NTSB 21

APPENDIX: V

DOCUMENT NUMBER: NTSB Record 21

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DESCRIPTION OF DOCUMENT: Chart titled "Radar Sites"

A staff member of the NTSB created this one-page document in preparation of the report titled Airplane Performance Study or TWA flight 800. This report, among other things, discusses the collection and evaluation of radar data. The Airplane Performance Study is available in the public docket, as well as on-line at www.ntsb.gov.

The chart, as it appears in the Airplane Performance Study, is released in full. Handwritten notes, however, have been redacted from this record pursuant to exemption (b)(5). These notes reflect the personal opinion of the writer rather than the policy of the agency. The employee making the notes was acting as a member of the TWA flight 800 accident investigation team. The document was intended to provide a description of data needed to derive the flight path of the accident aircraft using a simulation program created by a staff member of the NTSB. These notes

give an indication of the preliminary thoughts of how data will be used in the simulation program. A number of simulations were performed, resulting in several reports that are available in the public docket: Main Wreckage Flight Path Study, Errata to the Main Wreckage Flight Path Study, and Addenda I and II to Main Wreckage Flight Path Study. These reports are identified as Exhibits 22C through F in the public docket and are found in this Vaughn index as Exhibits VII - X to the Crider Declaration.

Information provided on Record 21 was used in the simulations to further derive the flight path responses of the accident aircraft following a catastrophic event, such as the loss of the forward section. Understanding the flight path following the catastrophic event may assist the Safety Board with the understanding of the cause of the catastrophic event.

The information is predecisional and deliberative in nature, thereby exempt from disclosure. By virtue of the application of exemption (b)(5) of the Freedom of Information Act (FOIA), the handwritten notes on this document were withheld in their entirety.

The (b)(5) exemption for the protection of deliberative process materials has always encompassed the preliminary findings and recommendations made to the decisional

authority so as not to cause harm to the quality of the agency's decision-making process, and thereby the decision. The harm arising from the release of this information is that, without the protection provided by the exemption, full and frank discussion of options and opinions so vital to the decision-makers would be impossible. (See Declaration of Dennis Crider). In this instance, NTSB staff is seeking review and confirmation of data and preliminary findings to prepare the NTSB studies for presentation to the Safety Board. The five-member Safety Board is the ultimate decision-maker as to the probable cause(s) of an accident, and the safety recommendations that follow from that cause. The simulation results described in the reports that are created using information from this document will contribute to the Safety Board's understanding of the flight path of the accident airplane, and thus aid in its decisions that will either alter maintenance of systems, training of personnel, or construction of systems so as to prevent future accidents. Because it is purely predecisional and part of the deliberative process, this record is exempt under 5 USC 552 (b)(5).

Radar Sites

40	38	22.4	73	45	59.2	JFK ASR radar site, lat/lon coordinates
-30.455	-9.14	[redacted]				x/y coordinates relative to ISP ASR
W 13.0		(b)(6)				FAA-provided magnetic variation
40	41	25.1	74	9	46	EWR ASR radar site, lat/lon coordinates
-48.53	-5 906					x/y coordinates relative to ISP ASR
W 13.0						FAA-provided magnetic variation
40	47	38.2	73	6	0.5	ISP ASR radar site, lat/lon coordinates
0	0					x/y coordinates relative to ISP ASR
W 13.0						FAA-provided magnetic variation
41	3	40.35	73	42	50.87	HPN ASR radar site, lat/lon coordinates
-27.875	16 136					x/y coordinates relative to ISP ASR
W 12.0						FAA-provided magnetic variation
41	29	26.14	74	6	20.52	SWF ASR radar site, lat/lon coordinates
-45.339	42.059					x/y coordinates relative to ISP ASR
W 12.0						FAA-provided magnetic variation
40	8	3.4	74	59	11.91	Trevose PA radar site, lat/lon coordinates
-86.911	-38.592					x/y coordinates relative to ISP ASR
40	52	42.66	72	41	15.95	Riverhead NY radar site, lat/lon coordinates
18.775	5.12					x/y coordinates relative to ISP ASR
42	2	2.4	70	3	11.1	North Truro MA radar site, lat/lon coordinates
136.148	76.879					x/y coordinates relative to ISP ASR
41	17	42	73	4	59	Sikorsky secondary radar site, lat/lon coordinates
0 771	30.054					x/y coordinates relative to ISP ASR
W 14.0						Sikorsky-provided magnetic variation

[redacted] (b)(6)