[redacted] ER-3-9893

25X1A6a [redacted]

30 April 1953

MEMORANDUM

TO : Assistant Deputy Director / Administration

25X1A6a FROM : [redacted]

SUBJECT : Electrical Power Studies [redacted] 25X1A6a

25X1A6a [redacted] 2500 ft² if in existing
5000 ft² if additional bldg.

1. PROBLEM

a. The auxiliary generator is not adequate to carry the load necessary in case of power failure.

b. The present facilities provided by the Power Company are not sufficient to carry any additional normal load and definitely cannot provide the load required during emergency operations.

2. DISCUSSION

a. Electric power is supplied to [redacted] by a single phase, 25X1A6a
50 KVA transformer. Auxiliary standby power consists of a 60 KW, single phase generator. The present connected station load is approximately 317 KW and additional communications equipment and an enlarged water supply system will add to the power demand. Present demand under low operating conditions is approximately 65 KW.

b. The Virginia Electric and Power Company will provide additional single phase power to the transformer at no cost to the Government.

c. It is understood that the Communications Office could make a 60 KW, single phase diesel generator available for [redacted] if the 25X1A6a
25X1A6a recommendations for [redacted] are approved. This generator is now 25X1A6a
being used at the Tower at [redacted] In work warehouse.

3. CONCLUSIONS

a. The present standby generator is inadequate for providing power under existing conditions and could not begin to supply power under emergency conditions, when the load would be materially increased.

b. That the minimum requirements for standby power for operation should be increased 100%.

[redacted]

c. That the power facilities now provided by the Virginia Electric and Power Company are not adequate for operation.

4. RECOMMENDATIONS

a. That an additional 60 KW generator be provided and installed.

b. That the Power Company be requested to provide additional power.

25X1A6a [redacted]

1. PROBLEM

a. Auxiliary standby power is not presently available for all facilities at [redacted]

25X1A6a

b. The diesel generator which has a capacity of 250 KW has a present load of 100 KW and, therefore, does not operate at maximum efficiency.

2. DISCUSSION

a. The 250 KW diesel generator installed at [redacted] is connected only to Station buildings and not to the other four points of power distribution. There is no standby power for the main pumping station, the emergency water pump at the city reservoir and the tower area where the [redacted] are located. See Annex "A".

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25X1A

b. Standby power at all points on the Station could be provided by purchasing the transmission facilities of the Utility Companies and the purchase of additional wire and transformers. The Utility Companies have estimated the cost of these facilities to be $12,000.00. See Annex "B". By providing individual standby generators at the points indicated above the cost would be approximately $15,500.00. The 250 KW generator will give the total necessary emergency power, will require only one attendant at one point, and will provide more steady and reliable current for longer periods of time than can be supplied by individual generators.

3. CONCLUSIONS

a. That the buildings at the tower site, the water pumping station and emergency water pump at the city reservoir are of a critical nature and should be provided with auxiliary power.

b. That the most economical and practical method of providing this needed protection would be the purchase of the existing electrical transmission lines and providing necessary additions.

4. RECOMMENDATIONS

a. That action be initiated to purchase the transmission facilities from the Utility Companies and provide standby power to all facilities at [redacted] by maximum use of the presently installed 250 KW generator.

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[redacted]

25X1A9a

Enclosures (2)