

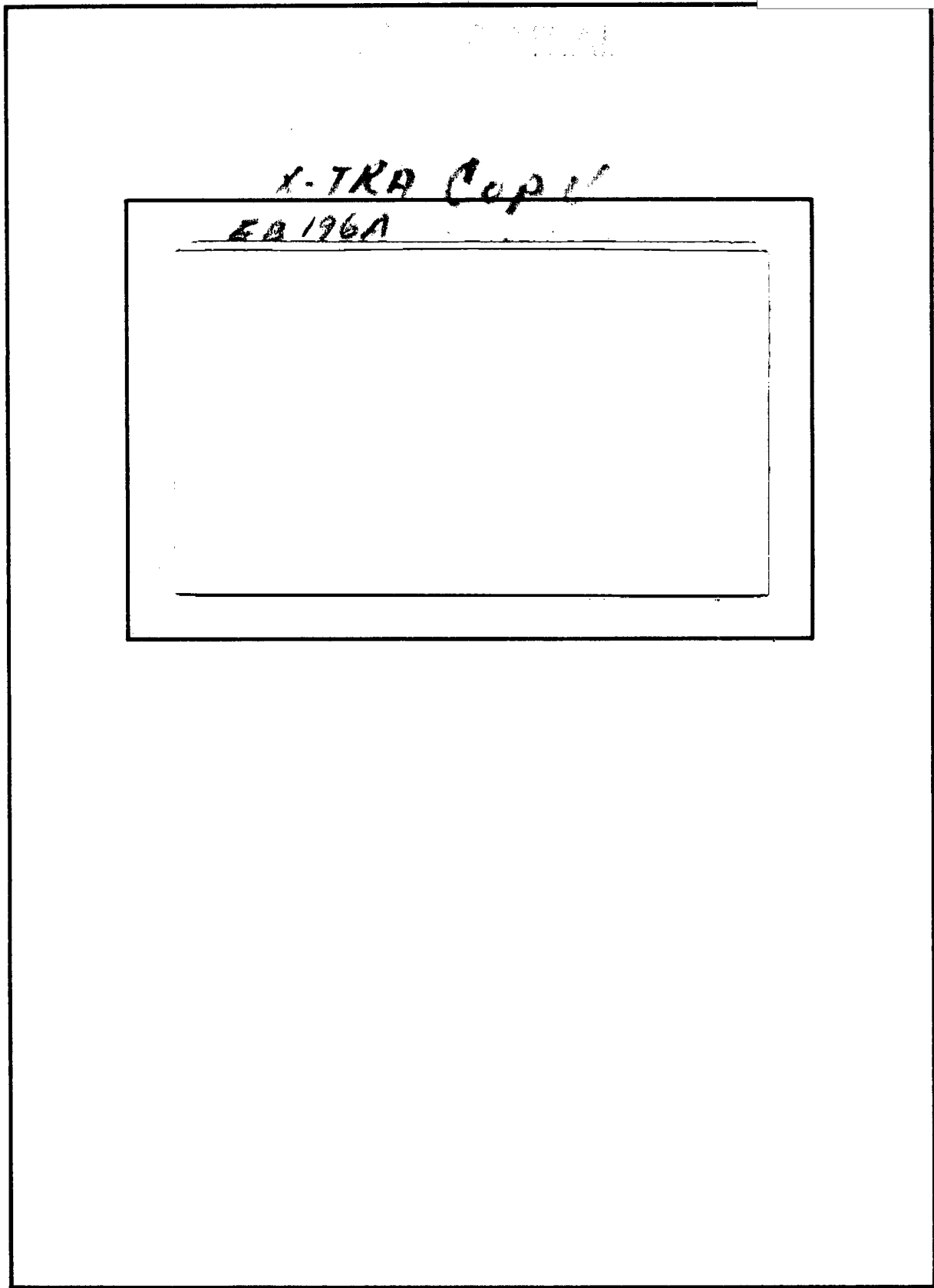
5

~~SECRET~~

3/10/61



50X1



~~SECRET~~

~~SECRET~~

CONFIDENTIAL

~~Foreign Disruptive Activities,~~
air Fed Incinerators

SUMMARY LETTER REPORT

ON

WORK ORDER NO. X,
TASK ORDER NO. KK

August 28, 1960

CONFIDENTIAL

DOC	<u>5</u>	REV DATE	<u>20 JUN 1980</u>	BY	<u>018373</u>
ORIG COMP	<u>056</u>	OPI	<u>56</u>	TYPE	<u>01</u>
ORIG CLASS	<u>S</u>	PAGES	<u>6</u>	REV CLASS	<u>C</u>
JUST	<u>22</u>	NEXT REV	<u>2010</u>	AUTH:	HR 70-2

~~SECRET~~ — CONFIDENTIAL

SECRET

March 10, 1961

Dear Sir:

This letter report summarizes the liaison activity performed under Work Order No. X, Task Order No. KK, in connection with the fabrication and functional testing of the four Model 1 incinerators by a commercial organization. The contract period for Work Order No. X, Task Order No. KK, was June 29 through August 28, 1960.

Part Fabrication and Unit Assembly

Under this program, we made three visits to [redacted]

50X1

[redacted] to monitor and expedite the fabrication of parts and the assembly of the four incinerator units. These trips were made on July 12, August 4, and August 18, 1960. During each visit, all of the parts completed since the previous visit were inspected for dimensional and functional adherence to the drawings and specifications.

50X1

We found only one major discrepancy between the detail drawings and the completed parts, namely, the inner-liner parts had not been properly deburred. It was re-emphasized to the fabricator that deburring was essential in order to maintain the proper air flow through the louvers. A subsequent check of the louvered parts showed that the deburring had been completed.

In the course of assembling the four units, it was found that two drawing errors had caused some minor assembly problems. One had resulted in an interference between the air-control handle and the flange on the air duct.

SECRET

SECRET

-2-

March 10, 1961

The other represented a misalignment of the damper blade in relation to the air-control handle; this caused improper positioning of the damper in the air duct. Minor changes were made in the fabricated parts to correct for the drawing errors, and the assembly of the four units was completed. These changes and also changes which had been made prior to the beginning of fabrication were incorporated into the revised Model 1 incinerator working drawings which were sent to you (as part of a letter dated January 6, 1961); also, appropriate corresponding changes were made in your Purchase Description dated February 10, 1960, and revised copies of the first 7-1/2 pages of this Purchase Description were transmitted to you.

Functional Tests

On August 31, 1960, a fourth trip was made to conduct functional tests on each of the four assembled units. These tests were performed in two parts: (1) a cold-air-flow test, and (2) a paper-burning test.

50X1

Cold-Air-Flow Tests

The cold-air-flow tests were run with the incinerators empty, in order to check for leaks at the gasketed joints and to measure the plenum-chamber pressure, which gives an over-all indication of the condition of the flow passages. In addition, a new or calibrated control-plate "Operating" position for the air-control handle was established for 60-cycle-current operation, in order to compensate for the change which had been made in the blower-wheel diameter (from 14-1/2 inches to 15-1/2 inches). The blower-wheel size had been increased to provide the necessary air flow when the unit

SECRET

SECRET

-3-

March 10, 1961

was operated on 50-cycle current with the air-control handle in the designed control-plate "Operating" position.

The cold-air-flow tests showed no excessive leaks at the gasketed joints. All four of the units met the acceptable air-flow requirement of a minimum of 2,400 cubic feet per minute at a plenum-chamber pressure of between 6.0 and 7.0 inches of water.

Table 1 summarizes the pressure- and flow-measurement data for the four units run on 60-cycle current with the air-control handle at the calibrated control-plate "Operating" position.

The calibrated "Operating" positions were not identical on each of the four units; they were within 1/16 inch of each other on the control plates. This variation was considered acceptable because it would permit meeting the minimum air-flow requirement when the blowers were operated on 50-cycle current with the air-control handle at the designed control-plate "Operating" position; and because for 60-cycle-current operation, an adjustment could be provided readily, as described next.

Subsequent to the above tests, four control-plate wedging blocks were prepared and sent to you for installation on the four incinerator control plates. The wedging blocks were identified so as to correspond to the numbers which had arbitrarily been assigned to the incinerator units; they were to be used to limit the opening of the air damper when the blowers were operated on 60-cycle current. For 50-cycle-current operation, the blocks would have to be removed from the control plates.

Burning Tests

After completion of the cold-air-flow tests, paper-burning tests were run on each of the units. These tests consisted of burning 1,200 pounds of

SECRET

SECRET

-4-

March 10, 1961

paper in Unit No. 1 and 600 to 757 pounds of paper in each of the other three units. The paper for Unit No. 1 consisted of 700 pounds of whole telephone books and 500 pounds of loose file paper including file folders; whole telephone books were burned in the remaining three units. An intermittent, batch feeding schedule was followed in these tests, using a batch size of approximately 35 pounds.

Table 1. Summary of Cold-Air-Flow and Paper-Burning Tests

Unit No.	Fluegas Pressure, in. H ₂ O	Cold-Air Flow, cfm	Total Weight of Paper, lb	Burning Period, min	Average Burning Rate, lb/hr
1	6.8	2,600	1,200	233	309
2	6.8	2,600	600	115	313
3	6.4	2,500	757	138	329
4	6.6	2,600	600	120	300

Note: The cold-air-flow test data are for the incinerators operated on 60-cycle current with the air-control handle in the calibrated control-plate "Operating" position.

Table 1 also shows the quantities of paper burned and the average burning rate for each of the four incinerators. Acceptable rates of at least 300 pounds per hour were achieved in all of the units. The high instantaneous burning rates attained in response to adjustment of the air-control-handle position were normal and the flue-gas temperatures were readily kept below

SECRET

March 10, 1961

the desired maximum of 1800 F. The emission of small pieces of black char from the stack was as low as in previous tests with prototype Model 1 units. The usual light-grey haze of fine fly ash was visible in the flue gases.

Conclusions

From the above tests, it is concluded that the four production incinerator units gave good over-all performance.

Based on our experience with commercial fabricators, we feel that, despite the delays and minor problems encountered, [redacted] did a good job in fabricating these four units. [redacted] workmanship was very good; the cooperation of the men doing the fabrication work was average.

50X1
50X1

We would appreciate any comments which you or your associates might care to make with regard to our efforts under this Work Order.

Sincerely,

[redacted signature box]

50X1

[redacted box]

50X1

In Triplicate

SECRET

SECRET