOTAL ENGINE TIME : # HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1248	1416
INLET AIR TEMP.(DEG.F) :	53.0	58.0
ATMOSPHERIC PRESS.($IN_{.}HG$) :	28.33	28.87
RELATIVE HUMIDITY (%) :	33	26
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0029	0.0027

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE #/A
IDLE	6	958	1571	236533	.007	.006	1.094	767.89	540.43	1.18	8.98	1.61	7.37	13.50	0.0230
INTERMED. 1	68	11950	7967	645689	.012	.011	2.090	9.02	32.86	2.25	51.10	37.36	13.74	48.10	0.0228
INTERMED. 2	88	14093	10314	716995	.014	.013	2.374	3.43	24.33	2.63	74.08	56.05	19.03	47.00	0.0231
MILITARY	100	16031	12388	764773	.016	.015	2.517	3.71	21.06	2.95	98.70	83.42	15.28	49.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	66.94	82.27	2823	2.25	0.44	1.84	105.17	129.3	4434	3.53	0.63	2.90	2.51
INTERMED. 1	0.46	2.91	3130	7.43	5.43	2.00	3.64	23.2	24974	59.20	43.28	15.92	12.74
INTERMED. 2	0.17	1.84	3132	9.22	6.98	2.24	1.71	19.0	32305	95.13	71.98	23.15	16.49
MILITARY	0.14	1.42	3133	10.96	9.26	1.70	1.78	17.6	38810	135.75	114.73	21.02	19.80

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D88-0876

REPORT DATE 08/19/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 66. TYPE C

TEST DATE : 2/11/76

ENGINE 9. NUMBER 1

ENGINE TYPE & MODEL : J75-P17
ENGINE SERIAL # : 610928
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1248	1416
INLET AIR TEMP.(DEG.F) :	53.0	58.0
ATMOSPHERIC PRESS.(IN.HG) :	28.93	28.87
RELATIVE HUMIDITY (%) :	33	24
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0029	0.0027

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	958	1571	236533	.007	.006	1.04	741.95	538.81	1.14	9.01	1.53	7.48	13.47	0.0262
INTERMED. 1	68	10950	7967	645609	.012	.011	2.488	8.41	33.30	2.23	51.11	36.46	14.64	44.90	0.0268
INTERMED. 2	88	14093	10314	716995	.014	.013	2.374	4.46	24.42	2.50	72.54	54.29	18.25	47.32	0.0262
MILITARY	100	16031	12388	764773	.016	.014	2.417	3.32	19.90	2.94	97.01	81.70	15.31	48.67	0.0262

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR					
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	64.98	81.18	2830	2.25	0.38	1.88	102.09	127.5	4445	3.56	0.60	2.95	2.51
INTERMED. 1	0.43	2.97	3138	7.58	5.35	2.15	3.43	23.7	24934	59.74	42.62	17.12	12.74
INTERMED. 2	0.20	1.90	3132	9.14	6.84	2.30	2.02	19.6	32303	94.31	70.58	23.73	16.49
MILITARY	0.13	1.35	3133	10.81	9.10	1.71	1.60	16.7	38812	133.89	112.76	21.13	19.80

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-003-0876

REPORT DATE 08/19/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 78, TYPE A

TEST DATE : 2/22/76

ENGINE 9, NUMBER 2

ENGINE TYPE & MODEL : J75-P17
ENGINE SERIAL # : 610829
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1000	1540
INLET AIR TEMP.(DEG.F) :	39.0	61.0
ATMOSPHERIC PRESS.(IN.HG) :	29.04	28.92
RELATIVE HUMIDITY (%) :	44	14
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0023	0.0017

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 14
TYPE : JP-4
WT.% CARBON : 85.68
WT.% HYDROGEN : 14.43
WT.% SULFUR : 0.07
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.94

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	889	1490	231838	.006	.006	1.090	1094.04	574.01	1.16	9.36	2.77	6.59	10.50	0.0231
INTERMED. ?	89	14384	10731	746869	.014	.013	2.423	2.46	25.19	2.67	86.51	79.07	7.45	53.25	0.0231
MILITARY	101	16195	12522	786799	.015	.015	2.519	2.65	19.16	2.96	114.28	101.47	12.81	53.58	0.0231
MAX A/B	155	24944	46375	779795	.059	.043	2.622	14.35	637.74	8.44	135.51	100.43	35.08	28.33	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	94.30	86.39	2739	2.31	0.69	1.63	140.58	128.7	4081	3.45	1.02	2.43	2.08
INTERMED. ?	0.11	1.48	3130	10.61	9.70	0.91	1.13	20.2	33588	113.86	104.06	9.80	15.01
MILITARY	0.10	1.29	3131	12.63	11.22	1.42	1.28	16.1	39206	158.19	140.46	17.73	17.51
MAX A/B	0.19	14.96	3109	5.22	3.87	1.35	8.94	693.6	144190	242.10	179.43	62.67	64.86

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC. SET 1492-008-0876 REPORT DATE 08/19/76
USAF TURBINE ENGINE EMISSIONS INVENTORY USAF CONTRACT F29601-75-C-0046
INDIVIDUAL ENGINE TEST REPORT

SCOTT TEST NUMBER 71. TYPE B TEST DATE : 2/22/76 ENGINE 9. NUMBER 2

ENGINE TYPE & MODEL : J75-P17
ENGINE SERIAL # : 610829
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1740	1814
INLET AIR TEMP.(DEG.F) :	54.0	55.0
ATMOSPHERIC PRESS.(IN.HG) :	28.91	28.92
RELATIVE HUMIDITY (%) :	15	14
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0017	0.0017

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 14
TYPE : JP-4
WT.% CARBON : 85.68
WT.% HYDROGEN : 14.43
WT.% SULFUR : 0.07
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.94

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	839	1479	223461	.007	.007	1.004	938.98	626.62	1.24	10.06	3.39	6.67	15.00	0.0230
INTERMED. 1	70	11322	8261	664772	.012	.012	2.127	8.18	33.41	2.37	57.46	41.18	16.28	49.50	0.0231
INTERMED. 2	88	14172	10602	734257	.014	.013	2.438	5.26	25.08	2.73	81.55	59.60	21.95	60.00	0.0231
MILITARY	101	16250	12494	774455	.016	.015	2.615	6.64	20.87	3.02	104.67	87.36	17.31	50.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	76.77	89.75	2782	2.36	0.48	1.56	113.54	132.7	4114	3.49	1.18	2.31	2.07
INTERMED. 1	0.39	2.81	3128	7.93	5.68	2.25	3.25	23.2	25838	65.49	46.94	18.56	11.55
INTERMED. 2	0.22	1.83	3138	9.77	7.14	2.63	2.33	19.4	33182	103.62	75.73	27.89	14.83
MILITARY	0.25	1.34	3130	11.34	9.47	1.88	3.13	17.2	39111	141.72	118.28	23.44	17.48

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE TF33-P3

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-088-8876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 59. TYPE B

TEST DATE : 27 3/76

ENGINE 7. NUMBER 1

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 643295
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : Y
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1253	1500
INLET AIR TEMP.(DEG.F) :	56.0	64.0
ATMOSPHERIC PRESS.(IN.HG) :	28.47	28.35
RELATIVE HUMIDITY (%) :	28	20
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0027	0.0026

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	*--- SMOKE --* SN	W/A
IDLE	5	822	888	125588	.007	.007	1.019	1584.00	625.48	1.19	7.25	1.90	5.35	10.00	0.0228
INTERMED. 1	67	11038	4962	491293	.010	.009	1.424	15.98	38.20	1.91	39.05	26.71	12.34	57.50	0.0231
INTERMED. 2	78	12833	5791	532307	.011	.010	1.518	7.38	27.93	2.04	46.87	34.30	12.57	54.00	0.0231
MILITARY	96	15817	7213	591881	.012	.011	1.681	5.35	18.89	2.32	65.77	48.42	17.35	54.50	0.0231
TAKE-OFF	105	17376	8001	613870	.013	.013	1.782	3.57	16.65	2.57	81.80	60.86	20.94	54.50	0.0231

EXHAUST MASS EMISSION INDICES :

	---------- # / 1000# FUEL ----------						*---------- # / HR ----------*						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	128.29	88.46	2644	1.68	0.44	1.24	113.92	78.5	2348	1.50	0.39	1.10	1.42
INTERMED. 1	0.95	3.98	3127	6.68	4.57	2.11	4.73	19.7	15514	33.16	22.68	10.48	7.93
INTERMED. 2	0.41	2.73	3130	7.52	5.50	2.02	2.39	15.8	18126	43.54	31.86	11.68	9.26
MILITARY	0.26	1.62	3132	9.28	6.83	2.45	1.90	11.7	22593	66.96	49.30	17.66	11.53
TAKE-OFF	0.16	1.29	3133	10.43	7.76	2.67	1.28	10.4	25318	84.25	62.68	21.57	12.92

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-000-0876

REPORT DATE 00/10/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 63. TYPE B

TEST DATE : 2/10/76

ENGINE 7. NUMBER 2

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 642636
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : B
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1830	2000
INLET AIR TEMP.(DEG.F) :	67.0	62.0
ATMOSPHERIC PRESS.(IN.HG) :	28.52	28.60
RELATIVE HUMIDITY (%) :	45	52
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0066	0.0064

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	859	886	126309	.007	.006	1.026	1137.12	543.54	1.15	7.44	3.15	4.29	13.00	0.0231
INTERMED. 1	64	10625	4758	483126	.010	.009	1.392	18.65	34.42	1.86	37.91	25.63	12.28	53.00	0.0230
INTERMED. 2	86	14270	6373	552858	.012	.011	1.585	13.25	22.15	2.20	57.18	41.86	15.32	51.00	0.0230
MILITARY	95	15610	7474	596947	.013	.012	1.707	7.52	19.63	2.43	72.04	55.18	16.86	51.00	0.0230
TAKE-OFF	103	16959	7874	609818	.013	.012	1.758	8.00	20.65	2.52	78.40	60.37	18.03	55.00	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	98.59	82.29	2736	1.85	0.74	1.07	87.35	72.9	2424	1.64	0.69	0.95	1.42
INTERMED. 1	1.14	3.68	3127	6.66	4.58	2.16	5.43	17.5	14851	31.64	21.39	10.25	7.59
INTERMED. 2	0.69	2.01	3134	8.51	6.23	2.28	4.38	12.8	19950	54.21	39.69	14.52	10.19
MILITARY	0.35	1.61	3132	9.71	7.44	2.27	2.64	12.0	23409	72.55	55.57	16.98	11.95
TAKE-OFF	0.36	1.63	3132	10.19	7.84	2.34	2.85	12.9	24661	80.21	61.76	18.45	12.59

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-000-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 64. TYPE C

TEST DATE : 2/10/76

ENGINE 7. NUMBER 2

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 642636
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : 8
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1830	2000
INLET AIR TEMP.(DEG.F) :	67.0	62.0
ATMOSPHERIC PRESS.(IN.HG) :	28.52	28.60
RELATIVE HUMIDITY (%) :	45	52
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0066	0.0064

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4
WT.% CARBON : 85.83
WT.% HYDROGEN : 14.40
WT.% SULFUR : 0.00
H/C RATIO-ATM.: 2.01
C/H RATIO-MASS: 5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	859	886	126309	.0007	.0006	1.026	1100.02	540.24	1.14	7.48	3.33	4.15	12.75	0.0258
INTERMED. 1	64	10625	4758	483126	.0100	.0099	1.392	13.12	33.57	1.86	37.36	24.69	12.67	52.50	0.0258
INTERMED. 2	86	14270	5373	552858	.0112	.0111	1.585	11.92	22.32	2.19	56.43	41.41	15.02	52.75	0.0258
MILITARY	95	15610	7474	596947	.0113	.0112	1.707	8.04	20.11	2.42	71.94	54.49	17.44	51.75	0.0258
TAKE-OFF	103	16959	7874	609818	.0113	.0112	1.758	7.50	20.44	2.52	78.21	58.69	19.53	51.75	0.0258

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	96.21	82.52	2742	1.88	0.84	1.04	85.25	73.1	2429	1.66	0.74	0.92	1.42
INTERMED. 1	0.80	3.59	3128	6.57	4.34	2.23	3.82	17.1	14856	31.19	20.61	10.58	7.59
INTERMED. 2	0.62	2.03	3131	8.42	6.18	2.24	3.95	12.9	19951	53.69	39.40	14.29	10.19
MILITARY	0.38	1.66	3132	9.74	7.38	2.36	2.84	12.4	23407	72.82	55.16	17.66	11.95
TAKE-OFF	0.34	1.62	3132	10.17	7.63	2.54	2.68	12.7	24661	80.10	60.10	20.00	12.59

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SFT 1492-D89-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 68. TYPE B

TEST DATE : 2/21/76

ENGINE 7. NUMBER 3

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 642953
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	945	1020
INLET AIR TEMP.(DEG.F) :	35.0	36.0
ATMOSPHERIC PRESS.(IN.HG) :	28.49	28.56
RELATIVE HUMIDITY (%) :	61	59
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0027	0.0027

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 14
TYPE : JP-4
WT.% CARBON : 85.68
WT.% HYDROGEN : 14.43
WT.% SULFUR : 0.07
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.94

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	999	886	143423	.006	.006	1.027	1276.54	534.08	1.06	7.39	1.33	6.06	18.50	0.0230
INTERMED. 1	74	12132	5215	526458	.010	.009	1.479	18.10	36.79	1.92	39.26	26.09	13.17	60.50	0.0230
INTERMED. 2	90	14897	5500	582579	.011	.011	1.638	13.56	25.65	2.17	52.59	38.72	13.87	61.50	0.0230
MILITARY	101	16666	7416	622649	.012	.012	1.776	13.08	22.11	2.35	64.59	49.00	15.59	62.00	0.0231
TAKE-OFF	106	17480	7907	634798	.012	.012	1.809	11.17	21.61	2.43	71.21	55.73	15.48	61.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	117.46	85.82	2676	1.95	0.35	1.60	104.07	76.0	2371	1.73	0.31	1.42	1.24
INTERMED. 1	1.07	3.81	3124	6.68	4.44	2.24	5.60	19.9	16293	34.83	23.15	11.68	7.29
INTERMED. 2	0.71	2.35	3128	7.92	5.83	2.09	4.63	15.3	20329	51.51	37.92	13.58	9.09
MILITARY	0.63	1.87	3129	8.99	6.82	2.17	4.71	13.9	23201	66.67	50.58	16.09	10.37
TAKE-OFF	0.52	1.77	3129	9.59	7.58	2.00	4.09	13.8	24428	74.84	58.57	16.27	10.92

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-088-0876

REPORT DATE 08/18/76
USAF CONTRACT F2960I-75-C-0046

SCOTT TEST NUMBER 69. TYPE A

TEST DATE : 2/21/76

ENGINE 7. NUMBER 3

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 642953
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1310	1700
INLET AIR TEMP.(DEG.F) :	41.0	43.0
ATMOSPHERIC PRESS.(IN.HG) :	28.68	28.77
RELATIVE HUMIDITY (%) :	46	29
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0026	0.0018

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 14
TYPE : JP-4
WT.% CARBON : 85.68
WT.% HYDROGEN : 14.43
WT.% SULFUR : 0.07
H/C RATIO-ATM.: 2.02
C/H RATIO-MASS: 5.94

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	971	938	143016	.007	.006	1.027	1207.55	532.79	1.09	8.49	2.41	6.07	10.50	0.0231
INTERMED. ?	82	13508	5944	562580	.011	.010	1.548	13.91	29.32	1.99	54.76	43.33	11.43	54.67	0.0231
MILITARY	99	16395	7376	618351	.012	.011	1.702	15.12	25.78	2.29	74.57	62.22	12.35	54.50	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	108.93	83.93	2702	2.20	0.62	1.57	102.18	78.7	2535	2.06	0.59	1.47	1.31
INTERMED. ?	0.80	2.93	3126	8.98	7.11	1.88	4.73	17.4	18584	53.40	42.25	11.15	8.31
MILITARY	0.75	2.24	3128	10.65	8.89	1.76	5.56	16.5	23070	78.57	65.56	13.01	10.32

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D8A-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 93. TYPE B

TEST DATE : 4/ 6/76

ENGINE 7. NUMBER 4

ENGINE TYPE & MODEL : TF33-P3
ENGINE SERIAL # : 642614
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : B
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1015	1105
INLET AIR TEMP.(DEG.F) :	64.0	69.0
ATMOSPHERIC PRESS.(IN.HG) :	28.61	28.61
RELATIVE HUMIDITY (%) :	63	51
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0083	0.0090

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4

WT.% CARBON :	85.35
WT.% HYDROGEN :	14.57
WT.% SULFUR :	0.05
H/C RATIO-ATM.:	2.05
C/H RATIO-MASS:	5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	6	927	921	127115	.007	.007	1.026	1014.57	595.87	1.33	8.55	2.23	6.32	10.50	0.0231
INTERMED. 1	74	12169	5520	496593	.011	.011	1.424	16.56	31.46	2.24	49.00	43.51	5.49	60.50	0.0231
INTERMED. 2	85	14087	6438	566565	.011	.012	1.528	10.96	24.98	2.42	61.07	55.40	5.67	61.00	0.0231
MILITARY	99	16329	7662	582598	.013	.013	1.662	7.73	20.35	2.62	79.61	72.20	7.41	60.00	0.0231
TAKE-OFF	103	16954	7970	590812	.013	.013	1.704	6.88	18.19	2.68	86.34	77.66	8.68	62.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	77.54	79.52	2789	1.87	0.49	1.39	71.41	73.2	2569	1.73	0.45	1.28	0.92
INTERMED. 1	0.84	2.79	3120	7.13	6.34	0.80	4.64	15.4	17221	39.38	34.97	4.41	5.51
INTERMED. 2	0.52	2.05	3122	8.24	7.47	0.76	3.32	13.2	20099	53.02	48.10	4.92	6.43
MILITARY	0.34	1.54	3123	9.92	9.00	0.92	2.57	11.8	23930	76.02	68.94	7.08	7.65
TAKE-OFF	0.29	1.35	3124	10.52	9.46	1.06	2.33	10.8	24895	83.85	75.42	8.43	7.96

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

ENGINE TF33-P7

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D00-0876

REPORT DATE 00/10/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 67. TYPE 0

TEST DATE : 2/12/76

ENGINE ID. NUMBER 1

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651524
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	900	930
INLET AIR TEMP.(DEG.F) :	52.0	55.0
ATMOSPHERIC PRESS.(IN.HG) :	28.70	28.69
RELATIVE HUMIDITY (%) :	89	88
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0077	0.0077

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 13
TYPE : JP-4

WT.% CARBON :	85.83
WT.% HYDROGEN :	14.40
WT.% SULFUR :	0.00
H/C RATIO-ATM.:	2.01
C/H RATIO-MASS:	5.96

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	1013	1128	141831	.008	.008	1.022	902.99	688.54	1.39	8.01	2.93	5.08	15.00	0.0231
INTERMED. 1	72	13735	5226	588495	.011	.011	1.585	10.45	26.07	2.15	44.71	33.06	11.65	51.00	0.0231
INTERMED. 2	88	16718	7662	652988	.012	.012	1.675	8.00	16.09	2.38	59.95	45.13	14.82	52.00	0.0231
MILITARY	100	18989	8933	689096	.013	.013	1.826	7.38	12.28	2.60	76.33	58.43	17.90	51.00	0.0231
TAKE-OFF	113	21376	10407	735603	.014	.014	1.992	6.67	10.91	2.84	99.60	78.30	21.30	51.50	0.0230

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	66.61	88.78	2813	1.69	0.62	1.07	75.14	100.0	3173	1.91	0.70	1.21	1.80
INTERMED. 1	0.55	2.42	3130	6.81	5.03	1.77	3.45	15.0	19488	42.37	31.33	11.04	9.95
INTERMED. 2	0.38	1.35	3132	8.25	6.21	2.04	2.94	10.3	24000	63.20	47.58	15.62	12.25
MILITARY	0.32	0.94	3133	9.62	7.36	2.26	2.90	8.4	27988	85.90	65.76	20.14	14.28
TAKE-OFF	0.27	0.77	3134	11.49	9.03	2.46	2.79	8.0	32611	119.57	94.00	25.57	16.64

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D08-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 87. TYPE B

TEST DATE : 4/ 1/76

ENGINE 10, NUMBER 2

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651471
TOTAL ENGINE TIME : # HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : ZGT
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	925	1108
INLET AIR TEMP.(DEG.F) :	58.0	61.0
ATMOSPHERIC PRESS.(IN.HG) :	28.80	28.80
RELATIVE HUMIDITY (%) :	30	25
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0032	0.0029

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4
WT.% CARBON : 85.35
WT.% HYDROGEN : 14.57
WT.% SULFUR : 0.05
H/C RATIO-ATM.: 2.05
C/H RATIO-MASS: 5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	936	1059	123055	.009	.008	1.022	1118.63	723.70	1.35	8.65	1.72	6.93	10.00	0.0231
INTERMED. 1	73	13816	5185	548313	.011	.011	1.516	36.00	25.92	2.26	57.11	50.93	6.18	48.00	0.0231
INTERMED. 2	82	15643	7042	594060	.012	.012	1.620	11.54	17.93	2.42	59.30	63.10	6.20	49.00	0.0231
MILITARY	98	18644	9610	637191	.014	.013	1.806	7.16	10.77	2.67	96.64	88.38	8.26	46.00	0.0231
TAKE-OFF	113	21419	10332	687069	.015	.015	1.996	6.61	7.99	2.97	139.01	126.87	12.14	39.00	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	83.09	93.86	2751	1.84	0.37	1.48	87.98	99.4	2913	1.95	0.39	1.56	1.06
INTERMED. 1	1.81	2.28	3118	8.24	7.35	0.89	11.20	14.1	19285	50.95	45.43	5.51	6.18
INTERMED. 2	0.54	1.47	3123	9.35	8.51	0.84	3.82	10.4	21990	65.83	59.94	5.89	7.04
MILITARY	0.31	0.80	3124	11.82	10.81	1.01	2.63	6.9	26901	101.79	93.09	8.70	8.60
TAKE-OFF	0.25	0.54	3125	15.29	13.96	1.34	2.62	5.5	32287	157.99	144.19	13.80	10.32

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-008-8876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 88. TYPE C

TEST DATE : 4/ 1/76

ENGINE ID. NUMBER 2

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651471
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : ZGT
SMOKE OPERATOR : DO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	925	1100
INLET AIR TEMP.(DEG.F) :	58.0	61.0
ATMOSPHERIC PRESS.(IN.HG) :	28.80	28.80
RELATIVE HUMIDITY (%) :	30	25
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0032	0.0029

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4
WT.% CARBON : 85.35
WT.% HYDROGEN : 14.57
WT.% SULFUR : 0.05
H/C RATIO-ATM.: 2.05
C/H RATIO-MASS: 5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
INTERMED. 1	73	13816	5185	548313	.011	.011	1.516	20.43	26.10	2.25	57.00	50.60	6.40	50.00	0.0262
INTERMED. 2	82	15643	7042	594060	.012	.012	1.620	9.74	17.67	2.41	69.71	63.13	6.58	48.00	0.0262
MILITARY	98	18644	9610	637191	.014	.013	1.806	6.81	10.60	2.66	96.77	88.63	8.14	47.00	0.0262
TAKE-OFF	113	21419	10332	687069	.015	.015	1.996	6.33	7.28	2.96	136.77	124.99	11.78	39.50	0.0262

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
INTERMED. 1	1.03	2.30	3120	8.25	7.32	0.93	6.37	14.2	19298	51.00	45.27	5.73	6.18
INTERMED. 2	0.46	1.46	3123	9.45	8.56	0.89	3.24	10.3	21992	66.57	60.29	6.29	7.04
MILITARY	0.29	0.79	3124	11.86	10.86	1.00	2.51	6.8	26902	102.12	93.54	8.59	8.50
TAKE-OFF	0.24	0.49	3125	15.10	13.80	1.30	2.52	5.1	32280	155.97	142.54	13.43	10.32

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-D88-8876

REPORT DATE 88/18/76
USAF CONTRACT F29681-7S-C-8846

SCOTT TEST NUMBER 89. TYPE 8

TEST DATE : 4/ 2/76

ENGINE 18. NUMBER 3

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651354
TOTAL ENGINE TIME : 8 HRS.
PERFORMANCE TEST RESULTS : PASS

TEST LOCATION : TINKER AF8
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : ZGT
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	1348	1445
INLET AIR TEMP.(DEG.F) :	79.8	79.8
ATMOSPHERIC PRESS.(IN.HG) :	28.61	28.58
RELATIVE HUMIDITY (%) :	24	23
INLET AIR HUMIDITY - (GM H28/GM DRY AIR) :	8.8852	8.8858

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 388 DEG.F
LENGTH : 188 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4
WT.% CARBON : 85.35
WT.% HYDROGEN : 14.57
WT.% SULFUR : 8.85
H/C RATIO-ATM.: 2.85
C/H RATIO-MASS: 5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	988	1872	122292	.889	.888	1.822	854.16	764.85	1.55	18.27	1.57	8.78	7.88	8.8238
INTERMED. 1	73	13834	5367	531885	.812	.812	1.581	15.65	16.65	2.45	66.19	68.96	5.23	42.88	8.8231
INTERMED. 2	83	15778	7219	572389	.813	.813	1.613	11.88	12.56	2.57	79.83	74.14	5.69	48.88	8.8231
MILITARY	97	18483	868	614272	.814	.814	1.778	9.14	9.62	2.88	186.99	188.81	6.98	48.88	8.8231
TAKE-OFF	118	28837	18137	656217	.815	.815	1.943	8.85	8.88	3.85	141.16	148.88	8.28	39.88	8.8231

EXHAUST MASS EMISSION INDICES :

	# / 1888# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	56.86	88.98	2831	1.96	8.38	1.66	68.95	95.3	3835	2.18	8.32	1.78	1.87
INTERMED. 1	8.73	1.35	3122	8.82	8.12	8.78	4.63	8.6	19888	56.15	51.71	4.44	6.36
INTERMED. 2	8.52	8.97	3124	18.14	9.42	8.72	3.77	7.8	22549	73.22	68.81	5.22	7.21
MILITARY	8.37	8.68	3124	12.48	11.67	8.81	3.23	5.9	27128	188.34	181.27	7.87	8.57
TAKE-OFF	8.38	8.58	3125	15.12	15.89	8.83	3.85	5.9	31676	153.26	152.96	8.38	18.13

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-008-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 94. TYPE B

TEST DATE : 4/ 6/76

ENGINE NO. NUMBER 4

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651630
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : C
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : OO

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	2000	2025
INLET AIR TEMP.(DEG.F) :	65.0	63.0
ATMOSPHERIC PRESS.(IN.HG) :	28.49	28.50
RELATIVE HUMIDITY (%) :	56	60
INLET AIR HUMIDITY - (GM H2O/GM DRY AIR) :	0.0077	0.0077

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4
WT.% CARBON : 85.35
WT.% HYDROGEN : 14.57
WT.% SULFUR : 0.05
H/C RATIO-ATM.: 2.05
C/H RATIO-MASS: 5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE W/A
IDLE	5	1036	1013	132998	.008	.008	1.026	845.53	680.72	1.40	8.50	2.01	6.49	6.00	0.0231
INTERMED. 1	74	14058	5314	567159	.011	.012	1.524	7.13	22.52	2.35	55.18	50.28	4.90	51.00	0.0231
INTERMED. 2	84	15980	7237	611778	.012	.012	1.637	5.61	14.55	2.49	67.05	61.56	5.49	49.50	0.0231
MILITARY	99	18865	8804	658068	.013	.013	1.816	4.49	10.77	2.74	92.07	84.70	7.37	51.00	0.0231
TAKE-OFF	110	20988	10015	697932	.014	.015	1.959	4.06	8.61	2.96	118.40	108.61	9.79	46.20	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	62.05	87.24	2819	1.79	0.42	1.37	62.86	88.4	2856	1.81	0.43	1.38	1.01
INTERMED. 1	0.35	1.90	3123	7.67	6.98	0.68	2.18	12.0	19716	48.40	44.10	4.30	6.31
INTERMED. 2	0.26	1.16	3124	8.79	8.07	0.72	1.86	8.4	22608	63.65	58.43	5.21	7.23
MILITARY	0.19	0.78	3125	10.98	10.10	0.88	1.64	6.9	27510	96.64	88.91	7.74	8.80
TAKE-OFF	0.16	0.58	3125	13.07	11.99	1.08	1.56	5.8	31299	130.88	120.06	10.82	10.01

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE AREA-WEIGHTED.

SCOTT ENVIRONMENTAL TECHNOLOGY INC.
USAF TURBINE ENGINE EMISSIONS INVENTORY
INDIVIDUAL ENGINE TEST REPORT

SET 1492-008-0876

REPORT DATE 08/18/76
USAF CONTRACT F29601-75-C-0046

SCOTT TEST NUMBER 9S, TYPE A

TEST DATE : 4/ 7/76

ENGINE 10, NUMBER 4

ENGINE TYPE & MODEL : TF33-P7
ENGINE SERIAL # : 651630
TOTAL ENGINE TIME : 0 HRS.
PERFORMANCE TEST RESULTS : FAIL

TEST LOCATION : TINKER AFB
TEST CELL NUMBER : 9
TEST CELL OPERATOR : D
SCOTT SUPERVISOR : ZGT
INSTRUMENT OPERATOR : PR
SMOKE OPERATOR : 00

AIR FLOW MEASUREMENT METHOD : BELLMOUTH

TEST ENVIRONMENTAL CONDITIONS :

	START	FINISH
TEST TIME (MIL.TIME) :	935	1150
INLET AIR TEMP.(DEG.F) :	65.0	64.0
ATMOSPHERIC PRESS.(IN.HG) :	28.50	28.50
RELATIVE HUMIDITY (%) :	70	73
INLET AIR HUMIDITY - (GM H20/GM DRY AIR) :	0.0097	0.0097

SAMPLE LINE :
FLOW RATE : 23 LPM
TEMPERATURE : 300 DEG.F
LENGTH : 100 FT.

FUEL ANALYSIS :
SAMPLE # : 16
TYPE : JP-4
WT.% CARBON : 85.35
WT.% HYDROGEN : 14.57
WT.% SULFUR : 0.05
H/C RATIO-ATM.: 2.05
C/H RATIO-MASS: 5.86

TEST MODE	% RATED POWER	THRUST #	FUEL FLOW #/HR	AIR FLOW #/HR	F/A ACT	F/A CALC	EPR	THC PPMC	CO PPM	CO2 %	NOX PPM	NO PPM	NO2 PPM	SMOKE SN	SMOKE M/A
IDLE	5	1018	1070	131699	.008	.008	1.023	1170.92	743.48	1.34	7.95	1.40	6.55	6.97	0.0231
INTERMED. 2	84	15942	7179	614283	.012	.011	1.512	1.98	14.63	2.25	56.24	57.60	8.64	50.93	0.0231
MILITARY	99	18730	8632	659312	.013	.012	1.783	0.60	9.86	2.49	90.46	79.66	10.80	47.98	0.0231

EXHAUST MASS EMISSION INDICES :

	# / 1000# FUEL						# / HR						
	THC	CO	CO2	NOX	NO	NO2	THC	CO	CO2	NOX	NO	NO2	SOX
IDLE	86.98	96.44	2736	1.69	0.30	1.40	93.07	103.2	2928	1.81	0.32	1.49	1.07
INTERMED. 2	0.10	1.29	3124	9.63	8.37	1.26	0.72	9.3	22429	69.11	60.09	9.02	7.17
MILITARY	0.03	0.79	3125	11.85	10.44	1.41	0.24	6.8	26977	102.32	90.10	12.21	8.52

** AVERAGE CONCENTRATION AND MASS EMISSION DATA ARE MASS-WEIGHTED.